AN EVALUATION OF TEENAGE OUT-MIGRATION IN OBUDU LOCAL GOVERNMENT AREA, CROSS RIVER STATE, NIGERIA

BY

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GEO/M.Sc/16/019

A MASTER'S DEGREE THESIS CARRIED OUT IN THE DEPARTMENT OF GEOGRAPHY AND ENVIRONMENTAL SCIENCE
UNIVERSITY OF CALABAR
CALABAR – NIGERIA

SUBMITTED TO

THE POSTGRADUATE SCHOOL
UNIVERSITY OF CALABAR
CALABAR – NIGERIA

IN PARTIAL FULFILLMENT OF THE COURSE REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE DEGREE (M.Sc) IN GEOGRAPHY AND ENVIRONMENTAL SCIENCE (POPULATION DEVELOPMENT AND ENVIRONMENT)

APRIL, 2021

DECLARATION

I, Akwaji, Catherine Irungme with Registration number GEO/M.Sc/16/019 hereby declare that, this research work titled "Teenage Out-migration in Obudu Local Government Area, Cross River State, Nigeria" is the product of my own research effort under the supervision of Dr. Eja I. Eja and has not been presented elsewhere for the award of a degree or certificate. All sources have been properly acknowledged.

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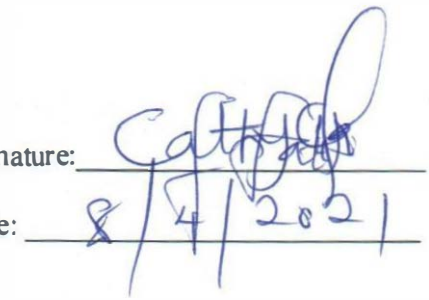
Signature: 

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CERTIFICATION

This is to certify that this thesis titled: **AN EVALUATION OF TEENAGE OUT-MIGRATION IN OBUDU LOCAL GOVERNMENT AREA, CROSS RIVER STATE, NIGERIA** and carried out by **AKWAJI, CATHERINE IRUNGME** (Reg. Number: **GEO/M.Sc/16/019**) has been examined and found worthy of the award of the Master of Science Degree in Geography and Environmental Science **(Population Development and Environment)**.

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ACKNOWLEDGEMENTS

I wish to express my gratitude to God Almighty for granting me protection and guidance throughout the period of this research work.

My first profound gratitude goes to my able supervisor Dr.. Eja I. Eja of the Department of Tourism Studies, University of Calabar. My appreciation goes to Prof. F. I. Okpiliya whose encouragement brought me this far. Dr. P. E. Oko whose encouragement helped me greatly to see that this work is completed. I am highly indebted to Dr. M. A. Abua our able Head of Department, Prof. F. E. Bisong, Prof. E. Bassey, Dr. Emma Ikpi, Dr. I. E. Okon, Dr. Ebin Okah, Dr. Joel Efiong, Dr. Raphael Offiong, Mr. Joseph Okputu and a host of other lecturers for the valuable contributions towards this research work.

I acknowledge with profound gratitude the contributions of my husband Mr. Emmanuel O. Akwaji, my children Betty, Blessing and Melissa. My parents Mr. and Mrs. Edward Inyaka, my brothers and sisters for the encouragement and words of advice.

Finally, I am really grateful to my course mates and colleagues especially Mr. Jerome A. Ayade and all those who contributed in one way or the other towards the completion of this program.

ABSTRACT

Teenage out-migration is a phenomena that requires interdisciplinary studies in order to cater for all the needs that are necessary to enhance the quality of life in the rural area or any part of the country. Teenage out-migration in Obudu is posing a serious problem, especially in the area of rural food production because agricultural productivity in rural areas depends on family labour. The study was carried out in Obudu Local Government Area to evaluate teenage out-migration and suggest ways and recommendations of solving this problem to the government and other agencies. Five specific objectives and hypotheses were formulated with questionnaires as the main research instrument. Data were collected from both primary and secondary sources. The secondary source was through records of data and reviewed of related literature. Results of the analysis revealed as follows; male migrant do not differ significantly from their female counterparts on the basis of out-migration. There is a significant influence of child well-being and out-migration in the study area. Attitude has a significant influence on teenage migrants. There is a significant influence of location on livelihood of teenage out-migration. And there is a significant influence of remittance of teenage out-migration in Obudu Local Government Area. Furthermore, 100% of the migrants and the supposedly Obudu/Bette indigene all suffer from one basic need of life or the other. The researcher found that through a form of collective voluntary conscience, all migrants and indigenes contributively in attendance are participating in one form of socio-cultural activity or the other such as Epie Festival and also have some informal gatherings in form of recreational activities mostly at evening hours. The research finally recommended some strategies that could be adopted to improve teenage out-migration in Obudu Local Government Area. The recommendation pointed out some of this agencies directly involved in solving some

of this issues; the ministry of health, Niger Delta Development Commission Chapter in Cross River State.

(Word count: 317)

TABLE OF CONTENTS

PAGE

PAGE

LIST OF TABLES

LIST OF FIGURES

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Migration has been identified as a survival strategy utilized by the poor, especially the rural dwellers. The assessment of the effects of migration on rural areas has remained relevant since migration acts as a catalyst in the transformation process of not only the destiny of individual migrants, but also the conditions of family members left behind, local communities, and the wider sending regions. One significant source of development for the rural populace as a result of this increasing drift towards the cities is remittances. Recently, migrants' remittances and the income multipliers they create are becoming critical resources for the sustenance strategies of receiving households as well as agents of regional and national development.

Migration can have a range of social, cultural, political and economic effects. It involves transfer of knowledge and skills, financial assets (including remittances), and the transfer of people from one location to another. Migration also has consequences for the individual, the area of origin and the area of destination on the family, household, society, the economy and development as a whole. The effect of international migration is not limited to remittances and cash inflows alone. It includes a wide range of development issues, governance and legal protection, employment and social, protection, health services and education, tertiary education, knowledge and skills development, economic growth, financial services and growth, agriculture and rural infrastructural development, and environment issues. All these come under migration and human development, defined by the United Nations Development Programme (UNDP) as a process of enlarging people's choices, which entails two important items, namely, expanding human capabilities and functioning.

Education is an important element of human development, and investment in education is regarded as the best form of human capital development. The 129 universities, plus other tertiary institutions, in Nigeria have not met the demand for tertiary education in the country. Thus, a large number of Nigerians migrate yearly in search of university education. The potential for Nigerians in the diaspora to contribute to tertiary education in the country is now being exploited by the National Universities Commission (NUC). Nigerian scientists based in the United States have entered into a formal agreement to assist universities at home, with a view to supporting postgraduate programmes, and academics in Nigeria have welcomed the move because of its potential positive multiplier effects.

Teenage out migration is the seasonal movement of children between the ages of 13-19 from one region to another in search of job opportunities, forced marriages, schooling and so on. Migration is a form of geographical mobility between one geographical units (origin) to a certain destination generally involving a change of residence from a place to the place of arrival (destination). It involves a permanent or temporary change of residence from one neighborhood settlement (administrative unit); this process is also out-migration (Kebede, 1994).

In the past years rural to urban migration in developed countries grew during the time of industrialization, when more mechanized farming needed few agricultural workers in the rural area and when there was demand for labour in urban based industries. But this is not always the case in developing countries which is more a function of rural problems than the urban attractions (Amato & Cheadle, 2005).

Meanwhile other developing countries of the world and our country Nigeria the process of migration is not a new phenomenon. Migration forms an important parts of the lives of many adults, youths and teenagers around the world. Nowadays,

in numerous areas and particularly in regional and remote areas rural-urban migration of young adults is normalized and expected. Numerous attempts have been made over the years by social scientist and policy makers to fully understand the process of migration and its implications for social development.

It has been argued that the outcome of human migration pattern and processes brings more rapid changes to the social, economic, political and other systems at both the homeland of the migrants and the destinations than any other phenomena of the human geography of those environments. Migration remains a global phenomenon and is one of the most important features in recent years. It has become a crucial issue and one that is likely to dominate policy and political agendas for many years to come.

Remittances are benefits migrants send back to their home communities either occasionally or in regular basis. This issue has gained the attention of scholars and policy makers seeking to understand migration and its process and the interest of these money flows and the possibility that remittances can serve to improve the living standard of families who remain in their communities where they originated from (Woodruff & Zenteno, 2007). It is on the basis of this background that the study intends to examine the teenage out migration in Obudu Local Government Area, Cross River State, Nigeria

1.2 Statement of the research problem

In Nigeria like other less developed and developing countries large numbers of people continuously migrate to urban centres. This is because of the pushing rural problem and pulling urban attractions respectively, the major rural problems are poor employment, natural disaster, low wages, poor social amenities, forced marriages, on

the other hand urban pulling factor such as improved housing high living standard, high wages, employment opportunity f and fair services attracts people towards urban areas (Nigatu, 2004).

The problem of migration in developing countries is now cleared because the rate of rural to urban migration continues to supercede the rate of job creation and the absorption capacity of both industry and urban social services (Acosta, 2011). Migration to cities and towns accelerates existing problems adding to urban unemployment, increasing pressure on housing resources, traffic congestions, social and psychological stresses amongst the urban population and poverty is wide spread expanded in cities and towns of Nigeria (Birru, 2004).

Teenagers that are well trained and enterprising in the community suddenly make a decision to migrate and this decision of this trained youth will weaken homes and the community they are pulling out from. World Bank (2014) estimated that roughly 1000,000 university graduates, specially and fully educated in Africa living and working in various countries move from their countries of origin to other countries. The former eastern block countries are all affected by the "brain drain'' in the last 10 years, Bulgeria has lost about 20 percent of it educated population due to emigration. In Armema, even 30 to 40 percent of the population have left the country for the same purpose.

Teenage out migration is a decision that affect the welfare of household, the home community and the economy in many ways, Azam and Gubert (2006), the welfare impact of migration on the pull community are most often, though not always poverty. They are mainly increased incomes from remittances, ability to enhance consumption, access to monies to start new business and also to tap on the knowledge and resources provided by the international communities.

Migration and remittances have both direct and indirect effects on the welfare of the population in the migrant sending countries. Adams and Page (2005) carried a cross country study of 71 developing countries and found that 10 percent increase in per capita official international remittances led to 3-5 percent decline in the share of people living in poverty.

Teenage out migration in Obudu is gradually affecting agricultural labour force which is a measure of the participating portion of rural population in agricultural sectors, that plays a critical role in rural food production. In Nigeria, farm labour provided by active energetic youth is considered an essential component of agricultural productivity in rural areas because maturity of the populace solely depends on family labour. Rural farmers due to peasantry nature of farming business and low labour, often mostly depend on family urban migration (especially by youths) involves the shifting of labour force in search of employment, better living standard, educational advancement, force marriages and other related factors that leads to create shortage in labour supply needed in agricultural production. Among the important roles this category of rural populace play to boost agricultural productivity are, clearing of the farm, bush paths for accessibility, staking, weeding, planting harvesting, crops and livestock raising marketing of farm produce and so on.

Observably with more youth migration into urban areas to earn better living, more aged people are left to accomplish the tasks associated with farming, especially women and under aged children. Which leads to reduction in labour supply, high cost of labour, reduction of farm holding, decline in quantity of crops yield, high cost of farm operation, increased cost of farm produce and food insecurity. Most parcels of land remain fallow in some family land leading to the encroachment of others which results to land dispute among rural dwellers. Interview with residents indicated

shrinkage in cultivated land since there is a drastic reduction in labour force at the household level due to teenage out migration.

It is however on the observable gap in knowledge that the present study is contemplated to assess the teenage out migration in Obudu Local Government Area, Cross River State, Nigeria. It will corroborate results elsewhere and increase our understanding on the impact of teenage out migration from the migrants communities.

1.3 Aim and objectives of the study

The aim of the study is to examine teenage out-migration in Obudu Local Government Area, Cross River State, Nigeria. Specifically the objectives of the study are to;

1) determine gender differences on teenage out migration.
2) find out the relationship between teenage well-being and outmigration.
3) examine the attitude of teenage migrant.
4) examine the influence of location of livelihood on teenage out migration.
5) assess/evaluate remittances of teenage out migration.

1.4 Hypotheses formulation

To achieve the objective of this research, the following hypotheses were formulated and tested;

1. Male migrants do not differ significantly from their female counterparts on the basis of outmigration.
2. There is no significant influence of teenage well-being on outmigration in the study Area.
3. Attitude has no significant influence on teenage migrant.

4. There is no significant influence of location of livelihood on teenage out migration.
5. There is no significant influence of remittances from outmigrants on teenage out migration in the study area.

1.5 Significance of the study

Conducting of the research on teenage out migration has the following importance: It addresses problems which are caused by teenage out migration (rural-urban migration) in the study area. It provides reliable evidence and information for various concerned bodies. It serves as a reference point for researchers as stepping stone and become source for further studies. For the resource country, it reduces overpopulation, it boost the Gross Domestic Product (GDP) of the host country, it reduces unemployment in the resource country and also increases labour force of the host country.

1.6 Scope of the study

This study is limited to Obudu Local Government Area of Cross River State. The research work focused on teenage out migration in the study area with particular reference to the ten political wards of the study area namely. Obudu urban I, Obudu urban II, Ipong, Angiaba, Begiading, Ukpe, Alege/Ugban,Utugwang north, Utugwang central, Utugwang south and remittances from teenage out migrants..

1.7 Study area

1.7.1 Location and size

Obudu Local Government Area lies between latitudes 4^0 58' 44.16" N of the equator E of the Greenwich median and 6^0 38'19.68" N and longitudes $8^0$17'54.6" E

and 9^0 7' 42.24 E, in Cross River State, Nigeria. It is found at the extreme northern axis bounded in the north by Vandikya Local Government Area of Benue state, by Boki Local Government Area to the South, Obanliku Local Government Area at the East and Bekwarra Local Government Area at the West. The town is approximately 17 kilometers away from Bebi airstrip, and a 6-hour drive from Calabar, the capital of Cross River State (Figure 1 and 2).

1.7.2 Socio-economic activities

The economy of Obudu is characterized by subsistence mixed farming system where farming is intermingled with the production of banana, yams, cassava, potatoes, rice, millet, sesame seeds, pepper, locust beans, black eye beans, garden egg, plantain in a season of intensive cultivation. Obudu people are also involved in livestock production in terms of poultry, Fishery and Piggery among others and they also market their skills in various service areas in nearby communities. The study area is characterized by small landholdings whereby an overwhelming majority of the farming households have no land for cultivation.

1.7.3 Population and settlement

The people of Obudu can easily be identified based on dialect. The language spoken by the people is "Bette". Obudu has a population of 215,800 according to the 2006 National Population Census (NPC). Obudu settlement pattern is nucleated, clustered and linear in nature where buildings are close to each other and in some communities the settlement pattern is arranged in a line due to the presence of a transport line e.g. road.

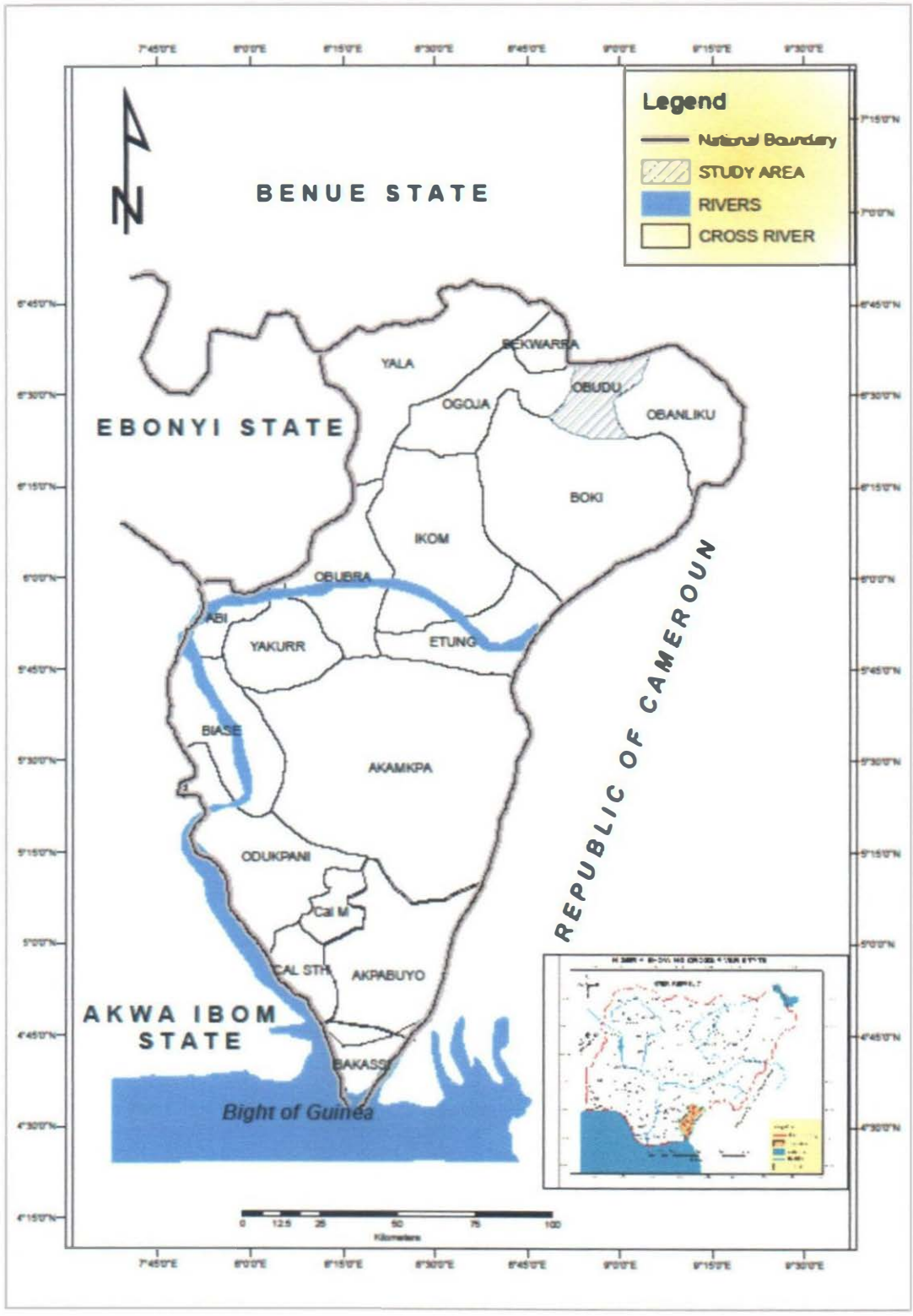

FIG. 1: Cross River State showing Study Area

Source: Cross River Geographic Information Agency (CRGIA, 2019)

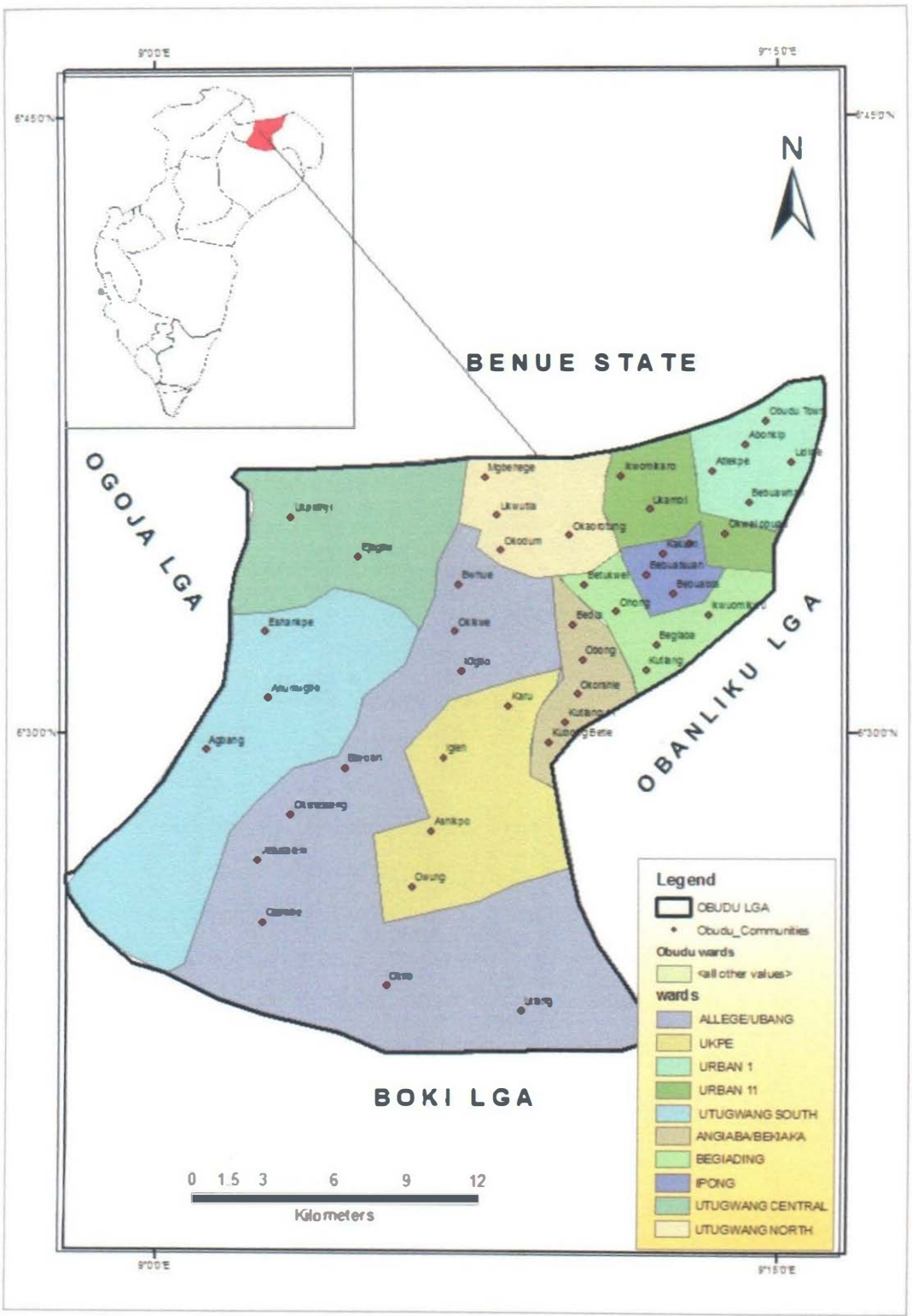

FIG. 2: Obudu showing ten (10) political wards

Source: Cross River State Forestry Commission (CRSFC, GIS unit, 2019)

1.7.4 Vegetation and soil

Obudu is located in the Southern guinea Savannah zone where vegetation is generally a mixture of lower mountain grassland and moist forest. The area also have some patches of savannah grassland and deciduous forest. According to Oko (2015) the vegetation depicts a three layered structure with the upper layer of trees not generally more than 15m-30m in height. The vegetation of Obudu can be delineated as having 2 distinct vegetations – The guinea savannah grass land and rainforest. The savannah vegetation is located in areas like parts of Utugwang central, Utugwang south and parts of Obudu urban, bordering the Southern axis of Benue State.

The climate and vegetation of Obudu provides soils that different potentials of the land. The soils are generally sandy loam, while in some location the range from loam to sandy clay (Bisong, 2004).

1.7.5 Relief and geology

Obudu Plateau is a plateau found on the Oshie ridge of the Sankwala mountain range, in Cross River State in the Southeast of Nigeria. It has an area of 40km^2 (15sqmi).

1.7.6 Climate and drainage pattern

The climate on the Obudu Plateau is comparatively cold. The plateau experiences a semi temperate climate, with temperatures going between 26^{0}C (78.8^{0}f) to 32^{0}C (89.6^{0}f) during the dry seasonal November to January the rainy season in June to September is colder with temperate low at between 4^{0}C (39.2^{0}f) to 10^{0}C (50.0^{0}f) recorded. The plateau receives heavy and abundant rainfall is received on the plateau between April to November.

Orographic activity is a factor contributing to the heavy rainfall. Clouds coming into Southern Nigeria from the Atlantic Ocean drop their moisture content onto the Plateau as the barrier of the Sankwala mountain forces the cloud upward and the resulting rapid cooling is followed by heavy rainfall in the Plateau.

CHAPTER TWO

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

2.1 Literature review

2.1.1 Gender and out-migration

Higher rates of out-migration of adolescents are a particular problem in many remote rural areas and this is highlighted in a number of studies. For example, the survey by Asis, (2006) suggests that by age 10/16 a higher proportion of girls than boys want to leave the area in which they are brought up either for good or for a few years and then return. Across Obudu a slightly higher proportion of young girls have left home by each age across the teenage years and into the early twenties. In many rural areas, this gender difference in turn means more women have left the area at early ages than men (Asis, 2006).

Gender difference in leaving home and in leaving rural areas reflects a range of factors including the different freedoms afforded men and women in family and community, heterosexual conventions, different patterns of consumption, the gendered nature of employment opportunities and greater emphasis on educational qualifications in the employment sectors dominated by women. While each factor is identified in the literature, no author puts relative weights on the balance of these factors and it is likely that they will vary in different localities and biographies. Literature on age difference in men and women leaving home routinely notes that this reflects the conventions of heterosexual partnership, in which there is a two year age gap between men and women in age of cohabiting with a partner. Although the majority of young women leave home to take up education rather than to live with a partner, at any age throughout early to mid adulthood, more women are living with a partner than men. Young women who are not pursuing higher education are to set up

independent households triggered by cohabitation or the birth of a child (Behrman, & Knowles, 2009). A number of studies suggest that women are more likely to feel constrained by living in rural areas than men and are more likely to feel they need to leave home and their home area in order to become independent. For example, Asis (2006) also suggested that constraints of living in a close-knit and controlling community are felt more strongly by women.

Research on leaving home suggests that women are more likely than men to feel that they have to live away from their parental home in order to be independent. This does not mean that young women are more likely than young men to live on their own as neither the School Leavers Survey nor the Scottish Household Survey shows this. In fact, more young adult men live on their own than women in rural and urban areas (Bledsoe & Sow, 2011) a difference which reflects the continued differential in young men and women's earnings and the consequent greater difficulty for young women in purchasing their own home (Behrman & Knowles, 2009).

In rural areas, the range of opportunities for creating independent households is very restricted. Transitional arrangements such as sharing with peers or affordable rented housing are not typically available. After comparatively reviewing the housing careers of young men and women who have stayed in the Scottish Borders, Jones suggests that the combination of low-paid repetitive work and housing geared towards families and older people perpetuates gender inequalities by encouraging women to lower their aspirations for independent housing until they have a partner or a child. Some young women are more likely to wish to participate in youth cultural activities at earlier ages than boys making them more discontented with available commercial facilities and transport options. For example, the study by Glendinning (2003) compares the views of young people in the north of Scotland across three different

age groups and demonstrates that agreement with the statement 'there's nothing for young people like me to do' is higher for girls across all ages and increases with age for both boys and girls. By age 13/14 two thirds of girls but only half of boys agree that there are 'too few shops that sell the things you want'. A larger proportion of 15/16 year old girls than boys agree that there is 'no transport to go places or do things you want'. The study shows girls being more interested than boys in listening to music, going to the cinema and shopping. In rural areas the latter two almost always involve public transport, if they are possible at all.

For example, Pavis (2001) pointed out that for young people in Duns the nearest cinema is in Galashiels, the cost was £5.60 return by bus and the last bus back left at 8.20pm. Boys, on the other hand, were more interested in computer games and internet surfing, which are more likely to be available in their home. A higher proportion of young women than young men now typically do very well at school and young women who are not high academic achievers are more likely to be focused on further education than men, typically taking qualifications directing them to female dominated work.

In a study by Xin and Chikako (2015) on gender and children migration impact on parents and the study revealed that in the past 15 years around 160 million Chinese rural workers migrated to cited to work, because of restrictions on migrant access to local health and education system a large cohort of migrant children are left behind in rural villages and growing up without parental care. This paper examines how parental migration affect children's health and education outcomes. Using the rural urban migration survey in China (Rumic) data we are able to measure the share of children's life time during which parents migrated away from home. By instrumenting this measure of parental migration with weather changes in their home

village which they were young we find a sizeable adverse impact of exposure to parental migration on children's health and education outcomes, they also discovered what the literature has always done using contemporaneous measure for parental migration on children's outcomes.

Hongwex and Yuxie (2015) investigated the effects of rural to urban migration on children's well being in Ghana and the study reveal that about 12.6 million school age rural children who have migrated with their parents and 22 million who have been left behind by the migrant have been affected. The propensity score matching methods are applied to estimate the effects of migration in children's 10-15 years old from a 2010 national survey (N=2, 417). Children's migration has significant positive effects on their objective well-being but no negative effects on their subjective well-being. There is little difference between the left behind and non-migrant children across multiple life domains. The Rosenbaum bounds tests indicate that the causal effects of child migration are sensitive to hidden bias for certain outcomes, but not for others.

According to Chenyue, Zhao, Leah, Xudong and Hesketh (2017) who investigated the long-term impacts of Chinese children's psychosocial wellbeing mitigating and exacerbating factors and the prolonged separation from migrant parents raises concerns for the well being of 60 million left behind children (LBC) in the rural China and the study aimed at putting into consideration the impact of current and previous parental migration on child psychosocial well being, with a focus on emotional and behavioural outcomes, while considering factors in family core and support.

Man, Jinyu, Ling, Weiyu and Iris (2016) carried out study on intergenerational relationships and psychological well-being of Chinese older adults with migrant

children and the study reveal the potential influence of children's out migration, internally or internationally on intergenerational relationship and parental well being. By comparing older adults in non migrant internal migrant, transnational and hybrid for both migrant and non migrant children families, the results shows that children's out migration only comprised intergenerational contact and instrumental support. Older adults of different family types had similar levels of depression and life satisfaction. Those in internal migrant families were most likely to report financial worries and those in transnational families were most likely to worry about lack of care. The influence of children's out migration was further confounded by parents coping resources. The finding shows that the vulnerability or the "left behind" elderly might have been exaggerated and suggested that future studies shall distinguish different types of migration and the diversity among older adults with migrant children.

A higher proportion of young women are oriented to further and higher education is likely to also contribute to their greater propensity to leave some rural areas. The reasons for gender differences in girls' and boys' attitudes to schooling are still debated. The sociology of education literature in the second half of the twentieth century noted that resistance to schooling was a means by which working-class boys asserted their masculinity. Their denigration of quiet studious behaviour as feminine posed no threat to their future employment if local opportunities included a demand for unskilled manual and masculine labour. For girls, regardless of their educational ability or class aspirations, conventionally the prospects of a 'respectable' job were improved by qualifications. The interaction of class and gender differences is a theme that persists in the literature. Women's employment remains more concentrated in particular sectors than men's, and this tendency is typically exaggerated in rural areas.

For example, the service sector, 'public administration, education and health', and the sector 'distribution, hotels and restaurants' both command a larger proportion of overall employment in the Highlands and Islands than in Scotland as a whole and 75% of women are employed in these two sectors with 50% in the former. Although about 25% of men work in 'distribution, hotels and restaurants', no other sector commands as large a proportion and men's employment is distributed across several sectors, most of which remain very male dominated, including the primary industries, energy and water, construction, transport and communication (Highland and Islands Enterprise, 2007).

Gender differences between children are also of significance when measuring the well-being of children in transnational families. Although considerable heterogeneity exists in gender norms in different contexts, the dominant narrative is one in which girls are more disadvantaged when parents migrate. In China, for example, Gao, Li, Kim, Congdon, Lau and Griffithss, (2010) found that girls in transnational care are more at risk for unhealthy behaviors such as drinking and smoking than girls in nonmigrant families. In Suárez-Orozco, Todorova and Louie, (2002) concluded that the investment in girls is sensitive to the household income, in that fewer resources from abroad are used on girls' education, with negative effects on their school success. In Ghana, qualitative evidence suggests that girls do more domestic work and can move or be moved around more easily, which may alter their quality of life. In other contexts, however, the gender differences were found to advantage girls when parents migrate. Evidence from Mexico suggests that paternal international migration has a net positive effect on girls' educational attainment, albeit such an advantage ceases to exist when fathers migrate internally (Antman, 2012).

on the impact of teenage out migration in Obudu Local Government Area, Cross River State is lacking.

Gaydosh, (2015) informed that children are affected by migration in all regions of the globe, but his understanding of its effects is highly limited. Data collection, monitoring and research are needed to better understand how migration affects societies, families and children at countries of origin and settlement; to inform policies to mitigate adverse impacts, and to enable families and children to make informed decisions about movement. Children who migrate independently of their parents or adult guardians are in many ways similar to adult migrants in seeking new social and economic opportunities. These children, sometimes referred to as 'unaccompanied minors', may actively seek migration opportunities as a result of many factors. Yet many migrant children are not recognized as migrants because they are identified using other terms, such as domestic workers, street children or foster children. Many of these children send remittances to their families, combine work with schooling or training and manage to save, although there is little information to facilitate comparison of the benefits against the many costs and risks migrant children face.

Since the turn of the century, transnational family studies emerged to focus specifically on families leaving Obudu LGA of Cross River State. Within this stream of literature, the outcomes of children left behind have become an important area of inquiry. Although there is a substantial interest in the well-being of children in transnational care, theoretical input remains underdeveloped. In general, parental migration is viewed as a strategy to improve the well-being of children and other family members when there is a state of economic deficiency in the country of origin (Bisong 2016).

However, questions remain about whether migration is a successful strategy to improve the well-being of family members who stay behind (Adams & Page, 2005). When looking specifically at children in transnational care, research indicates that parental migration may improve children's socioeconomic status (Wen & Lin, 2012), their health, and nutrition (Allison, 2009), as well as their educational aspirations, attainment, and performance (Antman, 2012). At the same time, studies articulate concerns about the emotional costs experienced by children following parental departure, especially when mothers migrate.

The effects of migration on child well-being must, however, be understood in the context surrounding the transnational care of children (Akomoye, 2016). The transnational family literature focuses predominantly on specifics of parental migration and finds that maternal migration often results in poorer outcomes for children. Specifically, studies conducted in Southeast Asia and China found that separation from a mother makes children unhappier (Jordan & Graham, 2012), more disadvantaged in health, and less engaged in school.

Drawing on ethnographic work in the Philippines, Parreñas (2005) found that children are more emotionally insecure following maternal migration than when fathers migrate. A negative relation between maternal migration and child well-being was found by research conducted in other geographical areas, such as Latin America. However, one must be cautious in making claims about negative consequences on children when mothers migrate, as this area of inquiry is recent and largely unexplored.

Transnational family studies, for the most part, look at international migration. There is also a large body of research that has been conducted in China and relates to internal migration, although over large distances (Twum-Baah, 2005). A number of

recent studies looked at the effects of internal and international parental migration in relation to well-being outcomes and found that more often than not children whose parents migrated abroad do not have poorer physical or psychological health than children whose parents migrated internally in Ghana and Nigeria. Another study found no association between internal or international parental migration and the school performance of Angolan and Nigerian children, but Ghanaian children were found to fare worse in school when parents were abroad than when parents were in the country (Cebotari & Mazzucato, 2016). Based on this evidence, there are reasons to believe that these two forms of migration will impact child well-being differently. Insights from the literature suggest that close proximity is necessary between the child and the primary caregiver for optimal child development.

When children out-migrate, they usually encounter administrative and financial difficulties, which prevents them from physically achieving their aims and objectives To this end, when these expectations are unmet, children may experience psychological and material difficulties that may affect their well-being. The role of the caregiver in the life of children is conceptually important but does not feature prominently in the transnational family research (Mazzucato & Schans, 2011). Who the caregiver is when parents migrate plays a crucial role in the development of children in transnational care. If the parent who migrates is the primary caregiver, then children are more likely to experience difficulties because of separation.

The caregiver plays a fundamental role in the life of children by providing a good quality parenting when one or both parents migrate. In Obudu, Goody (2016) finds that many children decide to migrate only if they are able to find a close family member to care for their children. The availability of kin to provide care to children is seen as an enabling factor allowing African parents to migrate alone for work.

Conversely, when migrant children have difficulties finding a suitable caregiver in the local network of people, then tensions may arise within the transnational family (Poeze, Dankyi, & Mazzucato, 2017). The quality of care provided by the caregiver is also of relevance and is expected to be higher when the caregiver is one of the parents of the child or a close family kin member.

2.1.3 Attitude and teenage migrant

According to Laura (2015) carried out a study on migration and its impact on children's lives and the shows that migration affects children in a variety of ways and can be both a positive and negative experience, it is s complex process with obstacles and opportunities, which influences children's development, they came up with issues that shape their settlement experience in host countries and the impact of migration on children's lives. The migration experience affects children's academic performance, children's social integration and emotional wellbeing, the migrant children face a broad range of different educational need and that parental evolvement influence children's academic achievement as well as language proficiency. Migrant children came from different backgrounds, which might create challenges in the educational system. the circumstance surrounding the migration play a very important role in the emotional wellbeing of the child as for instance the way that children identify themselves within a community. He further said that there are variety of factors that influence the psychological wellbeing and self esteem of migrant children. Some of these factors are age of migrant child which the migration occurs, the adaptation process is easier for younger children. Another factor that affects migrant in the host country and the strategies offered by the government regarding migrant children adaptation experiences.

2.1.4 Location of livelihood and teenage out migration

Mariam (2016) carried out a study on the socio-economic livelihood of the children and women of Karamayong and the burden is particularly heavy in terms of the socio-economic survival of their households. It has also increased the work load of women and it has put them in a greater risk of abuse such as rape or transactional sex in exchange for work, money and food. This has forced many to migrate to urban centers for employment for better life for their families and themselves. This limits their ability to engage in economic activities to improve their incomes, assets or capabilities and to contribute to the wellbeing of their families and most importantly their children. Due to this migration, the way of life of the children has changed from the traditional way of being child bearers in their songs and words. They now compare their livelihood strategies to that of warriors. They believe that just like men were referred to as warriors when they went out to hunt and raid cattle they have also become warriors by becoming the bread winners of their households.

According to Woldie, Degefa and Gate (2010), they investigated the causes and impacts of seasonal migration on rural livelihoods and the study was underpinned by the sustainable livelihood framework. Both urban and rural areas as places of destination and rural villages as origins of migrants have been considered data were collected using questionnaire survey, focus group discussion, key informant interviews and household case studies. Shortage of farmland, debt, lack of viable non-farm activities locally and the desire to earn additional income are the major reasons for seasonal migration of labour. Social networks and information flows are also important factors in migration and the research found out that single men are predominantly involved in migration while the participation of women is negligible. The earnings obtained have allowed rural households to supplement their income

from agriculture and indirectly contributed to overcoming the problem of farmland scarcity. The timing of movement which coincides with the agricultural slack season at home makes the impacts of seasonal out migration on agriculture minimal. Rather than viewing it as a livelihood option of the rural poor which contributes to reducing poverty and improving the livelihoods of the poor, migration is still perceived negatively and there has been little awareness of it significance.

Researchers like Chukwuedozie and Ignatius (2014) gave a summary of rural urban migration and livelihood in South Eastern Nigeria, questionnaire survey on 225 heads of rural households and focus group discussion in each of the five states in the study area were used to elicit information on rural urban migration and livelihoods characteristics of rural populace in the past three years. Descriptive statistics show spatial variations in the impact of migration on livelihood across the region. Financial and food indices are the most influential livelihood indices while two underlying components namely financial security and investments by families of migrants in the rural areas to improve their quality of life together explain 78.07% of the cumulative variance of the PCA in determining the impact of migration on livelihoods. Based on the findings, it is recommended among other things that educational institutions and small and medium scale industries should be established in the study area. The implementation of these measures will translate to improved quality of life in the region.

Londari (2016) carried out a study research on the impacts of migration on the livelihoods of urban settlers in point of Port Moresby in New Guinea, data were obtained using quantitative method comprising questionnaire surveys. Seven stages in the study area were selected base on population size and spatial equity from a population of almost 40 to 50 thousand people. From each of this stages fifty six

migrant who migrated from the rural villages, households were sampled for the study. Multinomial logit model and cluster analyses were used to estimate and categorize the effects of rural-urban migration. Measures of household capital were derived using principal component analysis or direct from survey responses. Six mutually exclusive livelihood strategies were identified using cluster analysis. This regression analysis shows that rural urban migration has impacted on the livelihood of migrants. There were no significant impacts of migration on the choice of livelihood using multinomial logit model other than the choice of "urban mixed" livelihood which was 5.7 times more than agriculture livelihood for those migrating into the urban centers ($P = 0.050$).

Laura (2004) investigated a study on city livelihoods and village linkages: rural-urban migration in Tamataue, Madagascar and he came up with the resolutions that Africans are migrating to cities and they will continue to maintain strong ties to rural places of origin as long as urban economies offer minimal security of economic opportunity. They adopted two stages of rural-urban migration, firstly what type of contemporary Malagasy life may lead some migrants to change or weaken ties to their home, villages and rural family members, secondly he analyze the role that rural linkages play in migrants urban livelihood strategies using 12 months, he studied the lives of 55 migrants originating from the Vavatenina district and currently living in the city of Tamataue. He used participant observation, structured interview, livelihood and wellbeing assessments and ranking exercises to determine migrants life histories, migration and livelihood strategies, and behaviours and values regarding linkages. He found out that migrants with weaker rural linkages tended to be male, poor protestant, and had a spouse or parent who was from outside the Vavatenina district.

2.1.5 Remittances and teenage out migration

The role of remittances and teenage out migration have been traditionally the focus of child psychology. Research shows that remittances in care arrangements increase the risk of teenage out migration, children's violence, risky health behavior, adolescent childbearing, early school dropout, and greater mental discomfort. A recent body of research has focused on the relation between parental marital status and the well-being of children in transnational care. The migration of parents in stable unions is motivated by a desire to improve the lives of children, whereas the divorced migrant parents may not always have time and resources to invest in children, particularly if they have formed new families abroad and have children in those unions (Dreby, 2010).

Lucas and Stark (2015) explore the statistical evidence on determinants of remittances in terms of motivation to remit to the rural households. However, Adams (2019), reveal that age, marital status, employment status, size of land and gender in terms of number of household male member above 13 years old are the determinants of migration and remittances. In addition, Hoddinott (2014), finds out that household and migrant characteristics influence the migration decision therefore remittances flow partly depend on parent and household land while son migrant and the remittances determinants always dynamics which may vary from household to household, migrant to migrant, geographical location so on.

Yeoh, Graham and Boyle (2002) find that the strong remittance determinant is altruism while consistent with exchange. Agrawal and Horowitz (2011) indicate that the significance difference between the single and multiple migrant member at the household. Blue (2004) clearly argue that the relation to migrant and household head strong remittance determinant and the relationship shows mainly parent,

children and siblings. According to de Hass (2006) international migration and remittances positive relationship to the home country economic development improve household standard of living and increase freedom of dominant cultural groups. However, Markova and Reilly (2007) finds that the strong relationship between migrant legal status and remittances as illegal migrant substantially volume of remittance less than those documented.

McDonald and Valenzuela (2012) explored that altruism motive, gender and employment status are factors of remittance but these depend on their overseas earning opportunities and capacities. However, Ullah (2007), revel that only a little share of remittances are straight way used up on investment goods, non-productive use and strong linkages with the .other economy of the country.

Valerie and Abusaleh (2010) carried out a research on the preliminary evidence on internal migration, remittances, and teen schooling in India and the research shows that there was correlations between the receipt or remittances from internal migrants and human capital investment in rural areas of India. They employ a propensity score matching approach to account for the selectivity of households into received from internal migrants and the schooling attendance of teens. The magnitude of the correlation is greater than focusing on how-caste households, and male schooling attendance in particular becomes more positive and statistically significant. Their findings provide a basis for establishing future research in the areas of migration and social protection in India.

According to Teferee (2016) who investigated the effects of rural youth out migration on migrant sending households in Gojjam and Wolayta, Ethiopia and the research revealed that rural youth out migration from densely populated agricultural areas is a common phenomenon in Ethiopia. The purpose is to assess the impacts of

youth out migration on the socioeconomic and demographic behavior of migrant-sending households using survey data and in-depth interviews. The finding revealed that remittances are considered important by the migrant sending households to enhance asset formation, increase level of income and consumption, improve depth repayment position, and augment family members education and medication. The study finally underscored the positive impacts of youth rural out migration in improving human environment relations through fertility reduction and easing population pressure, and mitigation of harmful traditional practices.

According to Schrieder and Knerr (2000) international remittances defines as the part of international migrants incomes send back from the destination country to the origin country and where the remitter indirectly compensate by a counter of goods and services. However, Van Doorn (2001) explains that such remittances includes in kind as the migrant usually send in cash to their left behind household members as well communities at the origin country. Moreover, Levitt (2001) explains that international remittances have implications in social capital, concepts, ideas, practices and identities from destination country to the originating place which may impact household economic, political, race, class, gender, relationship and also religion involvement.

2.2 Conceptual framework

2.2.1 New economic of labour migration

The concept of new economic of labour migration dealt with household and household considers as a single unit in the light of this theory. This single unit of household is use in the analysis for migration. The individual migrant worker

considers a subset of the household. The costs and benefits of the migration decision shares with migrant and his whole household. The individual migrant is part of the beneficial contract of the household members (Blue, 2004).). Household benefits from the income generate from different sources. This phenomenon became a form of coinsurance. This theory does not reduce the importance of individual activity in decision- making for migration. The actions and performances of individuals could be explained in the framework of decision-making unit with his whole household (Stark, 1991). The new economic of labour migration has established a unique relation with analytical approach of migration from an economic perspective and the more sociological view in which human behaviour has been examined. Therefore, remittances among household are integral to migration under the new economics of labour migration (NELM).

Until the emergence of the New Economics of Labor Migration (NELM) in the 1980s, migration scholars were largely divided into two main theoretical camps, viz. the neoclassical and historical-structural approaches to migration. Against this background, the NELM presented itself as a theoretical 'third way' between the two latter approaches, and purported to reconcile agency and structure in a way previously unachieved by either of them (Brown, 1917). While those pretensions gained a fair amount of acceptance and popularity, this paper argues that they are fundamentally misleading, and that the NELM is little more than a slightly more sophisticated avatar of the neoclassical approach to migration, whose fundamental weaknesses it has not, and cannot, shed. This paper further argues that, in so doing, the NELM effectively constitutes migration theory's own instance of economics imperialism, i.e. the attempt to advance the fundamental tenets of neoclassical economics (methodological

individualism and the assumption of optimizing rationality) within the context of the study and interpretation of various social phenomena.

2.2.2 The concept of sustainable livelihood

This concept is best conceptualized as a diagram merging two interactive triangles one representing the cornerstones of sustainable development (economic efficiency, environmental integrity, and human wellbeing) and the other showing those of sustainable livelihoods (local knowledge, science and technology, and policy structure). It is opined that elements and issues that make for sustainable livelihoods lie at the critical interface of human environment, interactions, political, cultural, religious, social, economic, biological and geo-physical factor simultaneously interact with and in combination with each other to produce a variety of functions, processes and product, which shape the way a community makes a living ecozone. Analysis of these factors allows policy makers and practitioners to formulate appropriate and context-specific programme and projects that aim to promote particular sustainable livelihood system.

A second scenario is the vulnerability assessment (VA) model. The notion of "vulnerability" and "sustainability" in the context of livelihood can be viewed as two ends of a continuum. The properties of the vulnerable livelihood system are contrary to those of a sustainable livelihood system. The framework is shown in figure 3.

The aim of sustainable livelihood is to

1) Manage (reduce) the risk of exposure to crises, stress and shocks

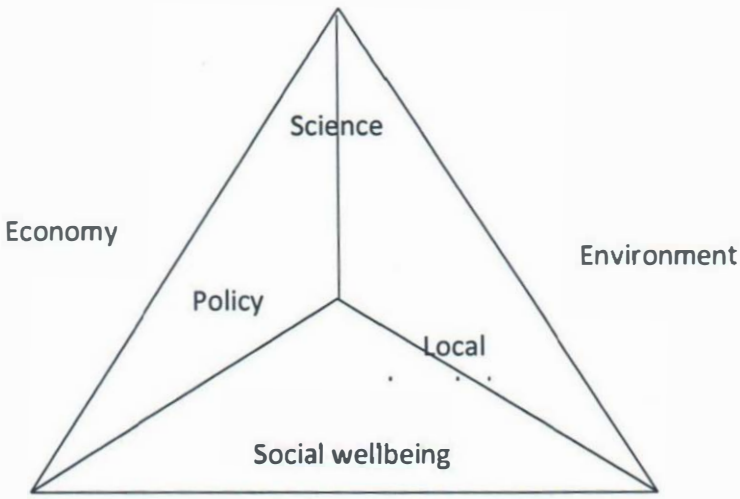

FIG. 3: Vulnerability assessment
Source: (Braudel, 1980)

3) Focus on potentiality by maintaining and enhancing enabling environments within which people can realize their livelihood aspirations.

Sustainable livelihood systems and groups (i.e. individuals, household, communities) on the above mentioned continuum are dynamic in nature. Based on the specific configuration of this space, livelihood system can be located at a certain point on the continuum. Additionally, accounting for vulnerable and sustainable livelihoods as processes allow us to view the relationship where the existence of such contradictions is a part of the process.

A nonlinear model of livelihood evolution can help explain how the elements that constitute a livelihood system change over time. The model of change extends the work of Braudel (1980) and Gould (1980, 1989). Braudel's is a threefold model that differentiates change between the instant (at the level of everyday occurrence), the cyclical (less transitory change, and structure in nature), and the tongue duree (where change is virtually experceptible). Applying the Braudelian scheme might be categorized as interaction change.

Rank order change or change pertains to cyclical changes for example, seasonal shifts in capabilities of different livelihood groups. We may find that the livelihood strategies which individuals or households undertake make them either vulnerable or sustainable in different seasons. Finally, change in constitute units (unit change), for example, the change in the governance structure, is similar to the bugue duree of the Braudelian scheme. This type change or transformation does not happen often.

A second model is that of Stephen Jay Gould Gould's punctuated equilibrium model purports that stages of relative tranquility are interrupted by sudden and dramatic changes. Such broad excocenous change – punctuation – will lead to a flurry

of radically new forms. In a long run, some of these forms may die out and a period of relative tranquility will ensue. In socio-political terms, war, revolution, economic changes such as emergence of capitalism and post-industrialist economies are the "punctuations" that trigger innovation. What follows in dramatic change in organization, culture, or economies which changes the constraints and opportunities for social actors. In other words, broad based external change has a variety of internal repercussions. We can extend Gould's theory of biological evolution to social evolution. We do so by considering livelihood groups as intentional agents as they perform livelihood strategies, and that these outcomes (adaptive strategies) are not necessarily efficient responses to environmental changes. Based on the above information, we put forth the idea the space of a livelihood system can be defined by three distinct processes which are linked through a tripartite structure The three sides of the analytical triangle are ecology, expanded entitlements and policy matrix as shown in figure 4. The core of the triangle comprises of coping and adaptive strategies of the livelihood groups for reducing risk, regaining their capacities and capabilities, and maintaining enhancing their livelihood options by creating a positive change in their lives.

Each point of the triangle (i.e. exposure, potentiality, capacity) represents a network of interconnected ideas and indicators which can be categorized on the basis of processes, structures, values and decisions. Ideally, we need to understand the three sides in retation to one another in addition to the points of the triangle which help shape decision-making. For example, the impact of policies on adaptive strategies of subsistence farmers need to be understood in relation to the quality of resource base on which they depend and also within the context of the social milieu (i.e. some notion of social capital). The indicators should reflect the interconnectedness of these

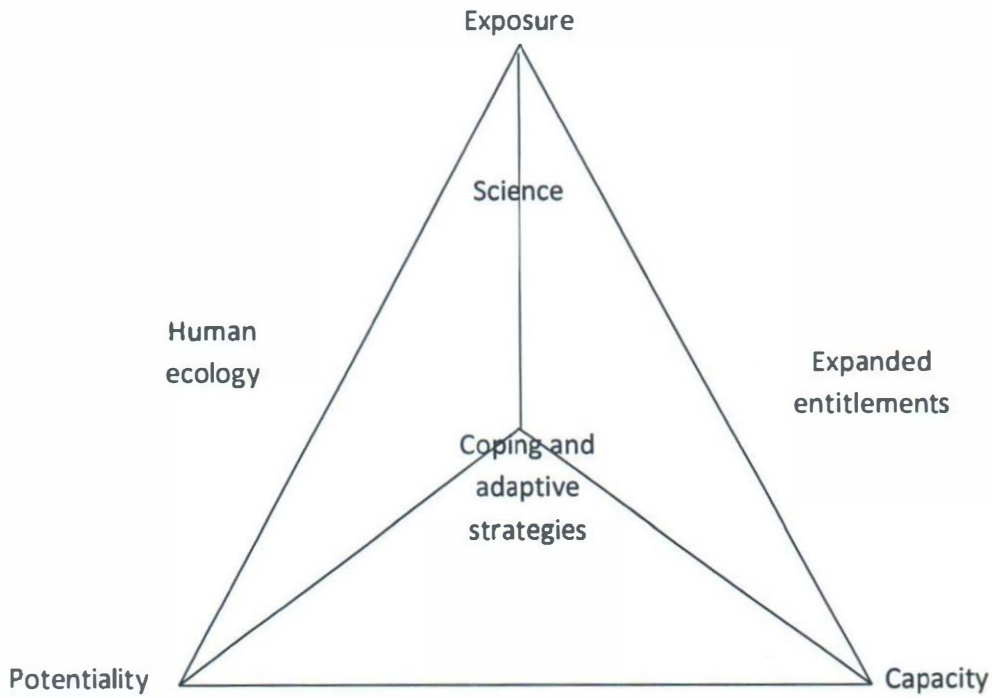

FIG. 4: Policy Matrix

Source: (Gould, 1980)

relationships. The next few paragraphs describe the elements of a livelihood system when viewed through the analytical triangle.

In a general sense, the human ecology side of the triangle refers to the relations between nature and human society. The emphasis is our model of a livelihood system emphasizes the relationship between livelihood systems reproduction (population growth) and consumption patterns and their implications for sustainability. This relationship raises several pertinent issues one of the questions is whether livelihood activities maintain and enhance or deplete and degrade the local natural resource base. On the positive side livelihood activities can improve productivity of renewable resources like air and river, water, organic soil fertility and trees. On the negative side, livelihood activities may contribute to desertification, deforestation, soil erosion, declining water tables salinisation, pollution. This concept of sustainable livelihood therefore forms the main basis on which this study is founded.

2.2.3 Lee's migration model (1966)

In 1966, Lee proposed a model to explain migration. He suggested that migration takes place in response to factors operating in the migrants place of origin and in one or more places of destination. He listed this factors, as positive (+ve) or "push", negative (-ve) or "pull" and neutral (0) or stationary. It is the balance of (+ve) and (-ve) factors that influence the incidence of migration and its direction. The push-pull factors could be social, economic, political or environmental (Jibowo, 2000) and are responsible for most human movements in place and time. The model has found wide application in migration studies as seen the works of Barness (2000), Johnson (2004), Kupere (2000), Roserup (1999) and Lipton (2003). In this study, it is used to

explain the causes of rural-urban migration in Obudu which are lack of job opportunities, poverty, poor economic activity etc. being the push factors and the pull factors being better job opportunities, better life amongst others.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research design

The study adopted the cross sectional survey research design. Survey research is directed towards determining the nature of a situation as it exist at the time of investigation. Isangedighi (2012) asserts that the research design involves objectively describing existing phenomena. This implies that the researcher has no control of the independent variables because they had already occurred and therefore can no longer be manipulated or controlled.

Therefore, the influence of the independent variables on the dependent variable arose from their occurrences and not from the direct intervention of the researcher. The survey research design is considered appropriate for this study because it allows the researcher to make inferences about the population by studying the sample for the study.

3.2 Types of data

The study collected data on the demographic characteristics of respondents such as age, sex, marital status, educational level, household size, occupation, annual income from remittance in and out-migration, age brackets of migrants, causes of out-migration and household income level.

3.3 Sources of data

The study used both primary and secondary sources of data. Questionnaire instrument interviews were used to gather information from the family or household across sample communities that made up the ten political wards on the cause of out-migration, annual rate of in and out-migration and household income from remittance.

Secondary data was obtained from National Population Commission depicting population statistics of Obudu, journals, articles, projects and internet.

3.4 Sampling technique

The stratified and simple random sampling techniques were adopted in the study. The first stage was to stratify Obudu LGA into different clans. The second stage was to select the respondents on the basis of gender (male and female). The final stage was to use simple random sampling to select the total respondents from the institutions. In using simple random sampling technique, the researcher utilized the hat and draw method where pieces of papers were put in the hat comprising of Yes and No, only the one drawn with inscription of Yes were used in the study while the one with the inscription of No were not considered in the study.

3.5 Sample size

In other to determine the sample size number represents 10% of the population. The Taro Yamane method of determining sample size was formulated by the statistician Taro The formula for accomplishing this exercise is $n=N/(1+N(e)^2)$ ..... (Eqn 1)

Where

n= sample size

N= population under study

e= signifies the margin error (it may be 0.10, 0.05 or 0.01 etc)

we will determine the sample size from a given population

$n=N/(1+N(e)^2)$ ..... (Eqn 2)

n= sample size

N= population under study

e= signifies the margin error

n=400/ (1+7401 (0.05) ^{2})

=3500/ (1+7401 (0.00025)

=3500/ (1+8.75)

=3500/ 10

350

3.6 Procedure for data collection

Questionnaire instrument were administered directly to the selected respondents (households heads) in Obudu LGA of Cross River State. The respondents were informed of the exercise and also told to be honest in the response to the items as the information obtained will be treated with all amount of confidentiality and be used as data for the research. At the end, the researcher collected the questionnaire from each of the respondents and carefully scanned through them for possible mistakes and proceed to analyse the data. Random sampling technique was used to select household heads whose teenage children are migrants. Copies of the questionnaire were administered in proportion to sample sizes allocated to each in the selected communities.

3.7 Procedure for data preparation and scoring

After collecting the questionnaire, codes and scores are assigned to each item. For ease of data preparation, a coding schedule was prepared by developing a key for each of the constructs of the instruments in a tabular form.

3.8 Techniques of data analysis

Both descriptive and inferential statistics were used. Descriptive statistical tools such as maps, charts, graphs and tables were employed.

Hypothesis one

H_{01}: Male migrant do not differ significantly from their female counterparts on the basis of outmigration in Obudu Local Government Area.

The hypothesis were tested using independent t-test. The formula is given as

$$t = \frac{\overline{X_1} - \overline{X_2}}{\sqrt{\frac{S_1^2}{N_1} + \frac{S_2^2}{N_2}}} \qquad \text{(Equation 3.1)}$$

Where ;

$\overline{X_1}$ = mean of group one

S_1 = standard deviation for the first group

S_1^2 = standard deviation for the first group squared

n_1 = No of cases in the first distribution

$\overline{X_2}$ = means for group two

S_1 = standard deviation for the second group

S_1^2 = standard deviation for the second group squared

n_2 = no of cases in the second group.

Hypothesis two

H_{02}: There is no significant influence of child well-being and outmigration in Obudu Local Government Area.

One way-ANOVA was used in testing hypothesis two

The formula is stated below:

(1) Sum of square for total or tss or sst = $\Sigma X^2 - \frac{(\Sigma X)^2}{N}$ (Equation 3.2)

(2) Sum of square for between or BSS or SSB

$$= \frac{(\Sigma X_1)^2}{n_1} + \frac{(\Sigma X_2)^2}{n_2} + \frac{(\Sigma X_3)^2}{n_3} \ldots - \frac{(\Sigma X)^2}{N}$$

(3) Sum of square for within or WSS or SSW

= SST – SSB or

$$\Sigma X^2 - \frac{(\Sigma X_1)^2}{n_1} + \frac{(\Sigma X_2)^2}{n_2} + \frac{(\Sigma X_3)^2}{n_3} \ldots - \frac{(\Sigma X)^2}{N} \text{ or } \Sigma X^2 - \frac{\Sigma T^2}{n_1}$$

(4) Degree of freedom for total = Dft = N – 1

(5) Degree of freedom for between = DfB = K – 1

(6) Degree of freedom for within = Dfw = N – K

(7) Mean Sum for within or MSB = $\frac{SSB}{DfB}$

(8) Mean sum for thin or MSW = $\frac{ssw}{DfW}$

(9) F-ratio = $\frac{MSB}{MSW}$

Hypothesis three

H_{03}: Attitude has no significant influence on teenage migrant in Obudu Local Government Area.

Independent t-test was used in testing hypothesis three

$$t = \frac{\overline{X_1} - \overline{X_2}}{\sqrt{\frac{S_1^2}{N_1} + \frac{S_2^2}{N_2}}} \quad \text{(Equation 3.3)}$$

Where ;

$\overline{X_1}$ = mean of group one

S_1 = standard deviation for the first group

S_1^2 = standard deviation for the first group squared

n_1 = No of cases in the first distribution

$\overline{X_2}$ = means for group two

S_1 = standard deviation for the second group

S_1^2 = standard deviation for the second group squared

n_2 = no of cases is the second group.

Hypothesis four

H_{04}: There is no significant influence of location on livelihood and teenage out migration.

Independent t-test was used in testing hypothesis four

$$t = \frac{\overline{X_1} - \overline{X_2}}{\sqrt{\frac{S_1^2}{N_1} + \frac{S_2^2}{N_2}}} \quad \text{(Equation 3.4)}$$

Where ;

$\overline{X_1}$ = mean of group one

S_1 = standard deviation for the first group

S_1^2 = standard deviation for the first group squared

n_1 = No of cases in the first distribution

$\overline{X_2}$ = means for group two

S_1 = standard deviation for the second group

S_1^2 = standard deviation for the second group squared

n_2 = no of cases is the second group.

Hypothesis five

H_{05}: There is no significant influence of remittances on teenage out migration in the study area.

One way-ANOVA of variance was used in hypothesis five

The formula is stated below:

(1) Sum of square for total or tss or sst = $\Sigma X^2 - \frac{(\Sigma X)^2}{N}$

(2) Sum of square for between or BSS or SSB

$$= \frac{(\Sigma X_1)^2}{n_1} + \frac{(\Sigma X_2)^2}{n_2} + \frac{(\Sigma X_3)^2}{n_3} \ldots - \frac{(\Sigma X)^2}{N}$$

(3) Sum of square for within or WSS or SSW (Equation 3.5)

= SST – SSB or

$$\Sigma X^2 - \frac{(\Sigma X_1)^2}{n_1} + \frac{(\Sigma X_2)^2}{n_2} + \frac{(\Sigma X_3)^2}{n_3} \ldots - \frac{(\Sigma X)^2}{N} \text{ or } \Sigma X^2 - \frac{\Sigma T^2}{n_1}$$

(4) Degree of freedom for total = Dft = N – 1

(5) Degree of freedom for between = DfB = K – 1

(6) Degree of freedom for within = Dfw = N – K

(7) Mean Sum for within or MSB = $\frac{\text{SSB}}{\text{DfB}}$

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

4.1 Data analysis

This chapter presents the general description of the research variables and the results of the data analyses in line with the five null hypotheses that were tested in the study.

4.2 Test of hypotheses

In testing this hypothesis, primary sources data was used and the raw data was derived from the administered questionnaire which was administered by the research to the respondents. The data in its raw form is presented below.

4.2.1 Hypothesis one

Male migrants do not differ significantly from their female counterparts in the study. The major independent variable is gender categorised in terms of male and female, while the dependent variable is out migration. To test this hypotheses gender was categorised in to male and female and the chi square analysis was employed. The result is presented with independent t-test as presented in Table 1.

The result with chi square in Table 4.1 revealed that for male who agree are 234 while those who disagreed are 156 their total is 390 while for female who agree are 155 and those who disagreed are 173 with a total of 328. The grand total is 718. The calculated chi-square is 9.06 which is greater than the critical value of 3.84 at 1 degree of freedom. Thus the null hypothesis is rejected. This implies that male migrant differ significantly from their female counterparts on the basis of outmigration in Obudu Local Government Area.

TABLE 4.1

Summary of chi-square analysis on the opinion of gender and teenage outmigration

Sex	Agree	Disagree	N	Cal X^2	df	Cri X^2
Male	234	156	390			
				9.06	1	3.84*
Female	155	173	328			
Total	389	329	718			

P<.05

Source: Field work 2020

4.2.2 Hypothesis two

In testing hypothesis two, primary sources data was used and the raw data was derived from the administered questionnaire which was administered by the research to the respondents. The data in its raw form is presented below:

There is no significant influence of teenage well-being and outmigration in Obudu Local Government Area. The independent variable in this hypothesis is teenage well being categorized in terms of High moderate and low, while the dependent variable is teenage out migration. To test this hypothesis, chi-square analysis was employed as presented in Table 4.2.

The results with chi square in Table 4.2 revealed that for those with high (agree) are 115, and those who disagree are 102 with a total of 217. Those who are moderate (agree) are 113, for those who disagree are 106 with a total of219 while for those with low (agree) are 174 and those who disagree are 108 wit a total of282. The calculated value was found to be 10.56 with 2 degrees of freedom, the Cri X^2 is 3.84. Thus the null hypothesis is rejected. This implies that there is no significant influence of teenage well-being and outmigration in Obudu Local Government Area.

4.2.3 Hypothesis three

To test hypothesis three, primary sources data was used and the raw data was derived from the administered questionnaire which was administered by the research to the respondents. The data in its raw form is presented below:

Attitude to life has no significant influence on teenage migrant in Obudu Local Government Area. The major independent variable is attitude categorised in terms of positive and negative, while the dependent variable is out migration. To test this

hypotheses gender was categorised in to male and female and the result is presented with independent t-test as presented in Table 4.3.

The result with independent-test in Table 4.3 revealed that from the 718 respondents sampled, 443 has positive attitude with mean and standard deviation of 16.3318 and 4.39617, while 275 are negative attitude with mean of 17.4618 and standard deviation of 3.99103. At 716 degrees of freedom the p-value was found to be .018 which is less than the chosen alpha of .05. Thus the null hypothesis is rejected. This implies that there is a significant influence of attitude to life on teenage migrant in Obudu Local Government Area.

4.2.4 Hypothesis four

There is no significant influence of location on livelihood of teenage out migration. The major independent variable is location categorised in terms of urban and rural, while the dependent variable is out migration the result is presented with independent t-test as shown in Table 4.4.

The result with independent-test in Table 4.4 revealed that from the 718 respondents sampled, 418 are from urban centres in Obudu LGA with mean and standard deviation of 16.2344 and 4.46060, while 300 are from rural areas with mean of 17.5033 and standard deviation of 3.989880. At 716 degrees of freedom the p-value was found to be .000 which is less than the chosen alpha of .05. Thus the null hypothesis is rejected. This implies that there is a significant influence of location on teenage migrant in Obudu Local Government Area.

TABLE 4.3

Result of attitude to life and teenage outmigration

Attitude	N	$\bar{X}$	SD	Df	t-cal	p-value
Positive	443	16.3318	4.39617			
				716	3.467	.018
Negative	275	17.4618	3.99103			

*p<.05

Source: Field work 2020

TABLE 4.4

Result of the influence of location on teenage outmigration

Location	N	$\bar{X}$	SD	Df	t-cal	p-value
Urban	418	16.2344	4.46060	716	3.960	.000
Rural	300	17.5033	3.89880			

*p<.05

Source: Field work 2020

4.2.5 Hypothesis five

There is no significant influence of remittances on teenage out migration in the study area. The independent variable in this hypothesis is remittances categorized in terms of High moderate and low, while the dependent variable is teenage out migration. To test this hypothesis, one way ANOVA was employed as presented in Table 4.5.

It can be discerned from Table 4.5 with the result of one-way ANOVA with influence of remittances and outmigration in Obudu Local Government Area using high, moderate and low, while high has 227 respondents with mean and standard deviation of 15.2687 and 2.88926, moderate has 229 respondents with mean and standard deviation of 17.5240 and 5.30604, and low has 262 respondents sampled with mean and standard deviation of 17.3969 and 3.95023 respectively. This implies that respondents with moderate level of remittances has the highest mean on the basis of teenage outmigration in the study while high has the lowest mean.

The result of the one way ANOVA showed that the p- value of .000 was less than the chosen alpha of .05. Thus the null hypothesis is rejected. This implies that there is no significant influence of remittances on teenage outmigration in Obudu Local Government Area. To test the direction of differences, a post hoc multiple comparison was executed with Fisher's Least Significance Difference (LSD) as presented in Table 4.6.

From the LSD test in Table 4.7, the men differences lies in the categories of high and moderate ($\overline{X}$ = -2.25530; p=.000 <.05), high and low ($\overline{X}$ = -2.12822; p=.000 <.05).

TABLE 4.5

Result of the research objective with remittances and outmigration

Level of remittances	N	Mean	Std. Deviation	Std. Error
High	227	15.2687	2.88926	.19177
Moderate	229	17.5240	5.30604	.35063
Low	262	17.3969	3.95023	.24405
Total	718	16.7646	4.27820	.15966

Source: Field work 2020

TABLE 4.6

Result of One way ANOVA of the influence of remittances and outmigration

Sources of variance	Sum of Squares	Df	Mean Square	F	p-value
Between Groups	744.778	2	372.389	21.510	.000
Within Groups	12378.443	715	17.313		
Total	13123.221	717			

*p<.05

Source: Field work 2020

TABLE 4.7

Fisher LSD with remittances and teenage outmigration

Remittances	Outmigration	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
High	Moderate	-2.25530*	.38970	.000	-3.0204	-1.4902
	Low	-2.12822*	.37729	.000	-2.8689	-1.3875
Moderate	High	2.25530*	.38970	.000	1.4902	3.0204
	Low	.12707	.37640	.736	-.6119	.8661
Low	High	2.12822*	.37729	.000	1.3875	2.8689
	Moderate	-.12707	.37640	.736	-.8661	.6119

*. The mean difference is significant at the 0.05 level.

Source: Field work 2019

4.3 Discussions of findings

The finding of hypothesis one revealed that gender does not significantly influence outmigration in Obudu Local Government Area of Cross River State. Obviously, gender difference in leaving home and in leaving rural areas reflects a range of factors including the different freedoms afforded men and women in family and community, heterosexual conventions, different patterns of consumption, the gendered nature of employment opportunities and greater emphasis on educational qualifications in the employment sectors dominated by women. Most studies on outmigration suggests that women are more likely than men to feel that they have to live away from their parental home in order to be independent. This does not mean that young women are more likely than young men to live on their own as neither the School Leavers Survey nor the Scottish Household Survey shows this. the findings agrees with Glendinning (2003) who compares the views of young people in the north of Scotland across three different age groups and demonstrates that agreement with the statement 'there's nothing for young people like me to do' is higher for girls across all ages and increases with age for both boys and girls. By age 13/14 two thirds of girls but only half of boys agree that there are 'too few shops that sell the things you want'. A larger proportion of 15/16 year old girls than boys agreed that there is 'no transport to go to places or do things they want'. The study shows girls being more interested than boys in listening to music, going to the cinema and shopping. In rural areas the latter two almost always involve public transport, if they are possible at all.

In line with the present study, Man, Jinyu and Ling (2016) found that older adults of different family types had similar levels of depression and life satisfaction. Those in internal migrant families were most likely to report financial worries and

those in transnational families were most likely to worry about lack of care. The influence of children's out migration was further confounded by parents coping resources. The finding shows that the vulnerability or the "left behind" elderly might have been exaggerated and suggested that future studies shall distinguish different types of migration and the diversity among older adults with migrant children. Again, Gao, Li, Kim, Congdon, Lau and Griffithss, (2010) found that girls in transnational care are more at risk for unhealthy behaviors such as drinking and smoking than girls in non-migrant families.

The result of the findings of hypothesis two showed that there is a significant influence of child well-being and outmigration in Obudu Local Government Area. Migration also occurs within countries; and contributes to urbanization and both formal and informal sectors. Additionally, significant numbers migrate from one rural area to another, sometimes across borders.

The study is in line with that by Dreby (2007) whose study shows that children are affected by migration in different ways: children are left behind by migrant parents; they are brought along with their migrating parents; and they migrate alone, independently of parents and adult guardians. the present finding agrees with Gaydosh, (2015) who found that children are affected by migration in all regions of the globe, but his understanding of its effects is highly limited. Children who migrate independently of their parents or adult guardians are in many ways similar to adult migrants in seeking new social and economic opportunities. These children, sometimes referred to as 'unaccompanied minors', may actively seek migration opportunities as a result of many factors. Also study by Goody (2016) agrees with the present finding as their study revealed that many children decide to migrate only if they are able to find a close family member to care for their children. The availability

of kin to provide care to children is seen as an enabling factor allowing African parents to migrate alone for work. Conversely, when migrant children have difficulties finding a suitable caregiver in the local network of people, then tensions may arise within the transnational

The result of hypothesis three showed that there is a significant influence of attitude to life on teenage migrant in Obudu Local Government Area. The present finding agrees with Laura (2015) who found that migration experience affects children's academic performance, children's social integration and emotional wellbeing, the migrant children face a broad range of different educational need and that parental evolvement influence children's academic achievement as well as language proficiency. Migrant children came from different backgrounds, which might create challenges in the educational system. the circumstance surrounding the migration play a very important role in the emotional wellbeing of the child as for instance the way that children identify themselves within a community. The present finding is in harmony with Moyosola (2004) whose findings support the theory that rural-urban migration negatively impact agricultural productivity through the loss of production members of rural areas. Also, Wuni (2013) finding suggest that rural urban migration is underlined by pull, push and risk aversion factor and that out-migration has negative implications for agricultural productivity and livelihoods in the study area. And the study finally commends that efforts should continue to increase income growth and development of social amenities in the area.

The result of hypothesis four showed that there is a significant influence of location on teenage outmigration in Obudu. Thus, the location determines the individual belief of outmigration. To this end, his finding agree with Chukwuedozie and Ignatius (2014) which gave a summary of rural urban migration and livelihood in

South Eastern Nigeria, the findings reveal that financial and food indices are the most influential livelihood indices, while two underlying components namely financial security and investments by families of migrants in the rural areas is to improve their quality of life. This further explains 78.07% of the cumulative variance of the PCA in determining the impact of migration on livelihoods. In the same vein, Londari (2016) carried out a study research on the impacts of migration on the livelihoods of urban settlers in point of Port Moresby in New Guinea. The regression analysis shows that rural urban migration has impacted on the livelihood of migrants. There were no significant impacts of migration on the choice of livelihood using multinomial logit model other than the choice of "urban mixed". Again, Laura (2004) found out that migrants with weaker linkages tend to be male, poor protestant, and had a spouse or parent who was from outside the Vavatenina district. He explored the influence of religion on rural urban linkages in greater depth in a case study, arguing that as protestant churches could see around a common narrative that demonizes select rural activities migrants in turn not only abstain these prohibited activities but in some cases have weaker overall linkages due to conflicts with families. Social networks and ambiguity about future burial stocks of material and financial capital, but that there was no such impact on social and human capital or food security. He concluded that poverty alleviation on conservation policies in Madagascar should be more effective if they recognized the relationship between rural and urban people..

The finding of hypothesis five revealed that there is a significant influence of remittances and teenage out migration in the study area. Thus the importance of remittances and teenage out migration have been traditionally the focus of child psychology. Obviously, remittances in care arrangements increase the risk of teenage out migration, children's violence, risky health behavior, adolescent childbearing,

early school dropout, and greater mental discomfort. The present finding is in line with that by Hoddinott (2014) who found that household and migrant characteristics influence the migration decision therefore remittances flow partly depend on parent and household land while son migrant and the remittances determinants always dynamics which may vary from household to household, migrant to migrant, geographical location and so on.

Also, finding by Yeoh, Elspeth and Paul (2002) revealed that remittance determinant is altruism while consistent with exchange. Agrawal and Horowitz (2011) study indicate that there is significant difference between the single and multiple migrant member at the household. Markova and Reilly (2007) finds that the strong relationship between migrant legal status and remittances as illegal migrant substantially volume of remittance less than those documented.

Ullah and Ahsan (2007) study also revealed that only a little share of remittances are straight way used up on investment goods, non-productive use and strong linkages with the .other economy of the country. The present finding agrees with Valerie and Abusaleh (2010) findings which provide a basis for establishing future research in the areas of migration and social protection in India.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

This study examined teenage out-migration in Obudu Local Government Area of Cross River State. Five specific objectives were formulated to guide the study. Data were collected from both primary and secondary sources, the primary data was through the administration of a structured questionnaire item to the teenagers under the study. The secondary source was through records of data in the national population commission and literature reviewed.

1. Male migrant do not differ significantly from their female counterparts on the basis of outmigration in Obudu Local Government Area of Cross River State, Nigeria.
2. There is a significant influence of child well-being and outmigration in the study Area.
3. Attitude to life has a significant influence on teenage migrant in Obudu Local Government Area.
4. There is a significant influence of location on livelihood of teenage out migration in Obudu Local Government Area of Cross River State, Nigeria.
5. There is a significant influence of remittances on teenage out migration in the study area.

5.2 Conclusion

This study of outmigration in Obudu is indeed an eye opener. From the findings one can conclude that the migrants are living at the margin of life which calls for a great and urgent attention. At the end of a successful research the followings

were found; firstly, women are found in the business of migration than the men. The former were 70% in attendant while the later 30%. This is not in line with other studies where men were more in migration than women. The condition of the area alone was not welcoming for the insatiable men.

Secondly, the level of education was consistent with the type of occupation of the migrant in the area. This was the case where 60% had no formal education and correlatively 60% were agriculturally employed through farming/fishing. Thirdly, the 4% civil/public servants were the only migrants who earned N16000-20000 and above monthly. The other 96% were far even below expectation (as low as N2000 monthly) Fourthly, houses were built without proper planning; all were built on difficult terrain, poor settlement layout, buildings on pipe lines all these were pictorially shown in the study. Furthermore, 100% of the migrants and the supposedly Obudu/Bette indigene all suffer from one basic need of life or the other. The researcher found that through a form of collective voluntary conscience, all migrants and indigenes contributively in attendance are participating in one form of socio-cultural activity or the other such as Epie Festival and also have some informal gatherings in form of recreational activities mostly at evening hours. In climax, Nigeria as in other developing countries as shown in the population, difficulties in solving negative effect or a double barred effect of immigration is the failure on the part of the local government which happens to be the closest administrator to the people bridging the gap between the federal government and the people.

5.3 Recommendations

This is a sympathetic situation of the migrants. The question to be asked is that, considering the problems faced by the migrants in their former and present

locations, and having identified through the study that majority of the migrants are from Bendi, Utuwang, Ukpe-Alege, and Utanga-Becheve, what effort has the Cross River State Government made to curtail people(its indigenes) from moving out of the state? There is need for the governments concern to look critically into the issue raised above.

5.4 Suggestions for further studies

Further studies could be conducted on the following areas

1. Rural-rural migration and it impact in cross river state
2. The study can be replicated in other local government areas in the state
3. Further studies could be conducted on the effect of outmigration on the economic development of the state in Nigeria

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APPENDIX

TEENAGE OUT-MIGRATION QUESTIONNAIRE (TOQ)

UNIVERSITY OF CALABAR
DEPARTMENT OF GEOGRAPHY AND ENVIRONMENTAL SCIENCE
FACULTY OF ENVIRONMENTAL SCIENCE

DEAR RESPONDENTS,

This instrument is designed to elicit information on "An Evaluation of Teenage Outmigration in Obudu Local Government Area, Cross River State, Nigeria". Your candid response will be helpful in this study as it is strictly for the purpose of academic fulfillment. Kindly respond to the items in the questionnaire with upmost sincerity. Your information will be treated with maximum confidentiality.

Thanks for your anticipated cooperation

(Researcher)

SECTION A: DEMOGRAPHIC CHARACTERISTICS

Fill in the answer or tick the appropriate blank boxes

Please indicate your community: .....

1) Sex: (a) Male ( ) (b) Female ( )

2) Age: (a) less than 20 years ( ) (b) 20-30 yrs ( ) (c) 31-40 yrs ( ) (d) 41-50 yrs ( ) (e) 51-60 yrs ( ) (f) 61yrs and above ( )

3) Marital status: (a) Single ( ) (b) married ( ) (c) Separated ( ) (d) Divorced ( ) (e) Widow/widower ( )

4) Educational level: (a) Not been to school ( ) (b) FSLC ( ) (c) SSCE/WAEC ( ) (d) NCE/Diploma ( ) (e) B.Sc./B.A ( ) (f) Others specified ( )

5) Occupation: (a) Unemployed ( ) (b) Trader ( ) (c) farmer ( ) (d) Civil servant ( )

6) Household/Size of family: (a) 1-2 ( ) (b) 3-4 ( ) (c) 5-6 ( ) (d) 7-8 ( ) (e) 9 and above ( )

7) Annual income level from remittance: (a) ₦5,000 – 10,000 ( ) (b) 15,000 – 20,000 ( ) (c) 25,000 – 30,000 ( ) (d) 35,000 – 40,000 ( ) (e) 50,000 – 55,000 ( ) (f) 60,000 and above ( )

8) Reasons for migration (a) Job opportunity ( ) (b) Forced marriage ( ) (c) Schooling ( ) (d) others specify ( )

9) Cause of migration: (a) Poverty ( ) (b) Poor living condition ( ) (c) Political instability ( ) (d) War ( )

Appendix

```
GET DATA /TYPE=XLSX
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FREQUENCIES VARIABLES=gender childbeing attitude location remitances
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  /ORDER=ANALYSIS.
```

Frequency Table

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	390	54.3	54.3	54.3
	female	328	45.7	45.7	100.0
	Total	718	100.0	100.0	

childbeing

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	high	217	30.2	30.2	30.2
	moderate	220	30.6	30.6	60.9
	low	281	39.1	39.1	100.0
	Total	718	100.0	100.0	

attitude

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	positive	443	61.7	61.7	61.7
	negative	275	38.3	38.3	100.0
	Total	718	100.0	100.0	

location

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	urban	418	58.2	58.2	58.2
	rural	300	41.8	41.8	100.0
	Total	718	100.0	100.0	

remitances

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	high	227	31.6	31.6	31.6
	moderate	229	31.9	31.9	63.5
	low	262	36.5	36.5	100.0
	Total	718	100.0	100.0	

```
FREQUENCIES VARIABLES=age maritalstatus education
  /ORDER=ANALYSIS.
```

Frequencies

```
[DataSet1] C:\Users\BENISON\Documents\outmigration.sav
```

Statistics

		age	maritalstatus	education
N	Valid	718	718	718
	Missing	0	0	0

Frequency Table

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	below 20 years	65	9.1	9.1	9.1
	20 - 30 years	324	45.1	45.1	54.2
	31 - 40 years	110	15.3	15.3	69.5
	41 and above years	219	30.5	30.5	100.0
	Total	718	100.0	100.0	

Maritalstatus

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	married	487	67.8	67.8	67.8
	single	197	27.4	27.4	95.3
	divorce	34	4.7	4.7	100.0
	Total	718	100.0	100.0	

Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	primary school	247	34.4	34.4	34.4
	secondary school	261	36.4	36.4	70.8
	tertiary school	210	29.2	29.2	100.0
	Total	718	100.0	100.0	

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
VAR00001	Equal variances assumed	3.443	.064	-4.384	716	.000	-1.38752	.31652	-2.00895	-.76610
	Equal variances not assumed			-4.449	716.000	.000	-1.38752	.31186	-1.99979	-.77526

Hypothesis two

Descriptives

VAR00001

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	Between-Component Variance
					Lower Bound	Upper Bound			
1.00	217	15.2673	2.92380	.19848	14.8761	15.6585	8.00	24.00	
2.00	219	17.1826	5.38631	.36397	16.4653	17.9000	9.00	81.00	
3.00	282	17.5922	3.88175	.23115	17.1372	18.0472	5.00	24.00	
Total	718	16.7646	4.27820	.15966	16.4512	17.0781	5.00	81.00	

ANOVA

VAR00001

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	717.927	2	358.963	20.689	.000
Within Groups	12405.295	715	17.350		
Total	13123.221	717			

Post Hoc Tests

Multiple Comparisons

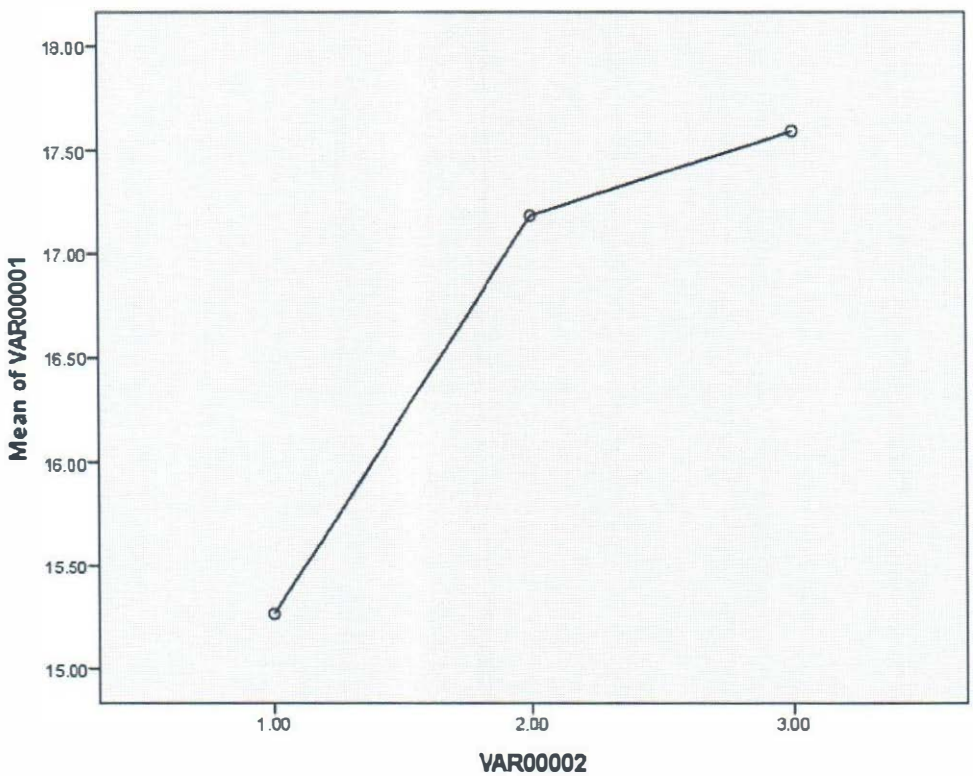
Dependent Variable: VAR00001

LSD

(I) VAR00002	(J) VAR00002	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1.00	2.00	-1.91537*	.39897	.000	-2.6987	-1.1321
	3.00	-2.32492*	.37614	.000	-3.0634	-1.5865
2.00	1.00	1.91537*	.39897	.000	1.1321	2.6987
	3.00	-.40955	.37517	.275	-1.1461	.3270
3.00	1.00	2.32492*	.37614	.000	1.5865	3.0634
	2.00	.40955	.37517	.275	-.3270	1.1461

*. The mean difference is significant at the 0.05 level.

Means Plots



Hypothesis three

Group Statistics

	VAR00002	N	Mean	Std. Deviation	Std. Error Mean
VAR00001	1.00	443	16.3318	4.39617	.20887
	2.00	275	17.4618	3.99103	.24067

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
VAR00001	Equal variances assumed	5.609	.018	-3.467	716	.001	-1.12999	.32594	-1.76991	-.49007
	Equal variances not assumed			-3.546	623.073	.000	-1.12999	.31866	-1.75578	-.50420

Hypothesis four

Group Statistics

	VAR00002	N	Mean	Std. Deviation	Std. Error Mean
VAR00001	1.00	418	16.2344	4.46060	.21818
	2.00	300	17.5033	3.89880	.22510

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
VAR00001	Equal variances assumed	4.354	.037	-3.960	716	.000	-1.26888	.32046	-1.89804	-.63973
	Equal variances not assumed			-4.048	688.792	.000	-1.26888	.31348	-1.88437	-.65339

Hypothesis five

Descriptives

VAR00001

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1.00	227	15.2687	2.88926	.19177	14.8908	15.6466	8.00	24.00
2.00	229	17.5240	5.30604	.35063	16.8331	18.2149	9.00	81.00
3.00	262	17.3969	3.95023	.24405	16.9164	17.8775	5.00	24.00
Total	718	16.7646	4.27820	.15966	16.4512	17.0781	5.00	81.00

ANOVA

VAR00001

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	744.778	2	372.389	21.510	.000
Within Groups	12378.443	715	17.313		
Total	13123.221	717			

Post Hoc Tests

Multiple Comparisons

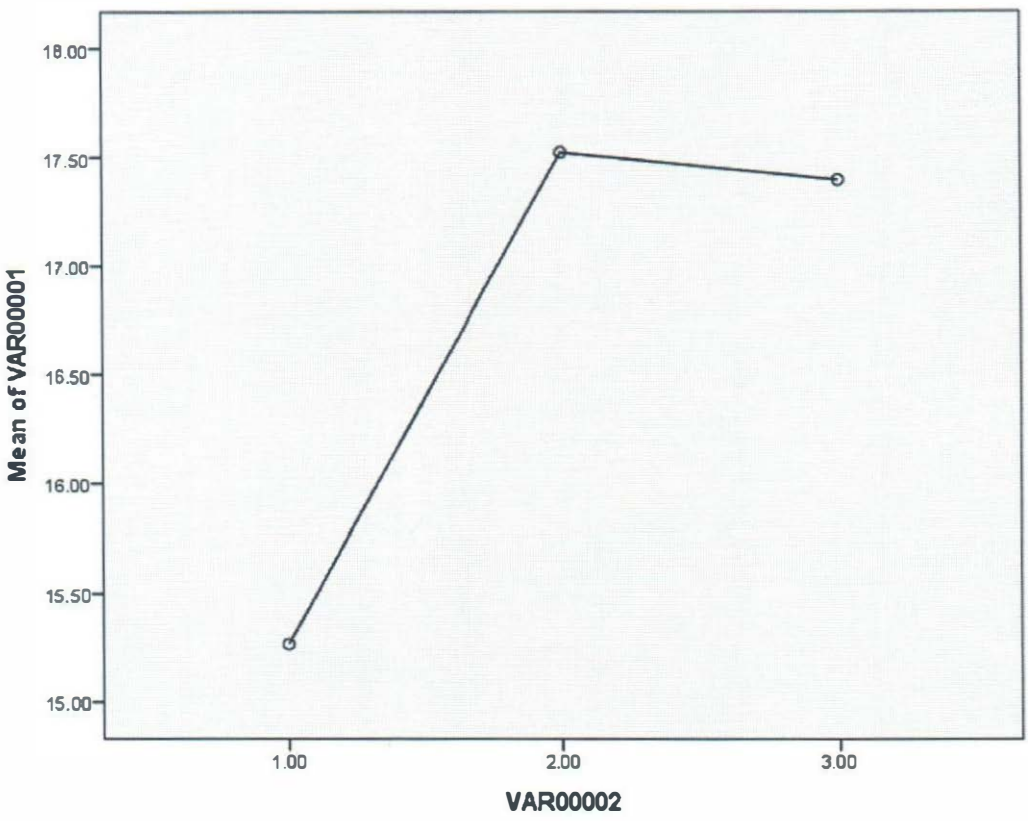
Dependent Variable: VAR00001

LSD

(I) VAR00002	(J) VAR00002	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1.00	2.00	-2.25530*	.38970	.000	-3.0204	-1.4902
	3.00	-2.12822*	.37729	.000	-2.8689	-1.3875
2.00	1.00	2.25530*	.38970	.000	1.4902	3.0204
	3.00	.12707	.37640	.736	-.6119	.8661
3.00	1.00	2.12822*	.37729	.000	1.3875	2.8689
	2.00	-.12707	.37640	.736	-.8661	.6119

*. The mean difference is significant at the 0.05 level.

Means Plots



Group Statistics

	VAR00002	N	Mean	Std. Deviation	Std. Error Mean
VAR00001	1.00	390	16.1308	4.53955	.22987
	2.00	328	17.5183	3.81687	.21075

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
VAR00001	Equal variances assumed	3.443	.064	-4.384	716	.000	-1.38752	.31652	-2.00895	-.76610
	Equal variances not assumed			-4.449	716.000	.000	-1.38752	.31186	-1.99979	-.77526

APPENDIX III

Raw data for appendix hypothesis 1

18.00	17.00	17.00	16.00	13.00	15.00	9.00	12.00	14.00	12.00	21.00
17.00	20.00	20.00	24.00	13.00	18.00	18.00	15.00	9.00		15.00
21.00	16.00	16.00	15.00	24.00	16.00	20.00	15.00	17.00	9.00	
18.00	12.00	22.00	21.00	20.00	15.00	13.00	24.00	16.00		17.00
19.00	18.00	15.00	15.00	24.00	18.00	14.00	15.00	18.00	18.00	
16.00	15.00	23.00	15.00	15.00	12.00	21.00	24.00	13.00	17.00	
22.00	16.00	18.00	24.00	18.00	15.00	15.00	11.00	9.00	14.00	
13.00	14.00	19.00	14.00	19.00	15.00	18.00	21.00	22.00	17.00	
16.00	15.00	15.00	24.00	12.00	18.00	19.00	24.00	9.00	19.00	
15.00	18.00	21.00	17.00	14.00	21.00	18.00	18.00	16.00	20.00	
13.00	16.00	15.00	24.00	23.00	15.00	18.00	19.00	15.00	11.00	
18.00	14.00	21.00	14.00	17.00	12.00	21.00	19.00	12.00	19.00	
10.00	9.00	11.00	24.00	21.00	17.00	14.00	19.00	8.00	24.00	
15.00	19.00	21.00	15.00	15.00	12.00	21.00	17.00	12.00		16.00
16.00	16.00	18.00	11.00	18.00	22.00	17.00	14.00	15.00	20.00	
16.00	16.00	16.00	21.00	14.00	19.00	12.00	21.00	16.00		18.00
21.00	9.00	19.00	24.00	24.00	9.00	17.00	19.00	18.00	24.00	
20.00	14.00	12.00	24.00	11.00	17.00	21.00	15.00	13.00		13.00
12.00	12.00	16.00	15.00	12.00	24.00	22.00	12.00	24.00	15.00	
16.00	12.00	12.00	18.00	18.00	21.00	15.00	14.00	16.00		19.00
15.00	20.00	13.00	19.00	24.00	22.00	8.00	18.00	17.00	9.00	
19.00	13.00	14.00	14.00	17.00	16.00	15.00	17.00	14.00		18.00
12.00	15.00	14.00	14.00	19.00	9.00	14.00	16.00	19.00	13.00	
12.00	16.00	16.00	21.00	14.00	16.00	18.00	13.00	17.00		22.00
21.00	12.00	18.00	19.00	24.00	18.00	18.00	24.00	24.00	24.00	
13.00	12.00	18.00	17.00	15.00	14.00	15.00	7.00	14.00		20.00
16.00	17.00	23.00	12.00	24.00	18.00	6.00	14.00	24.00	11.00	
12.00	22.00	19.00	19.00	14.00	12.00	18.00	13.00	15.00	20.00	
18.00	18.00	16.00	23.00	22.00	15.00	21.00	21.00	18.00	12.00	
18.00	17.00	21.00	15.00	21.00	21.00	11.00	17.00	13.00		15.00

20.00 18.00 15.00 12.00 24.00 19.00 16.00 12.00 13.00 18.00
17.00 18.00 19.00 23.00 21.00 19.00 19.00 15.00 9.00 15.00
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11.00 20.00 15.00 16.00 22.00 18.00 24.00 17.00 17.00 16.00
19.00 21.00 14.00 17.00 24.00 20.00 17.00 12.00 14.00 19.00
19.00 19.00 20.00 18.00 12.00 19.00 24.00 12.00 17.00 18.00
20.00 16.00 14.00 13.00 24.00 18.00 10.00 19.00 15.00 12.00
11.00 21.00 20.00 20.00 18.00 18.00 21.00 10.00 12.00 17.00
16.00 13.00 17.00 10.00 24.00 18.00 13.00 13.00 16.00 .00
14.00 19.00 22.00 20.00 13.00 12.00 16.00 19.00 13.00 18.00
22.00 18.00 19.00 13.00 13.00 17.00 15.00 12.00 9.00 9.00
12.00 15.00 21.00 14.00 12.00 19.00 15.00 18.00 15.00 16.00
18.00 9.00 15.00 21.00 17.00 24.00 11.00 13.00 19.00 9.00
14.00 18.00 18.00 10.00 17.00 19.00 18.00 18.00 15.0021.00
18.00 14.00 9.00 18.00 23.00 9.00 15.00 12.00 15.00 22.00
13.00 14.00 18.00 12.00 17.00 12.00 19.00 12.00 14.00 14.00
16.00 21.00 19.00 13.00 14.00 18.00 15.00 10.00 13.00 9.00
13.00 12.00 22.00 18.00 17.00 15.00 13.00 15.0017.0017.00
15.00 21.00 11.00 12.00 14.00 18.00 17.00 12.00 20.00 20.00
14.00 16.00 12.00 18.00 16.00 14.00 15.00 14.00 16.0015.00
22.00 23.00 13.00 20.00 19.00 16.00 13.00 15.00 15.00 12.00
15.00 14.00 18.00 18.00 9.00 16.00 18.00 19.00 17.00 15.00
21.00 21.00 19.00 10.00 24.00 18.00 18.00

Raw data for hypothesis two

18.00	17.00	17.00	16.00	13.00	15.00	9.00	12.00	14.00
15.00	21.00	16.00	16.00	15.00	24.00	16.00	20.00	15.00
17.00	19.00	18.00	15.00	15.00	24.00	18.00	14.00	15.00
12.00	17.00	22.00	16.00	18.00	24.00	18.00	15.00	15.00
22.00	17.00	16.00	15.00	15.00	24.00	12.00	18.00	19.00
16.00	20.00	13.00	16.00	15.00	24.00	23.00	15.00	18.00
12.00	19.00	10.00	9.00	11.00	24.00	21.00	17.00	14.00
16.00	16.00	16.00	18.00	11.00	18.00	22.00	17.00	14.00
18.00	21.00	9.00	19.00	24.00	24.00	9.00	17.00	19.00
13.00	12.00	12.00	16.00	15.00	12.00	24.00	22.00	12.00
19.00	15.00	20.00	13.00	19.00	24.00	22.00	8.00	18.00
18.00	12.00	15.00	14.00	14.00	19.00	9.00	14.00	16.00
22.00	21.00	12.00	18.00	19.00	24.00	18.00	18.00	24.00
20.00	16.00	17.00	23.00	12.00	24.00	18.00	6.00	14.00
13.00	20.00	18.00	18.00	16.00	23.00	22.00	15.00	21.00
15.00	20.00	18.00	15.00	12.00	24.00	19.00	16.00	12.00
15.00	20.00	21.00	12.00	18.00	22.00	13.00	18.00	16.00
24.00	19.00	18.00	15.00	7.00	12.00	18.00	12.00	12.00
16.00	19.00	21.00	14.00	17.00	24.00	20.00	17.00	12.00
18.00	20.00	16.00	14.00	13.00	24.00	18.00	10.00	19.00
17.00	16.00	13.00	17.00	10.00	24.00	18.00	13.00	13.00
18.00	22.00	18.00	19.00	13.00	13.00	17.00	15.00	12.00
16.00	18.00	9.00	15.00	21.00	17.00	24.00	11.00	13.00
21.00	18.00	14.00	9.00	18.00	23.00	9.00	15.00	12.00
14.00	16.00	21.00	19.00	13.00	14.00	18.00	15.00	10.00
17.00	15.00	21.00	11.00	12.00	14.00	18.00	17.00	12.00
15.00	22.00	23.00	13.00	20.00	19.00	16.00	13.00	15.00
15.00	21.00	21.00	19.00	10.00	24.00	18.00	18.00	11.00
21.00	16.00	15.00	17.00	15.00	23.00	18.00	22.00	11.00
17.00	22.00	16.00	15.00	19.00	16.00	18.00	15.00	12.00

Raw data for hypothesis three

34.00	23.00	27.00	23.00	31.00
23.00	25.00	28.00	34.00	24.00
32.00	26.00	27.00	12.00	26.00
34.00	35.00	23.00	13.00	27.00
13.00	12.00	25.00	12.00	25.00
24.00	16.00	26.00	11.00	28.00
25.00	17.00	21.00	17.00	28.00
23.00	18.00	23.00	18.00	24.00
35.00	13.00	31.00	22.00	23.00
12.00	16.00	31.00	25.00	24.00
10.00	17.00	32.00	26.00	20.00
8.00	19.00	32.00	24.00	21.00
9.00	23.00	25.00	25.00	20.00
12.00	26.00	33.00	22.00	11.00
15.00	19.00	21.00	34.00	19.00
34.00	16.00	31.00	10.00	18.00
23.00	27.00	32.00	8.00	9.00
21.00	6.00	31.00	8.00	10.00
22.00	24.00	17.00	9.00	17.00
22.00	25.00	24.00	21.00	20.00
13.00	26.00	25.00	22.00	16.00
12.00	27.00	28.00	33.00	17.00
13.00	17.00	33.00	21.00	19.00
14.00	14.00	13.00	23.00	14.00
12.00	12.00	23.00	13.00	20.00
13.00	28.00	25.00	29.00	11.00
14.00	29.00	29.00	26.00	19.00
15.00	33.00	27.00	20.00	16.00
23.00	34.00	22.00	19.00	11.00
23.00	12.00	32.00	16.00	21.00
24.00	10.00	31.00	31.00	17.00
23.00	25.00	31.00	30.00	18.00

24.00	17.00	31.00	24.00	20.00
25.00	14.00	27.00	12.00	19.00
11.00	23.00	28.00	14.00	13.00
12.00	31.00	29.00	15.00	19.00
13.00	26.00	25.00	16.00	20.00
14.00	12.00	34.00	26.00	17.00
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13.00	33.00	25.00	16.00	19.00
13.00	23.00	28.00	12.00	10.00
12.00	23.00	26.00	23.00	13.00
8.00	12.00	25.00	21.00	21.00
9.00	15.00	27.00	20.00	17.00
10.00	16.00	28.00	17.00	13.00
12.00	16.00	21.00	19.00	20.00
14.00	18.00	23.00	25.00	19.00
23.00	19.00	24.00	26.00	19.00
23.00	13.00	25.00	22.00	15.00
24.00	14.00	29.00	33.00	19.00
35.00	10.00	28.00	24.00	19.00
34.00	62.00	24.00	26.00	19.00
36.00	13.00	25.00	16.00	19.00
37.00	34.00	30.00	10.00	18.00
13.00	26.00	35.00	8.00	16.00
14.00	15.00	24.00	9.00	20.00
13.00	26.00	22.00	10.00	21.00
11.00	32.00	12.00	12.00	19.00
15.00	31.00	18.00	13.00	18.00
34.00	27.00	9.00	14.00	17.00
36.00	32.00	24.00	22.00	17.00
31.00	31.00	15.00	23.00	19.00
34.00	24.00	14.00	25.00	19.00
33.00	23.00	33.00	24.00	16.00
33.00	35.00	24.00	23.00	13.00

25.00	12.00	23.00	26.00	20.00
24.00	8.00	23.00	34.00	18.00
35.00	29.00	24.00	30.00	12.00
7.00	30.00	10.00	32.00	21.00
8.00	29.00	13.00	16.00	14.00
9.00	26.00	13.00	17.00	17.00
7.00	23.00	16.00	18.00	20.00
9.00	33.00	17.00	14.00	21.00
6.00	14.00	22.00	22.00	20.00
8.00	15.00	32.00	23.00	21.00
13.00	33.00	23.00	33.00	18.00
25.00	26.00	16.00	23.00	19.00
24.00	27.00	17.00	23.00	20.00
25.00	23.00	15.00	15.00	10.00
23.00	12.00	13.00	18.00	11.00
24.00	23.00	18.00	16.00	15.00
25.00	24.00	19.00	17.00	17.00
26.00	26.00	22.00	19.00	19.00
24.00	27.00	23.00	20.00	15.00
25.00	34.00	26.00	21.00	20.00

Raw data for hypothesis 4

34.00	26.00	24.00	24.00	19.00
25.00	27.00	13.00	25.00	15.00
36.00	28.00	20.00	26.00	17.00
21.00	13.00	13.00	24.00	18.00
32.00	14.00	23.00	25.00	20.00
32.00	26.00	15.00	24.00	21.00
33.00	27.00	27.00	25.00	20.00
21.00	20.00	12.00	26.00	21.00
8.00	13.00	13.00	34.00	18.00
9.00	25.00	18.00	21.00	19.00
9.00	26.00	8.00	23.00	20.00
9.00	34.00	19.00	24.00	9.00
8.00	26.00	13.00	25.00	19.00
7.00	28.00	16.00	26.00	19.00
13.00	28.00	17.00	23.00	20.00
14.00	13.00	19.00	22.00	21.00
15.00	17.00	20.00	22.00	17.00
13.00	15.00	22.00	23.00	21.00
14.00	13.00	20.00	24.00	19.00
12.00	17.00	22.00	25.00	21.00
13.00	18.00	23.00	21.00	18.00
14.00	19.00	14.00	23.00	21.00
13.00	23.00	25.00	24.00	21.00
14.00	24.00	16.00	25.00	19.00
13.00	9.00	17.00	23.00	20.00
14.00	27.00	18.00	24.00	18.00
13.00	23.00	19.00	22.00	31.00
13.00	12.00	15.00	24.00	32.00
14.00	13.00	24.00	25.00	31.00
13.00	14.00	26.00	23.00	30.00

11.00	16.00	27.00	24.00	30.00
12.00	17.00	28.00	25.00	17.00
14.00	18.00	30.00	23.00	19.00
15.00	19.00	23.00	23.00	18.00
16.00	13.00	26.00	21.00	20.00
31.00	14.00	27.00	24.00	20.00
25.00	18.00	35.00	25.00	21.00
27.00	22.00	34.00	23.00	21.00
28.00	25.00	30.00	24.00	16.00
23.00	26.00	34.00	25.00	17.00
22.00	27.00	22.00	23.00	20.00
23.00	28.00	23.00	24.00	6.00
24.00	24.00	21.00	25.00	20.00
25.00	25.00	28.00	21.00	14.00
23.00	27.00	19.00	23.00	21.00
24.00	28.00	16.00	24.00	19.00
31.00	17.00	17.00	23.00	21.00
31.00	18.00	19.00	24.00	18.00
31.00	19.00	19.00	23.00	20.00
23.00	13.00	23.00	23.00	17.00
24.00	30.00	14.00	24.00	20.00
22.00	24.00	9.00	23.00	20.00
25.00	30.00	18.00	24.00	20.00
24.00	31.00	19.00	25.00	17.00
26.00	32.00	24.00	31.00	21.00
24.00	33.00	26.00	32.00	20.00
32.00	34.00	20.00	33.00	15.00
21.00	24.00	27.00	33.00	20.00
23.00	9.00	28.00	33.00	19.00
24.00	24.00	29.00	31.00	20.00
22.00	25.00	30.00	32.00	19.00
24.00	26.00	34.00	32.00	21.00
25.00	30.00	29.00	31.00	17.00

24.00	20.00	27.00	32.00	17.00
28.00	21.00	12.00	32.00	21.00
30.00	33.00	23.00	12.00	21.00
31.00	22.00	26.00	13.00	19.00
31.00	33.00	27.00	13.00	20.00
31.00	23.00	33.00	12.00	19.00
23.00	25.00	30.00	12.00	19.00
24.00	24.00	26.00	13.00	19.00
32.00	34.00	12.00	24.00	20.00
35.00	16.00	24.00	23.00	21.00
24.00	25.00	35.00	25.00	20.00
23.00	12.00	34.00	26.00	21.00
23.00	15.00	22.00	24.00	21.00
25.00	9.00	21.00	25.00	21.00
24.00	10.00	16.00	26.00	21.00
26.00	9.00	20.00	23.00	21.00
23.00	22.00	25.00	24.00	19.00
24.00	33.00	27.00	25.00	21.00
25.00	35.00	30.00	23.00	21.00
22.00	33.00	21.00	22.00	21.00
24.00	16.00	17.00	23.00	18.00
25.00	17.00	19.00	23.00	18.00
26.00	18.00	29.00	24.00	21.00
23.00	23.00	20.00	25.00	21.00
23.00	25.00	12.00	21.00	20.00
22.00	26.00	5.00	23.00	17.00
24.00	15.00	6.00	22.00	17.00
25.00	5.00	26.00	22.00	16.00
22.00	6.00	17.00	22.00	17.00
24.00	7.00	31.00	24.00	16.00
25.00	8.00	32.00	25.00	19.00
23.00	13.00	31.00	24.00	18.00
31.00	20.00	24.00	25.00	14.00

31.00	31.00	16.00	23.00	17.00
32.00	23.00	18.00	24.00	21.00
33.00	4.00	19.00	25.00	19.00
23.00	6.00	22.00	24.00	15.00
26.00	7.00	34.00	25.00	16.00
32.00	9.00	26.00	22.00	17.00
31.00	27.00	27.00	22.00	21.00
32.00	14.00	30.00	26.00	12.00
35.00	16.00	31.00	25.00	10.00
24.00	27.00	32.00	24.00	16.00
25.00	26.00	33.00	26.00	21.00
23.00	30.00	34.00	27.00	21.00
25.00	32.00	8.00	32.00	19.00
26.00	14.00	9.00	25.00	15.00
24.00	5.00	8.00	24.00	20.00
25.00	16.00	29.00	23.00	20.00
21.00	17.00	23.00	21.00	19.00
23.00	18.00	15.00	21.00	21.00
24.00	19.00	12.00	21.00	20.00
23.00	8.00	17.00	23.00	17.00
24.00	17.00	25.00	24.00	14.00
32.00	23.00	25.00	25.00	19.00
33.00	16.00	15.00	23.00	14.00
33.00	17.00	16.00	24.00	19.00
25.00	18.00	16.00	24.00	13.00
26.00	31.00	23.00	23.00	21.00
24.00	32.00	26.00	24.00	11.00
25.00	32.00	27.00	25.00	20.00
24.00	23.00	33.00	26.00	18.00
25.00	24.00	27.00	23.00	18.00
26.00	31.00	20.00	24.00	19.00
24.00	9.00	20.00	25.00	17.00
25.00	15.00	24.00	23.00	18.00

21.00	13.00	30.00	24.00	15.00
24.00	18.00	9.00	24.00	14.00
34.00	10.00	17.00	25.00	21.00
24.00	7.00	19.00	26.00	21.00
25.00	20.00	23.00	23.00	19.00
22.00	26.00	30.00	24.00	18.00
32.00	27.00	31.00	25.00	17.00
24.00	28.00	34.00	23.00	21.00
24.00	29.00	32.00	24.00	20.00
22.00	30.00	35.00	25.00	14.00
21.00	12.00	10.00	24.00	21.00
23.00	13.00	15.00	23.00	20.00
24.00	14.00	16.00	24.00	20.00
14.00	15.00	17.00	25.00	20.00
21.00	16.00	30.00	26.00	17.00
24.00	17.00	31.00	21.00	19.00
23.00	18.00	32.00	23.00	17.00
22.00	19.00	33.00	24.00	13.00
24.00	20.00	31.00	25.00	18.00
23.00	21.00	24.00	24.00	18.00
22.00	22.00	26.00	23.00	21.00
23.00	23.00	17.00	25.00	12.00
24.00	24.00	18.00	24.00	19.00
24.00	30.00	19.00	24.00	23.00
21.00	5.00	20.00	25.00	23.00
22.00	17.00	13.00	23.00	17.00
24.00	20.00	14.00	25.00	19.00
24.00	21.00	16.00	24.00	21.00
24.00	23.00	17.00	26.00	20.00
22.00	24.00	18.00	27.00	15.00
24.00	25.00	30.00	21.00	16.00
24.00	27.00	22.00	24.00	17.00
21.00	28.00	24.00	21.00	19.00

22.00	29.00	17.00	24.00	10.00
22.00	30.00	29.00	23.00	20.00
22.00	31.00	30.00	25.00	12.00
22.00	26.00	20.00	24.00	7.00
23.00	27.00	31.00	25.00	19.00
24.00	26.00	32.00	26.00	17.00
25.00	14.00	33.00	23.00	17.00
22.00	15.00	34.00	23.00	19.00
23.00	18.00	36.00	21.00	19.00
24.00	16.00	16.00	25.00	17.00
23.00	27.00	19.00	24.00	16.00
25.00	19.00	18.00	23.00	12.00
24.00	27.00	19.00	24.00	12.00
23.00	6.00	26.00	25.00	19.00
25.00	7.00	15.00	26.00	9.00
24.00	8.00	17.00	23.00	8.00
25.00	10.00	18.00	24.00	18.00
31.00	12.00	22.00	25.00	10.00
31.00	8.00	20.00	24.00	19.00
31.00	9.00	23.00	24.00	19.00
32.00	13.00	34.00	2.00	19.00
25.00	14.00	13.00	25.00	13.00
24.00	18.00	17.00	24.00	22.00
26.00	19.00	19.00	25.00	11.00
23.00	20.00	18.00	24.00	20.00
26.00	21.00	22.00	25.00	18.00
27.00	22.00	33.00	24.00	20.00
23.00	26.00	34.00	25.00	11.00
8.00	27.00	27.00	31.00	3.00
10.00	34.00	29.00	31.00	19.00
8.00	35.00	28.00	31.00	19.00
9.00	33.00	30.00	8.00	8.00
23.00	23.00	31.00	9.00	14.00

24.00	13.00	32.00	18.00	12.00
23.00	14.00	24.00	16.00	20.00
22.00	17.00	34.00	17.00	19.00
21.00	8.00	31.00	14.00	19.00
23.00	9.00	15.00	14.00	19.00
26.00	10.00	16.00	13.00	21.00
32.00	11.00	8.00	13.00	21.00
23.00	12.00	9.00	14.00	19.00
25.00	13.00	10.00	15.00	21.00
24.00	26.00	34.00	12.00	17.00
26.00	18.00	30.00	13.00	16.00
23.00	20.00	23.00	23.00	20.00
22.00	23.00	23.00	24.00	19.00
24.00	9.00	24.00	25.00	20.00
23.00	16.00	25.00	23.00	21.00
23.00	17.00	26.00	23.00	19.00
21.00	13.00	27.00	24.00	9.00
24.00	19.00	28.00	25.00	16.00
23.00	20.00	29.00	21.00	15.00
25.00	21.00	30.00	23.00	14.00
26.00	22.00	8.00	24.00	16.00
24.00	23.00	9.00	25.00	20.00
25.00	24.00	10.00	23.00	15.00
26.00	28.00	11.00	24.00	15.00
24.00	29.00	12.00	25.00	18.00
25.00	9.00	22.00	26.00	13.00
26.00	10.00	14.00	21.00	13.00
24.00	13.00	17.00	24.00	19.00
25.00	14.00	18.00	23.00	19.00
26.00	29.00	27.00	25.00	19.00
21.00	30.00	18.00	24.00	13.00
23.00	28.00	26.00	25.00	14.00
24.00	15.00	27.00	26.00	13.00

23.00	17.00	28.00	23.00	12.00
26.00	18.00	30.00	24.00	11.00
23.00	10.00	26.00	24.00	14.00
24.00	12.00	27.00	25.00	14.00
21.00	9.00	23.00	23.00	13.00
22.00	8.00	22.00	24.00	16.00
22.00	9.00	23.00	21.00	22.00
22.00	10.00	24.00	23.00	21.00
23.00	13.00	25.00	23.00	23.00
24.00	14.00	21.00	23.00	11.00
24.00	17.00	20.00	25.00	14.00
26.00	18.00	13.00	26.00	15.00
25.00	22.00	14.00	27.00	14.00
23.00	13.00	13.00	24.00	13.00
24.00	31.00	15.00	25.00	12.00
25.00	13.00	16.00	24.00	11.00
23.00	14.00	17.00	25.00	13.00
21.00	15.00	18.00	26.00	14.00
24.00	16.00	23.00	31.00	13.00
26.00	17.00	26.00	25.00	14.00
25.00	18.00	27.00	26.00	14.00
23.00	19.00	28.00	23.00	13.00
24.00	20.00	30.00	24.00	23.00
25.00	21.00	21.00	25.00	24.00
25.00	13.00	9.00	26.00	23.00
33.00	8.00	8.00	27.00	24.00
25.00	9.00	10.00	21.00	25.00
26.00	10.00	11.00	24.00	21.00
23.00	12.00	12.00	21.00	22.00
24.00	14.00	13.00	23.00	24.00
23.00	17.00	14.00	25.00	26.00
25.00	22.00	16.00	24.00	25.00
23.00	21.00	17.00	22.00	26.00

21.00	23.00	18.00	23.00	27.00
24.00	25.00	19.00	24.00	23.00
23.00	26.00	23.00	25.00	24.00
25.00	28.00	20.00	26.00	25.00
24.00	29.00	13.00	23.00	26.00
23.00	30.00	9.00	2.00	27.00
25.00	21.00	10.00	25.00	21.00
23.00	22.00	25.00	24.00	21.00

Raw data for hypothesis five

17	11	15	18	15	15	20	16	19
17	17	15	19	15	20	20	24	9
19	16	15	19	15	19	20	13	14
20	22	20	18	15	19	12	19	21
19	24	15	18	19	17	14	21	18
11	17	24	12	19	19	24	24	18
13	12	18	21	24	21	24	21	13
19	15	22	19	18	19	24	20	16
23	14	15	15	19	16	24	22	15
13	10	21	19	19	14	17	24	18
11	18	18	20	18	15	16	21	13
16	14	12	19	15	13	19	13	21
12	24	15	19	21	18	12	24	15
21	24	24	16	13	17	17	21	21
19	18	24	24	21	16	24	19	12
21	24	24	15	12	24	20	19	12
19	24	16	19	21	9	12	19	12
19	17	20	24	17	18	24	16	21
23	19	24	24	12	18	24	19	15
20	12	24	19	19	24	24	15	15
24	18	24	19	20	15	19	16	18
19	16	18	15	24	19	19	15	15
19	24	17	17	18	18	19	24	18
19	24	20	16	23	13	19	24	21
19	21	19	15	18	20	19	24	19

11.00	20.00	12.00	16.00	19.00	18.00	18.00	16.00	11.00	15.00
13.00	15.00	21.00	16.00	15.00	17.00	15.00	23.00	18.00	22.00
11.00	15.00	21.00	12.00	10.00	24.00	18.00	17.00	19.00	15.00
20.00	17.00	17.00	22.00	16.00	15.00	19.00	16.00	18.00	15.00
12.00	15.00	20.00	18.00	13.00	17.00	18.00	15.00	13.00	15.00
15.00	11.00	17.00	18.00	20.00	12.00	16.00	24.00	18.00	13.00
21.00	24.00	18.00	11.00	18.00	18.00	18.00	15.00	15.00	20.00
16.00	13.00	22.00	16.00	22.00	17.00	16.00	23.00	17.00	12.00
19.00	15.00	9.00	17.00	14.00	20.00	9.00	17.00	12.00	18.00
22.00	16.00	9.00	13.00	19.00	17.00	15.00	12.00	18.00	12.00
12.00	21.00	9.00	15.00	21.00	14.00	23.00	14.00	19.00	15.00
21.00	12.00	17.00	20.00	17.00	23.00	13.00	19.00	20.00	14.00
12.00	15.00	9.00	11.00	12.00	18.00	9.00	15.00	17.00	15.00
17.00	20.00	15.00	19.00	14.00	10.00	15.00	12.00	17.00	18.00
14.00	9.00	9.00	12.00	19.00	17.00	15.00	11.00	15.00	15.00
16.00	19.00	23.00	19.00	15.00	13.00	12.00	15.00	9.00	17.00
15.00	17.00	12.00	14.00	19.00	15.00	9.00	14.00	16.00	15.00
18.00	16.00	11.00	17.00	18.00	12.00	12.00	15.00	19.00	10.00
15.00	21.00	18.00	16.00	21.00	15.00	16.00	12.00	9.00	12.00	18.00
13.00	15.00	15.00	17.00	8.00	14.00	17.00	9.00	12.00	14.00
15.00	24.00	22.00	19.00	12.00	18.00	7.00	21.00	15.00	18.00
20.00	12.00	16.00	18.00	15.00	13.00	20.00	12.00	15.00	