INFLUENCE OF LOCAL STRUCTURAL FACTORS ON TOURISM BACKWARD LINKAGE WITH LOCAL MICRO AND SMALL ENTERPRISES IN KISUMU COUNTY

BY

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DECLARATION

By Student:

This thesis is my original work and has never been submitted for degree in any other University

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I dedicate this work to Mrs Hellen Anyango Ngado, Tonny Travis Ratip and Tyra June Akumu.

ABSTRACT

Though tourism is globally recognized as significant drivers of economic development and growth, its economic potential in Africa is dampened by income leakages which reduce its real contribution in promoting local socio economic welfare in Sub Sahara Africa. In Kenya, there is limited linkage between tourism sector and local economy of Kisumu County, which denies local people the opportunity to optimally benefit from tourism. A number of studies have been conducted mostly on determinants of local participation in tourism, but no study has been done on the influence of structural factors on tourism backward linkage with local economy of Kisumu County - a gap that the current study seeks to fill. The overall objective for the study is to analyse the influence of the structural factors on tourism backward linkage with local micro and small enterprises in Kisumu County. The specific objectives of the study were to establish the relationship between number of income streams within the tourist facilities and local purchase ratio; to analyse significant differences in average score profile amongst groups of local suppliers and explain probability of their sale exceeding government policy threshold of 30%; to model the effect of number of income streams, location, size, type and competition among tourism enterprises on local purchase ratio controlling for patronage rate and visitor length of stay ; to establish the moderating effect of levels of tourism business networks on the relationship between physical location of tourism firms, type of tourism firms and local purchase ratio ; and to analyse the interacting effect of tourism seasonality on the nexus between the size of tourism enterprise, patronage rate and local purchase ratio. The research design was cross - sectional field survey wherein the target population of 266 tourism enterprises were used, and from which a sample of 106 tourism enterprises drawn using proportionate stratified random sampling techniques. The respondents in the study were managers of tourism enterprises. The data was collected using self-administered questionnaires. The first objective was analysed using Pearson`s $\chi^2$ *Statistics,* and Cramer`s *V statistics*. In the analysis of the second objective *multiple descriptive discriminant analysis* and *Linear probability model* was employed; the third objective was analysed using *Multiple regression analysis*. Fourth objective was achieved using *Three Way ANOVA* or 3 x 3 x 2 *Factorial design*; *multivariate analysis of variance* based on a *mixed design GLM model* was adopted in the analysis of fifth objective. It was established that level of tourism business network affected relationship between location of tourism business and local purchase ratio but it did not affect the impact of type of tourism enterprises on the same. The number of income stream within tourism firm has no significant relationship with local purchase ratio. Local suppliers were differentiated by value of weekly supplies, promptness in making deliveries and long term relationship developed with tourist industry. The socio economic variables with significant effect on probability of exceeding 30% sale threshold included amongst others quality of supplies, number of supplier`s employees and frequency of weekly supply. Though seasonality had no moderating effect on the nexus between patronage rate and local purchase ratio, its effect on local purchase ratio depended on the size of tourism enterprises; lastly, all independent variables explained only 14.8% of variation in local purchase ratio. Local purchase ratio of tourism firms in rural areas exceeded those of Kisumu CBD and its outskirts. In conclusion, tourism backward linkages can be enhanced by collaborative strategies amongst tourism firms in rural areas and outskirts of Kisumu City and competitive strategies amongst the same in Central Business District. Product diversification at micro level has no effect on the local economy if linkage between tourism and local economy is weak. Value of supplies and sustained commercial relationship with tourist industry are amongst the key success factor in local supply business. The key contribution of the study is in creating understanding of the role of business network and tourism seasonality in moderating effect of business location and aspect of destination accommodation structure respectively on extent of tourism backward linkage with the local economy. Thus, the study advances the theory of business network and the perspective on tourism seasonality.

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LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
ANOVA	Analysis of Variance
CBD	Central Business District
CI	Confidence Intervals
ECOHIM	Ecotourism Hotel and Institutional Management
HIV	Human Immune Virus
ODI	Overseas Development Institute
RESET	Regression Specification Error Test
SCP	Structure – Conduct – Performance
UNCTAD	United Nation Conference on Trade and Development
UNECA	United Nation Commission for Africa
UNWTO	United Nation World Trade Organization

OPERATION DEFINATION OF TERMS

Tourism	Set of enterprises, organization and facilities designed to cater for needs and wants of visitors.
Backward Linkage	Local inputs as a proportion of all total input procured by tourism enterprise in a given period of time.
Monetary Value	Product of quantity supplied and unit cost
Room Occupancy rate	Total room sold over a week as a proportion of the product of hotel rooms and seven nights times 100%.
Competition	Number of proximal local businesses or tourism enterprises supplying same categories of inputs and services respectively
Delivery timeliness	The length of time taken by local supplier between receiving input orders from tourist facilities and the actual delivery of the ordered inputs.
Patronage Rate	The number of clients or visitors served in a tourist facility in a month.
Tourism Seasonality	Variability or fluctuation of tourist arrivals within a year
Tourism Enterprises	Businesses which provide accommodation, food and beverages to visitors such as hotel, quest houses, lodges, tented camps, apartment and restaurants
Micro enterprises	Any local businesses which employs between one and five employees
Regressand / Criterion variable	Dependent variable/ Backward linkage
Small Enterprises	Local businesses which employ between six and twenty employees
Sustainability of supply business	Length of time in which local supplier is in commercial relationship with tourist facility
Large Tourism Enterprise	Accommodation facilities with fifty or more beds
Business Networks	A number of businesses in the industry with which a given tourism enterprise has commercial relationship.
Subcontracting	An agreement between the buyer and supplier to render

	service or product
Franchising	An arrangement where the proprietor of a business model allows another party to replicate his or her business model subject to imposed conditions by the proprietor.
Brokerage	Service of intermediary in linking buyer and producer without being directly involved in either production and distribution
Unbundling	Outsourcing production and service delivery
Local Structural factors	Dynamic imperfections in the industry and market which present opportunity for enhanced performance through the right management.
Economy of Kisumu County	Network of local micro and small businesses in Kisumu County

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

This Chapter features background information regarding economic linkages associated with tourism development, statement of the problem and purpose of study. It also includes objectives, hypotheses of the study, significance of the study and conceptual framework.

The United Nation Economic Commission for Africa (UNECA) and United Nation World Tourism Organization (UNWTO) projected a positive future growth prospect for tourism in both developed and developing countries (UNECA, 2011; UNWTO, 2011). UNWTO also forecasted that tourist arrival would increase in Africa by 49 million in a span of 10 years from 85 million in 2020 (Samento & Rink, 2016). Despite the positive prospects, Africa accounted for only 3% and 5% of global tourism arrivals and receipts respectively (Samento & Rink, 2016). In order to optimize tourism as a strategy for development in Africa, emphasis must be put on provision of quality tourism services which directly depend on skills development and education (Smento & Rinka, 2016).

The tourism backward linkage with local economy provides the mechanism through which tourism development can contribute to economic well – being of local people in many economies (Nepal, 2010), given favourable structural conditions. This has been demonstrated in Cyprus where development of rural tourism has led to strong backward linkage with other sectors of rural economy (Giannakis, 2014). Backward linkage is defined as demand connection formed between tourism enterprises with other enterprises in the resource market (Frank, Hefner & Paulo, Guimareas, 1999), or as goods and services supplied to tourist industry from within the destination (Weaver and Lawton, 2014). Therefore, backward linkage, which is measured as

proportion of total raw material and components sourced locally per year, is an empirical indication of relative importance of tourism to the local economy (Mak, 2004).

However, there are a number of structural constraints which influence the linkage between the tourism economy and local economy. Structural factors are set of stable variables, which are economic and technical in nature, and influence the conduct of suppliers, buyers, interaction between suppliers and buyers and the performance of an enterprise (Porter, 1998). Alternatively, according to Wickham (2006), structural factors are unique mix of market and industrial imperfections which face a given enterprise in a competitive context, whose dynamic nature result from interacting decisions of buyers, suppliers and competitors, and which affect performance of enterprise. Some of the factors include the prevailing business environment, education and income level among local population, factors behind incidences and level of crime, and rate of female participation in the economy, the factors underpinning the availability of sufficiently trained workforce and quality of infrastructure (Cheng & Lai, 2011 cited in OECD & UNWTO, 2013).

The proportion of tourists` spending in local economy and its associated indirect economic activities induced by tourist spending determine local economic effects of tourism (United Nation Environmental Programme, 2011). According to the report of United Nation Conference on Trade and Development (UNCTAD), economic impact of tourism on the economies of almost all countries of Sub Sahara Africa has not been optimal because of structural constraints endemic in local economy (Giannakis, 2014; UNCTAD, 2017). Some of such impediments are lack of intermediary support structure that facilitate interaction between buyers and suppliers, and mismatch between demand from tourism sector and supply from local economy (UNCTAD, 2014).

Various approaches have been attempted to optimize tourism backward linkage with local economies of Sub – Sahara Africa. Such approaches included community - based tourism and pro poor tourism which have both produced mixed results. Pro poor tourism is defined as "…tourism that results in increased net benefits to the poor people" (Holden, 2013: page 123 – 124; Zhao, 2016). Its main central focus is on enhancing environmental and social effect of tourism development through empowerment, capacity building, access to infrastructure and basic amenities (Zhao, 2016). Pro poor tourism is realized through policy adjustment which leads to increase in the levels of tourist arrivals to a destination, encouraging backward linkage of tourism through high quality and diverse local product which can induce tourists to spend, and ensuring that the poor local people receive a high proportion of tourist expenditure (Holden, 2013).

Despite the apparent advantages of pro poor tourism in spreading tourism benefits to the poor people, the concept of pro poor tourism has been found not to be innovative from both theoretical and methodological angle on several grounds: it is claimed that any form of tourism can be pro poor, that the distinction between pro poor tourism and other forms of tourism such as community – based tourism, alternative tourism, and sustainable tourism is blurred (Zhao, 2016). Furthermore, that though the impact on poverty has such three aspects as direct effect on poverty, secondary effect on poverty and wider dynamic effect on economy and growth (Zhao, 2016), current practices of pro poor tourism is biased heavily on direct effect on poverty, but ignoring the other two (Mitchell & Ashley,2010). Also, it is not easy to influence the attitude of mainstream stakeholders towards pro poor tourism. Last but not least, development model based on pro poor is not easy to replicate without modification because the root cause of poverty is not the same, and it is deeply rooted in the unique context of each location (Zhao, 2016). Lastly, a

long term benefit to the poor is questionable as pro poor tourism can be undermined by structural inequality within the political economy (Holden, 2013).

Like pro poor tourism, community – based tourism is an approach to planning and development of tourism based on assumption that sustainability of tourism depends on local community involvement (Mair, 2016). It adopts a bottom – up approach to tourism policy - making and development and its key utility has been the reduction of inequality and poverty in the community, enhancement of community empowerment, control and ownership of tourism enterprise by community members (Mair, 2016). However, the main weakness of community – based tourism is in its failure to acknowledge that structural differences among community membership and their different levels of empowerment and interested has effect on the quality of policy decisions affecting optimal management of tourism enterprise (Mair, 2016).

In Sub Sahara African region, tourism in East African region has been affected by structural impediments (Iain et al., 2013). There are acute deficiencies in human resources critical for tourism development; the region is also incapacitated by limited range of tourism products, policy and regulatory frameworks necessary for tourism operation are inadequate and business environment is unpredictable (UNECA, 2011). Many models which have been developed with the aim of improving tourism earning in East Africa have not helped East African countries realize their goal of alleviating poverty (ODI, 2006). Some new strategies have been proposed to improve tourism linkage such as having local enterprises dominating procurement, promoting local cultural products and boosting local entrepreneurs' capacity to deliver product and inducing increased tourist expenditure within the local economy (ODI, 2006). The extent to which the proposed strategies have born fruits so far is not yet known (Iain et al., 2013). Generally, the unsuccessful interventions attempted to enhance backward linkage of tourism with local economies of African tourists` destinations and scanty economic data on tourism sector has

contributed to deeply rooted doubt about the real trickle down economic effect of tourism in Africa and East Africa in particular (Iain et al., 2013)

Tourism development in Kenya was induced and accelerated by the decline of world prices of Kenya`s traditional exports in 1963, but the aspiration of developing tourism was undermined by limited financial resources coupled with inadequate skilled personnel (Yobesia & Valle, 2009). In the year 2002 the momentum toward developing tourism was revived by Kenya government. Kenya government through its sessional paper entitled *Economic Recovery Strategy for Wealth and Employment creation 2003 – 2007*, identified tourism as one of key determinant of economic activity (Ministry of Industrialization and Vision 2030, 2002). Its main intention was to use pro poor tourism as a strategy for strengthening linkages of tourism with the rest of economy (Ministry of Industrialization and Vision 2030, 2002).

However, tourism is yet to develop significant backward linkage with extractive activities which support majority of population (Yobesia & Valle, 2009). The finding was a confirmation of official Kenya`s Government position through the *sessional paper No.2 of 2005 on Development of Micro and Small Enterprises for Wealth and Employment Creation for Poverty Reduction* that there is limited linkage between large enterprises and Micro and Small enterprises in Kenya (Ministry for Labour and Human Resource Development,2005). Also, according to a World Bank report titled '*Kenya Country Economic Memorandum: From Economic Growth and Shared Prosperity'* published in 2016 by the World Bank Group the country's economic growth which accelerated in the past decade has not resulted in widespread prosperity for all Kenyans. According to the report, Kenya`s economy still remained amongst the 25% poorest countries in the world with poverty level as high as 40% of the population (World Bank, 2016). Policy on micro and small enterprise development born in the year 2005 was, therefore, expected to have

favourable effect on Kenya tourism industry (Ministry for Labour and Human Resource Development, 2005).

Fortunately, micro and small enterprise sector is the fastest growing in Kenya with 66% of 1.3 million enterprises located in rural areas (Ministry for Labour and Human Resource Development, 2005). The sector has been recognized in the *Kenya Sector Plan for Tourism 2013 -2017* as central in sustainable tourism development (Ministry of Devolution and Planning, 2013). However, the development and mainstreaming of micro and small enterprise sector into the national economy has been hampered by such structural factors as unfavourable policy environment and taxation regime, inhibitive legal and regulatory environment, limited access to information, market and financial services, inadequate business skills and access to technology, limited access to infrastructure, formal and informal entry barriers, HIV/AIDS, and limited access and lack of adherence to health and safety in work places (Ministry of Labour and Human Resource Development, 2005). Despite the structural weaknesses in the sector generally, tourism enterprises are indispensable in the prosperity of a destination as they enhance trickle-down effect of tourist spending into local economy (Ateljevic & Page, 2009).

According to Kisumu County Annual Development Plan for Fiscal Year 2019/2020, Kisumu County is one of 47 counties created by the constitution of 2010 and it is the main gateway to the rest of Africa Great Lake region. Kisumu County Gini Coefficient was 0.430 in the year 2013(Kenya National Bureau of Statistics [KNBS] & Society for International Development [SID], 2013). Gini Coefficient is an index which measures the extent of distribution of consumer expenditure among households or individual within an economy (KNBS& SID, 2013). A coefficient index of 0 and 1 indicates perfect equality and inequality respectively (KNBS&SID, 2013). Thus, distribution of income expenditure in the County deviates from a perfect equal distribution (KNBS&SID, 2013). Additionally, Kisumu County recorded Human Development

Index (HDI) of 0.52 which is similar to national index, but far from the ideal index of 1.00 (National Council for Population and Development[NCPD],2017). The HDI is a composite index of such indicators as life expectancy, education and income per capita (NCPD, 2017).

In addition to the foregoing development profile, Kisumu County is a promising tourists` destination in the western circuit as it is endowed with diverse tourist attractions which include wildlife, culture and spectacular physical features (Communication, Economic Planning and Development Executive Committee, 2013). It has an international Airport through which the County can directly get international tourists (Ministry of East Africa Affairs, Commerce and Tourism, 2015), and it has recently experienced massive investment in infrastructure and tourists facilities (Communication, Economic Planning and Development Executive Committee, 2018). However, full potential of resources has not been exploited (Babu, Haghiri & Oketch 2012) and the County has continued to register high rates of poverty levels (World Bank, 2016), thereby putting a lot of questions on the role of tourism in County development.

The main economic activities in the county for local residents are fishing, agriculture and industrial activities based in urban areas(NCPD,2017), but fishing and subsistence agriculture face a bleak future due to overfishing, water hyacinth menace, inappropriate fishing methods and waste disposal (Communication, Economic Planning and Development Executive Committee, 2018). The County has a growing youthful population majority of whom are unemployed, without entrepreneurial skill and whom have been identified in the *County Integrated Development Plan 2013 - 2017* as a threat to development (Communication, Economic Planning and Development Executive Committee, 2013).

According to *Sector Plan for Tourism 2013 -2017* involvement of the youth in tourism activities at County level economically empower them and help reduce insecurity (Ministry of East Africa

Affairs, Commerce and Tourism, 2013). But the ability of Kisumu County hospitality industry to absorb unemployed youths has been undermined by its very low occupancy rate (Kenya Bureau of Standards, 2012). Moreover, local participation rate in tourism activities is insignificant (Babu, Haghiri & Oketch 2012; Odege, 2014). Ventures which are run by local people at both Kit Mikayi and Got Ramogi are ineffective because of limited capacity among the people (Misiko, 2013).

Therefore, indications of weak tourism backward linkage with micro and small business sector within the County include inadequate entrepreneurial skills and capital amongst youthful population (Ministry of East Africa Affairs, Commerce and Tourism,2013), limited economic prospects in hospitality industry and poor or inadequate output from agricultural activities (Kenya National Bureau of Standards,2010). As a result of limited capital and entrepreneurial skills among local people, their participation in tourism related activities is low (Babu, et al. 2012; Odege, 2014). The key issue is the extents to which a clear understanding of structural factors embedded in the economy of Kisumu County can be managed to invigorate tourist industry capacitate local businesses towards a vibrant and sustainable linkage that is economically beneficial to local economy. The interaction amongst tourism enterprises, local micro and small businesses in Kisumu County and the resultant backward linkage as an outcome can be enhanced through understanding role of structural drivers and adopting a business strategy for exploiting or minimizing imperfections embedded within Kisumu County`s economy as a competitive context of all enterprises. It is from this perspective that this particular study was motivated to find out influence of structural factors on tourism backward linkage with local micro and small business.

Although many studies on Kisumu County have explored the determinants of local participation in tourism activities or barriers to optimization of economic opportunities in tourism (Babu, et al.

2012; Haghiri & Oketch 2012; Misiko, 2013; Odege, 2014), 'linkage between tourism and other industries is an under researched topic'(Cristina, 2016: 545) and also none of the studies in Kisumu County, in particular, have explored the relationship between structural factors and the extent of backward linkage between tourism sector and local economy. The current study, therefore, seeks to create new understanding on nature of structural factors and their influence on tourism economic impact on the economy dominated by micro and small local enterprises.

1.2 Statement of the Problem

There is limited linkage between tourism sector and local economy of Kisumu County, which denies local people the opportunity to optimally benefit from tourism. The evidence of poor linkage includes the inability of local people at *Kit Mikayi* and *Got Ramogi* to effectively run facilities because of lack of capacity. There is poor linkage between municipal market with nearby hotels in Kisumu town and poor quality of services among guest houses. The occupancy rates among hotels in Kisumu County are sub optimal not to mention lack of adequate capital and entrepreneurial skills among local youth. As a result, local people have not fully optimized economic opportunities from tourism. If this state of affair continues without policy intervention tourism development may not have significant role in economic development of economy of Kisumu County.

1.3 Purpose of the Study

The purpose of this study is to analyse the influence of structural factors on tourism backward linkage with local small and micro enterprises within Kisumu County.

1.4 Objective of the Study

The specific objectives of the study were;

i. To establish relationship between the number of income streams within the tourists` facilities and local purchase ratio.

ii. To analyse significant differences in average score profile amongst groups of local suppliers and explain probability of their sale exceeding government policy threshold of 30%.

iii. To model the effect of the number of income streams, location, size and type of tourism firms, and competition among tourism enterprises on local purchase ratio controlling for patronage rate and visitor length of stay

iv. To establish the moderating effect of level of tourism business networks on the relationship between physical location of tourism firms, type of tourism firms and local purchase ratio.

v. To analyse the interacting effect of tourism seasonality on the nexus between the size of tourism enterprise, patronage rate and local purchase ratio.

1.5 Research Hypotheses

To achieve the objectives, the following hypotheses were tested at 5% significance level.

i. **H_o**; The local purchase ratio has no significant relationship with tourists` facilities number of income streams.

ii. **H_o;** There is neither statistically significant differences in average score profile amongst groups of local suppliers nor any socio economic characteristics with significant explanatory power on the probability of local suppliers` sale exceeding government policy threshold of 30%.

iii. **H_0 ;** Income streams, location, size and type of tourism firms, and competition among the tourism firms, controlling for patronage rate and visitor length of stay, have no significant partial and joint effect on variation in the local purchase ratio.

iv. **H_0**; The influence of physical location of tourism firms and type of tourism firms on local purchase ratio is not moderated by level of business networks.

v. **H_0**; There is no interaction effect of tourism seasonality on the nexus between the size of tourism enterprise, patronage rate and local purchase ratio.

1.6 Significance of the Study

The study provides useful insight and understanding of the nexus between structural factors and tourism backward linkage with local economy. It further contributes not only in suggesting greater diversity in local economic activities but also in identifying significant aspects of local capacity building program to enhance local participation in tourism supply businesses. The study also underscores greater collaborations among tourism enterprises in rural areas, but greater competition in urban areas.

The uniqueness of the study lies on its focus on structural factors endemic in the local economy which may limit optimal linkage of tourism sector with local economy. This is a significant departure from previous studies in the region whose main focus has been biased on factors influencing local participation in tourism. Lastly, the study advances the theory of business network and location theory by establishing moderating effect of business networks on the relationship between location and extent of tourism backward linkage with the local economy, which was not known previously.

1.7 Conceptual Framework

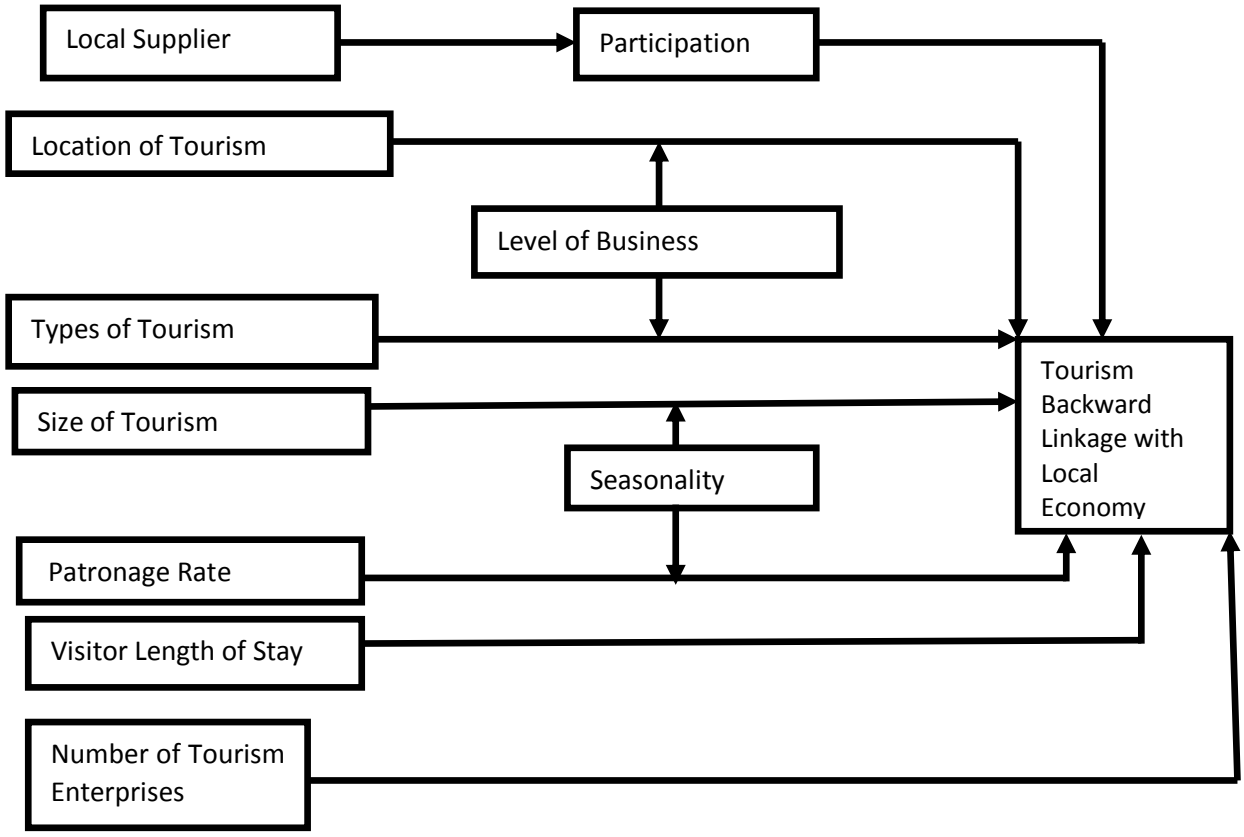

Figure 1.1: Effects of Structural Factors on Tourism Backward Linkage with Local Economy

Source (Author, 2020)

The extent of tourism backward linkage with local economy is a function of local structural factors. According to industrial organization economics, structural factors are imperfections embedded in a competitive context emanating from market and industry, and which influence performance of firms depending on the way firms are managed (Brian, 1968 quoted in Wickham, 2006). In this study local structural factors include such independent variables as size of the tourism enterprises, patronage rate of the tourism enterprises, physical location of tourism enterprises, visitors length of stay in tourism enterprises, type of tourism enterprises, competition among tourism enterprises found in each locality and socio economic characteristics of local

suppliers. Intervening variable is the level of participation in tourism business by local suppliers. Moderating variables include tourism seasonality and level of business networking. The criterion variable is extent of backward linkage measured as local purchase as a proportion of total purchases made by tourism enterprises.

Size of an enterprise in general is determined by level of sales per capital employed, number of employees and amount of revenue generated. In accommodation sub - sector of tourist industry, size is determined by number of bed nights achieved or number of rooms (Stabler, 1997). It is hypothesized that the size of tourism enterprise has a positive effect on the extent of tourism backward linkage with local economy, and it effect depends on tourism seasonality. Tourism seasonality is the regular fluctuation of tourism demand, and is caused by special events in a destination such as institutional arrangements, timing of school and work vacations, and climatic patterns (Cooper, 1998). Tourism seasonality has effect on sale (Nigel, 2003), "it results in seasonal employment and under - use or even closing down of tourist facility" (Cooper, 1998: 72-73). Large scale tourism enterprises host more tourists and requires greater amount of inputs and raw materials to cater for their visitors than small tourism enterprises. Going by the assumption that large tourism enterprises will purchase most of their input locally, it follows that the larger the enterprise the greater the potential for backward linkage with local businesses, depending on tourism seasonality.

A patron refers to clients or customers and patronage rate is the number of customers or clients served in each period. Patronage rate is a function of time of the day, month of the year, events, competitive strategies of tourism firm and climatic factors. Weekly patronage rate vary depending on tourism season and it affect extent of tourism backward linkage through level of demand for services within the tourism enterprise. The high level of demand for service from tourist facility put pressure on procurement and human resource department of tourism enterprise

to place more orders from local suppliers to meet increased visitor demand for food, beverages, materials and services. However, low patronage leads to diminished demand for services which in turn depresses local to total purchase ratio. Therefore, the effect of size of tourism enterprise and patronage rate on backward linkage will be significantly strong during high tourism season but weak during low tourism seasons.

Physical location of a firm in relation to its suppliers, "affect inbound logistical cost." (Porter, 1998: 82-83). In tourism, however, it is hypothesized that the greater the proximity of tourism enterprises to local businesses the greater the quantity and frequency of supplies made by local businesses to the concerned tourism enterprise. Local businesses which are located near tourism enterprises can supply more food stuff whose quality has not been compromised by duration of storage and transportation time. Such local businesses are preferred to distant local businesses because they can supply what is required quickly and at the right quality. Local to total purchase ratio varies not only with location of tourism enterprises in relation to local businesses but also with extent of network developed by tourism firms. It is, therefore, logical to hypothesize that proximity of tourism enterprises, which are part of extensive network, to local businesses enhances local to total purchase ratio (backward linkage with local suppliers) and thus local economy.

Tourism enterprises are classified according to ownership, type of activity, industry and profit orientation or otherwise (Beech & Chadwick, 2006). The influence of type of tourism enterprises and physical location of tourism enterprises on local to total purchase ratio is hypothesized to vary depending on level of business networks developed by tourism enterprises. Business network is basically a set of independent enterprises bound together by common interest and from which affected enterprises appropriate strategic resources cost effectively (Hisrich, 2008). By virtue of ability to access resources, a given type of tourism businesses which are part of

networks are logically expected to register superior performance over independent enterprises of the same type without such networks.

Competition is indicated by the number of tourism enterprises within a given locality which use same technology to offer similar products to the same market. Effect of rivalry or competition amongst tourism enterprises can be appreciated within the context of the five-force framework proposed by Porter (2004). High level of competition amongst tourism enterprises in an area with few suppliers is positively associated with value of supplies made by local businesses to the tourism enterprises, if the few local businesses supplying same products in relation to number of tourism enterprises. On the other hand, if there are few tourism enterprises in relation to number of local suppliers then the bargaining power of local suppliers will be weak and this will be reflected in low value of their supplies. Alternatively, few local businesses which are unique in supplying quality products are likely to experience high sales to tourism enterprises but low competition amongst tourism enterprises means that local suppliers have limited opportunities to make sales. This then means that local businesses will supply less if competition amongst tourism enterprises is low. In conclusion, high competition amongst tourism enterprises enhances backward linkage within tourism industry when there are few local suppliers or if local suppliers are individually unique in providing and sustaining high quality of supplies and in meeting requirements of their customers.

Income stream or revenue points refer to product portfolio. Using a hotel as an example, room accommodation, restaurant and bar, curio shops, saloon, barbershop, bar and massage constitute different income streams or revenue points. According to product portfolio theory the various income streams have different market shares and experience different growth rates (Khairat and Alvameedy, 2016). Lastly, the cash flow associated with each income stream depends on the

stage of the related product life cycle. It is hypothesized that enterprises with many income streams have favourable and robust linkage with local economy than those with few.

Lastly, socio economic characteristics of supplier of tourism inputs affect backward linkage through their actual level of participation in supply business. The participation level is indicated by the weekly sale as proportion of total purchase procured by tourism enterprises or proportion of total procurement made by each tourism enterprise from a given local supplier. Local suppliers whose sale proportion exceed 30% of all total procurement made by tourism enterprises are considered to have a higher level of participation in tourism activity or low otherwise. Already, it has been established from the literature that gender, marital status, education level and occupation status are associated with tourism entrepreneurship which is suspected to correlate with extent of tourism backward linkage.

1.8 Scope and Limitation of the Study

The study covered areas within Kisumu County which have tourist facilities and are registered and regulated by Kenya Regulatory Authority. Such tourism enterprises included guest houses, hotels, lodges and restaurants to which supplies from micro and small businesses in the County can be channelled.

The study focused on the structural factors endemic either in local business environment which are suspected to influence the proportion of purchase made by tourism enterprises from local supply businesses. However, the study was based on a sample drawn from tourism enterprises located only in Kisumu County whose structural factors may be unique and thus, cannot be generalized to all tourism enterprises in Kenya. Secondly, owners of local micro and small businesses within Kisumu County were not directly involved in the study. Data pertaining local owners of micro and small enterprises was obtained from tourism enterprises to which they supplied inputs. Also, given the geographic scope of Kisumu County and dispersion of tourism

enterprises within the county, constraint of time and financial resources affected the length of time of data collection exercise and the size of sample for this study. However, the constraints of resources and time were minimized by efficient utilization of limited time and financial resources.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section is divided into two major sub sections namely theoretical review in which various theories and perspective relevant to the study are covered. It is followed by empirical literature review that is organized into themes consistent with research objectives. The section ends with two sub section which provide summary of the whole section and research gaps found therein.

2.2 Theoretical Literature

2.2.1 Theories of Poverty

This theory is useful in understanding underlying reasons and differences in tourism participation among local communities. In the context of the current study, the theory is useful in explaining differences in the average score profiles among local suppliers and factors behind their ability or otherwise to exceed some threshold in their sale to tourist industry. Poverty is a condition of deprivation characterized by the inability to meet basic physiological needs and shelter, inability to exploit opportunities for self - development, inability to play a role as member of a community or society, and marginalization(Holden,2013). There are two main and broad theories of poverty: Geographical and socioeconomic theories of poverty. The former explain the distribution of poverty in space while the latter advance reasons why individuals or households live in poverty (Chimhowu, 2009).

According to Chimhowu (2009) geographical theory of poverty has got two main perspectives, namely the deterministic and possibility perspectives. While deterministic perspective attributes existence of poverty to the characteristics of the physical environment, possibility perspective advances the idea that the association between developmental decisions and poverty is influenced, but not determined by physical environment.

The socioeconomic theories of poverty include individual pathologies theory, culture of poverty narrative and structural causes of poverty. According to pathologies theory, which was discounted for its failure to recognize structural barriers which limit individual from exploiting opportunities, individual weaknesses such as laziness, mental or physical infirmities are responsible for individual situation(Chimhowu,2009). Last but not least, the culture of poverty narrative states that poverty is a product of social belief systems passed down to successive generation through socialization (Chimhowu, 2009). Lastly, 'structural causes' perspective explains poverty in terms of structural impediments within capitalist economy and political systems (Chimhowu, 2009). In summary, the foregoing theories are foundation upon which valuable insights on factors affecting local participation in tourism activities leading to stronger or otherwise economic linkage of tourism and local economy can be appreciated.

2.2.2 Product Portfolio and Life Cycle Theory and Boston Consulting Group Framework

The role of number of income streams in tourism backward linkage can be appreciated from the perspective of product portfolio theory, Boston Consulting Group framework and product life cycle theory. According to the product portfolio theory, a business that has broad portfolio has greater ability to spread risks and opportunity than one with narrow portfolio (Nigel et al., 2003) and the flexibility to adjust its product mix in face of changing market conditions(Chandra,2006). In the context of the current study, the theory is useful in appreciating why tourism enterprises with a diversified income streams can help create opportunities for local traders and thus, promote greater linkage with local economy.

Additionally, BCG framework provide criteria for adopting optimal product mix by identifying different categories of products - which are labelled and classified as stars, cash cow, question marks and dogs - on the basis of their ability to generate cash flow for either maintaining or

developing product portfolio (World Tourism Organization 2011). The level of income generated from each product categories is affected by its relative market share and market growth rate (Philip, William, and Rajunor 2012), and the stage in product life cycle at which the product has reached (Khairat and Alvameedy 2016). The implication of BCG framework in the current study is that tourism enterprises with optimal number and types of income streams can become not only sustainable, but also promote sustainable linkages with the local economy.

2.2.3 Business Network Theory

Business networks are independent enterprises bound together by trust or some common interest and are useful in not only transferring knowledge, as conduit for information, and intensive skills that are costly to secure but also provide opportunities for exchanging goods and services that are not easy to enforce through contractual arrangement (Hisrich, 2008). Networks change business from being an isolated entity to being a node with a greater synergy within network of relationship with suppliers, collaborators and competitors (Gabler, 2009). Every business is found in a network of relationship with other enterprises which is either tight or loose network (Wickham, 2006). Unlike a loose network, a tight network is one in which it is not easy to break into by a challenger and one in which all partners are satisfied (Wickham, 2006).

Though the theory is relevant in explaining the mechanism through which the level of business network developed by tourism enterprise impact tourism enterprise performance, it has, however, fall short in explicitly linking such performance with extent of local income linkage and in particularly explaining its moderating role in the effect of size of tourism enterprises and patronage rate on tourism backward linkage with local economy.

2.2.4 Location Theory

The most appropriate perspective in the location theory for the current study is the one attributed to Alfred Weber (1868 – 1958) called industrial production. The theory provides a springboard

upon which studies can be made concerning location decisions of people, enterprises and government agencies (Murray, 2009). It also provides justification for spatial location of services and siting policies (Murray, 2009).

Alfred Weber predicted and explained ideal or optimum location of an industry or an enterprise, putting a number of factors into consideration. Such factors included labour costs, agglomeration economies, transportation costs, materials and products. Accordingly, the optimum location of an enterprise or an industry would be such intermediate place between resource market and product market as to economizes on total transportation cost, which is a function of the amount of materials and straight line distance (Euclidean distance) (Murray,2009). The main assumptions of this theory include absence of competition, homogeneity in political regime, economic system and culture (Murray, 2009).

This theory, in the context of current study, is useful in explaining location decisions among tourism enterprises of Kisumu County. However, the assumption on the absence of competition weakens its full application in tourism since local tourism enterprises face competition locally, nationally and internationally.

2.2.5 The Service Profit Chain Theory

The theory is useful in the current context as it explains the internal dynamics of local micro and small enterprises, which can affect their relationship with tourist industry with significant implications on their growth and profitability, and in turn globally affect the extent of the sustainability of tourism backward linkage with the local economy.

The theory underscores the centrality of joint effect of capacitated and supported frontline employees of a service business, and customers` attitude in the realization of effective service delivery (Kotler, Bowen & Make 2014). The service profit chain identifies profitability and

growth as function of customers` loyalty, employees` satisfaction, value of service offered, support services and policies directed towards improving employees` productivity (Heskett, Sasser, & Schlesinger 1997).

According to the theory, the loyalty and satisfaction of both employees and customers contribute to enterprise`s profitability and growth. Also, employees` capability, level of service and quality of employees` output is affected by the service delivery system and operation strategy (Heskett et al. 1997). Employees' productivity and quality of their output will affect value of services given to customers. Thus, customers who get more value for money from employees get satisfied, and their satisfaction is registered in repeat business with the enterprise and positive referrals leading to profitability and growth. The converse is true for customers who get mediocre value from unskilled and demotivated employees. Lastly, the theory also identifies management as a factor which moderates relationship between employees` productivity and quality of service leading to customer satisfaction.

2.2.6 Perspective on Tourism Seasonality

The amount of tourist expenditure and amount of supplies made to tourist industry by local economy is affected by tourism seasonality. The seasonal pattern of demand for product is mostly pronounced in tourism (Nigel, et al., 2003). Seasonality as systematic, irregular, intra – year movement in tourism activities is attributed to timing of production and consumption decisions of economic agents, weather changes and the calendar (Hylleberg, 1992). Thus, daily, weekly, monthly and yearly fluctuations in tourism constitute seasonality (Cooper et al. 2005).

According to Butler and Mao (1997) seasonality has two dimensions namely natural or physical and institutional seasonality. While, according to Butler and Mao, natural seasonality is the temporal variation in such natural phenomena as rainfall and lead to the temporal fluctuation in

tourism phenomenon typified by, inter alia, number of visitors and their expenditure, institutional seasonality is based on human behaviour and consumer decision making, for example the decision on vacation time. Natural seasonality increases with increase in the distance from the equator (Hartmann, 1986; Butler, 1994). Additionally, location of tourism enterprises within a destination (Baum and Hagen, 1999) and the breath of tourism product within a destination affect the degree of tourism seasonality effect.

Intensity of tourism resource use within a year is variable as a result of seasonality (Corluka, 2019). Seasonal patterns of cash inflows and outflows amongst tourism enterprises are also attributed to seasonality of demand (Nigel, et al., 2003). Additionally, peak seasons are so associated with inflationary tendencies, overcrowding, and poor service delivery as low season is characterized by low occupancy rate, underutilized tourism infrastructure, unemployment and reduced income with associated welfare challenges (Middleton & Clerk (2001). Fortunately, effect of tourism seasonality can be managed by diversifying markets, staggering holidays, promoting domestic tourism, tax incentives and differential pricing (Butler, 2001).

The key contribution of this perspective includes a clear concept of tourism seasonality, causes, types and effect of tourism seasonality. It has also helped understand the role of tourism product and market diversification in mitigating effect of seasonality. However, the moderating effect of tourism seasonality on the relationship between sizes of tourism enterprises and patronage rate remain unexplained.

2.3 Empirical Literature Review

2.3.1 Number of Income Streams and Tourism Backward Linkage

The study seeks to establish the relationship between the number of income streams or revenue points and extent of tourism backward linkage or local purchase ratio. The number of income streams are the revenue points or, the number of product portfolio within a given tourism

enterprise. Though the literature on effect of product portfolio on extent of tourism backward linkage is scanty, there are two scholars who explored the effect of diversity in tourism product such as cultural diversity, ethnic and religious diversity on tourist arrivals and economic development respectively. First, Muhoro, Wishitemi and Okello (2020) conducted a study aimed at finding out the diversity of potential cultural attractions in Nairobi urban tourism destination in relation to tourist arrivals. The study was based on target population of foreign tourist departing through Jomo Kenyatta International Airport from which a sample size of 231 respondents was drawn. The analysis of quantitative data, resulting from questionnaires whose items were measured on Likert scale of 1 – 5, found out that diversity in cultural attractions increased tourist arrivals by creating a positive image of the destination.

Secondly, a study by Amin(2020) whose study investigated whether existing ethnic and religious diversity affect international tourism and economic development found out that diversity in both religion and ethnicity had negative association with international tourist arrivals, tourist receipts, expenditure and economic development. Compared with the previous study of Muhoro, et al. (2020), the study of Amin (2020) was based on a strong methodological approach as it used a data set of 187 countries on which panel data analysis was applied. Also, while Muhoro et al. (2020) established a positive association between diversity in tourism product with tourist arrivals, Amin (2020), on the other hand, established the opposite.

From the two studies, therefore, the relationship between diversity in tourism product and tourist arrivals remain either inconclusive or depend on study context. Lastly, the two previous studies considered the effect of product diversity from a more aggregated level of urban and international level. However, the current study seeks to establish the same effect, but at a micro level of tourism enterprise.

2.3.2 Determinants of Participation Level of Local Businesses in the Tourist Industry

The study also seeks to find out factors that not only differentiate local suppliers but also affect their possibility of making sale in excess of the policy imposed threshold of 30%. Participation of local community in tourism, according to Beyer(2014), is underpinned by two factors namely the extent to which local community wield significant influence and control over tourism development and management, and the significance of the proportion of tourism benefits appropriated by local community. In the context of current study, level of local participation is understood as the significance of proportion of economic benefits of tourism appropriated by local businessmen.

In order to improve level of community participation in tourism, Beyer (2014) advocated key interventions which included sustainable management of local resources, local capacity development, enhancing access to financial services, and improving community infrastructure. Lastly, Bwasiri (2014) emphasized that true participation by local community of Loliondo Game Controlled Area in Northern Tanzania would require adoption of effective mechanism for mainstreaming local influence, control and management of tourism resources.

Four similar studies have been conducted in Lesotho and in Tioman Island in Malaysia; in Western Kenya and in Murchison Falls Conservation Area in Uganda, to establish how community can be involved in tourism (Thetsane, 2019), factors limiting their participation (Azman & Yahaya, 2013; Mugiri, et al. 2017), and how local participation in tourism management and entrepreneurship can be enhanced (Baby et al.2012; Odege, 2014). Thetsane (2019) found out that consultation with local community of Lesotho in tourism policy formulation process and mainstreaming their collective voice in key decision making process was highly valued. Tourism investment by local community, facilitated by financial support and tourism business education, was also important in enhancing local participation and in promoting

their greater role in tourism entrepreneurship (Thetsane,2019). The study by Azman and Yahaya (2013) established that level of education, age, employment status, and gender affect the extent local participation in tourism business activities in Tioman Island in Malaysia. Last but not least, Babu et al. (2012) and Odege (2014) both established that very low income and low education level amongst local residents were key hindrances to local participation in tourism development and lastly, Mugiri et al. (2017) found out that income, land ownership, level of education, engagement in farm labour and service provision to tourists by local were key factors affecting local participation in tourism. However, the factors which cut across most previous studies which include marital status, age and employment status, education income, neither explained effect on sale response probability nor discriminatory effect amongst groups of local suppliers in the current study.

Unlike the study of Azman and Yahaya (2013), which used quantitative methods and it involved random sample of 346 local inhabitants of the Island, the methodological approach adopted by Thetsane (2019), Babu et al. (2012) and Odege (2014) reduce the external validity of their finding. For instance, Thetsane adopted interview of 500 household sampled using convenience and stratified sampling technique and the use of descriptive statistics in data analysis while Babu et al. (2012) adopted a focused group discussion and descriptive statistics. On the other hand, Mugiri et al. (2017), Azman and Yahaya(2013) both of which were based on inferential statistics are relatively more strong in external validity.

Last but not least, the four studies differed from the current study on the nature of their investigation. The previous studies focused on the limitation of local community involvement in tourism, but the current study focus is on deepening involvement of local community already involved in tourism. Lastly, all previous studies have not exposed differences in average score

profiles among local suppliers and factors affecting probability of exceeding sale proportion imposed by policy.

2.3.3 Determinants of Backward Linkage of tourism with Local Economy

The network of intersectoral supply relationship between tourism and the rest of productive sectors of the domestic economy create economic linkages (Lejarraga & Walkenhorst,2010, cited in Anter, 2016) Backward linkage is defined by Turok (1993) as proportion of material input sourced from local economy, or the relative importance of tourism as demander of inputs from local economy(Anter,2016). The study adopt the definition by Turok (1993) because it easy to operationalize.

Studies which have been carried out in a number of countries regarding tourism backward linkage with local economy have led to mixed results. For instance a study done in Egypt to explore both financial leakages and linkages of tourism affirmed linkage between tourism and other sectors except the sectors in which local community operate, because of their inability to provide what is needed (Anter,2016). The poor linkage between tourism and local economy has also been reported in Lao People`s Democratic Republic. Key causes of the weak linkage were enumerated as competition from importations, limited knowledge of tourists` expectation by local traders, inadequacy in product range, quality, quantity and reliability (UNCTAD, 2014). On the contrary, a study carried out in the same country by Khanal, Gan and Becken(2014) focusing on inter sector linkage, but using input – output model found out that between 2003 and 2008 tourism depended heavily on such sectors as food and beverage, manufacturing, wholesale and retail trade, agriculture and livestock. Also, the weak linkage between tourism to domestic economy has lead minimal economic impact of tourism on rural development (UNCTAD, 2014). However, a study whose methodological approach was similar to the one adopted by Anter

(2016) established that tourism not only created significant linkages in rural areas of Cyprus, but also offered great potential for economic activities (Giannakis,2014).

It is important to note that though the two studies by Giannakis (2014) and Anter (2016) both were based on input – output model whose data were obtained from Tourism Satellite Account. However, the account cannot be easily generated from local level other than national level, making it difficult to assess linkages at the local level (Large, 2011, cited in Anter, 2016). Also, there is a time lag of up to three years between recording and publication on data to Tourism Satellite Account (Large, 2011,cited in Anter, 2016), which may affect the relevance and validity of the findings. Lastly, the studies have not modelled tourism linkages using the explanatory variables in order to explain the effect of such variables on the extent of tourism backward linkage as the current study has done.

2.3.4 Moderating effect of Business Networks on Backward Linkage of Tourism with Local Micro and Small Enterprises

How do business networks developed by tourism firms influence the relationship amongst the location, type of tourism firms and the extent of backward linkage? Business network are pattern of interactions that transform enterprises from state of isolation into nodes within a network of competitors, suppliers and collaborators (Gabler, 2009). Business networks are more critical in tourism than in any other industry (Scott, Baggio and Cooper, 2008). This confirmed the study conducted by Bickerdyke (1996) in Australia which established that tourism has the most inter organization networks. Also, businesses with international or regional associations tended to have impressive performance owed to enhanced ability to attract business worldwide, and airlines which develop working relationship with hotel referrals improve their payload significantly (Sudhir, 2009).

Two separate studies conducted in China and Nigeria established that while inter -firm relationship or business networks affect business performance, the effect of external factors, entrepreneur characteristics and firm characteristics on performance is moderated by location. Cai and Szedl(2016) studied the effect of business networks and enterprise performance in Nachang in China and established positive correlation. In Nigeria, Minai and Igwe (2011) carried out a study, which involved entrepreneurs and managers of enterprises, established moderating effect of location on the relationship between external factors, individual profiles and firm characteristics, with firm performance. However, the study done by Minai and Igwe(2011) was biased against trade and distribution sector. Trade and distribution services, however, spans tourist industry and thus, leaving them out in the study discounts applicability of findings in tourism business. Also, whereas this finding was about the moderating effect of location in influencing business performance, the current study, on the contrary, sought to establish the moderating effect of business networks on the relationship between location and backward linkage. Therefore, the moderating effect of business network on the relationship between location and backward linkage has not been established.

The methodologies used in the two studies were different, but robust going by their choice of research design, sizes of their samples and sampling techniques. For example the study of Minai and Igwe (2011) adopted a cross section survey in which 300 entrepreneurs were drawn from the population using systematic random which guaranteed equal representations of the various groups of respondent. In contrast, Cai and Szedl (2016) used a larger sample size of 2800 managers and adopted field experiment. Therefore, the studies exhibit very strong external validity despite that they were never focused on tourism industry specifically.

2.3.5 Moderating Effect of Tourism Seasonality

The study also sought to establish the moderating effect of seasonality on the nexus between rate of patronage, sizes of tourism enterprises and extent tourism backward linkage with the local economy. Seasonality is the fluctuation in tourism volume within a year (Carluka,2019), or swing in the level of tourism industrial demand and supply resulting from holiday and school breaks or weather conditions (Chung,2009, cited in Parteca, Harba,Tigu & Anton, 2020).

Various researchers have studied tourism seasonality from different perspectives and came up with interesting outcomes: First, Parteca et al. (2020) did a comparative study of extent to which seasonality affect skills of hotel employees in two Romanian cities: one of which was affected by tourism seasonality and the other not significantly so affected. Parteca et al. (2020) established that seasonality caused problems in managing small businesses by affecting level and quality of workforce. Secondly, Carluka (2019) conducted a desktop research in order to provide an overview of current knowledge about tourism seasonality. The researcher observed that causes of tourism seasonality are domiciled within both tourist destination and tourists generating regions. Moreover, the causes may be stable over a long period, continuous, or unpredictable.

Whereas push factors are associated with tourist generating regions and include calendar effect, inertia, tradition, social pressure, access or fashion; on the other hand, pull factors are related to destination regions and include climate, physical attractions, licensing restriction, sporting seasons, trading patterns of other businesses, events, accessibility and accommodation structure(Carluka,2019). Most interestingly, Carluka, (2019) established three different points: first, the push and pull factors not only create tourism seasonality but are also independent and interact when creating seasonal character of a destination. Secondly, the impact of seasonality varies significantly within the location of tourism enterprise within a destination. Thirdly, the most specialized destinations, unlike diversified destinations, are usually most seasonal.

Lastly, Lee, Galloway, Seers and O'Mohany (2008) found out that seasonality had both favourable and adverse effects on Wine and Mountain Tourism, and it was moderated by business location, personal characteristics of operators and the tourists. In exploring factors influencing seasonality of tourism in Oman, Veena (2019) found out, based on a sample from employees of tourist industry, that climatic, personal and policy-based factors affected seasonality and recommended differentiation of experiences as a way of mitigated tourism seasonality.

However, all the foregoing studies did not explain the moderating effect of tourism seasonality on the relationship between size of tourism enterprise, level of patronage of tourism enterprises and tourism backward linkages.

2.4 Summary

There are five key points derived from the literature review: First, the effect of product portfolio on level of tourist arrivals vary with the nature of products and destination. Whereas diversity is positively correlated with tourist arrivals with respect to cultural attractions, the diversity in religion and ethnicity has negative association with international tourist arrivals. Secondly, the key factors affecting local participation in tourism activities vary depending on the area of study. They include level of education, age, employment status, gender, level of income and land ownership.

Furthermore, the extent of tourism backward linkage with local economy is significantly influenced by competition from importations, level of local awareness and knowledge of tourism market and industry, and local capacity in meeting the needs of tourist industry. Last but not least, while business network has effect on business performance, the effect of external factors, profiles of entrepreneurs and business on performance of tourism enterprises is moderated by

location. Lastly, there are two groups of factors responsible for tourism seasonality: The pull factors which are associated with tourist destination and the push factors related to tourist generating regions. These two factors are independent, but interact in creating seasonal character of a tourist destination.

2.5 Research Gaps

There are a number of gaps which have been identified from the previous studies which are related to tourism backward linkages. The first one is that the relationship between diversity in tourism product and tourist arrivals remain either inconclusive or depend on study context. Also, the two previous studies considered the effect of product diversity from a more aggregated level of urban and international level. However, the current study seeks to establish the same effect, but at a micro level of tourism enterprise.

Secondly, previous studies differed from the current study on the nature of their investigation. The previous studies focused on the limitation of local community involvement in tourism, but the current study focus is on deepening involvement of local community already involved in tourism. Lastly, all previous studies have not exposed differences in average score profiles among local suppliers and factors affecting probability of exceeding sale proportion imposed by government policy. Moreover, previous studies have not modelled tourism linkages using the explanatory variables in order to explain the effect of such variables on the extent of tourism backward linkage as the current study has done. Thus, the effect of explanatory variables in the current study on extent of tourism backward linkage had not been explored by the previous studies.

The study done by Minai and Igwe (2011) was biased against trade and distribution sector. Trade and distribution services, however, spans tourist industry and thus, leaving them out in the study

discounts applicability of findings in tourism business. Also, whereas finding from previous study was about the moderating effect of location in influencing business performance, the current study, on the contrary, sought to establish the moderating effect of business networks on the relationship between location and backward linkage which has been covered by the previous study. Therefore, the moderating effect of business network on the relationship between location and backward linkage has not been established. Lastly, the previous studies did not explain the moderating effect of tourism seasonality on the relationship between size of tourism enterprise, level of patronage of tourism enterprises and tourism backward linkages. This is a gap that the current study seeks to fill.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter covers research philosophy, research design, and study area. It also encompasses target population, sample size, unit of analysis and sampling frame. Finally, sampling technique, data collection strategies not to mention pilot testing and data analysis are also included.

3.2 Description of Study Area

Kisumu County has a total area of 2,085.9 square kilometres with a population size of 968,909, it is generally warm throughout the year with temperature which range from 20 ^{0}C to 35^{0}C, and its humidity is high throughout the year. According to Kisumu County Annual Development Plan for Fiscal Year 2019/2020, Kisumu County is one of 47 counties created by the constitution of 2010 and it is the main gateway to the rest of Africa Great Lake region. In terms of development profile, Kisumu County Gini Coefficient was 0.430 in the year 2013(Kenya National Bureau of Statistics [KNBS] & Society for International Development [SID], 2013). Thus, distribution of income expenditure in the County deviates from a perfect equal distribution (KNBS&SID, 2013). Additionally, Kisumu County recorded Human Development Index (HDI) of 0.52 which is similar to national index, but far from the ideal index of 1.00 (National Council for Population and Development[NCPD],2017).

Fortunately, Kisumu County is a promising tourists` destination in the western circuit, as it is endowed with diverse tourist attractions which include wildlife, culture and spectacular physical features (Communication, Economic Planning and Development Executive Committee, 2013). It has an international Airport through which the County can directly get international tourists (Ministry of East Africa Affairs, Commerce and Tourism, 2015), and it has recently experienced

massive investment in infrastructure and tourists facilities (Communication, Economic Planning and Development Executive Committee, 2018).

However, the full potential of tourism resources has not been exploited (Babu, Haghiri & Oketch 2012) and the County has continued to register high rates of poverty levels (World Bank, 2016), thereby putting a lot of questions on the role of tourism in County development. The main economic activities in the county for local residents are fishing, agriculture and industrial activities based in urban areas(NCPD,2017), but fishing and subsistence agriculture face a bleak future due to overfishing, water hyacinth menace, inappropriate fishing methods and waste disposal (Communication, Economic Planning and Development Executive Committee, 2018). Furthermore, the County has a growing youthful population majority of whom are unemployed, without entrepreneurial skill and whom have been identified in the *County Integrated Development Plan 2013 - 2017* as a threat to development (Communication, Economic Planning and Development Executive Committee, 2013).

According to *Sector Plan for Tourism 2013 -2017* involvement of the youth in tourism activities at County level economically empower them and help reduce insecurity (Ministry of East Africa Affairs, Commerce and Tourism, 2013). But the ability of Kisumu County hospitality industry to absorb unemployed youths has been undermined by its very low occupancy rate (Kenya Bureau of Standards, 2012). Moreover, local participation rate in tourism activities is insignificant (Babu, Haghiri & Oketch 2012; Odege, 2014). Ventures which are run by local people at both Kit Mikayi and Got Ramogi are ineffective because of limited capacity among the people (Misiko, 2013).

Therefore, indications of weak tourism backward linkage with micro and small business sector within the County include inadequate entrepreneurial skills and capital amongst youthful

population (Ministry of East Africa Affairs, Commerce and Tourism,2013), limited economic prospects in hospitality industry and poor or inadequate output from agricultural activities (Kenya National Bureau of Standards,2010). As a result of limited capital and entrepreneurial skills among local people, their participation in tourism related activities is low (Babu, et al. 2012; Odege, 2014).

As far as this current study is concerned, the county was clustered into three regions namely central business districts which included Kisumu main town and areas extending to *Milimani, Nyalenda, Kilimani, Kachok, Polyview, Kibuye,* and *Kamas*. Outskit of Kisumu town constituted *Nyalenda, Kondele, Migosi, Mamboleo*, Airport Area*, Nyawita, Obunga and Dunga*. Kisumu rural encompassed *Kanyakwar, Kanyamedha, Kogony, Kisian, Ojola, Maseno, Kolenyo, Nyamasaria, Awasi, Ahero, Katito, Pap Onditi* and beyond.

3.3 Research Philosophy

The study was biased towards ontology of positivism. Positivism is a philosophical stance that mirrors the one adopted in natural science (Veal, 2018). The study was based on factual data which existed in the records of tourism enterprises and which were collected using self – administered questionnaires. Hypotheses, which guided the study, were formulated before data collection and were, later, tested using factual collected data. The phenomena under study namely tourism backward linkage with local economy was explained using various model such as econometric and general linear models, which were developed by the researcher.

3.4 Research Design

The study was causal and cross sectional field survey as was based on a random sample of tourism enterprises in a given time. Also, both independent and dependent variables were measured contemporaneously. In terms of time horizon, this study covered a period spanning

twelve months, from July 2019 to July 2020, during which part of research process including collection of cross sectional data was conducted and concluded.

3.5 Target Population

The target population for the study constituted tourist facilities which offer accommodation, food and beverages to visitors, and have been in operation for at least a year. Such enterprises were deemed appropriate for the study as the greatest economic impact of tourism on local economy was registered through them. The specific types of tourism enterprises included hotels, lodges, guest houses, restaurants and clubs operating within Kisumu County and featured in the records maintained by Tourism Regulatory Authority of Kisumu. The following Table 3.1 indicates the number of tourism enterprises classified under different categories.

Table 3.1: The number and Categories of Tourism Enterprises in Kisumu County

CATEGORIES OF TOURISM ENTERPRISES	POPULATION SIZE
Hotels, Motels and Lodges	128
Guest Houses	70
Restaurants and clubs	68
Total Population Size	266

Source: Tourism Regulatory Authority, Kisumu County.

3.6 Sampling Design

3.6.1 Sample size determination

The source list of all tourism enterprises, obtained from Tourism Regulatory Authority of Kisumu, was adopted as a sampling frame from which the following overall sample and sub sample sizes was drawn randomly. Sample size according to Cohen, Marrison and Mansion (2007) is affected by margin of error, population size, and confidence level. Whereas precision is the extent of the correspondence of sample statistic with population parameter, confidence level

is the certainty with which estimate of population parameter is stated based on sample statistic (Kothari, 2001). Therefore, the choice of sample size from a target population size of 266 tourist enterprises was based on 0.075 margin of error consistent with 95% confidence level. Moreover, to take care of likelihood of non-response, attrition and mortality, the ultimate sample size for the study was overestimated, as "It is advisable to overestimate other than to underestimate the required sample size." (Gorard, 2003: 60). Therefore, based on the response rate of 95% the sample size was inflated to get the actual sample size. The inflation was arrived at by dividing the probability sample by the response rate (Saunders, Lewis and Thornhill, 2007).

Fisher Formulae for sample size determination was applied in determination of study sample size. The formulae is given as

$n = z^2 \times P \times (1-P)/e^2$. Where P is the proportion of population with desired characteristics, e is the margin of error and Z is quantile on a standard normal distribution corresponding to probability of 0.975. Since the population under study was less than 10,000 the calculated sample size was adjusted using the formulae; $N \times n/ (N + n)$. Therefore, based on the population of 266 Enterprises, a confidence level of 95% and a margin of error of 7.5% the sample size for the study were 106.

Given the structure of tourism industry as indicated in the sampling frame in Table 3.1, a multiplier of (106/266 = 0.398) was used against each sub population (stratum) sizes to get actual sub samples sizes for each category of the enterprises. The sampling units were comprised of managers. The sample size and sub samples are reflected in table 3.2.

Table 3.2: The Population and Sample Sizes

CATEGORIES OF TOURISM ENTERPRISES	LABEL	POPULATION SIZE	MULTIPLIER	SAMPLE SIZE
Hotels, Motels and Lodges	**Htl**	**128**	0.398	51
Guest Houses	**Gh**	**70**	0.398	28
Restaurants	**Rst**	**68**	0.398	27
TOTAL		**266**	**0.398**	106

3.6.2 Sampling Techniques

Tourism enterprises exist in different types or categories with varying numbers of firms as indicated in Table 1 above. Each category of tourism enterprises is considered to be a stratum. In total there were three strata. Therefore, proportionate stratified sampling technique based on a multiplier of 0.398 was used to ensure that firms in each category were represented in the sample in the same proportion as they exist in the target population. The multiplier was derived from dividing the overall sample size of 106 by population size of 266. The details of sizes of each sampled category were as reflected in Table 3.2. Specific tourism firms constituting each stratum were selected randomly using SPSS based on a sample frame which was sourced from the Tourism Regulatory Authority of Kisumu, and was assumed to contain a complete list of all Tourism Enterprises categories.

3.7 Instruments for Data Collection

The self-administered questionnaires were administered to the managers of tourism enterprises. The questionnaire was appropriate for the study because it favoured the respondent who worked under busy environment, and thus might not be available for interview. Such respondents could fill the questionnaire at their convenient time and the information they provided were deemed accurate as their responses were not influenced by the presence of researcher. The questionnaires were distributed personally in the morning hours and collected later in the afternoon the same day to optimize on response rate. 115 questionnaires were distributed instead of 106 in order to

reduce effect of non - response rate. Out of a total of 115 questionnaires distributed, 110 were completely filled and recorded in SPSS data sheet. Using case selection facility of SPSS version 21, 106 observations were selected randomly from 110 observations in the data sheet and used in the study. The whole data collection exercises covered a period of one month. Based on the collected responses from the questionnaire, it was possible to make observation vector and partitioned the same into two sets of variables: those which pertained to the tourism enterprises and the other pertaining to local suppliers. Through the use of questionnaires, it was possible to physically store collected data on 106 observations and later transfer them into SPSS Data Matrix with each observation in the matrix having data for two sets of variables namely one pertaining to the tourism enterprises and the other set pertaining to local supplier characteristics. The subsequent analyses involving hypotheses testing were based on the generated Data Matrix with complete data for all variables. Questionnaires also acted as document of primary reference in case some errors in the entry of data in the SPSS Data Sheet occurred, or in case there was a need to further scrutinize outlying observation in order to understand their nature prior to their deletion.

3.7.1 Instrument Validity and Reliability

The reliability of the questionnaire was tested by developing a correlation matrix of all metric variables measured on ratio scale of the twenty completed questionnaires and standardized Cronbach`s Alpha of 0.707 was calculated based on upper or lower triangular correlation matrix of set of items in the matrix (Battacherje,2012). The calculation was based on the following formulae;

Standardized Cronbach Alpha = $\boldsymbol{k.f/\ (1+(k-1)f}$ where $\boldsymbol{k}$ is number of items in the scale, $\boldsymbol{f}$ is mean of $\boldsymbol{k(k-1)/2}$ coefficients in the upper or lower triangular correlation matrix (Battacherje,2012). Since the threshold for Internal reliability is 0.70 it was concluded that the

instrument was reliable. The content validity, which requires inclusion of dimensions and element of construct under measurement, was fulfilled after the questionnaire attached to the research proposal was successfully presented to the panel of examiners at various level including tourism and Economics experts within the ECOHIM and Economics of Maseno University department prior to implementation of the study.

3.8 Pilot Testing

Prior to conducting major data collection exercise a few questionnaires were distributed to thirty enterprises with the sole aim of finding out whether the respondents were able to comfortably fill in the questionnaires without problem which might arise from misinterpretation. The questionnaires were also distributed to find out whether the instrument was reliable in collecting expected responses. Such questionnaires were distributed and later collected after one week. Only twenty questionnaires were returned completely filled in.

From the pilot study it was established that most respondent were not willing to provide certain data as they considered them as too sensitive information to give to outsiders. Other respondents took the questionnaires but either returned them incomplete or just dropped out of the study. Other respondents failed to fill in the questionnaire because they had misplaced them. This observation informed a new strategy for collecting data in the next phase of data collection. Some questionnaire items were rephrased for ease of understanding. Items considered sensitive were changed in scale of measurement from ratio scale to ordinal scale. Also items which were highly correlated were deleted in order to reduce the length of the questionnaire by reducing the number of items. This was done to enhance response rate and economize on respondent time required to fill in the questionnaire. Finally, the length of time between distributing and collecting questionnaires from a respondent was reduced from one week to either a day or two. This was done to curb the challenge of non-response rate.

3.9 Procedure for Data Collection

In order to gain access into tourism enterprises and be allowed to collect data, the owners and managers of such enterprises needed to be convinced that the research was valid and that the data collected were not going to be misused. It was therefore necessary to acquire research permit from National Commission for Science Technology and Innovation. The permit was also backed with authorization letters from Kisumu County Commissioner and County Director of Education. Copies of the said document were attached to all questionnaires.

The researcher physically and personally visited tourism enterprises and sought to see the management. Upon meeting the management, the researcher explained nature and purpose of research. To gain trust of the management the original research permits and authorization documents were presented to the managers and when convinced they were given questionnaire. The questionnaires were physically distributed in the morning hours and either collected mostly on the same or on the following day. The distribution of questionnaires and their collection was done for a period of almost one month beginning Mid-December 2019 to Mid-January 2020.

3.10 Data Screening

The data in all the 110 questionnaires were keyed in SPSS data sheet and 106 cases selected randomly in the analysis. The data sheet was later screened for any outlier value for each and every variable. Descriptive statistics including mean, standard deviation, boxplots skewness and Kurtosis was examined for values of each variable in the data set. Most variables had values whose skewness and kurtosis did not exceed a magnitude of one and were thus considered not to significantly deviate from normal distribution. However the few variables whose values were found to be skewed were appropriately transformed. For the few variables which had atypical values, linear interpolation and regression imputation was used to replace the outliers in order to preserve the sample size for subsequent analysis.

3.11 Data Analysis

In order to test hypotheses data on each objective was analysed using different techniques as explained below;

3.11.1 Relationship between Number of Income Streams of Tourism Enterprises and Local Purchase Ratio

The number of income streams within tourism enterprises is a discrete variable but the local purchase ratio is a continuous variable. The local purchase ratio was approximated by discrete variable by diving range of values of local purchase ratios into intervals as was suggested by Brandt (2014). The size of class interval was determined using the formulae: interval size = Range/ (1+3.3log (N) (Konthari, 2001). Thus, there were two factors namely the revenue points or income streams factor measured at two levels and local purchase ratio factor measured at four levels as indicated in Table 3.3.

Table 3.3: Levels and Sizes of Revenue points and Local Purchase Ratio Factors

Factors	Levels	Number of Observations
Revenue Points	Between 1 and 2	49
	Between 3 and 4	57
Local Purchase Ratio	Between 0.04 and 0.29	15
	Between 0.30 and 0.55	20
	Between 0.56 and 0.81	34
	Between 0.82 and 1.00	37

The two variables were represented in a 2 x 4 nominal by nominal Contingency Table and significance of their dependence determined based on observed and expected frequencies, and p value.

The Chi Square Model was given below

$$X^2 = \sum (o - E)^2 / E,$$

Where O is the observed frequency, E is the expected frequency and X^2 is the calculated Chi Square.

Therefore, to find out the correlation between number of income streams in tourism enterprises and local purchase ratio, Pearson`s Chi – Square statistics was used with its corresponding p – value to establish the significance of the association between the two factors.

3.11.2 Local Suppliers Mean Score Profiles and Sale Response Probability

Factors contributing to differentiating groups of local suppliers and explaining the probability of their sale proportion exceeding 30% were analysed using *multiple descriptive discriminant analysis* and *linear probability model* respectively. The discriminant scores is the linear combination of the discriminating variables and was given as below

3.11.2 (a) Specification of Discriminant Analysis Function

The discriminating variables included in the discriminant function were those deemed to be significant indicators of extent of tourism backward linkage with local economy by determining the level of local suppliers` activities in tourism sector, as they loaded significantly on local purchase ratio variable.

$Discriminant\ Score_i = \beta_0 + \beta_1 x_{i1} + \beta_2 x_{i2} + \beta_3 x_{i3} + \beta_4 x_{i4} + \beta_5 x_{i5}$, where β_i are the discriminant weights and x_{ij} are observations made on the various discriminating variables.

X_{i1} - are observations on weekly supply value variable.

X_{i2} – are observations on rate promptness variable.

X_{i3} – are observations on supply quality rating variable.

X_{i4} – are observation on supplier education level.

X_{i5} – are observations on longevity in commercial relationship between local supplier and tourist industry.

3.11.2(b) Specification of Linear Probability Model

Sale response probability (SRP) is the probability of local suppliers` sale proportion exceeding 30% of all total procurement made by a given tourism enterprise. The model of the sale response probability was given as,

$$SRP_i = \gamma_0+\gamma_1 Age31\_35_i+\gamma_2 Age26\_30_i+\gamma_3 PrimEd_i+\gamma_4 SecEd_i+\gamma_5 UnivEd_i+\gamma_6 Male_i+\gamma_7 EmploStatus_i+\gamma_8 Sup\ Employees_i+\gamma_9 PromptRate_i+\gamma_{10} Longevity_i+\gamma_{11} SuppQuality_i+\gamma_{12} PriceLevel_i+\gamma_{13} WeekSupplFreq_i+ Error_i$$

SRP_i - are observations on the sale response probability

$Age31\_35_i$ – are observations on local suppliers with age between 31 and 35 years old, with *Age 35*_above as the reference category.

$Age26\_30_i$ – are observations made on local suppliers with age between 26 and 30 years old

Prim Ed_i – are observations made on local suppliers with primary level of education, with *College* $Educ_i$ as the reference category.

Sec Ed_i – are observations made on local suppliers with secondary education

Univ Ed_i – Observations made on local suppliers with university education

$Male_i$ – Observations made on male suppliers, with $Female_i$ as reference category

Emplo $Status_i$ – Local suppliers' employment status

Sup $Employees_i$ – Number of employees within local supplier business

Prompt $Rate_i$ – industrial rating of local supplier promptness in making deliveries

$Longevity_i$ – The length of time that local supplier has been with tourists` industry in commerce

Supp Quality$_i$ – The industrial rating of quality of local supplies

Price Level$_i$ – The industrial rating of the local supplies pricing level

Week Suppl Frequency$_i$ – Rate of local supply in a week

Error$_i$ – factors uncorrelated with the model which affects sale response probability

3.11.3 Specification of Local Purchase Ratio Model

To explain effects of tourism physical location, size and type, competition, number of income streams, weekly rate of patronage on extent of tourism backward linkage with local micro and small enterprises, a linear modelling of local purchase ratio was formulated using explanatory variables.

In order to explain the influence of physical location, size and type of tourism enterprises, the effect of competition, number of income streams within tourism enterprises on local purchase ratio for all tourism enterprises with the same level of patronage rate and visitor length of stay, Multiple Linear Regression Model was developed as follows:

$$LP\ Ratio = \beta_0 + \beta_1 Location + \beta_2\ SizeEntr + \beta_3 TypeEntr + \beta_4 RivalsNo + \beta_5 IncomeStr + \beta_6 PatronageRate + \beta_7 LengthStay + Error$$

Table 3.4: Definition of Modelling Variables

Variables	Type	Definition of Variable
LP Ratio	Metric	Local purchase ratio is the value of supplies from a given local supplier divided by total supplies from ALL supplies received by tourism enterprise
Location	Dummy	Location is a categorical variable representing Kisumu CBD, Outskirts of Kisumu Town and Rural Areas of Kisumu. The reference category is Outskirts of Kisumu Town.
Size Entr	Metric	Size of Enterprise is the maximum number of visitors that tourism enterprise can serve within its existing capacity.
Type Entr	Dummy	Type of enterprise is qualitative variable represented by two dummy variables. It includes hotels & lodges, guest houses, restaurant & clubs with hotel & lodges treated as reference group.
Rival No	Metric	The number of rivals is a measure of level of competition faced by tourism enterprise in terms of number of proximal enterprises offering same services.
Income Str	Metric	Income streams or revenue points is the number of portfolio or main sources of tourism enterprise revenue.
Patronage Rate	Metric	The typical number of visitors served by tourism enterprise between Friday and Sunday.
Length Stay	Metric	Number of nights spent by visitors in a tourism enterprise before checking out.
Error	Metric	Other uncontrolled factors influencing local purchase ratio but uncorrelated with controlled variables.

3.11.4 Moderating Effect of Business Networks on Backward Linkage of Tourism with Local Micro and Small Enterprises

In order to establish moderating effect of level of tourism business network on the relationship between physical locations of tourism enterprises, type of tourism firm and local purchase ratio, Analysis of Variance Technique was adopted. In this framework, local purchase ratio was the continuous dependent variable; physical location and type of tourism enterprises were treated as Between Subject Factors measured at three levels each. The other factor was tourism business networks measured also at two levels. This was, therefore, a ***3 x 3 x 2 Factorial Design***. The main effects of business networks, the physical location, type of tourism enterprises and the interaction effects between and amongst the factors were assessed using F test and its

corresponding p value compared with significant level. The general linear model was given below

*Local Purchase Ratio = Baseline + Location effect + Tourism Type Effect + Location*Tourism Type Interaction Effect + Tourism Business Network Effect + Location *TB Network Interaction Effect + Tourism Type*TB Network Interaction Effect + Location*Tourism Type*TB Network Effect + Within Group Error.*

Table 3.5: Levels of Business Networks, Type of Tourism Enterprise and Physical Location Factors

Factors	Levels	Value Label	Group Size
Level of Networking	1	2 and less Networks	42
	2	3 and more Networks	64
Enterprise Location	1	Outskirt of Kisumu Town	53
	2	Within Kisumu CBD	31
	3	Rural Areas within Kisumu	22
Enterprise Type	1	Hotel & lodge	51
	2	Guest House	28
	3	Restaurant & Club	27

3.11.5 General Linear Modelling of moderating effect of Tourism Seasonality

Multivariate analysis of variance was adopted in the analysis, based on a Mixed Design Model with seasonality as Within Subject Factor (Repeated Measures), level of weekly patronage and size of tourism enterprise were both treated as Between Subject Factor. The mixed design model is given as:

*Number of Visitors = Baseline + Seasonality Effect + Patronage Rate Effect + Size of Tourism Enterprise Effect + Seasonality * Patronage Rate Interaction Effect +*

*Seasonalty*Size of Tourism Enterprise Interaction Effect + Seasonality* Patronage Rate*Size of Tourism Enterprise Interaction Effect + Error*

Seasonality is a within subject factor measured at 12 levels as indicated in the following Table 3.6 below

Table 3.6: Within-Subjects Factors

Measure:	Number of Visitors Served
Season	Dependent Variable
1	JAN
2	FEB
3	MAR
4	APR
5	MAY
6	JUN
7	JUL
8	AUG
9	SEPT
10	OCT
11	NOV
12	DEC

Weekly Patronage and Size of Tourism Enterprise factors were both measured at three levels as indicated in Table 3.7 below

Table 3.7: Between-Subjects Factors and their Levels

Factors	Levels	Value Label	N
Tourism Enterprise Size	1.00	30 and less Patrons	28
	2.00	31 through 96 Patrons	40
	3.00	97 and More Patrons	28
Patronage Rate	1.00	10 and less Customers per week	33
	2.00	11 through 30 Customers per week	33
	3.00	31 and more Customers per week	30

Wilk`s Lambda, ***F value*** and ***p values*** for interaction between size of tourism enterprises and tourism seasonality, and interaction between tourism seasonality and rate of patronage were determined and their respective p values compared with significance level.

3.12 Research ethics

3.12.1 Confidentiality

The information given by respondent was used strictly for academic pursuits. The identity of the respondent and the enterprises from which the data was collected was never disclosed in the questionnaire or during data analysis process and the data collected was not disclosed to any firms or used in a manner that is unfair to the organization from which it was originated.

3.12.2 Anonymity

The respondents were not required to indicate their names, the department or workstation or organization in which they work in the data collection tool. The identity of all the cases considered was labelled in such a manner that they all remained unanimous.

3.12.3 Informed Consent

The respondents in the study were duly informed about the study, purpose of the study and the need to collect data. The request for access was presented together with relevant authorization documents for data collection from the University and other institutions such as National Commission for Science, Technology and Innovation. Once the access was granted the researcher conformed with all reasonable conditions relating to interaction, duration, timing and handling of data sources and other related documents.

3.12.4 Potential Benefits

There was no monetary benefit that was derived from participating in the study as a respondent. However, benefit resulting from new knowledge that sprung from the study outcome was shared with the respondent as a way of motivating them to participate through open source journal publications. The benefits will accrue to society in the long run once the study make recommendations towards addressing policy gaps in County Tourism Development and such recommendation are considered for implementation or further research**.**

3.12.5 Potential Discomfort, Inconveniences, Injuries, Harm or Risks

The respondents were asked to fill in the questionnaire at their own free time so that the organization for which they work does not incur loss of man hour required in productivity. The identity of the respondent and their organization was not disclosed and the data collected from individuals and organization remained unanimous and was not used for any other purpose other advancing academic interest.

3.12.6 Voluntarism

The respondents` participation and withdrawal from the study was on their own volition. The purpose of the study was clearly explained and respondent consent was obtained through their signature of agreement to participate in the study. However, respondents were free to withdraw their participation from the study at any time of their choice.

CHAPTER FOUR

RESULT AND DISCUSSION

4.1 Introduction

This Chapter covers analysis and discussion on the moderating effect of tourism business network on the relationship between physical location of tourism firms, type of tourism firms and local purchase ratio. It also provides analysis and discussion on relationship between the number of income streams within tourism enterprises and local purchase ratio. Further, factors which not only differentiate groups of suppliers but also explain the probability of their sale proportion exceeding government threshold level of 30% are discussed.

Also, the role of tourism seasonality in influencing the relationship between size of tourism enterprises, weekly rate of patronage and local purchase ratio is highlighted. Lastly, local purchase ratio is explained in terms of modelling local purchase ratio using physical location, size and type of tourism enterprises, level of competition, and number of revenue points found in tourism enterprises, controlling for both patronage rate and length of stay.

4.2 Characteristics of Tourism Enterprises as Units of Analysis

Tourism enterprises from which data were collected were categorized into three: Hotels and lodges, guest houses, restaurants and clubs. The enterprises were sampled from three main locations namely outskirt of Kisumu town, within Kisumu CBD and rural areas within Kisumu County. The Table 9 below indicates the type of tourism enterprises randomly sampled from the three cluster areas of Kisumu County.

Table 4.1: A Cross Tabulation of Enterprise Location by Enterprise Type

		Enterprise Type			Total
		Hotel & lodge	Guest House	Restaurant & Club	
Enterprise Location	Outskirt of Kisumu Town	26	21	6	53
	Within Kisumu CBD	15	4	12	31
	Rural Areas within Kisumu	10	3	9	22
Total		**51**	**28**	**27**	**106**

(Source: Author, 2020)

4.3 Relationship between Number of Revenue Points of Tourism Enterprises and Local Purchase Ratio

The first objective was to find out relationship between the number of revenue points within tourism enterprises and local purchase ratio. In the analysis the revenue point variable and local purchase ratio variable were converted into factors. The revenue points (income streams) factor was measured at two levels and the local purchase ratio was measured at four levels. The 2 x 4 nominal by nominal contingency Table 4.2 was used to feature observed and expected absolute frequencies. The significance of the dependence between income stream factor and local purchase ratio factor was determined using Pearson`s $\chi^2$ statistics, Cramer`s V statistics and contingency coefficient C.

From Table 4.2, the observed frequencies were found to be generally lower than expected frequencies for the enterprises with between 1 and 2 income streams across the three intervals of local purchase ratio. However, the observed frequencies were more than expected frequencies for enterprises with between 3 and 4 income streams across all intervals of local purchase ratio factor. It appeared that the relationship between income stream factor and local purchase ratio factor depended on level of income stream factor.

Table 4.2: Association between Income Streams and Local Purchase Ratio

			Local Purchase Ratio Intervals				Total
	No. of Income Streams		Between 0.04 & 0.29	Between 0.30 & 0.55	Between 0.56 & 0.81	Between 0.82& 1.00	
Income Streams Factor	Between 1 and 2	Count	5	8	15	21	49
		Expected Count	6.9	9.2	15.7	17.1	49.0
	Between 3 and 4	Count	10	12	19	16	57
		Expected Count	8.1	10.8	18.3	19.9	57.0
Total		Count	15	20	34	37	106
		Expected Count	15.0	20.0	34.0	37.0	106.0

(Source: Author, 2020)

Table 4.3 and Table 4.4 indicate that the income streams (revenue points) factor is independent from local purchase ratio factor (Pearson`s $\chi^2$ statistics = 0.388, Cramer`s V = 0.169, Contingency Coefficient = 0.167, p value = 0.388). Therefore, the number of revenue points within tourism enterprises had no bearing, whatsoever, on the extent of local purchase ratio, and the hypothesis that proportion of value of local purchase has no significant relationship with tourists` facilities number of revenue points was not rejected at 5% significance level.

The finding contradicts the previous finding by Muhoro et al. (2020) and Amin (2020) who established that diversity in tourism product have positive effect and negative effect respectively on tourist arrivals and thus income. Furthermore, the product portfolio theory does not support the current finding because the range in product offering within tourism enterprises is not associated with the spread of opportunities in the local economy. The opportunities seem to be spread externally by tourism enterprises through importation as opposed to within the local economy. Therefore, the apparent lack of significant relationship between number of revenue

points and tourism linkage with local economy was attributed to significant reliance of tourist industry on importation of supplies from outside Kisumu County.

Table 4.3: Chi-Square Tests of Significance of Revenue Points – Purchase Ratio Association

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.026	3	.388
Likelihood Ratio	3.049	3	.384
Linear-by-Linear Association	2.803	1	.094
N of Valid Cases	106		

Table 4.4: Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.169	.388
	Cramer's V	.169	.388
	Contingency Coefficient	.167	.388
N of Valid Cases		106	

4.4 Local Suppliers Mean Score Profiles and Local Purchase Response Probability

Preliminary Diagnostics in Descriptive Discriminant Analysis

The sample size to variable ratio of 20:1 required for implementation of discriminant analysis was met as the study had a sample size of 106 and five discriminant variables. Though, according to Table 13, equality requirement for variance – covariance matrices across the four groups was violated (Box M test = 66.14, p value = 0.001) the technique was deemed to be robust to violation due to equality in group sizes used in the study. Each discriminant variables were found to be normally distributed according to their respective Q –Q Normal Plot.

Also, the skewness and kurtosis coefficients for the variables were less than 1in magnitude, and thus requirement for multivariate normality was met. Further, there was no outlier observations noted in all discriminant variables. Lastly, the respondent or observations used in the study were randomly collected and questionnaire administered individually and thus the requirement of

independence was met. Finally, according to Table 4.6, there was no multicollinearity amongst the discriminant variables as the Variance Inflationary Factor (VIF) for all variables were less than 2 in magnitude.

Table 4.5: Homogeneity of Variance Test Results

Box's M		66.149
F	Approx.	2.050
	df1	30
	df2	32923.368
	Sig.	.001

Tests null hypothesis of equal population covariance matrices.

Table 4.6: Collinearity Test

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	56.118	17.749		3.162	.002		
	Longvity in Commercial Relation	-.505	.170	-.289	-2.966	.004	.918	1.089
	Supplier Education Level	-8.537	3.597	-.234	-2.374	.020	.901	1.110
	Weekly Supply Value	.000	.000	-.042	-.413	.681	.841	1.189
	Rate Supplies Quality	3.133	2.328	.161	1.346	.181	.611	1.636
	Rate Promptness	.661	1.884	.038	.351	.726	.761	1.313

a. Dependent Variable: Case ID

4.4.1 Differences in Mean Score Profile among Groups of Local Suppliers of Tourism Enterprises

The first part of the second objective was to establish significant differences in the average score profile amongst groups of local suppliers based on given discriminatory variables and dimensions along which they were separated. Multiple descriptive discriminant analysis was used to find out the dimensions of discrimination, and variables contributing in differentiating

groups of tourism suppliers. Almost all suppliers in this study operated micro enterprises. The key discriminating variables used included rating of supplier pricing of products, promptness rating of order delivery, number of employees in supplier business, rating of quality of supplier`s product, supplier education level and age bracket, and average value of weekly supply.

The suppliers were grouped according to the frequency of weekly supply which included 4 times a week and below, 5 and 7 times a week, and 8 times a week and above. The Table 4.8 indicates the groups of local suppliers and their respective number per group. Table 4.7 and Figure 4.1 provide profile of main product sold by local suppliers to tourism enterprises. From Table 4.7 and Figure 4.1, beverage, beef and detergent account for 9.4% of all key commodities supplied by local suppliers, poultry product accounted for 13.2%, and fish and vegetables, each accounted for 20.8%. It is apparent that fishery and agriculture are the key sectors which drive tourism backward linkage with local economy of Kisumu County.

Table 4.7: Local Commodity Supplied

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Non	5	4.7	4.7	4.7
	Beef	10	9.4	9.4	14.2
	Beverage	10	9.4	9.4	23.6
	Cereals	1	.9	.9	24.5
	Detergent	10	9.4	9.4	34.0
	Fish	22	20.8	20.8	54.7
	Fruits	1	.9	.9	55.7
	Milk	4	3.8	3.8	59.4
	Pork product	2	1.9	1.9	61.3
	Potatoes	1	.9	.9	62.3
	Poultry Product	14	13.2	13.2	75.5
	Textile	1	.9	.9	76.4
	Toiletry	2	1.9	1.9	78.3
	Vegetable	22	20.8	20.8	99.1
	Water	1	.9	.9	100.0
	Total	**106**	**100.0**	**100.0**	

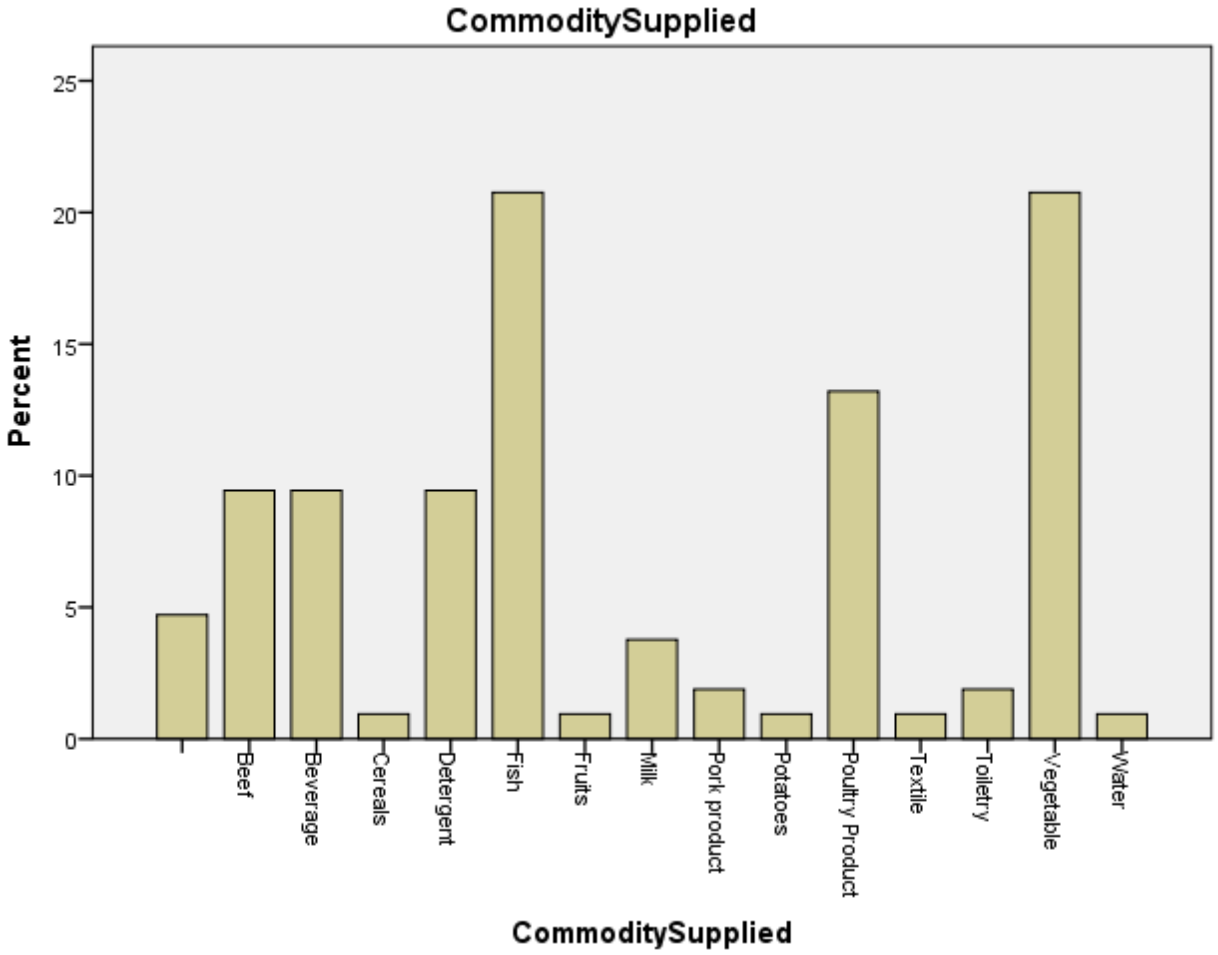

Figure 4.1: Local Commodities from Local Suppliers

(Source: Author, 2020)

4.4.1.2 The Analysis on Average Score Profiles

The mean for the five discriminant variables across the three groups is indicated below in the Table 4.8 and the significance of group means differences are shown in the Table 4.9. From the results there was significant group means differences in weekly supply value (F value = 6.788, p value = 0.002), rating on promptness in supply delivery (F value = 6.353, p value = 0.003), rating on quality of supplies (F value = 3.605, p value = 0.031) and longevity in commercial relationship (F value = 4.829, p value = 0.010). Therefore, the three groups of suppliers were most likely differentiated on dimensions defined by the four mentioned significant variables.

Generally, local suppliers who made 8 and more supplies per week sold supplies valued at Kshs 16,888, were most favourably rated (8.842) in terms of making prompt deliveries of the highest quality (8.5), and were most experienced in supply business, having been in the business for 26 ½ months. Suppliers who made between 5 and 8 supplies per week made, on average, sold supplies valued at Kshs 13,780, were rated second most favourably (8.147) in terms of making deliveries promptly of second highest quality(7.824) but had the least experience in supply business of 14 months. Lastly, local suppliers who made 4 and less supplies per week and had 19 months experience in the supply business sold, on average, Kshs 6,756 worth of supplies, were favourably rated high on promptness in making deliveries (7.441) whose quality were highly rated (7.559). However, there were no significant differences amongst groups of local supplier on the account of level of education. All ratings were based on Likert Scale of 1 through 10, with 10 indicating highest and 1 lowest.

Table 4.8: Supplier Groups Descriptive Statistics

Weekly Supply Rate		Mean	Std. Deviation	Valid N (listwise) Unweighted	Weighted
4 and below per week	Weekly Supply Value	6755.614	7234.9938	34	34.000
	Delivery Promptness	7.441	2.0180	34	34.000
	Supplies Quality	7.559	1.5991	34	34.000
	Supplier Education Level	2.676	.8780	34	34.000
	Longevity in Commercial Relation	18.882	15.2072	34	34.000
5 and 7 per week	Weekly Supply Value	13779.118	12671.7281	34	34.000
	Delivery Promptness	8.147	1.6354	34	34.000
	Supplies Quality	7.824	1.5467	34	34.000
	Supplier Education Level	2.265	.8279	34	34.000
	Longevity in Commercial Relation	14.176	11.9911	34	34.000
8 and more per week	Weekly Supply Value	16887.276	14181.4732	38	38.000
	Delivery Promptness	8.842	1.3054	38	38.000
	Supplies Quality	8.500	1.4842	38	38.000
	Supplier Education Level	2.632	.7857	38	38.000
	Longevity in Commercial Relation	26.500	21.7377	38	38.000
Total	Weekly Supply Value	12640.541	12487.8647	106	106.000
	Delivery Promptness	8.170	1.7483	106	106.000
	Supplies Quality	7.981	1.5795	106	106.000
	Supplier Education Level	2.528	.8419	106	106.000
	Longevity in Commercial Relation	20.104	17.6365	106	106.000

Table 4.9: Tests of Equality of Group Means

	Wilks' Lambda	F	df1	df2	Sig.
Weekly Supply Value	.884	6.788	2	103	.002
Delivery Promptness	.890	6.353	2	103	.003
Supplies Quality	.935	3.605	2	103	.031
Supplier Education Level	.953	2.553	2	103	.083
Longevity in Commercial Relation	.914	4.829	2	103	.010

4.4.1.3 Dimensions of Differentiation of Groups of Local Suppliers

The expected number of dimensions along which the three groups would be differentiated was two and this was statistically confirmed in Table 4.10 and Table 4.11 below. From the result in Table 19 the local suppliers were differentiated by the first significant discriminant function (χ2value = 36.638, p value = 0.000) and second discriminant Function (χ2value = 11.055, p value =0.026). From result in Table 4.10 variance of composite scores in the first discriminant function account for 22.4% of Between Group Variance and the discriminant function itself account for 71.4% of all Between Group Variance. The variance of composite scores in the second discriminant function account for 10.4% of Between Group Variance and the discriminant function itself accounts for 28.6% of total Between Group Variance. Therefore, the three groups of local suppliers were separated to a greater extent along the first dimension, and to a lesser extent along the second dimension.

Table 4.10: Eigen values

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.288	71.4	71.4	.473
2	.116	28.6	100.0	.322

Table 4.11: Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	Df	Sig.
1 through 2	.696	36.638	10	.000
2	.896	11.055	4	.026

The following Table 4.12 indicates the association between the two significant discriminant functions and discriminating variables. According to the standardized canonical discriminant coefficient indicated in Table 4.12, value of weekly supply and rating on promptness in supply delivery load heavily on first discriminant function as opposed to rating on supply quality, supplier education level and longevity in commercial relationship. The high composite score on this first discriminant function is associated with high values in weekly supply, favourable rating on promptness in supply delivery, low but positive longevity in commercial relationship with tourism enterprises, but negative rating on quality of supplies and lower supplier education level. The second discriminant function is associated with longer length of time in commercial relationship with tourism enterprises, higher education level of supplier, low rating on supply quality but low rating in supply delivery promptness and decreasing value of weekly supply.

Table 4.12: Standardized Canonical Discriminant Function Coefficients

	Function	
	1	**2**
Weekly Supply Value	.739	-.193
Rate Promptness	.694	-.158
Rate Supplies Quality	-.049	.012
Supplier Education Level	-.060	.656
Longevity in Commercial Relation	.217	.752

The coordinate of group means for the three categories of supplier is indicated below in Table 4.13. Figure 4.2 indicates actual positions of group centroids in a space defined by the two significant discriminant functions. According to the discriminant plane, local suppliers who made 5 and 7 supplies per week have been separated from those who made 4 and less supplies per week, and those who made 8 and more supplies per week along the second discriminant function. However, the second discriminant function had not separated suppliers who made 4 and less supplies per week from those who made 8 and more supplies per week. Lastly, suppliers who made 8 and more supplies per week and those who made 4 and fewer supplies per week scored higher on the second discriminant function than suppliers who made 5 and 7 supplies per week.

The First Discriminant Function has successfully separated the three groups of suppliers. Generally, suppliers who made 8 and more supplies per week score highest on the discriminant function followed by group of local suppliers who made 5 and 7 supplies per week. Suppliers who made 4 and fewer supplies per week scored the lowest on the first discriminant function.

Since significant loadings on functions are deemed to be those of at least 0.3 (Finch and Laking, 2008), First discriminant function is defined by high value of weekly supply and high rating on promptness in making deliveries, both of which represent effectiveness and efficiency. The second discriminant function is defined by high education level amongst suppliers and sustainability in commercial relationship with tourism enterprises, representing experience. Therefore, the null hypothesis that there is no statistically significant differences in average score profile amongst groups of local suppliers based on the given discriminatory characteristics is rejected on all discriminating variables other than supplier education variable.

Table 4.13: Functions at Group Centroids

Weekly Supply Rate	Function	
	1	2
4 and below per week	-.683	.225
5 and 7 per week	.010	-.488
8 and more per week	.603	.235

Unstandardized canonical discriminant functions evaluated at group means

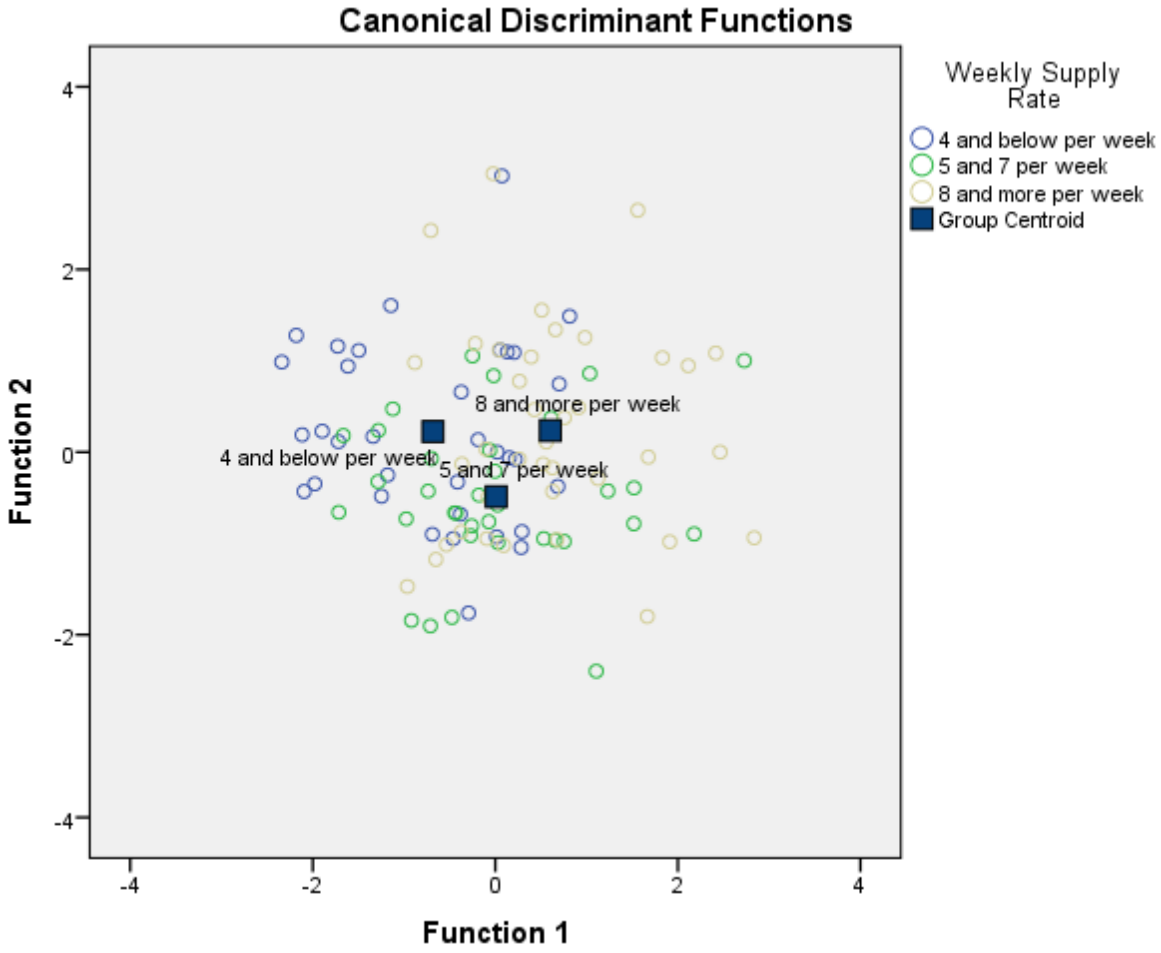

Figure 4.2: Groups of suppliers in discriminant plane

The base for commercial relationship between local suppliers and the tourist industry was narrow, being characterized only by fish, poultry products and vegetables. This, according to product portfolio theory, limits the county from exploiting opportunities in the tourism economy but exposes it to economic risks. According to Beyer (2014), real local participation in tourism is partly determined by significance of economic benefits expropriated by local community. But

given the narrow range of products traded by local suppliers, it was apparent that tourism economic impact in the region had not been sufficiently robust because of limited scale and scope of local participation in tourism business activities. The implication of the finding was that tourism economy of Kisumu County relies on imported inputs from other economies.

The key variables which differentiated local suppliers were found to be value of weekly supplies, promptness in making deliveries, quality of supplies, and supplier longevity in commercial relationship with tourism enterprise. From the foregoing variables, effectiveness and efficiency in the local supply business operations couple with experience in operating in the tourists industry are inferred as key factors conferring local suppliers' competitive advantage in trade. The finding of the current study is in agreement with the previous studies of Odege (2014), Azma and Yahaya (2013) and Mugiri et al. (2017) that education may a critical factor in local participation in tourism but also reveals that it is not a significant factor in differentiating local suppliers. It also advances knowledge by stating that effectiveness, efficiency in local supply business and experience of tourist industry of Kisumu County are significant qualities that confer competitive advantage among local suppliers.

The implication of the finding was that level of education did not confer competitive edge amongst local suppliers in tourist industry. Longevity in commercial relationship between local suppliers and tourist industry was indirectly alluded to by Bwasiri (2014) when he established that limited experience in tourism business undermined local participation in tourism. In the current study, however, longevity in commercial relationship was treated as a distinguishing factor amongst local suppliers already participating in tourist industry. Local suppliers who made 8 and more supplies per week had a longer commercial relationship with tourist industry, followed by suppliers who made 4 and less supplies per week. But suppliers who made between 5 and 7 supplies per week had the least length of time in commercial relationship with the

industry. The implication of the finding was that old and experienced local suppliers had a wider variation in their weekly supplies as opposed to relatively new and inexperienced local suppliers. In the *Service Profit Chain Theory* of Heskette et al, (1997), such variables as customer loyalty, employee satisfaction, value of service offered amongst others underpinned Business Growth and Profitability.

In the current study, longevity in commercial relationship with tourism enterprise was proxy to customer loyalty variable, value and quality of supply was implied in value of service offered variable. Therefore, the current study, to greater extent, affirmed the service profit theory. The implication was that level promptness in responding to customers' orders, perceived value and quality of supplies by tourism industry and sustainability in commercial relationship were key success factors which if incorporated in capacity building program for local business community could lead to greater tourism economic linkage. Lastly, the local suppliers were significantly differentiated along two key dimensions.

The first dimension was typified by value of weekly supplies and industrial rating of speed with which they respond to demand for supplies. The second dimension was underpinned by supplier education level and longevity of local supplier in commercial relationship with tourist industry. The implication of the finding was that any capacity building amongst local businesses geared towards improving overall tourism economic linkage with local economy need to consider productivity and efficiency of local suppliers and sustainable relationship between tourist industry and local businesses. This was where the current study deviated from the previous studies in the context of local participation in tourism.

4.4.2 Socio economic Determinant of Tourism Suppliers` Sale Response Probability

The second part of the third objective was to analyse socio economic characteristics explaining probability of local suppliers' sale exceeding 30% of total weekly purchase made by tourism enterprises. A linear Probability Model was used to model Sale Response Probability using such socio economic variables as age of local supplier (dummy variable), supplier education level (dummy variable), gender of supplier (dummy variable), number of employees in supply business, supplier employment status (dummy variable), promptness in supplying, length of time in commercial relationship with Tourism enterprises, quality of supplies, pricing level of local supplies and frequency of supply per week. The Response Probability was a binary variable indicating whether proportion of weekly local supply exceed 30% of total supplies procured by tourism enterprise in a week.

Preliminary Diagnostics of Linear Probability Model

The estimation of Multiple Linear Model Parameters are based on such assumptions as linearity in parameters, random sampling, lack of multicollinearity amongst independent variables, zero error mean given values of explanatory variables, error term and dependent variable follow normal distribution and constant error variance conditional on values of set of explanatory variables. According to Boxplots of variables, Z-Scores obtained on all variables and Mahalanobis Squared Distance, there was neither outlier nor influential observations. However, since linear Probability Model has binary response dependent variable the requirement of constant error variance and normal distribution was violated.

The requirements of linearity, random sampling and lack of perfect multicollinearity were observed. The Variance Inflationary Factor for all independent variables was less than 2 as shown in the last two columns under collinearity in Table 4.14 under result and discussion. Since error variance was heteroscedastic, Generalized Least Square Estimation, particularly Weighted

Least Square Estimation, of model parameters was adopted. The Model was initially estimated by OLS Estimation and predicted probabilities were then obtained from the estimated model. The variance of residuals were determined as $(b_0 + b_1x_1 + \ldots + b_nx_n)(1- b_0 - b_1x_1 - \ldots - b_nx_{n)}$. The reciprocal of standard deviation of the residual was used as weight to transform all variables from which parameter estimates were determined by OLS Estimation (Wooldridge, 2013). To ensure that the predicted probabilities were bounded between 1 and 0, the predicted values which were less than 0 were approximated to be 0.05 while those probabilities that exceeded 1 were approximated to be 0.99 (Wooldridge,2013). Out of 106 predicted probabilities only three fell outside the boundary of 1 and 0.

Finally, based on the *boxplots* the observations on all variables did not have outliers and based on *Cook`s Distance* there was no influential observation in all variables. All independent variables closely followed normal distribution. The skewness and kurtosis coefficients for all variables were less than one. Lastly, observations made on each independent variable fell along diagonals of *Q-Q Normal Plots* generated from SPSS.

From the Table 4.14 suppliers whose age bracket fell within 26 – 30 and 31 – 35 had lower probability than suppliers whose age was 36 and above to make sales whose proportion exceed 30% of all sales made to tourism enterprises. However, this observation was not significant (p value > 0.05). While on average local supplier with primary education had a higher probability for his/her sale proportion exceeding 30% of all total sales than a supplier with College level education. Local suppliers with Secondary and University level education had lower probability of their sales exceeding 30% of total sales made than Supplier with College Level Education. These observations had also occurred by chance (p value > 0.05). In terms of supplier gender, male and female had same probability of their sales exceeding 30% of total sales made to tourism enterprises (p value = 0.334). Local suppliers employment status had no differential

effect on response probability (p value = 0.332). Increasing number of employees in local supplier business reduced the probability of sale of such supplier exceeding 30% of all purchases made by tourism enterprise by 7.4% (t value = -2.646, p value = 0.01). While promptness with which local suppler responded to orders from customer and his or her long relation in business with customer had no effect on probability of sales ever exceeding 30% of total sales made (p value > 0.05), quality of local supplies enhanced probability of exceeding 30% threshold by 8.8%(t value = 2.629, p value = 0.010). Last but not least, pricing of local supplies had no effect on probability of local supplier sale exceeding 30% of total supplies(p value = 0.495) but frequency of Weekly Supply reduced probability of sales of local supplier exceeding 30% of total sales made by 5.3% (p value = 0.018).

The null hypothesis that there no any socio economic characteristics with significant explanatory power on the probability of local suppliers` sale exceeding 30% of total weekly purchase made by tourism enterprises was not rejected for all variables other than dummy variables on physical location, number of employees in supplier`s business and quality of local supplies. The findings are consistent with poverty theory with respect to the structural inhibitors against maximal exploitation of economic opportunities by local people (Chimhowu, 2009).

Therefore, the socio economic variables with significant effect on response probability were number of people employed by local supplier, quality of local supplies and frequency of weekly supply. The new finding did not contradict the earlier findings by Azman and Yahaya(2013), Mugiri et al.,(2017), Odege (2014) and Babu et al.,(2012) that level of education affect participation of local people in tourism. On the contrary, the current finding put emphasis on local suppliers already participation in tourism by looking at the probability of proportion of their sale exceeding policy requirement of 30%. It was established that education, employment status, gender amongst other characteristics did not affect probability of exceeding the threshold. While

the increase in number of employees in supplier business depressed probability of making sales in excess of policy threshold, reduced weekly frequency of local supplies and increased quality of supplies enhanced probability of exceeding policy threshold. As business increase in size supplier efficiency is compromised because of owner`s limited ability and skill to manage many employees beyond a critical size and as a result the output was compromised.

The finding is in agreement with the hypothesis of diseconomies of scale and the associated law of diminishing return propounded by Lipsey and Chrystal (1995) and the theory of poverty. Lowered frequency of weekly supply and improved quality of supplies enhance probability of exceeding 30 % threshold because, as explained in the Service Profit Chain Theory (Heskett, et al, 1997), both lead to customer satisfaction and thus positive biasness of tourism enterprises towards local supplier. Because the role of practical and professional education had been found to be important in tourism entrepreneurship it was counterintuitive that it had got no significant role in enabling local supplier sales exceed proportion of 30% policy threshold.

Table 4.14: Weighted Least Square Estimates of Sale Response Probability Equation

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	.541	.335		1.612	.110	-.125	1.207		
	AgeBracket_31and35	-.002	.095	-.002	-.017	.986	-.191	.188	.796	1.256
	AgeBracket_26and30	-.056	.147	-.038	-.377	.707	-.348	.237	.813	1.229
	Primary Educ	.075	.144	.061	.521	.604	-.211	.362	.606	1.649
	Secondary Educ	-.056	.106	-.057	-.531	.597	-.266	.154	.727	1.375
	University Educ	-.155	.152	-.103	-1.023	.309	-.456	.146	.829	1.206
	Gender_Male	.088	.090	.097	.971	.334	-.092	.268	.842	1.188
	Employ Status_ Employed	.132	.136	.103	.975	.332	-.137	.402	.754	1.326
	No of Supplier Employees	-.074	.028	-.263	-2.646	.010	-.129	-.018	.850	1.177
	Promptness Rating	-.010	.028	-.040	-.355	.723	-.067	.046	.668	1.497
	Longevity in Commercial Relation	-.001	.003	-.041	-.399	.691	-.006	.004	.788	1.269
	Supplies Quality Rating	.088	.034	.299	2.629	.010	.022	.155	.648	1.543
	Prices Level Rating	-.017	.025	-.073	-.685	.495	-.068	.033	.730	1.370
	Weekly Supply Frequency	-.053	.022	-.239	-2.417	.018	-.097	-.010	.856	1.168

4.5 Modelling Local Purchase Ratio

The third objective was to model proportion of purchase from local micro and small enterprises by tourism enterprises controlling for various independent variables.

Preliminary Diagnostics of Multiple Regression Model

The metric variables were screened for outlier observations, missing values and normal distribution. There were no missing observations noted amongst the metric variables. Further, scrutiny of boxplots, *normal Q-Q Plots*, skewness and kurtosis Coefficient revealed no serious departure from normal distribution for all metric variables expect enterprise size variable which had one outlier and significantly deviated from normal distribution. The skewness and kurtosis coefficient for all variables, other than enterprise size, had Coefficients whose magnitude never exceeded 1. To correct the anomaly found with enterprise size variable, the variable was subjected to logarithmic transformation. *Cook`s Distance* value for all observations was less than 1 which signified absence of influential observation. The Regression Specification Test (RESET) was conducted on the estimated model and it was found out that the squared and cubed predicted dependent variables in the expanded Model were both not significant. This indicated that the original model was not misspecified.

The further key assumptions for Multiple Linear Regression Analysis for cross sectional data include linearity in parameter, random sampling, lack of perfect multicollinearity amongst independent variables, zero conditional mean for error term, homoscedasticity of variance of error term given values of independent variables and normal distribution of error term. Least Square Estimation of Multiple Regression parameters relies on fulfilment of the foregoing assumptions otherwise conclusion

derived would not be valid (Wooldrigde, 2013).

The requirement of random sampling was met as all respondents were selected randomly from a sample frame developed by Tourism Regulatory Authority and questionnaire administered to each independently. Almost all variables had inflationary Factor of less than 2. One of the variables had Inflationary Factor of slightly more than 2. Therefore, there was no significant Multicollinearity amongst the variables. Lack of homoscedasticity was indicated by observing some pattern on scatterplot of residuals against predicted values of dependent variables. Heteroscedasticity was further confirmed by conducting *Lagrange Multiplier Test* whose calculated value of 25.44 exceeded Critical Chi Square value of 2.167. To correct the anomaly the model parameters were estimated by OLS Estimator and logarithm of its squared residual regressed on the independent variables. The exponent of predicted values of log – linear Model was calculated to obtain the variance of residuals. All variables in the original Model were weighted by a value obtained from the reciprocal of square root of residual variance. The transformed original Model was then estimated by OLS to obtain Feasible Generalized Least Estimates of parameters which were then interpreted.

The result in Table 4.15 shows that only 14.8% of variation in Local Purchase Ratio is explained by the Multiple Regression Model with a standard error of estimate of approximately 0.28.

Table 4.15: Purchase Ratio Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.384[a]	.148	.068	.27560

From the result in ANOVA Table 4.16, all the independent variables are jointly insignificant in explaining the variation in local purchase ratio(F-value = 1.847,p-value = 0.07)

Table 4.16: ANOVA for Purchase Ratio

Model	Sum of Squares		Df	Mean Square	F	Sig.
1	Regression	1.262	9	.140	1.847	.070
	Residual	7.292	96	.076		
	Total	8.554	105			

According to the result in Table 4.17, changes in all independent variables except one had no individual effect on any change in local purchase ratio (p values > 0.05). Additionally, local purchase ratio in the outskirts of Kisumu Town was not significantly different from that of Kisumu CBD. However, local purchase ratio in rural area of Kisumu County was higher than that obtaining in the Outskirts of Kisumu Town and CBD of Kisumu Town by 15.3% (t value = 1.998, p value = 0.049). Lastly, though it appears that local purchase ratio in restaurant and club were lower than in hotel and lodges by

8.9% and local purchase ratio attributed to guest houses were higher than hotel and lodges by 5.7%, all such differences in purchase ratio amongst types of tourism enterprises generally occurred merely by chance (p value > 0.05). Therefore, the null hypothesis that location, patronage rate, size, type and number of tourism firms, number of revenue points and visitor length of stay has no significant partial and joint effect on variation in the proportion of local purchase was by and large not rejected at significance level of 0.05.

Table 4.17: Generalized Least Square Estimate of Purchase Ratio Equation

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	*95.0% Confidence Interval for B*	
		B	Std. Error	Beta			*Lower Bound*	*Upper Bound*
1	(Constant)	.564	.176		3.198	.002	*.214*	*.914*
	Length of Stay	-.052	.028	-.230	-1.823	.071	*-.108*	*.005*
	Log enterprise size	.052	.035	.167	1.491	.139	*-.017*	*.121*
	Patronage Rate	-.001	.002	-.089	-.871	.386	*-.005*	*.002*
	Income Streams	-.027	.037	-.089	-.710	.480	*-.101*	*.048*
	CBD KSM	-.019	.070	-.029	-.267	.790	*-.157*	*.120*
	Rural Areas KSM	.153	.077	.216	1.998	.049	*.001*	*.305*
	Number of rivals	.014	.011	.127	1.293	.199	*-.007*	*.035*
	Restaurant and Club	-.089	.098	-.134	-.914	.363	*-.283*	*.104*
	Guest House	.057	.084	.087	.680	.498	*-.109*	*.224*

4.6 Moderating effect of Level of Tourism Networks

The fourth objective was to establish the moderating effect of tourism business networks on the relationship between physical location, type of tourism enterprises and local purchase ratio. In order to achieve the foregoing objective Analysis of Variance based on Generalized Linear Model was adopted. Local purchase ratio was used as the continuous dependent variable. The Between Subject Factors included physical location factor measured at three levels namely outskirts of Kisumu Town, within Kisumu CBD and Rural Areas of Kisumu County. Type of tourism enterprise factor was measured at three levels which included hotel and lodges, guest houses, restaurants and clubs. Level of tourism business network factor was measured at two levels namely 2 and fewer networks and 3 and more networks.

Preliminary diagnostics of general linear model

The data was explored and it was found that there were neither serious outliers. The Analysis of Variance Model based on Between Subject Design as adopted was based on such three key assumptions as homoscedasticity, normal distribution of dependent variable and independence observations in each group. According to Lavene `s Test of Error Variance the error variance was heteroscedastic (F value = 2.226, p value = 0.009). The dependent variable was assumed to follow normal distribution because of large sample size of 106 and Central Limit Theory prescription. Since the data was collected from each individual enterprises that were geographically separated the requirement of independence was upheld. Violation of homoscedasticity was not serious because the study used groups of respondents with equal sizes.

From the Table 4.18 the moderating effect of tourism business network on the relationship between location of tourism business and local purchase ratio is significant (F value = 6.337, p value = 0.003). Globally, however, the effect of type of tourism enterprise on the local purchase ratio does not depend on the level of business networks developed by tourism businesses.

Therefore, the hypothesis that the influence of location on proportion of local purchase is independent on the extent of business networks in tourism is rejected.

Table 4.18: Tests of Between-Subjects Effects

Dependent Variable: Local Purchase Ratio Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	2.102[a]	16	.131	1.721	.057
Intercept	27.185	1	27.185	356.185	.000
Network Factor	.394	1	.394	5.163	.025
Location	.494	2	.247	3.236	.044
Enterprise Type	.016	2	.008	.103	.902
Network Factor * Location	.967	2	.484	6.337	.003
Network Factor * Enterprise Type	.284	2	.142	1.863	.161
Location * Enterprise	.090	4	.022	.294	.881
Network Factor * Location * Enterprise	.277	3	.092	1.210	.311
Error	6.793	89	.076		
Total	56.521	106			
Corrected Total	8.894	105			

From Table 4.19, tourism enterprises with two and less business networks which are located in the outskirts of Kisumu City, Kisumu Central Business District (CBD) and rural areas have on average 62%, 83% and 78% respectively of their total purchases sourced from local suppliers. However, similar tourism enterprises located in the outskirts of Kisumu City, Kisumu CBD and rural areas of Kisumu County but with three and more business networks got on average 67%, 33% and 79% of their total input purchases from local businesses.

Also as indicated in Table 4.19, and Figure 4.3, the moderating effect of tourism business network was positive in both rural areas and in the outskirts of Kisumu Town but it was negative in Central Business District. Further, the moderating effect of Tourism Business Networks was stronger in Kisumu Central Business District than rural and outskirts of Kisumu Town. However,

there was no significant interaction effect between level of tourism business network and type of tourism enterprise (F-value = 1.863, p-value = 0.161).

From the result, it was apparent that tourism enterprises located in outskirts of Kisumu City and rural areas with three and more business networks outperformed their counterparts with two and less business networks in creating linkages with local economy. However, tourism enterprises with two and less business networks outperformed those with three and more business networks in creating local economic linkages in Kisumu CBD. However, from the previous findings of Cai and Szedl (2016), business networks were found to be positively correlated with firm performance, and the performance was moderated by location (Igwe & Minai, 2011). But when firm performance is interpreted to mean the extent to which the firm creates linkage with local enterprises, then, current finding was partly consistent with that of Cai and Szedl with regards to tourism enterprises in rural and outskirts of Kisumu County, but partly inconsistent with regards to tourism enterprises in Central Business District of Kisumu County. Further, the current findings deviated from that of Igwe and Minai as the study focused on moderating effect of tourism business networks on the relationship between physical location and firm performance.

Therefore, on the basis of the finding, the contribution of the current study is the revelation that the effect of business network on firm performance is not only positive but also be negative, and that it varied with the location of tourism enterprises. The current study also advances the theory of business network by establishing the strength and direction of the interaction effect of business networks on the relationship between enterprise physical location, and extent of tourism backward linkage with Kisumu County's economy. The moderating effect of tourism business networks has been established to be strongest but negative in Kisumu Central Business District, but positively stronger in the outskirts of Kisumu City than it is in rural areas of Kisumu County.

Table 4.19: Moderating effect of Business Networking on Location and Types of Tourism Enterprises

Dependent Variable: Local Purchase Ratio

Level of Networking	Enterprise Location	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
2 and less Networks	Outskirt of Kisumu Town	.618	.064	.490	.745
	Within Kisumu CBD	.831	.078	.677	.985
	Rural Areas within Kisumu	.781[a]	.120	.544	1.019
3 and more Networks	Outskirt of Kisumu Town	.673	.073	.527	.818
	Within Kisumu CBD	.326	.107	.114	.538
	Rural Areas within Kisumu	.793	.074	.646	.939

a. Based on modified population marginal mean.

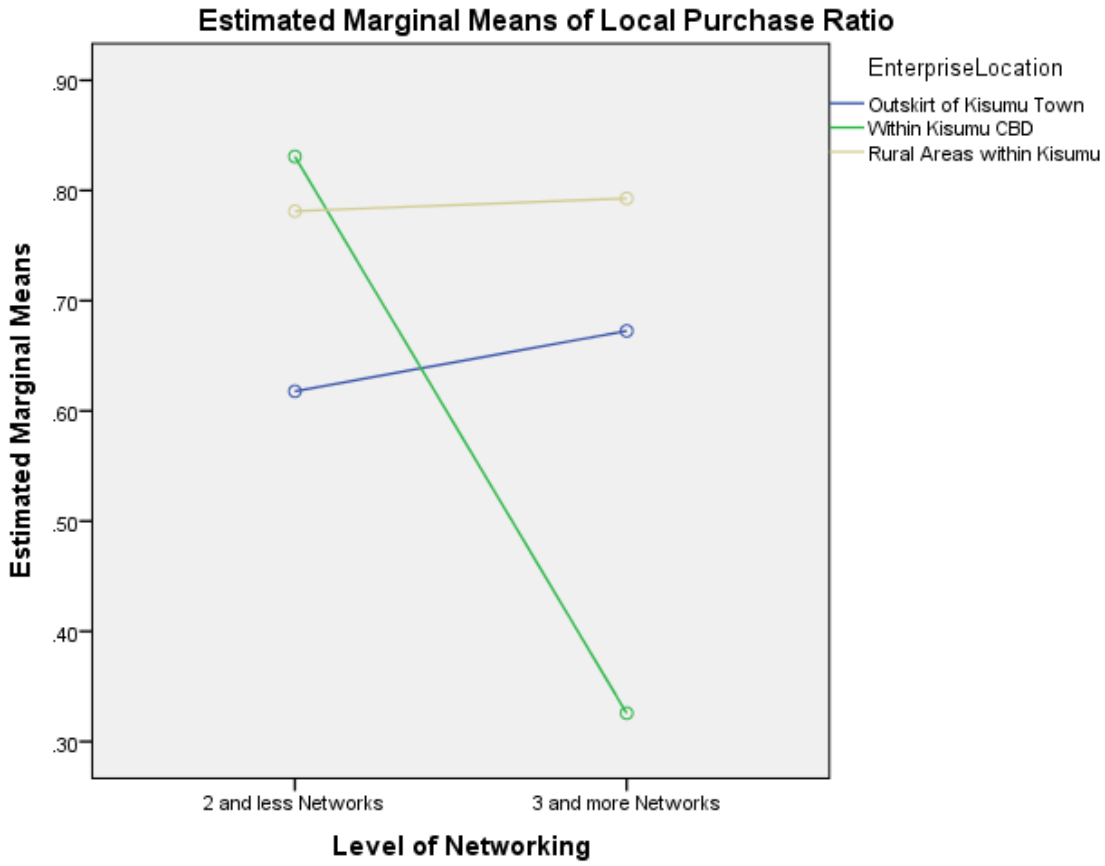

Figure 4.3: Moderating effect of tourism business network

4.7 Moderating effect of Tourism Seasonality

The last objective was to establish moderating effect of tourism seasonality on the nexus between the size of tourism enterprises, weekly patronage rates of tourism enterprises and local purchase ratio. To achieve the objective a Generalized Linear Model with two Between Subject Factors and one Within Subject Factor was adopted in the analysis. The two Between Subject Factors were size of tourism enterprises and weekly patronage rate each measured at three levels. The Within Subject Factor was tourism seasonality with 12 repeated measures or levels. The actual repeated measures were adopted in the study, as a proxy to local purchase ratio. According to Woodridge (2013), unobserved variable can be represented by a variable which is correlated with it. Such a variable is called proxy variable. Thus, the number of visitors or clients served by tourism enterprises in a month correlate positively with local purchase ratio and is hereby adopted as proxy variable in the analysis.

4.8 Preliminary Diagnostics

Each dependent variables score across the groups were converted into z scores and from the scores no observation had a z score of 3, thus there were no outliers' observations among the variables for each group. Further, following data exploration, it was found out that 10 observations had missing data on the monthly tourists` arrival and were excluded from the analysis. The key assumptions in the application of Mixed Design based on ANOVA were multivariate normal distribution of dependent variables, sphericity, homogeneity in variance – covariance matrices across groups and independence of observations on dependent variables.

However, the violation of homogeneity of variance – covariance matrices across group was not serious as long as the ratio between the largest and smallest group was less than 1.5 (Debbie & Hahs, 2017). The sample size for the study was large enough for the Central Limit Theorem to apply and ensure that Multivariate normality was not violated. Further univariate normality on

dependent variable was not violated either. The observations on dependent variables for each group were obtained from individual enterprises that were not related in ownership and were not in close proximity to one another. Therefore, requirement for independence was upheld.

For a repeated measure design, the requirement of spherecity must be met prior to application of univariate analysis. The result in Table 4.20 below indicates that the requirement of spherecity was not upheld (*Mauchly`s W*=0.000, *p value* = 0.000). As a remedy, the degrees of freedom of the univariate *F* - statistics were subjected to *epsilon* adjustment. Accordingly, *Huynh – Feldt* procedure was adopted in adjusting the degrees of freedom of *F* statistics prior to data interpretation.

Table 4.20: Mauchly's Test of Sphericity

Measure: Number of Visitors Served per Month

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	Df	Sig.	Epsilon		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Seasonality	.000	3965.258	65	.000	.118	.131	.091

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

4.8.1 Moderating Effect of Tourism Seasonality

The results reflected in Table 4.21 indicates that the effect of rate of patronage on number of served visitors per month did not depend on tourism seasonality (F value = 1.045, p value = 0.373). However, the effect of size of tourism enterprise on number of visitors served per month was dependent on tourism seasonality (F value = 2.826, p value = 0.044). This supports the observation made by Carluka (2019) that accommodation structure interact with push factors to create seasonality profile of a destination. On the overall, the performance of all enterprises varied depending on the seasons.

From Figure 4.4 below, the maximum number of visitors served by all enterprises was in the month of February, with tourism enterprises with capacity of 97 and more patrons serving the greatest number of visitors, followed by enterprises with capacity of 30 patrons and less. However, enterprises with capacity of between 31 and 96 patrons received the least number of visitors. Also, tourism enterprises registered high patronage in the month of September with tourism enterprise whose capacity was 97 and more patrons attracting the greatest number of clients as in February. However, unlike in February, tourism enterprises whose capacity was between 31 and 96 patrons outperformed those with capacity of 30 and less patrons. Low season spanned the months of March to August in which all tourism enterprises with capacity of between 31 and 96, and those with capacity of 30 and less patrons received similarly lower number of clients than enterprises with capacity of 97 and more patrons.

Lastly, from November through December tourism enterprises with capacity of 30 and less patrons got the highest number of visitors per month, followed by tourism enterprises with capacity of 97 and more patrons. Tourism enterprises with capacity of between 31 and 96 patrons received the least number of visitors per month across the same period. Since one of the key determinant of tourism backward linkage with local economy is the level of tourists` arrivals to a destination (Ashley & Goodwin 2007), large tourism enterprises generally promoted tourism backward linkage in Kisumu County from January through October. This is however, contrary to the previous finding that large and expanding firms have relatively lower linkages with local economy (Ruan & Gorg, 1997).

However, the importance of tourism enterprises with capacity of 30 and less patrons, and those with capacity of between 31 and 96 patrons in promoting backward linkage with local economy depended on season of the year: enterprises with capacity of between 31 – 96 patrons

outperformed the ones with capacity of 30 and less patrons between January and March and were the best performer between November and December; enterprises with capacity of 30 and less patrons outperformed those with capacity of between 31 and 96 patron form August through November.

Table 4.21: Tests of Within-Subjects Effects

Measure: Number of Visitors Served per Month

Source		Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[a]
Seasonality	Sphericity Assumed	3878038662.497	11	352548969.318	6.581	.000	.070	72.389	1.000
	Greenhouse-Geisser	3878038662.497	1.303	2975455308.788	6.581	.007	.070	8.577	.796
	Huynh-Feldt	3878038662.497	1.437	2699256502.809	6.581	.005	.070	9.455	.824
	Lower-bound	3878038662.497	1.000	3878038662.497	6.581	.012	.070	6.581	.718
Seasonality * EnterpriseSize	Sphericity Assumed	3330802387.507	22	151400108.523	2.826	.000	.061	62.174	1.000
	Greenhouse-Geisser	3330802387.507	2.607	1277792011.497	2.826	.049	.061	7.367	.622
	Huynh-Feldt	3330802387.507	2.873	1159180037.449	2.826	.044	.061	8.121	.654
	Lower-bound	3330802387.507	2.000	1665401193.753	2.826	.065	.061	5.652	.542
Seasonality * PatronageRate Factor	Sphericity Assumed	1231259398.779	22	55966336.308	1.045	.405	.023	22.983	.820
	Greenhouse-Geisser	1231259398.779	2.607	472346672.304	1.045	.369	.023	2.723	.259
	Huynh-Feldt	1231259398.779	2.873	428500748.450	1.045	.373	.023	3.002	.272
	Lower-bound	1231259398.779	2.000	615629699.390	1.045	.356	.023	2.089	.227
Seasonality * EnterpriseSize * PatronageRate Factor	Sphericity Assumed	1751602708.798	44	39809152.473	.743	.891	.033	32.696	.853
	Greenhouse-Geisser	1751602708.798	5.213	335982698.495	.743	.598	.033	3.874	.265
	Huynh-Feldt	1751602708.798	5.747	304794859.821	.743	.610	.033	4.270	.280
	Lower-bound	1751602708.798	4.000	437900677.199	.743	.565	.033	2.972	.230
Error (Seasonality)	Sphericity Assumed	51268489789.337	957	53572089.644					
	Greenhouse-Geisser	51268489789.337	113.391	452139624.298					
	Huynh-Feldt	51268489789.337	410169434.392						

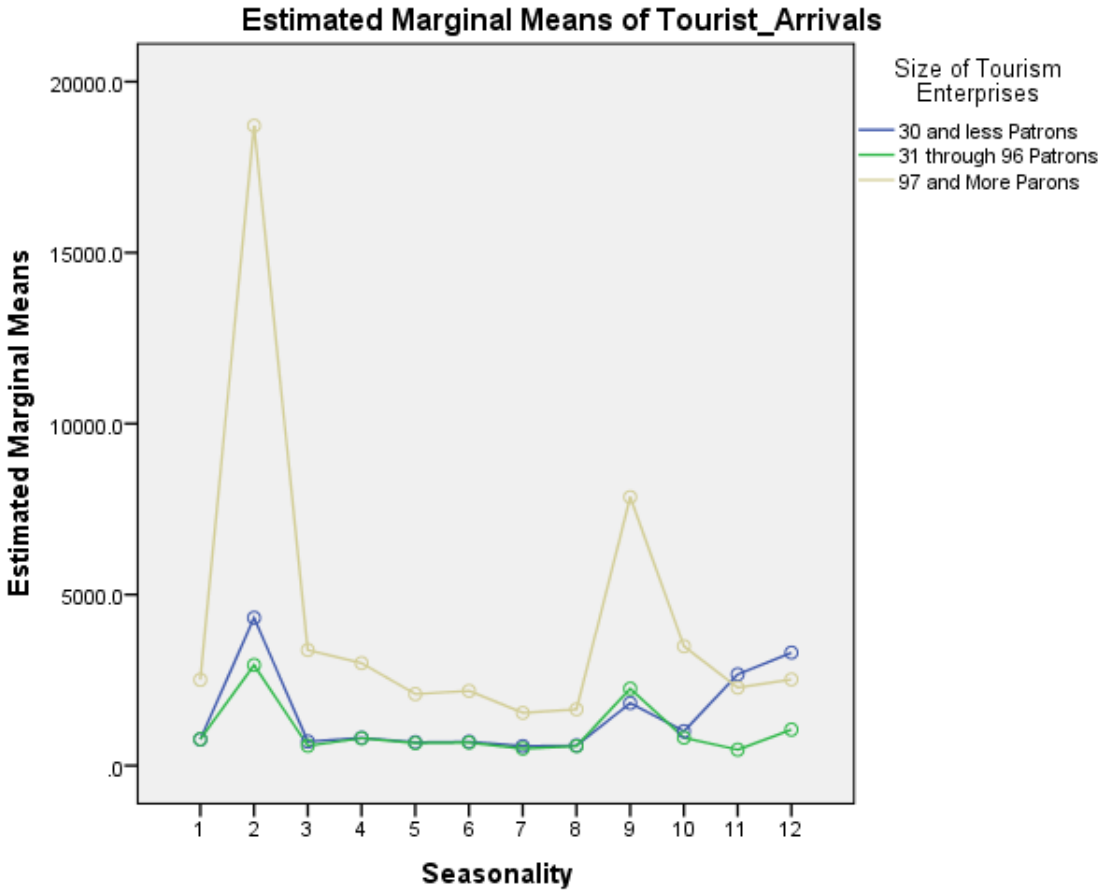

Figure 4.4: Interaction Effect of Seasonality

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1 Introduction

The chapter highlights summary and recommendation on the association between tourism enterprises income streams and local purchase ratio, differences in average score profiles among local suppliers, key factors differentiating groups of local suppliers and affecting chances of their sale proportion in exceeding a threshold of 30%. This is followed by the conclusion on factors affecting extent of tourism backward linkage. Last but not least, moderating effect of level of tourism networks on the relationship between physical location and type of tourism enterprises and local purchase ratio is covered. Lastly, the conclusion on the interacting effect of tourism seasonality is made.

5.1 Summary of the Main Findings

5.1.1 Effect of Number of Income Streams within Tourism Enterprises on Tourism Backward Linkage with Local Economy

Based on the observed and expected frequencies reflected in the contingency table, the effect of income streams within the tourism enterprises on local purchase ratio depended on the level of income stream factor. The effect of income streams was negative on purchase ratio for tourism enterprises with between 1 and 2 income streams across three intervals of local purchase ratio factor but positive for enterprises with between 3 and 4 income streams across all intervals of local purchase ratio factor. However, on the overall, there was no significant effect or relationship between the number of income streams within tourism enterprises and the extent of local purchase ratio.

5.1.1.1 Local Suppliers Mean Score Profiles

Generally, the main products supplied to tourism industry from suppliers were fish, poultry products and vegetables. Other minor products included beef, beverages, and detergent. The

scale and scope of local supply in Kisumu County was relatively limited. The suppliers of the mentioned products were different based on value of supplies, promptness in responding to demands from tourist industry, quality of supplies and length of time with which they had been in commercial relationship with tourist industry. Suppliers, grouped according to the rate of their weekly supply, could be completely distinguished on the first dimension characterized by value of supplies and promptness in making deliveries demanded by the tourist industry. Three groups of suppliers were all separated on the first dimension. Local suppliers who score highly on the first dimension of discrimination were those who made 8 times and more supplies per week, followed by suppliers who made 5 and 7 times supplies per week and, lastly, local suppliers who made 4 times and less supplies per week. Local suppliers who ranked highest on this dimension made supplies of the highest value with the highest level of promptness. Local suppliers who ranked the lowest on this dimension were those who made supplies of lowest value with lowest level of promptness.

However, the second dimension distinguishes suppliers whose rate of weekly supply was 5 and 7 from the other two groups. The two groups of local suppliers ranked highest on the second dimension of discrimination and they included those who made 4 and fewer times per week, and 8 and more times per week. Those who ranked the least are local suppliers who made 5 times and 7 times supplies per week. The local suppliers who ranked highest on this second dimension were those with higher level of education coupled with a longer term of commercial relationship with tourism enterprises than their counterpart.

5.1.1.2 Sale Response Probability

Suppliers could increase their probability of exceeding 30% policy threshold in their sales by reducing the number of employees to optimum level, supplying goods of high quality but

reducing frequency of their weekly supply. Suppliers of all given age brackets did not differ in probability of exceeding 30% threshold. This is the case with supplier level of education, gender, length of time in commercial relationship with tourism enterprises and employment status. Therefore, the probability to exceed 30% of all supplies procured by tourism enterprises by local supplier could not be influenced by age bracket of supplier, his or her education attainment, gender, or employment status.

5.1.2 Modelling Tourism Backward Linkage with Local Economy of Kisumu County

A multiple regression model linking local purchase ratio as dependent variable with a number of independent variables was developed in order to explain the effect of such explanatory variables on the dependent variable. The model attempted to explain tourism backward linkage with local economy of Kisumu County as a function of physical location, type and size of tourism enterprises, level of competition amongst tourism enterprises, level of portfolio diversification, rate of weekly patronage and visitor length of stay. The only significant finding was that tourism enterprises located in rural areas of Kisumu County were economically more linked with local economy than their counterparts in Kisumu Central District and in the Outskirts of Kisumu Town. In relative terms, visitor length of stay was the most important amongst all variables in depressing the local Purchase ratio. But size of tourism enterprises and number of rivals faced by tourism enterprise were the next most important variables in enhancing local purchase ratio. However, in absolute terms the mentioned variables were statistically insignificant.

5.1.3 Moderating Effect of Tourism Business Network in Tourism Backward Linkage

The influence of physical location of tourism enterprises on the tourism backward linkage with local economy varies depending on the level of tourism business networks. The moderating effect was positive in both rural areas and in outskirt areas of Kisumu Town. However, it was negative in Central Business District of Kisumu City. Further, the moderating effect of tourism

business networks was negatively stronger in Kisumu Central Business District than it was positively stronger in the rural areas and in outskirt areas of Kisumu Town. Lastly, effect of type of tourism business did not depend on the level of tourism business networks.

The study has established that the effect of type of tourism enterprises on tourism linkage with local economy was not influenced by level of business networking amongst tourism enterprises. Further, the extent with which tourism develop economic linkage with local economy did not depend with type of tourism enterprise, that is, whether it was a hotel, restaurant or guest house. However, the effect of physical location of tourism enterprises such as hotels, lodges, guest houses, restaurants and clubs on the extent of tourism backward linkage with local economy of Kisumu County varied depending on the level of networks developed by tourism enterprises. Tourism enterprises with two or less business networks and located in Kisumu Central Business District (CBD) had stronger economic linkage with local economy than those with the same networks but located in rural and outskirts of Kisumu Town. However, in rural areas tourism enterprises with three and more business networks had stronger economic linkages with local economy than those with same business networks but located in Kisumu CBD or Outskirts of Kisumu Town. The decrease in economic linkage with local economy was remarkably dramatic amongst enterprises located in Kisumu CBD with increase in level of business networks. Further, increased business networks was associated with greater local economic linkages amongst tourism enterprises located in the outskirts of Kisumu Town and those located in rural areas. However, lesser local economic linkage was associated with tourism enterprises located in Kisumu CBD as they increase the level of their business networking. In a nut shell, lower level of business networking amongst hotels, lodges, guest houses, restaurants and clubs in Kisumu CBD was favourable to the local economy but high level of business networking amongst same

enterprises located either in the outskirts of Kisumu Town, or rural areas of Kisumu County was favourable to local economy.

5.1.4 Interaction Effect of Tourism Seasonality on Tourism Backward Linkage with Local Economy

The effect of weekly rate of patronage of tourism enterprise on extent of local purchase ratio did not depend on tourism seasonality. However, the effect of size of tourism enterprises on local purchase ratio depended on tourism seasonality. Finally, enterprises with capacity of between 31 – 96 patrons outperformed the ones with capacity of 30 and less patrons between January and March and were the best performer between November and December; enterprises with capacity of 30 and less patrons outperformed those with capacity of between 31 and 96 patron form August through November.

5.2 Conclusion

There are five main implications derived from the foregoing results and discussion: First, the diversification of product at firm level does not have any bearing on the extent of backward tourism linkage with local economy unless such enterprises are operating in an industry that is already linked with the local economy. Secondly, that level of education as opposed to level of promptness in responding to orders, perceived value of local supplies and sustainability in commercial relationship between local traders and tourist industry does not confer competitive edge amongst local suppliers in tourist industry.

Thus, the key success factors which if incorporated in capacity building program for local business community could lead to greater tourism economic linkage include effectiveness and efficiency in production and distribution, and good awareness of the tourist industry. Thirdly, tourism backward linkage with local economy, given any level of patronage and visitor length of

stay, cannot be significantly improved or influenced by any adjustment in the accommodation structure.

Last but not least, tourism enterprises in extensive business network and located in rural areas and outskirt of Kisumu Town tended to purchase more inputs from local suppliers than from suppliers based outside Kisumu County. On the contrary, tourism enterprises with extensive business networks which were located in Kisumu Central Business District generally tended to purchase more inputs from suppliers based outside Kisumu County than those based within. This means that for an increase in business network developed by tourism enterprises within the County to have positive effect on tourism backward linkage with local economy, such networks are mostly likely to be amongst tourism enterprises in rural and outskirts of Kisumu County.

Therefore, expansive business networks amongst tourism enterprises based in rural areas and areas peripheral to the City were likely to boost local industrialization which could help alleviate poverty in rural areas. Lastly, though fluctuation of visitors is lower generally in small enterprises than large enterprises, large enterprises outperformed small enterprises overall in attracting visitors and thus creating demand for local products. In other words, large tourism enterprises are associated with more tourist arrivals across the year and can potentially improve linkage between tourism sector and local economy.

5.3 Recommendations

First, competitive behaviour amongst tourism enterprises in Kisumu CBD should be encouraged in order to crowd out importation and create opportunity for local suppliers in lucrative tourist industry but collaborative behaviour should be encouraged amongst tourism enterprises in rural areas of Kisumu County in order to enhance tourism backward linkage. Secondly, local suppliers should be enabled to diversify products of high value apart from fish and vegetables in

order to not only improve on value of the sales made to tourism enterprises but also enhance local income.

Thirdly, local suppliers who wish to supply tourism enterprises at least eight times per week should develop a sustainable commercial relationship with tourism enterprises by laying emphasis on improving values or quality of their supplies and being efficient and prompt in responding to orders placed by tourism enterprises. This will enhance possibility of local supplier sale proportion exceeding government threshold of 30%, and thus deepen tourism backward linkage with local economy of Kisumu.

Lastly, in order to create the non - existent positive correlation between the scale of tourism enterprise and tourism backward linkage with local economy a number of structural adjustment need to be made. Income leakages should be minimized by empowering local people to invest in guest house and restaurant businesses, train local people to acquire employable skills in tourism and hospitality industry; create awareness of economic potential of tourism to local people and develop capacity amongst local suppliers to be able to adequately meet, on a sustainable basis, the needs of County tourism industry.

5.4 Contribution of the Study

5.4.1 Contribution to Academician

The study contributed to the theory of business network in creating understanding of the role of business networks in moderating the effect of location on tourism backward linkage with local economy. It also advances knowledge by identifying bases of potential differentiation among local suppliers which can confer competitive advantage in tourism business activities within Kisumu County. On the issue of seasonality, the study has also made a contribution by creating a new understanding about the moderating effect of tourism seasonality on the relationship

between size of tourism enterprises and extent of backward linkage as a result of level of patronage. Lastly but not least, the study revealed key factors which affect probability of local suppliers exceeding policy imposed level of participation in economic activity. Lastly, the study has created understanding of the centrality of economic linkage between tourism enterprise and local economy as a pre – condition for the level of business activities in the former to have significant effect in the later.

5.4.2 Contribution to Policy

The study underscores the importance of economic linkage between the tourism sector and local economy as the primary pre - condition for enhancing efficacy of tourism in reducing poverty and thus realizing the goal of eliminating extreme poverty. Further, the study has highlighted some elements of structural impediments to optimal local participation in tourism activity which can be born in mind in local capacity building geared to towards increasing economic benefits to local population of Kisumu County. Lastly, in order to reduce adverse effect of tourism seasonality on local economy and optimize on tourism receipts, the study advocates for appropriate seasonal adjustment in the capacities of tourism enterprises.

5.4.3 Contribution to Practice

In practical terms, the study advocates for greater collaboration among tourism enterprises located in the marginal and rural areas, but more competition among enterprises in urban areas. Increased competition among enterprises in the urban areas crowds out importations which reduce local economic impact of tourism. However, enhanced collaboration among tourism enterprises located in marginal or rural areas of Kisumu County contribute to poverty reduction by creating income opportunities for local traders.

5.5 Suggested Areas for Further Research

Firstly, further research is needed to understand the mechanism behind moderating effect of tourism business network on the influence of physical location on tourism backward linkage with local economy. Secondly, longitudinal study should be conducted in order to accurately assess effect of tourism seasonality on tourism backward linkage. In such longitudinal studies accurate records of tourist arrivals, total expenditure on inputs by tourism enterprises and proportion of total expenditure on local products should be key variables that should be captured. Lastly, the current study should be replicated using both structural equation modelling, and input – output model with data obtained from Tourism Satellite Account.

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APPENDICES

APPENDIX I : RESEARCH TIMELINES

ACTIVITY	YEAR ONE				YEAR TWO				YEAR THREE			
MONTHS	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**
Proposal Development												
Presentation in the Department of Ecohim												
Making Correction and Presenting to School												
Making Corrections and Presenting in SGS												
Refining and presenting at MUERC												
Data Collection, editing and Coding												
Data Analysis												
Writing Thesis and presenting												
Draft Refinement												
Submission of Second Draft												
Final Refinement												
Submission of Final Draft												

APPENDIX 2: QUESTIONNAIR

INTRODUCTION.

My name is **AMATA MWALO MATHIAS**, a researcher based from **MASENO UNIVERSITY.** I have been authorized to carry out a study whose title is `*The Influence of Structural Factors on Tourism Backward Linkage with local Micro and Small Enterprises within Kisumu County*.' I, therefore, wish to collect data from randomly sampled tourism enterprises within Kisumu County in order to achieve the objective of the study. Your enterprise is amongst the sampled enterprises for this study.

It is hoped that the study outcome will help address structural weaknesses within the county`s economy and thus enhance the economic impact of Tourism for optimal benefit of local residents.

Participation in this study will provide you with an opportunity to contribute in highlighting policy gaps hampering growth of Tourism in the County.

Filling this questionnaire will take you not more than thirty minutes. Captured data in the questionnaire will be kept confidential and will be used only for the purpose of the study. Your name will not be linked to the data. Your participation in this study is voluntary and you are free to withdraw at any time. Participation in the study shall not attract any monetary compensation.

1. In case you have any question or point that you feel need to be clarified regarding your right as research participant please contact:

The Secretary, Maseno University Ethical Committee, Private Bag, Maseno;

Telephone Numbers 057-51622, 0722 203411, 0721 543976, 0733230878.

Email Address: muerc-secretary@maseno.ac.ke; muerc-secretary@gmail.com.

2. In case you have any question or issues related to the study that need to be clarified, please contact:

AMATA MWALO MATHIAS, P.O. BOX 3848, 40100, KISUMU

Telephone Number is 0711 673 984

Email: amatamwalo2014@yahoo.com

Appending you signature below signify consent to participate in the study

…….

Signature of the Respondent

INSTRUCTION: **Answer ALL questions in each SECTION of this questionnaire as accurately as possible.**

SECTION A

A01: Indicate the type and features of your enterprise below where appropriate(Choose only one and provide relevant details)

HOTEL	**[…….]**	**No. of Beds……No of Visitors Rooms……**
LODGE	[…….]	No. of Beds…… No of Visitors Rooms……
GUEST HOUSE	[…….]	No of Beds…… No. of Visitors Rooms……
HOSTEL	[…….]	No. of Beds…….
RESTAURANT	[…….]	No. of Customers Chairs……
AIRLINE	[…….]	No of Seats……
TOUR FIRM	[…….]	No. of Tour Vans.....Van Capacity……
CLUB	[…….]	No. of Customers Chairs……

A02: Indicate the maximum number of customers your enterprise can serve within its existing capacity.

Number of Customers[…….]

A03: Indicate the physical location of your enterprise (Tick only one)

Outskirts of Kisumu Town(Milimani, Nyalenda, Kondele, Airport)	**[……]**
Within Kisumu CBD	[…….]
Rural Areas within Kisumu County	[…….]

A04: State the main revenue points or streams of income of your enterprise (e.g. Beverage, etc)

1.
2.
3.

4.
5.
6.
7.
8.

A05: State below the total cost you incurred on food and non - food items last month

Total Expenses [KSHS…….]

A06: Out of your total expenses in A05 above indicate the value of Supplies you bought from vendors who reside within the location of your enterprise.

Value of Local Supplies [KSHS……]

A07: Rate your monthly consumption of the following items on the following scale.

Extremely High	7	6	5	4	3	2	1	Extremely Low

Item	**Rating**
Vegatables	
Fish	
Poultry Products	
Beef	
Beverage	
Services	
Detergent	
Textile	

A08(a): How many customers did you receive last weekend? [……..]

A08(b) What cost did you incur in serving the customers last weekend?

KSHS […….]

SECTION B

B01: State or approximate the actual number of visitors you served and/ accommodated between January and December for the years 2018 and 2019

Months	Visitors received 2018	Visitors received 2019
JANUARY		
FEBRUARY		
MARCH		
APRIL		
MAY		
JUNE		
JULY		
AUGUST		
SEPTEMBER		
OCTOBER		
NOVEMBER		
DECEMBER		

B02: How many enterprises within the locality of your business do you consider as your competitors?

Number of Competitors […….]

B03: Indicate the number of businesses with whom you generally cooperate with and are members of your business network

Number of Businesses within Your Network […….]

B04: On average how many nights or days (if Tour firm) does a client spend in your enterprise after checking in.

Length of Stay: No. of Night(Accommodation)[……] or No. Days(Tour)[……]

SECTION C

C01: Indicate below the characteristics of your regular supplier

Employment status of Supplier	Employed Self Employed	[……] [……]
Supplier Gender	Male Female	[…….] […….]
Supplier Age Bracket	Below 25 years old Between 26 & 30 years old Between 31 & 35 years old 36 years old and above	[…….] […….] […….] […….]
Number of Times Supplies made per week	[……]	
Main commodity supplied(e.g. Eggs)	[……]	
Supplier education Level	Primary School Secondary School College University	[…….] […….] […….] […….]
Supplier Residential Area	Within Kisumu County Outside Kisumu County	[…….] […….]
Approximate length of Time(in Months) in Commercial relationship with supplier	[……..]	
Value of weekly Purchase from Supplier	KHS[……]	
Number of Employees in Supplier Business	[……]	
Number of Suppliers you deal with in a week	[……..]	

C02: How long does the local supplier take to respond to your orders of supplies?

Length of Time in Days [……]

C03: Rate the goods and services you receive from your local supplier on a scale of 1 to 10 below(Circle or Tick **only once** per item)

	Very Very Low										High
Quality of Supplies	10	9	8	7	6	5	4	3	2	1	
Pricing of Supplies	10	9	8	7	6	5	4	3	2	1	
Promptness in Delivery	10	9	8	7	6	5	4	3	2	1	
Variety of Supplies	10	9	8	7	6	5	4	3	2	1	
No. of Supplies per week	10	9	8	7	6	5	4	3	2	1	

C04: Based on your knowledge of the various suppliers both within and outside Kisumu County, what is their relative importance to your enterprise`s image and output quality (divide 100 percentage points between them below

Products of Suppliers within Kisumu County	
Products of all other suppliers outside Kisumu County	
TOTAL	100%

SECTION D

How do you rate expenditure you incurred on suppliers last year between Jan and Dec 2018

MONTHS	**RATING (Circle or Tick only one per item below)** **Very Low** **Very High**										
JAN & FEB	1	2	3	4	5	6	7	8	9	10	
MARCH & APRIL	1	2	3	4	5	6	7	8	9	10	
MAY & JUNE	1	2	3	4	5	6	7	8	9	10	
JULY & AUGUST	1	2	3	4	5	6	7	8	9	10	
SEPT & OCT	1	2	3	4	5	6	7	8	9	10	
NOV & DEC	1	2	3	4	5	6	7	8	9	10	

APPENDIX3: NACOSTI RESEARCH LISENCE

THIS IS TO CERTIFY THAT:
MR. AMATA MWALO MATHIAS
of MASENO UNIVERSITY, 0-40100
KISUMU,has been permitted to conduct
research in *Kisumu County*

on the topic: *INFLUENCE OF LOCAL STRUCTURAL FACTORS ON TOURISM BACKWARD LINKAGE WITH LOCAL MICRO AND SMALL TOURISM ENTERPRISES IN KISUMU COUNTY*

for the period ending:
23rd July,2020

Permit No : NACOSTI/P/19/15740/31228
Date Of Issue : 24th July,2019
Fee Recieved :Ksh 2000

Applicant's Signature

Director General
National Commission for Science, Technology & Innovation

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013

The Grant of Research Licenses is guided by the Science, Technology and Innovation (Research Licensing) Regulations, 2014.

CONDITIONS

1. **The License is valid for the proposed research, location and specified period.**
2. **The License and any rights thereunder are non-transferable.**
3. **The Licensee shall inform the County Governor before commencement of the research.**
4. **Excavation, filming and collection of specimens are subject to further necessary clearance from relevant Government Agencies.**
5. **The License does not give authority to transfer research materials.**
6. **NACOSTI may monitor and evaluate the licensed research project.**
7. **The Licensee shall submit one hard copy and upload a soft copy of their final report within one year of completion of the research.**
8. **NACOSTI reserves the right to modify the conditions of the License including cancellation without prior notice.**

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REPUBLIC OF KENYA

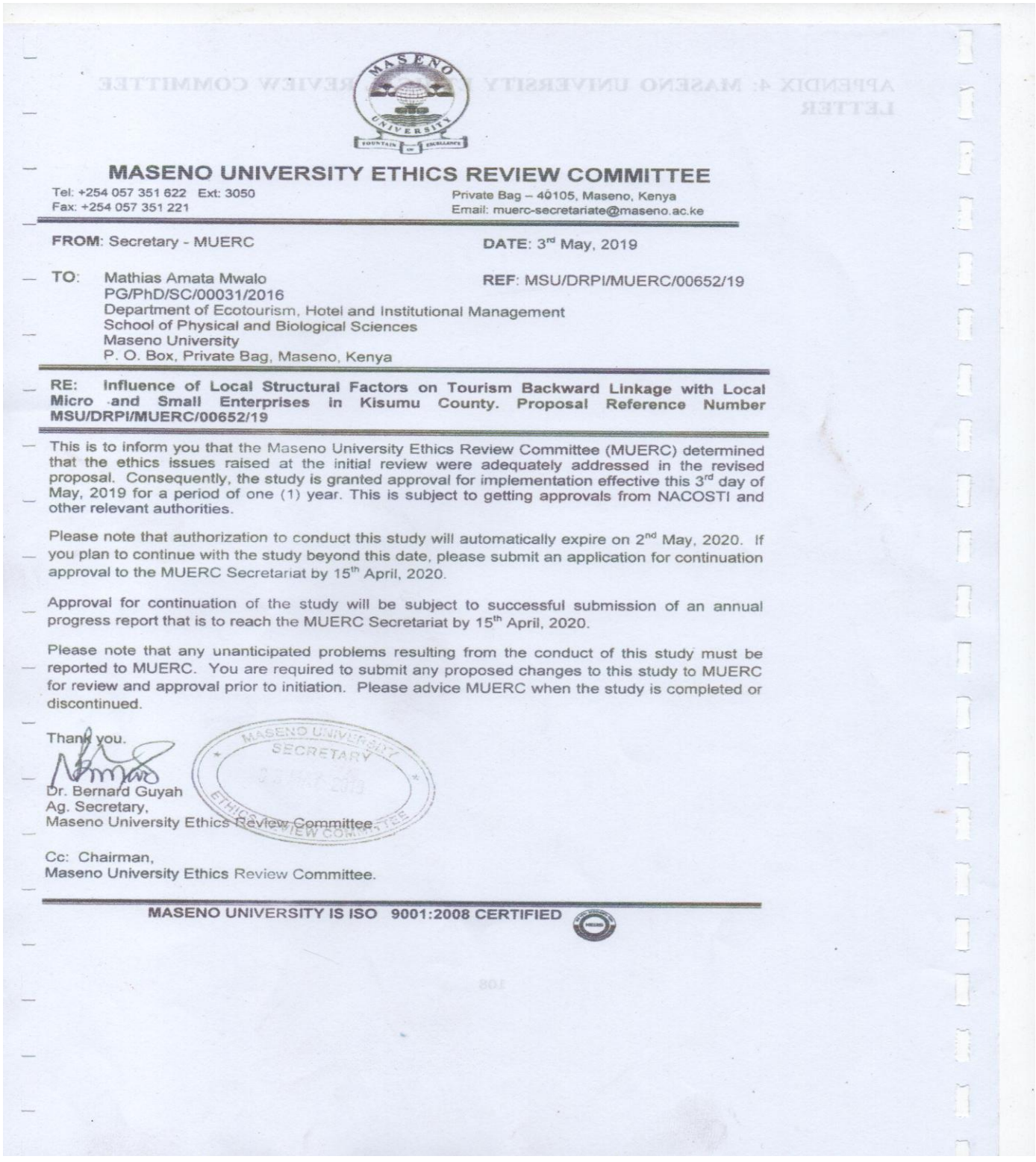
National Commission for Science, Technology and Innovation

RESEARCH LICENSE

Serial No.A 25982

CONDITIONS: see back page

APPENDIX 4: MASENO UNIVERSITY ETHICAL REVIEW COMMITTEE LETTER



MASENO UNIVERSITY ETHICS REVIEW COMMITTEE

Tel: +254 057 351 622 Ext: 3050
Fax: +254 057 351 221

Private Bag – 40105, Maseno, Kenya
Email: muerc-secretariate@maseno.ac.ke

FROM: Secretary - MUERC

DATE: 3rd May, 2019

TO: Mathias Amata Mwalo
PG/PhD/SC/00031/2016
Department of Ecotourism, Hotel and Institutional Management
School of Physical and Biological Sciences
Maseno University
P. O. Box, Private Bag, Maseno, Kenya

REF: MSU/DRPI/MUERC/00652/19

RE: Influence of Local Structural Factors on Tourism Backward Linkage with Local Micro and Small Enterprises in Kisumu County. Proposal Reference Number MSU/DRPI/MUERC/00652/19

This is to inform you that the Maseno University Ethics Review Committee (MUERC) determined that the ethics issues raised at the initial review were adequately addressed in the revised proposal. Consequently, the study is granted approval for implementation effective this 3rd day of May, 2019 for a period of one (1) year. This is subject to getting approvals from NACOSTI and other relevant authorities.

Please note that authorization to conduct this study will automatically expire on 2nd May, 2020. If you plan to continue with the study beyond this date, please submit an application for continuation approval to the MUERC Secretariat by 15th April, 2020.

Approval for continuation of the study will be subject to successful submission of an annual progress report that is to reach the MUERC Secretariat by 15th April, 2020.

Please note that any unanticipated problems resulting from the conduct of this study must be reported to MUERC. You are required to submit any proposed changes to this study to MUERC for review and approval prior to initiation. Please advice MUERC when the study is completed or discontinued.

Thank you.

Dr. Bernard Guyah
Ag. Secretary,
Maseno University Ethics Review Committee.

Cc: Chairman,
Maseno University Ethics Review Committee.

MASENO UNIVERSITY IS ISO 9001:2008 CERTIFIED