



ASHESI UNIVERSITY COLLEGE

The dynamics of technology in five Restaurants in East Legon, Accra

UNDERGRADUATE THESIS

BY

Jeremy Ohene-Ntow

Thesis submitted to the Department of Business Administration, Ashesi University College. Submitted in partial fulfilment of the requirements for the award of Bachelor of Science Degree in Business Administration

Supervised by: Dr. Enyonam Kudonoo

April 2018

ACKNOWLEDGEMENT

I would like to express my deepest gratitude to God first, for His grace and mercies, seeing me through to the end of this capstone thesis project. I would also like to thank my parents and siblings for their financial support as well as their encouragement through the tough times and the times I felt like giving up. My greatest thanks go to my Supervisor, Dr. Enyonam Kudonoo, without whom I would not have been able to complete successfully, her love, concern and support was overwhelming. Finally, I would like to say a big thank you to my professors; Dr. Esi Ansah and Mrs. Emefa Dako for their concern and support in the progress and success of my project as well as my personal well-being.

DECLARATION

I hereby declare that this thesis is the result of my own original work and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature:

Candidate's Name: Jeremy Ohene-Ntow

Date: April 16, 2018

I hereby declare that the preparation and presentation of the thesis were supervised in alignment with the guidelines on supervision of thesis as designed by Ashesi University College.

Supervisor's Signature:

Supervisor's Name: Dr. Enyonam Kudonoo

Date: April 16, 2018

ABSTRACT

This study explores the use of technology in five restaurants in East Legon for sustainable growth. The objective is to find out how the use of technology is bringing changes in the operations of the restaurant business and how these changes are transforming restaurant business operations. Accordingly, a qualitative approach was employed to collect data using semi structured interviews. Ten participants, made up of one manager and one employee from each restaurant, were interviewed. Data were analyzed by identifying categories and developing themes for discussion in line with research questions and objectives of the study. Responses revealed that technology had been a major factor in the changes that had occurred in the operations of their business over time. It changed the way they take orders, prepare meals and cocktails, the use of advanced equipment like pressure cookers, blenders, microwaves, hot plates, toasters, dough spreaders, and ovens with thermometers and timers, and advertising using social media, and having an online presence by means of a website. The study concludes by suggesting that restaurant operators to maximize the use of technology to boost their businesses for sustainable growth.

Table of Contents

ACKNOWLEDGEMENT	II
DECLARATION	III
ABSTRACT	IV
Table of Contents	V
CHAPTER 1: INTRODUCTION	1
1.1 Background.....	2
1.2 Statement of the problem, research question(s) and objectives	4
1.3 Research question(s)	5
1.4 Objectives.....	5
1.5 Relevance of Study	5
1.6 Theoretical framework	6
1.7 Methodology.....	6
1.8 Organization of study	6
CHAPTER 2: LITERATURE REVIEW	9
2.1 Introduction	9
2.2 Technology	10
2.3 Restaurant Establishments.....	12
2.4 Restaurant Operations	15
2.5 Technology in restaurant operations	16
2.6 Theoretical Framework	18
2.7 Conclusion.....	20
CHAPTER 3: METHODOLOGY	21
3.0 Introduction	21
3.1 Research Approach	21
3.2 Research Design	21
3.3 Research Scope.....	22
3.4 Study Population.....	22
3.5 Sampling Strategy and technique.....	23
3.6 Data collection and analysis	24
3.7 Data Analysis.....	24
3.8 Ethical Considerations.....	24
3.9 Limitations.....	25
CHAPTER 4: DATA FINDINGS AND ANALYSIS	26
4.0 Introduction	26
4.1 Organization and nature of data collected	26
4.2 Findings from the Various Restaurants	27
4.3 Summary of Responses from restaurant A	28
4.4 Responses from restaurant B	30

4.5 Responses from restaurant C	33
4.6 Responses from restaurant D	36
4.7 responses from restaurant E.....	38
4.8 Conclusion.....	40
CHAPTER 5: CONCLUSION RECOMMENDATION AND LIMITATIONS	44
5.1 Conclusion.....	44
5.2 Recommendation	46
5.3 limitations.....	46
References.....	48
Appendix.....	53
Section 1	53

CHAPTER 1: INTRODUCTION

Due to urbanization, increase in income and market liberalization in most parts of the world, including Ghana, people are developing appetite for eating out (Kennedy, Nantel, & Shetty, 2004). The traditional eating from home seems to be fading away. The trend of eating in restaurants in Accra is becoming more prevalent than it used to be two decades ago. People enjoy the variety of dishes offered in Ghanaian restaurants in the form of buffets, where they have easy access and the opportunity to taste as many different dishes as possible unlike what pertains in the home where only one variety is prepared for the family at a time (Kennedy, Nantel, & Shetty, 2004).

From Inkumsah's (2011) findings, the growth of the restaurant industry has been attributed to mothers who are career women, and as a result do not have the time to cook for their households. Similarly, the concept of eating at fast food establishments and restaurants is a more preferred option to most households in America, which is creating increasing growth in the hotel and restaurant industry (Brown, 1990). The 2017 outlook report for the American restaurant industry predicts a 1.7% (adjusted for inflation) gain in sales from restaurants (\$798.7 billion). The restaurant industry workforce is projected to increase to 14.7 million making the restaurant industry the nation's second largest employer in the private sector. (National Restaurant Association, 2017)

According to Connolly and Olsen (2001), the quest to find out the future of the hospitality industry, led the International Hotel and Restaurant Association to set up a

Think Tank, consisting of over 100 strategists. The findings derived from this endeavor, revealed that technology was one of the major drivers of change in the dynamics of the hotel and restaurant industry (Connolly & Olsen, 2001). Cavusoglu (2015), contributes to the concept by asserting that technology is becoming a major factor in the operations of restaurants across all the levels and categories of restaurants in the United states of America. He categorized restaurants as Chain restaurants and independent restaurants explaining further that they have all taken the initiative to integrate technology in their restaurant operations (Cavusoglu, 2015).

This study seeks to find out if a similar concept can be identified in the Ghanaian restaurant space, and if technology is influential in the restaurant industry. The Accra Food Hackathon discussion panel, explored the opportunities that the collaboration of food service and technology could have on tourism and the promotion of local dishes. The article claims that technology in the restaurant industry is either existent or expected. Consequently, technology may have the ability to influence the restaurant industry in Ghana (Abdulai, 2016).

1.1 Background

Ghana has been identified as one of the countries in Africa with a promising market for restaurant business. This infers that the growth of the restaurant industry in Ghana is significant and favorable for investors (Douglas, 2015). According to Omari (2014), the informal restaurants including street food vendors and “chop-bars” have been the main outlets that Ghanaians have had in the past, in terms of eating out. Currently,

there is a proliferation of formal restaurants, which are becoming a preference for Ghanaian citizens, due to globalization and urbanization in Ghana (Omari, 2014). Kentucky Fried Chicken, a large American fast food restaurant, established her presence in the Ghanaian market since 2014, and it is projected to increase to over 20 establishments in the country (Omari, 2014).

There are also several restaurants including Chinese, Indian, and Korean restaurants being established across the country. This infers that the market for restaurants in Ghana is growing rapidly. Almost simultaneously, the use of technology in the form of internet and social media is increasing at a significant rate in the country.

According to the 2016 Annual Ghana Social report, about 8 million of the population of Ghana have an online presence, use mobile and internet technology. The social media penetration is up to about 40% (CliqAfrica Limited and Advanced media, 2017). This shows evidence of the growth of technology in Ghana. Adjei (2017), elaborates on how technology can be a great tool in improving the customer service experience. He explained that customer retention and profits can be significantly improved if technology is harnessed and applied to a business (Adjei, 2017). Therefore, it is highly imperative to understand the performance of the restaurant business in Ghana and how technology can help to improve it.

As at 2012, research done by the Ghana statistical service revealed that the hospitality industry; restaurant services are a part of, was one of the main contributors to

economic activity in the service sector of Ghana. Indicating that restaurant business in Ghana is promising. This further emphasizes the importance of the restaurant business in Ghana (Ghana Statistical Service, 2012).

This study seeks to uncover the essence of technology in the restaurant business in Ghana, by focusing on five restaurants in East Legon, Accra. This research analyzes data gathered from the five restaurants and use the findings to show the important role technology can play in the dynamics of the operations of a restaurant and thereby, contribute to the growth of the industry.

1.2 Statement of the problem, research question(s) and objectives

Considering the growth of the restaurant industry, its significance and prospects in Ghana, there is very little or no available information documented. There is also no extensive research, detailing how technology is being incorporated in the restaurant industry. A gap in the body of knowledge is identified with regards to the area under study. It is asserted that technology improves business opportunities and operations (Adjei, 2017). Accordingly, the presence of technology in the country and its use implies that technology is also growing rapidly (CliqAfrica Limited and Advanced media, 2017). This study seeks to find out how technology is being used in the restaurant business and the changes it has brought to operations and marketing of their unique products and services for growth.

1.3 Research question(s)

- How is technology changing the dynamics of the five restaurants in East Legon?
- What ways can technology contribute to the sustainable growth of the five restaurants in East Legon?

1.4 Objectives

General objective: is to ascertain the role technology is playing in the sustainable growth of the five restaurants under study in East Legon.

Specific objectives are to:

- Explain how technology is changing the operations of the five restaurants in recipe development, food preparation, and taking orders.
- Identify the changes technology has brought to the marketing aspect of the five restaurants.

1.5 Relevance of Study

There seems to be a gap in the body of knowledge concerning the dynamics of technology in restaurants and as such, the successful completion of this study would provide some knowledge to add to the information spread on this topic and related topics. Information of this nature would also be a source of reference for individuals who seek to enter the restaurant industry. As a contributor to economic activity, more knowledge on this industry would enable the discovery of available resources and capabilities that would improve the restaurant business, which would promote the improvement and sustainable growth of the industry.

1.6 Theoretical framework

In a competitive industry, firms must employ specific strategies and practices that give them a competitive edge or advantage over their competitors. It is therefore necessary to understand the nature and structure of the industry and hence be able to reconstruct operations and processes in a way to obtain the highest yield. The study applies the underlying principles of *the theory of the business*, which states that, some assumptions are made by a firm to identify its customers and competitors, its technology and dynamics that shape its activities and lastly what the firm gets paid for (Hanlon, 2013) to throw light on the importance of technology in the restaurant business. *The theory of the business* (Drucker, 1994) , is used to throw light on the role of technology in the restaurant industry and how it affects the dynamics of operations.

1.7 Methodology

For the purposes of this research, an exploratory approach was utilized. The basis of analysis takes a qualitative perspective to review and explain data findings. This means that, restaurants studied were selected from specific geographical locations in East Legon, Accra. Data were collected through structured interviews, and through observation at the five restaurants. A manager and an employee were interviewed from each restaurant, making a total of 10 participants of this study.

1.8 Organization of study

This study is organized in the following chapters:

Chapter 1 consists of a brief introduction of the topic, research on the background, the identified gap, the objectives, research questions and the theoretical framework that drive

the development of the topic. Moreover, methodology and outline of the project are clearly detailed.

Chapter 2 consists of an in-depth review of existing related literature. That is, information and knowledge of the topic and related topics that inform the study, the effect of technology on the dynamics of operations in the restaurant industry, and arguments on the topic of study.

Chapter 3 is made up of an extensive description on the methods of data collection and analysis, including the description of the nature of the research and the type of analysis conducted.

Chapter 4 presents the data collection process and analysis of the data. This details the approaches to data collection, analysis, interpretation and discussion of the findings of the study. All findings are discussed in line with the objectives of the study as well as the research question to understand the reality of the situation.

Chapter 5 is the conclusion, recommendation and limitations of the research, which is based on the findings of the research, conclusions derived from the study, limitations and recommendations.

The next chapter of this research discusses all the concepts and theories that would aid in explaining the topic under study. The review of literature that describes the

use of technology in the restaurant industry, the types of technologies that have been adopted and how these technologies are changing the dynamics of the restaurant industry, would be analyzed. Also, the theoretical framework, *the theory of the business*, would also be analyzed to understand how the use of technology has become integral for restaurant businesses and the prospects for the future of restaurants and technology use.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

Encapsulating reviewed articles and literature on the importance of the use of technology in the restaurant industry, this chapter makes connections, inferences and contradictions of the different perspectives and arguments made by researchers in relation to the topic of this study. The title of this study, **the dynamics of technology in five restaurants in East Legon, Accra**, is one that unearths the importance of the use of technology in the restaurant industry. It throws light on how the use of technological equipment, processes, and devices are changing the operations of the restaurant industry for effective service delivery and growth.

This literature review lays the foundation for collecting data that inform and guide the analysis of the state of five restaurants in East Legon, Accra and how their operations and activities are executed using technology to improve service delivery. It also enables one to compare and contrast what is happening in other countries/economies, with what is happening in East Legon Accra. In this section, I identified the processes and activities that have necessitated the use of technology in the restaurant industry and showed how the *theory of the business* can be applied to this concept.

For the purposes of this study, technology is defined as the combination of tools and crafts, a balance of software and hardware. (Muller, 2010). This definition was selected because it possesses the concepts which this research seeks to understand concerning restaurant operations. How restaurants combine new techniques and methods

with new software designs to serve their customers better. This research seeks to explore how owners and workers in restaurant businesses view technology and what it means to them in terms of their development and improvement. Also, how restaurants combine their techniques and their tools to meet the needs of their customers and society.

This chapter is structured in the following manner. It starts with the definition of technology, restaurants establishments, categories and operations/traditional practices of restaurants, the use of technology in the restaurant industry and the changes it brings, the theoretical framework and ends with a conclusion. In assessing the technologies used in the restaurant industry, this literature review focuses on the technologies used in operations, which is recipe development, food production, food service delivery, and marketing including advertising tools and techniques.

2.2 Technology

Technology is derived from the Greek word *techne*, which means making perfect every art that seems imperfect in nature. This concept discusses application, science, art and education (Abdul, Che, & Wati, 2012; Herschbach, 1995; Muller, 2010). Technology according to Muller (2010), is the combination of tools and crafts, balancing software and hardware. Technology has also been defined as “*the means and methods employed to meet the needs of society*”. (Webster, 1979). Sahal (1981), as cited by Abdul, Che, and Wati (2012), explained that technology can be viewed as “configuration”, which means it relies on products and or processes that are subjective in determining, but specifiable. They contributed to the discourse of technology by explaining that the dynamic nature of

technology has brought about different definitions and concepts of technology. Hence, defining technology is complex due to its dynamic nature and the diverse angles from which researchers see and interpret the concept (Abdul, Che, & Wati, 2012). This supports the argument that technology is defined based on context, perspectives and area of expertise.

There is no one definition for the concept of technology. In the article, *Defining the Concepts of Technology and Technology Transfer: A Literature Analysis*, a collection of definitions from various authors on technology were collated. According to the article, Jones (1970, p. 70) defined technology as “*the way in which resources inputs are converted into commodities*”. Hawthorne (1971, p. 70) defined technology as “*the application of science to solve well-defined problems*”. Galbraith (1972, p. 70) defines technology as “*the systematic application of knowledge to practical tasks*”. (Abdul, Che, & Wati, 2012). From these varying definitions, there are underlying concepts embodied in the concept of technology. These concepts are aligned with the interests of this research project and what it seeks to understand with respect to the concept of technology.

The concepts of knowledge application and process or method give a broad umbrella in which technology can be identified. Hence although technology is dynamic, it follows a pattern of using knowledge and skills to solve problems or make products that meet specific needs. Herschbach (1995), argues that technology has more to do with technique

than complex intellectual/academic or formal education. According to him, technology has a stronger bearing on method and application. This shows that technology is not limited but dependent on the perspectives of individuals and how they understand the concept based on their areas of expertise (Abdul, Che, & Wati, 2012). It also cannot be limited to only formal education since some part of technology is informed by higher learning, while other parts are related to the application and practical aspect of technology (Herschbach, 1995), which is applied in all manner of industries including the restaurant industry to improve service delivery.

2.3 Restaurant Establishments

Ghana's food sector continues to expand. The sector consists of hotels, resorts and restaurants. Out of these three categories, the fast food restaurants and fine dining restaurants sector have experienced the largest growth over the past few years. This indicates that the craving for foreign and ethnic foods have increased, showing a promising \$1 billion valuation of the food service market in Ghana. The growth is estimated to be at a 20% annual rate (Ashitey, 2008). The national statistical services, in their findings of the provisional gross domestic product, 2012, shows that the greatest contributor to the GDP growth of the country is the service industry, contributing about 49% to GDP. In this industry, the restaurant and hotel sectors recorded growth of more than 10%. (Ghana Statistical Service, 2012).

This indicates that, the market for the restaurant business in Ghana is quite attractive and lucrative. Some factors explaining why Ghana's food sector is doing so

well are, Ghana's relatively stable political climate, and rapid growth in the private sector. Also, Ghana's growing population especially the youth are developing preference for foreign dishes and cuisine. The behavior of business men and women who now prefer to hold meetings at restaurants, and the expansion of the tourism sector and the in flood of expatriates working for multinational companies in the country (Ashitey, 2008).

In her dissertation, Turkson (2012), also made the connection with the growth of tourism and the setting up of restaurants and hotels in Ghana. Although her work sought to understand the quality of the hospitality industry in Ghana, her work noted the rapid growth in the industry. The country is now boasting of hotel and restaurant establishments that meet international standards, International hotels from the United States of America have established some hotels in the capital city, Accra, which include Hilton Hotel, Holiday Inn Sheraton. Other international hotels such as Golden Tulip has one hotel in Accra and another in Kumasi (Ashitey, 2008). Kentucky Fried Chicken (KFC), is also another huge American fast food company that has opened 10 restaurants in Accra, with the objective of opening more branches in Ghana (Omari, 2014).

There are also the informal sector restaurants in Ghana, which includes way side food vendors and chop bars. They are preferences for a section of the Ghanaian society. The operations of informal sector restaurants in Ghana started before the proliferation of the formal restaurants (Omari, 2014).

According to Cavusoglu's (2015) research, the restaurant industry is divided into two main categories namely chain restaurants and independent restaurants. His work describes chain restaurants as two or more eating establishments at different locations but owned by one party, having all activities and operations related through some legal entities. Independent restaurants are restaurants that are operated by its owners and are not affiliated to any international or national body (restaurant). However, gathering from the definitions provided, there seems to be some underlying factors that are almost constant when one tries to explain the concept of technology (Cavusoglu, 2015). His work goes on further to highlight a more segmented categorization of independent restaurants based on the level of service rendered by a restaurant.

Quick service restaurants offer limited variety of food and in a very fast fashion. In such places, food is ordered at the counter and paid for before consumption. These restaurants may employ the use of drive through service. Casual restaurants offer food services by serving customers at a table and paying after consumption. This type of service is a lower cost version of fine dining restaurants. Fine dining restaurants offer a more expensive and luxurious eating experience for customers with high level of service (Cavusoglu, 2015).

Assessing the restaurant industry in Ghana and America, suggestion can be made that the restaurant industry contributes greatly to the economic activity of the service sector. The phenomenon of eating out is creating more establishment of restaurants in the

society and meeting the needs of busy working mothers and workers by providing a variety of dishes at their convenience (Inkumsah, 2011).

2.4 Restaurant Operations

References have been made to how restaurants used to operate before the existence or introduction of restaurant technology. In his article, Doran (2012), describes how many of the activities in the kitchen were done by hand and services were rendered manually with a simple cash register to collect payment for services. Describing the methods as “arcane”, his work states that although the use of technology was low, restaurants were still somehow successful. Operators of restaurants had to be highly skilled to provide services needed. Doran’s article gives some insight into how restaurants operated before restaurant technology, indicating the importance of skills to effective work in a restaurant, which also infers that operations were tedious and slow.

Restaurant operations over the past decade has experienced some changes. These changes came about because of the increase in types and styles of restaurants. Moving from catered food, airline food service, to family dining restaurants, to road side diners and then to fast food restaurants (DiPietro, 2017). As the categories of restaurants evolved, so did the services of the various restaurants. Technology was used to introduced ways of serving customers in a more engaging way, bringing change such as self-service, counter service and green practices to the restaurant services. The operations of restaurants, the design of restaurants and the development of menus for restaurants have all changed over the past decade (DiPietro, 2017).

2.5 Technology in restaurant operations

Connolly and Olsen (2001), in contributing to the restaurant discourse imply that the biggest driver of change in the operations of restaurants in future is technology. The future of the hospitality industry is saturated with the use of technology making a difference in the hospitality industry (Connolly & Olsen, 2001). The use of technology in delivering service is becoming quite attractive to the service industry, thus restaurants are employing the use of *information technology* (IT) in rendering services to customers. The use of point of sales (POS) systems in restaurants is one of the ways technology is being incorporated. The kitchen delivery service is one of the systems available to restaurants now.

This employs the use of a point of sales (POS) to help waiters and cooks manage orders to make sure customers are served in a timely manner and ensuring served foods are fresh and hot (Doran, 2010). According to literature, input technology is bringing about change in the restaurant industry through the use of equipment for more efficiency and effectiveness and less labor required (Muller, 2010).

Another use of technology that is making a great impact is self-service technology, which was imported from other industries by the food service industry to improve the service experience for customers. The self-service technology describes how restaurants display their services and menus and allows customers to place their orders themselves and pick up orders, without having a waiter or waitress to serve them. This

service is mostly used in banks where customers interact with an interface to select the services they would require from the banking hall.

This allows for more accurate convenient delivery of services. Using this technology enabled the restaurant industry to rekindle the declining performance of service providers in the food service industry (Ruiz-Molina, Gil-Saura, & Berenguer-Contrí, 2014). A study conducted by Kincaid and Baloglu (2005), showed that self-service technology improved the provision of service in the restaurant industry because it attracted more customers. It has also helped restaurants to gain information about their customers (using tablets and mobile apps) and align marketing campaigns directly to specific targets (Kincaid & Baloglu, 2005). Technology was employed by restaurants to improve their operations concerning inventory management systems, as well as expanding marketing systems and strategies.

The use of technology in restaurants was aimed at improving performance and productivity for sustainable success (Huber, Hancer, & Thomas, 2010). Sigala (2003), brings to the table the concept of proper strategy. Her study reveals that it is not just merely adopting technology that brings about improved productivity, but rather adopting technology strategically as an organization and integrating this system of adoption into organizations' strategies (Sigala, 2003). This could be applied in the Ghanaian context, since its service industry is improving rapidly and thus constructing the right tools and methods to use, which may make technology go a long way to enhance the output of its service sector.

There are speculations on the importance of e-business to the restaurant industry in Ghana, and how the use of *Information Communication Technology* (ICT) can greatly improve the hospitality and tourism industry in Ghana. The use of the internet to conduct business transactions brings about benefits such as management of information, cutting transactional cost and better understanding of the market. E-business (conducting business using ICT, the internet), can be used by restaurants to manage guest's information as well as guest orders (Asabere, Doku, Kusi-Sarpong, & Opppong, 2014). To consolidate all this research, this project sought to apply the theoretical framework: *the theory of the business*, to align the use of technology in the restaurant business showing how business owners or interested parties could make assumptions as to what would make their business successful, when considering starting a restaurant business.

2.6 Theoretical Framework

Drucker's (1994) *theory of the business* states that businesses must be governed by a framework to understand their operations, and how to model their activities to attain profitability and sustainability. Thus, based on this assertion, businesses can improve their quality of performance by applying the theory of the business (Daly & Walsh, 2010). According to the *theory of the business*, there are certain assumptions that drive the profitability of a firm in an industry. Drucker further explains that with every organization the initial mission, vision and purpose of the business is an assumption.

Thus, how a business operates and how it is structured stems from an assumption that leads to creating a certain value, which leads to the return on investment of the business. Drucker the outlined the specific areas in which these assumptions are derived. He made mention of markets, customers, competitors, society, technology, and internal strengths and weaknesses as what forms a firms' *theory of the business*; shaping its values, core operations, decision making and its role or purpose as a business (Drucker, 1994). To implement the assumptions and construct of this theory to the phenomenon of technology use in the restaurant industry, would mean to try to understand what, over the past decade has become the theory of the business for restaurant establishment. Deducing from literature reviewed on cases on America shows that the assumptions driving the use of technology are that customers demand quality service and the point of sales (POS) system provides an improvement of service for customers (Doran, 2010) .

The issue of waiting time for customers is also one that technological inputs addresses by using e-tablet menus to speed up service process and offer a unique experience to customers (Srikanth, Buchanan, & Miller, 2014). A case study about China showed how the use of social media is beneficial to the restaurant industry in terms of information and data analysis as well as improving dining options for their customers. The paper suggested that restaurants in china should consider devoting resources to improve their social media presence (Diaping, daidu, Meituan platforms) to capture value from their markets. In this situation, *the theory of the business* for Chinese restaurants would factor social media as their technological assumption. (Ghiselli & Ma, 2015)

2.7 Conclusion

In analyzing available related literature on the concept of technology use in restaurants and using the theoretical framework, it can be inferred that the technology assumption proposed by Drucker (1994) has a very significant bearing on the restaurant industry. Restaurant owners and managers need to review their management strategies and find out how well their assumptions tie in with the current trends in the business environment for restaurants.

This study seeks to use *the theory of the business*, to identify the assumptions concerning the use of technology in five restaurants in East legon, and how it is changing their operations, as well as marketing strategies.

Considering the related literature reviewed in this chapter, an appropriate method for data collection and analysis is selected. Chapter three details the methodology for data collection and analysis to enable answering the research questions of this study and achieve the objectives of the study.

CHAPTER 3: METHODOLOGY

3.0 Introduction

This section of the study details the approach used in data collection and data analysis. It outlines the research design and research approach, sample population as well as the sample size, and data collection tools. The techniques and concepts employed are to aid the researcher in answering the stated research questions to achieve the objectives of the study.

3.1 Research Approach

The qualitative approach is preferred because it relies heavily on descriptions that provide a deeper understanding of the topic under study. A qualitative approach is most prudent for this research as the topic under study is a new area of study for the setting selected. studies concerning the use of technology in restaurants in Accra have not been documented enough to show the dynamics of technology in the restaurant industry. Therefore, an in depth understanding of the setting would go a long way to pave the way for more specific research to be conducted.

3.2 Research Design

An exploratory research design was used in carrying out this research to enable the researcher to differentiate between the realities and myths surrounding the use of technology in the restaurant industry in East Legon, Accra. The research questions for this study sought to uncover the realities of the phenomenon of technology use in the restaurant industry. The aim of this study is to draw from experiences of the stakeholders

in the restaurant industry on how technology has been influential in the industry, drawing meaning from interview results and how participants perceive technology is changing the restaurant industry (Waters, 2017).

3.3 Research Scope

Based on the objectives and research questions of this study, the research scope would cover restaurants in Accra, their in-house operations including recipe development, preparation of food, customer service, and how these operations have changed over time. Restaurants are categorized under fine dining restaurants, casual restaurants who have been in existence for more than five years. This is to allow the researcher to identify the different assumptions made with respect to technology in establishing the business, for restaurants that have been in operations for a period and for restaurants that have been recently established.

3.4 Study Population

The population for this study would encompass all restaurants in East Legon Accra. This area was selected mainly because East Legon has been dubbed one of the key areas in Accra to rent or buy a home. Real estate in the area is increasing and demand for housing and apartments is on the rise. Noted for its friendly business environment, East Legon serves as a hub for a lot of businesses, meetings and lunch breaks for business people as there are a variety of restaurants in the area (Meqasa, 2016). There are also a variety of hotels in the area making it attractive to traffic driving through the suburb. The

proximity of the area to suburbs like Spintex, Madina and Ashaley Botwe also emphasizes the inflow of traffic through the town.

The University of Ghana, Lancaster University, Webster University, Radford and Islamic university College, are all educational Institutions situated within the neighborhood and on the outskirts of the suburb that all patronize the restaurants in the area selected for the study. East Legon hubs restaurants such as Vida e Café, DNR Turkish Restaurant, Coco Lounge, Mamma Mia, Burge and Relish, KFC, Papa's Pizza, and Honey Suckle. This makes the area selected for this study useful to the research as there are a variety of restaurants in the area and a lot of economic and social activities that go on in the area.

3.5 Sampling Strategy and technique

The sampling strategy to be implemented in this research is the purposive sampling. This is a non-probability sampling technique that is synonymous to qualitative research. The sample from the population is selected based on criteria that must be present to achieve the purpose of the research; research question and objectives. (Palys, 2008). The restaurants selected for this exploratory case study possess specific features that suit the objectives and research questions of this research. Fine dining and casual restaurants that have been operating for a year or more, are the main targets for the sample. One manager, and one employee, of these restaurants are the specific participants of the sample for the research. Casual restaurants have been described as the sector of the restaurant industry currently gaining attention and growing fast in the industry (DiPietro,

2017). The qualitative nature of this study does not allow for large samples. Thus, five restaurants were selected based on the criteria given for this research.

3.6 Data collection and analysis

The main data collection tools utilized for this research are semi structured interviews and observations. Interview responses were recorded either by voice recording or notes taken during the interview. The semi structured nature of the research allowed participants to express their perspectives and experiences with the phenomenon under study. To get in-depth rich data, observations were carried out inside of the restaurants based on the permission given to observe and understand how technology is being applied to operations in the restaurant.

3.7 Data Analysis

All data collected were analyzed based on themes extracted from the outcome of interviews. Themes were developed from interview results and used to do the grand narrative. Attention is paid to ensuring findings reflect the subjects' views and responses and not that of the researcher.

3.8 Ethical Considerations

Participants are aware that the research interviews are on a voluntary basis and not obligatory. Also, non-disclosure agreements were made available to participants in the sample who agree to take part in the research. During interviews, research

participants have the liberty to approve of voice recording of the interviews before the researcher can be allowed to record conversations.

3.9 Limitations

Time constraint is one of the major limitations of this research. As the researcher conducting this study has academic obligations that restricts the amount of time available for conducting research. The willingness of parties involved in the sample to cooperate with the researcher accessing and collecting data may affect the research procedure and success.

To be able to manage the limitation of confidentiality, confidentiality agreements were given to stakeholders who want to be anonymous. Participants were also being made aware of the fact that findings and purpose of the research is solely academic would not be used for any other purpose.

CHAPTER 4: DATA FINDINGS AND ANALYSIS

4.0 Introduction

This chapter is in three main sections, organization and nature of data collected, analysis of findings from the five restaurants, and concluding insights. In these three sections the researcher elaborates on how the data was collected, the significance of the content and how the theoretical framework informs the study conducted. Also, reference is made to show how objectives and research questions tie in with data collected.

4.1 Organization and nature of data collected

In line with the research topic, **the dynamics of technology in five restaurants in East Legon, Accra**, data was gathered, by interviewing 10 participants in total. The research was conducted with a qualitative approach. Hence all analysis and conclusions focused on findings of the five restaurants that were studied. These interviews were semi structured in nature, and for each restaurant, one manager as well as one employee was interviewed. Interviews were guided by a set of interview questions. However, responses were not limited to the questions provided. The purpose of the research questions was to tease out the different perspectives of participants on the use of technology in their businesses, and to answer the research questions and achieve the objectives of this project.

Interview questions sought to identify and understand if technology use in the restaurant business was preeminent, and if it had facilitated changes in the operations in the restaurant business.

All interviews were voice recorded and later transcribed for data analysis. All participants voluntarily consented to their participation. Restaurants were selected based on certain categorical features including, must have been in operations for a year or more, must either provide fine dining restaurant services or casual restaurant services, and must be situated in East Legon, Accra. The interview questions used in generating data were:

1. How long has your business been operating?
2. Tell me about the way you carry out activities in this restaurant since its inception?
3. What changes have you made to make your business serve its customers better?
4. What part is technology playing in the daily activities of your business?
5. What technological tools do you use in retaining and gaining new customers?
6. How successful have these tools been since you started using them?
7. How do you advertise for your restaurant?
8. Tell me about what you use in making food preparation easier and faster?
9. In your perspective, what does the future look like concerning the use of technology in the restaurant business?

4.2 Findings from the Various Restaurants

For this research, all restaurants that took part in the study were labeled as restaurants A, B, C, D, and E, with the objective of maintaining the confidentiality agreements made them. Also, participants are identified as Manager A, manager B,

manager C, manager D, manager E, Employee A, Employee B, Employee C, Employee D, and Employee E. This means that manager A and employee A are affiliated with restaurant A; the same applies to all other participant letters and their corresponding restaurant letters. The next section outlines summaries of the responses of the participants from each restaurant.

4.3 Summary of Responses from restaurant A

Per the interview questions asked, **manager A** indicated that their restaurant had been in operation for about 7 years, and he has been working in the restaurant space for almost 20 years. He mentioned the daily activities that are executed to serve customers and how over the past 7 years these activities have changed. He talked about how orders used to be written on note pads and sent to the kitchen before the food can be served to the customer. There was a similar routine for drink orders sent to the bar. He discussed that the introduction of technological tools like the point of sales system has helped to improve and speed up the services of their restaurant.

When asked the question: *What changes have you made to make your business serve its customers better?* **manager A** described how orders are now inputted into a computerized system that prints or relays information to the kitchen reducing the time it takes for an order to be ready by a great margin. There is no need to walk all the way to the kitchen (the back end) to announce the order. Restaurant A also makes use of a computerized data base system that helps them keep track of their customers and engage them in their promos, as well as sending them warm wishes during festive seasons. The

manager explained that this has helped them maintain and attract new customers. **For manager A**, technology's presence in the restaurant business has influenced every activity the restaurant executes and allows them to deliver their services better.

Manager A further explained that, technology has helped reduce errors in recording information, taking orders and administering bills for payments, increased security, checks progress, employee behavior, theft and pilfering. The restaurant makes use of the internet and social media platforms to advertise its menus and services. According to him, the restaurant does not use radio or TV broadcasts for advertisement, using the internet (their website) gave them access to customers both in and outside the country. They also use traditional forms of advertisement were the use of billboards or sign boards at prominent location. There was also the use of digital screens to display to customers who came to the restaurant the menus and special offers the restaurant has, as well as their promos. They also aired football matches all as a means of attracting customers and entertaining them as they wait for their food. Customers also made use of their "hotline" to make orders to either have them delivered or come over to pick them.

Question 8: *Tell me about what you use in making food preparation easier and faster?*

The response to this question indicated that, in the kitchen, there was the use of new equipment such as the hotplate and toasters that enhanced the speed at which food was prepared and served. They also use new and improved ovens with timers that ensure food was cooked and not burned to reduce waste.

In response to question 9: *In your perspective, what does the future look like concerning the use of technology in the restaurant business?* For manager A, technology use in the restaurant industry has now become fundamental for sustainability of restaurant business, however, there is the issue of workers losing their jobs since “machine can now do what humans are doing now.” The future for restaurant businesses has technology at its heart and it is changing the traditional way restaurants operate.

Employee A has been working with the restaurant for 4 years, and he also shared the same sentiments with **manager A**, on concepts such as changes in how customers are served, how the kitchen is notified of orders, using the point of sales system. In his view technology has provided the restaurant with tools and equipment that has made cooking faster and serving more customers at a sitting within a short time. In his view technology made customer service better and faster. For instance, using tablets to take orders increased the number of customers they could serve within a specified time. This is because the information can be sent directly to the kitchen as they input the order. For employee A, the future of restaurant businesses and the use of technology is inevitable, since the integrating of technology thus far has improved the opportunities and services of restaurants immensely.

4.4 Responses from restaurant B

Responses from **manager B**, indicates that **restaurant B** is a fine dining restaurant; serving Korean and Japanese dishes, that has been in operations for about a year and a half. Since its inception the restaurant has maintained its daily operations

with very little changes. Waiters and waitresses welcomes customers and take orders on note pads. The orders are then inputted into the point of sales system, and an order ticket is printed and placed on a serving window in a left to right order for the kitchen to prepare the meals.

Manager B's responses of to question 3: *What changes have been made to make your business serve its customers better?* Are as follows.

The only significant change has been the introduction of the point of sales system, which has helped the restaurant improve on its record keeping information database. The manager made mention of being aware of the technological tools such as iPad (digital tablet devices) that could aid in taking orders and sending information to the kitchen faster and explained that they do not use such technology now but would consider it as the restaurant grow to ensure efficiency.

Manager B also made mention of word of mouth advertisement, using signboards, and handing out of flyers as a major means of advertisement. However, in answering question 7: *How do you advertise for your restaurant?* **Manager B** stated that, now, they have also employed the use of social media platforms to showcase their meals and menus and post events for festive seasons and holidays.

As a means of retaining customers the restaurant seeks to employ the services of a live band at the restaurant, they also had digital screens that entertains their customers.

For **manager B**, technology in the kitchen was low, since they only used a few advanced

equipment like the microwaves, ovens and meat slicers, but did not have a point of sales software or system that was operating in the kitchen back end, but only at the front end.

In conclusion **manager B** stated that in the future, technology use would be critical to sustainability of restaurants. He stated that technology is being used by most restaurants and thus to stay relevant and serve customers better his restaurant would integrate technology in its growth in order not to be left behind. Citing that it would be useful to have surveillance cameras in his restaurant to help improve security in his restaurant.

Summary of the responses to the interview questions stated for **employee B**. He has been working with the restaurant since its inception and has observed that the important thing for him is to make sure that his customers are pleased with his services. He spoke about using YouTube to learn more about the cuisine they serve their customers, since he was unfamiliar with it, and expressed how useful the internet has been for him to enable him to serve his customers better. He stated that the restaurant uses mainly the traditional means of serving customers in restaurants and that there is very little change with respect to technology or its use.

He however admits to the fact that integrating technology would be very essential since “we are in a technology world, so we can’t do away with technology”. In answering question 5: *what technological tools do you use in retaining and gaining customer?* He stated that the use of the internet is one major tool which is changing the way restaurants market and advertise for themselves, because making use of social media platforms and

the internet, you have more people being exposed to what you do as a restaurant, and there are higher chances of improving your customer range and market.

4.5 Responses from restaurant C

For this restaurant, the manager (**manager C**), stated that the business had been in existence for about 7 years, but he had been working in the restaurant for about 2 years. He also mentioned that the restaurant was a fast food restaurant that employed the self-service technology as a means of serving customers. Describing their daily activities, he explained that, when a customer enters, he or she has access to the menu, which is displayed on a large board above the counter. The customer then makes his order and goes to pick it up when the order is ready.

Question 4: *What part is technology playing in the daily activities of your business?*

In terms of the role technology is playing, the manager stated that they employed the use of buzzers or pagers, which they gave to the customer after they had made their orders. When the order was ready, the pager would buzz, notifying the customer that the order is ready for pick up. This self-service system was a bit unusual for their customers when they first began operating, since the customers were used to being served by waiters and waitresses, but over time the customers became accustomed to the system. They however, used to include services of waiters and waitresses when there was rush hour or a crowd in the restaurant.

In his view there was not much technology was changing in terms of their daily activities, however the use of the pager system was considered as technology and its use gave their customers a nice experience. As a way of retaining customers, **restaurant C**, employed the use of an application software that allowed customers to order food from **restaurant C** and have it delivered to their homes. They used this application software to also advertise for their restaurant and used their social media platform presence to advertise for their restaurant. As to whether they used TV and radio broadcast for advertisement, **manager C** responded that they do not use these mediums for advertisement.

Question: *Tell me about what you use in making food preparation easier and faster?*

In the kitchen, **restaurant C** uses a lot of advanced equipment including pressure cooker, dough spreader, deep fryer and refrigerators. Interestingly **manager C** did not consider these to be technological tools or technology, but after the interview he realized that these machines count as technological tools. According to him, the use of technology should make things easier, as a result, these tools and devices can be considered as technology.

Manager C concluded by saying that technology would make work less stressful and enjoyable for employers if its playing a big role in the activities of a restaurant. Thus, the future of restaurant businesses must include technology in order to serve its customers better.

For **Employee C**, who had been working for **restaurant C** for about a year and a half, but just started working at this current branch of **restaurant C**, explained that the restaurant run a self-service system, where customers go through the displayed menu, make their orders and have an attendant print out a receipt for them, and when the food is ready, they come and pick up their order. He also made mention of the use of their pager system which was available to customers. He mentioned that they served new customers who were not familiar with their self-service system, in the traditional restaurant manner (a waiter or waitress serves the customer with a menu, the customer orders and when the order is ready, customer is served at their table), and used that opportunity to explain to them their self-service system for the next time they visit the restaurant.

Employee C made mention of how the service is more familiar to the foreigners in the country who visit their restaurant, and the local customers have difficulty ordering their food and picking it up themselves. However, over time there has been improvement in how customers respond to their self-service system. **He went on further to** say that technology has paved the way for advertisement to become more dynamic, not only having to use TV and radio broadcasts, but with the introduction of social media platforms such as Instagram and Facebook.

In response to question 6: *How successful have these tools been since you started using them?* He described how the use of these technological tools (social media) helped restaurants to “*sell themselves*” easily and has helped to make more people know about **restaurant C**. He cited an example where restaurant C, held a promo on social media,

and had an overwhelming number of participants. In his view having and owning a delivery system is one major way to serve customers better, also technology has introduced the use of the point of sales system, which has made service easier. He gave an example of one of the restaurant's branches opening without the point of sales system and this made operations hectic and hard to track revues and profits for the day. He believes technology is really helping and it is changing the restaurant business as a business owner or interested parties you need to involve technology, because "*you can't really trust manual stuff*".

4.6 Responses from restaurant D

From the responses of **manager D**, **restaurant D**, has been operating for 2 years. In response to question 2: *tell me about the way you carry out activities in this restaurant since its inception?* The usual operations of **restaurant D** have been consistent since its inception. **Manager D** expressed that customers are welcomed and served with a place to sit and then a menu chart is given to them. Orders are inputted into their point of sales computerized system and the ticket is sent to the kitchen for the order to be prepared. The manager also made remarks about beginning the restaurant business already using technological systems and procedures. All their stock and information were computerized, and systems were put in place to serve customers better.

Thus, there has not been much changes with the operations of **restaurant D**. References were made to how technology has made operations change over time and how the implementing of the Wi-Fi (wireless internet services) helped retain and attract

customers. Some significant changes had been experienced in their advertisement as a restaurant. Response to question 7: *how do you advertise for your restaurant?* The restaurant used to send out flyers to offices and participate in events where they set up stands to talk to people about their restaurant. However, over time the restaurant has resorted to using social media platforms and also engaging customers personally when they visit the restaurant.

These new methods have shown more positive results as opposed to the use of flyers and the use of stands at events. The use of equipment like blenders, ovens and microwaves constituted technology usage in the kitchen.

For **manager D**, the use of technology in the restaurant business in the future would reduce the stress in carrying out activities such as checking attendance of employees through finger print identification system and log ins. This would reduce errors and improve accuracy of records keeping.

For **employee D**, he discussed that he had been working with this restaurant for only 6 months as a barman and expressed very little understanding in the concept of the project. He however identified, the various activities the restaurant goes through to serve its customers, and how they use the point of sales system to assign bills and take orders to send to the kitchen. He mentioned how technology has allowed them to implement delivery services to their operations using Jumia (an online platform that provides shopping and delivery services to the region) services.

In his view, technology had provided them with equipment like the deep fryer, to help with serving some dishes in a speedy manner. For employee D, technology use in the restaurant industry would help reduce the stress of doing some activities manually; pounding fufu and breaking ice, which made those activities tedious and time consuming.

4.7 responses from restaurant E

Restaurant E, has been in operations for 8 years, and according to **manager E**. **according to him**, during the early days of the restaurant, their operations involved taking orders on pieces of paper; the order slip, the billing slip and the third sheet was for keeping records. However, now the restaurant has a computerized point of sales system, that helps waiters to place orders and send a copy to the kitchen for the chef to receive and prepare the order. This system has made serving customers simpler. **Manager E**, made mention of how their presence on Facebook, helps them to advertise their services, and being able to reach more people through their website.

Response to question 4: *what part is technology playing in the daily activities of your business?*

The use of technology has also helped **restaurant E** track the number of people who visit their restaurant daily. **Manager E**, mentioned how the use of computer software and computerized system made it easier to keep records, speed up services to customers and also making it easy to share financial data and records to interested parties. This system also helped the restaurant to regulate prices and make changes easily.

Response to question 8: *Tell me about what you use in making food preparation easier and faster?* The manager made mention of large equipment they use in the kitchen to make cooking more efficient and passed a comment that it would have been extremely tedious and almost impossible to manage the customers they have now with the systems they used to use 5 years ago. He also made mention of the fact that technology use in restaurants would improve over time and more advanced devices and systems would be implemented to serve customers better.

Employee E, who has been working with **restaurant E** for 4 years, expressed his delight in technology being used in the restaurant business. He also made mention of how the restaurant had changed from what he termed as “man power”; taking orders on paper (captain order), in three parts. One for the kitchen one for the customer and one for records. He drew attention to the fact that the restaurant had both lean and peak seasons, and there were some activities that responded to these seasons; hiring live bands, to attract customers. These activities needed to be observed to know when to stop them, to avoid making losses.

Another form of customer retention method implemented was the delivery service the restaurant adopted. The restaurant employed the use of Jumia services, and through their website to help customers order food and have it delivered to them. In the view of the employee, this helped them to increase revenue and to reach customers even beyond east legon. This was made possible by the use of technology.

For **employee E's** response to question 7, he stated that the restaurant used to advertise with billboards in the beginning, but since they became popular, they do not do much advertisement since people recommend them to others. He however stated that, currently most businesses use social media platforms to advertise for their business and this has proven more efficient and reaches more people than the old methods, **Employee E**, ended by encouraging the restaurant business to use technology and use it well to gain its benefits. He also urged individuals to learn more and understand technology. He expressed how helpful technology has been for him as a barman. He claimed he could go online and learn new recipes and methods for his smoothies and fruit juices.

4.8 Conclusion

In analyzing the data collected, four major themes arise from the responses from the restaurants: **efficiency, accuracy, convenience, and security**. These themes, help satisfy the research questions and objectives stated in chapter 3 of this project.

Efficiency

Respondents explained how technology is changing operations in their various businesses by indicating how the use of the point of sales computerized system has enhanced their services in taking orders as well as preparing orders in a shorter time. The front and back end communicate more efficiently due to technology use (walking to the kitchen is no longer a practice). For restaurants who did not have the point of sales system in the kitchen, they commented on how implementing that system would be their

next move in terms of improvement. Having new and advanced kitchen equipment also improved food preparation times and quality. This statement was made by **employee E**, expressing the efficiency of technology in their restaurant.

“Now we have the computerized system, which after writing the order, the cashier just punches into the machine, which send the information into the kitchen.

There’s a printer that will print the order there and then, the chef takes over from there. It has been very effective and has made things very easy for us. The orders come quick, quick, quick”.

Accuracy

The use of technology has reduced error and improved accuracy in record keeping and data management in the five restaurants. The daily activities of the five restaurants has been made easier and hassle free since the inception of software and systems that help store data, share data, and manage data.

” Looking at the ease, it’s easier, it’s safer, and it’s easy to get records and you can store these records for a long time. It’s easy to share these records, you don’t need the accountant to come here to go through every single piece of paper, you can send it as an excel file, and its easy when you are even increasing prices, you just input everything on the computer if you want to increase by a certain percentage, you just input it and the P.O.S picks it up and runs it.”

Manager E made this statement during his interview, expressing how the new software has helped him in his restaurant business.

Convenience

The use of social media platforms to advertise for the restaurant business also made it easier for people to know the various services and promotions, as well as their menus. Customers were able to access information about the various restaurants in the comfort of their homes. Technology's role in the restaurant business has brought restaurants closer to their customers.

Security

According to participants' remarks, technology has also increased the safety and security levels in the restaurant businesses of these five restaurants. Using the point of sales system has allowed for better tracking of transactions and activities. All orders are registered in the system and can be easily assessed and checked for any errors. Using these new computerized systems reduce errors in business activities; making them more trust worthy and useful. Some restaurants also mentioned how using the software system provided them with security to prevent and reduce theft. The software possesses security features and assigns each waiter to all the transactions they carry out.

The major aspects of the restaurant business that have been influenced by technology use is food preparation, taking of orders and advertisement. These changes made by technology have been adopted as the new ways of operations and drives the profitability and sustainability of the restaurant business.

Based on the analysis provided and the insights from each participant, it can be inferred that *the theory of the business* for setting up a profitable and sustainable restaurant business in east legon involves considering the level of customer satisfaction customers, would be requiring; delivery services social media presence and online presence, high levels of efficiency and productivity of the restaurant. Serving customers in a timely fashion, providing high quality services and products. Also, another assumption one must make is that, all data, stock and inventory must be stored in a manner that is easily accessible and easy to share. Data must be secured and should be easily updated.

Considering these assumptions, it is prudent to say that according to the theory of the business for setting up a restaurant in East legon participants claim technology must be a major factor in developing how to operate as a business, to reach a large customer base and run a sustainable business. The details of interview results are available and would be provided upon request

The next chapter finalizes all the materials of this research and concludes the entire project report.

CHAPTER 5: CONCLUSION RECOMMENDATION AND LIMITATIONS

5.1 Conclusion

In the quest to understand how the use of technology in restaurants is changing the dynamics of the restaurant business, this research project focused on five selected restaurants in East Legon Accra. Narrowing in on how technology use in the daily activities of these restaurants had brought about change in their operations, and which specific areas technology had influenced.

The research topic, **the dynamics of technology in five Restaurants in East Legon, Accra**, was guided by research questions as well as objectives to collect data that helped to answer the question the researcher sought after. To achieve this the researcher used a qualitative approach research method. Semi structured interviews were used in gathering data from participants. All participants volunteered to take part in the research. Interviews were conducted on a one-to-one basis with a set of interview questions. All restaurants selected were in the category of fine dining and casual restaurants and had been in business for more a year or more.

After successful completion of data collection and data analysis, it was observed that the research questions as well as the objectives of the study had been achieved. Participants' insights and contributions confirmed the use of technology in the restaurant business is preeminent and it has brought changes in the way restaurants advertise, prepare food, take orders and serve customers. Technology has aided with the introduction of the self-service technology into the restaurant business as well as delivery

and pick up services in restaurants. These new operational activities have allowed the five restaurants in east legon to attract more customers and increased their scope; beyond east Legon and their revenues as well.

Technology use in the restaurant business is becoming more and more fundamental for restaurateurs and as such it was highlighted that to be able to run a sustainable and successful restaurant business, one must seriously consider applying technological tools, skills and devices in their appropriate proportions.

The theoretical framework, *the theory of the business*, by peter Drucker, informs this research project. The purpose of this theoretical framework was to identify the connection between, the changes that technology is bringing into the daily operations of the restaurant business and the kind of assumptions these changes would drive or motivate the mission, vision and business model design of a restaurant business, if one wanted to start and operate a restaurant business. Considering the findings of this research it can be said that the assumption, incorporating technology into the business model of setting up a restaurant according to the five restaurants studied, is one that should be borne in mind when establishing sustainable and profitable restaurant. *The theory of the business* makes mention of other factors such as customers, markets, society and internal and external strengths and weaknesses.

All these factors are affected by the assumptions in terms of technology that one would assume in starting up a restaurant business. Therefore, according to findings of this research, *the theory of the business* in the view point of participants constitutes of

assuming technology would be a great tool to attract maintain and satisfy customers since its use enhances operations of restaurants in today's world.

5.2 Recommendation

This research is focused on only five restaurants in East Legon. It was conducted with a qualitative approach thus findings cannot be generalized over a larger population. However, the findings indicate that there is a big influence of technology on restaurants in our Ghanaian context and more information or knowledge on this would greatly enhance how well the Ghanaian economy can improve its restaurant business sector, which would positively affect the Ghanaian economy.

It is therefore, suggested that more research should be done considering the different locations and hot zones for restaurants and the types of technology that are thriving there, and also how best technology can be put to use in restaurants to yield the optimum profits, whilst serving customers well and creating sustainable businesses. A more quantitative study can also be conducted to give results and findings that can be generalized to a larger population.

5.3 limitations

In conducting the research, the research faced some challenges that made data collection and analysis somewhat difficult. During the interview, it was observed that some participants and some difficulty expressing their thoughts clearly. The use of the English language was one of the causes for this. Also, some participants had very little understanding of the concept of technology, the research had had some difficulties in

breaking down the concept for participants to understand. Also, time to schedule a meeting for the interview was a challenge as restaurants were busy and it was difficult to get a hold of employees and managers to sit and have the interview.

References

- Abdul, W. S., Che, R. R., & Wati, O. I. (2012). Defining the Concepts of Technology and Technology Transfer: A Literature Analysis . *International Business Research* , 5(1).
- Abdulai, J. (2016, January). *Accra Food Hack – Positioning Food & Technology As Catalysts for Tourism*. Retrieved from circumspecte:
<https://circumspecte.com/2016/01/accra-food-hack/>
- Adjei, D. (2017). *Technology as a tool for total customer service*. Retrieved from myjoyonline: <http://www.myjoyonline.com/opinion/2017/February-23rd/technology-as-a-tool-for-total-customer-service.php>
- Asabere, N. Y., Doku, V., Kusi-Sarpong, S., & Opppong, D. (2014). Adopting Electronic Business in Ghana: Story of the Hospitality Industry . *International Journal of Computer Applications*, 85(4).
- Ashitey, E. (2008). *Ghana's Food Service Sector 2008*. Global Agriculture Information Network, Ghana HRI Food Service Sector .
- Brown, M. D. (1990). The Restaurant and Fast Food Race: Who's Winning? *Southern Economic Journal*, 56(4), 984-985.
- Cavusoglu, M. (2015). An analysis of technology applications in the restaurant industry. *University of South Florida Scholar Commons*, 1-5.
- CliqAfrica Limited and Advanced media. (2017). *The 2016 Annual Ghana Social Media report* . CliqAfrica .

- Comparison of Convenience Sampling and Purposive Sampling . (2015). *American Journal of Theoretical and Applied Statistics*.
- Connolly, J. D., & Olsen, D. M. (2001, July). Tourism and Hospitality Research. *An environmental assessment of how technology is reshaping the hospitality industry*, 3(1).
- Daly, P., & Walsh, S. J. (2010). Drucker's theory of the business and organisations: challenging business assumptions. *Management Decision*, 48(4).
- DiPietro, R. (2017). Restaurant and foodservice research: A critical reflection behind and an optimistic look ahead. *International Journal of Contemporary Hospitality Management*.
- Doran, D. (2010). Restaurants and technology – past, present and future: a practitioner's viewpoint. *Worldwide Hospitality and Tourism Themes*.
- Douglas, K. (2015, August 28). *Ghana: Opportunities in Ghana's Hospitality Industry*. Retrieved from allafrika: <http://allafrica.com/stories/201509161770.html>
- Drucker, F. P. (1994). *The Theory of the Business*. Retrieved 2017, from Harvard Business review: <https://hbr.org/1994/09/the-theory-of-the-business>
- Ghana Statistical Service. (2012). *Provisional Gross Domestic Product 2012*. Ghana Statistical Service: Statistics for Development and Progress, National Accounts Statistics.
- Ghana Statistical Service. (2012). *Quarterly Gross Domestic Product Second Quarter: 2012*. Ghana Statistical Service , Ghana Statistical Service (GSS), Head Office.

- Ghiselli, R., & Ma, J. (2015). Restaurant social media usage in China A study of industry practices and consumer preferences. *Worldwide Hospitality and Tourism Themes*, 7(3).
- Hanlon, A. (2013). *What is the The Diffusion of Innovation model?* Retrieved 2017, from smartinsights: <http://www.smartinsights.com/marketing-planning/marketing-models/diffusion-innovation-model/>
- Herschbach, R. D. (1995). Technology as Knowledge: Implications for Instruction. *Journal of Technology Education*, 7(1).
- Huber, M., Hancer, M., & Thomas, G. (2010). A comparative examination of information technology usage in the restaurant industry. *Journal of Foodservice Business Research*(3).
- Inkumsah, A. W. (2011). Measuring Customer Satisfaction in the Local Ghanaian Restaurant Industry. *European Journal of Business and Management*.
- Kennedy, G., Nantel, G., & Shetty, P. (2004). Globalization of food systems in developing countries: a synthesis of country case studies. *Food and Agriculture Organization of the United Nations* (83).
- Kincaid, C., & Baloglu, S. (2005). An exploratory study on the impact of self-study technology on restaurant operations. *Journal of Food Service Business Research*, 8(3).
- Kippenberger, T. (1997). The theory of the business. *The Antidote*, 2(1).
- Lynch, T. (2014). Methodology. *Writing Up Qualitative Research (Independent Study version)*.

Meqasa. (2016). *East Legon Locality Profile* . Retrieved from Meqasa :

<https://meqasa.com/popular-places-East-Legon>

Muller, C. (2010). Hospitality technology: a review and reflection. *Worldwide Hospitality and Tourism Themes*, 2(1), 9.

Muller, C. (2010). Hospitality technology: a review and reflection. *Worldwide Hospitality and Tourism Themes*.

National Restaurant Association. (2017). *Restaurant Industry Outlook* . National Restaurant Association.

Omari, R. (2014). Fast food in Ghana's restaurants – Prevalence, characteristics, and relevance: An Interdisciplinary Perspective. 2-6.

Palys, T. (2008). Purposive sampling. *The Sage Encyclopedia of Qualitative Research Methods*, 697-698.

Ruiz-Molina, M. E., Gil-Saura, I., & Berenguer-Contri, G. (2014). Information and communication technology as a differentiation tool in restaurants. *Journal of Foodservice Business Research* , 17(5), 410-428.

Sigala, M. (2003). Integrating and exploiting information and communication technologies (ICT) in restaurant operations: implications for restaurant productivity. *Journal of Foodservice Business Research*, 6.

Srikanth, B., Buchanan, N., & Miller, L. B. (2014). Exploring the promise of e-tablet restaurant menus. *International Journal of Contemporary Hospitality Management*, 26(3).

- TripAdvisor . (2017). *Restaurants near University of Ghana*. Retrieved from
TripAdvisor: https://www.tripadvisor.com/RestaurantsNear-g293797-d7889798-University_of_Ghana-Accra_Greater_Accra.html
- Turkson, D.-B. (2012). Quality Assurance in the Hospitality Industry: A Case Study of Capital View Hotel, Koforidua. *KwameNkrumahUniversityof Science and Technology*.
- Waters, J. (2017). *Phenomenological Research Guidelines*. Retrieved from capilanou:
<https://www.capilanou.ca/psychology/student-resources/research-guidelines/Phenomenological-Research-Guidelines/>
- Webster. (1979). *Webster's New Collegiate Dictionary* . G. & C. Merriam Co.,.

Appendix

Section 1

Project topic: The dynamics of technology in five restaurants in East Legon, Accra.

Research Interview Questions (Draft)

10. How long has your business been operating?
11. Tell me about the way you carry out activities in this restaurant since its inception?
12. What changes have you made to make your business serve its customers better?
13. What part is technology playing in the daily activities of your business?
14. What technological tools do you use in retaining and gaining new customers?
15. How successful have these tools been since you started using them?
16. How do you advertise for your restaurant?
17. Tell me about what you use in making food preparation easier and faster?
18. In your perspective, what does the future look like concerning the use of technology in the restaurant business?

Questions for employee

1. How long have you been working in this restaurant?
2. What are some of the changes that have occurred since you started working here?
3. Do you use any technological tools in retaining and getting customers?
4. Tell me about what you use in making food preparation easier and faster?
5. Has technology helped your business to serve customers better?
6. In your perspective, what does the future look like concerning the use of technology in the restaurant business?