DETERMINANTS OF RURAL HOUSEHOLD'S ACCESS TO INFORMATION AND UTILIZATION OF FAMILY PLANNING PRACTICES IN DIRE DAWA ADMINISTRATION

M.Sc. Thesis

Muluken Demissie

June 2012

Haramaya University

DETERMINANTS OF RURAL HOUSEHOLD'S ACCESS TO INFORMATION AND UTILIZATION OF FAMILY PLANNING PRACTICES IN DIRE DAWA ADMINISTRATION

A Thesis Submitted to the College of Agriculture and Environmental Science, Department of Rural Development and Agricultural Extension, School of Graduate Studies

HARAMAYA UNIVERSITY

In Partial Fulfillment of the Requirements for the Degree of

MASTER OF SCIENCE IN RURAL DEVELOPMENT AND AGRICULTURAL EXTENSION (AGRICULTURAL COMMUNICATION AND INOVATION)

By

Muluken Demissie

April 2012

Haramaya University

APPROVAL SHEET OF THESIS
SCHOOL OF GRADUATE STUDIES
HARAMAYA UNIVERSITY

As Thesis Research advisor, we hereby certify that we have read and evaluated this Thesis prepared, under our guidance, by **Muluken Demissie,** entitled **Determinants of Rural Household's Access to information and Utilization of Family Planning practices in Dire Dawa Administration.** We recommend that it to be submitted as fulfilling the Thesis requirement.

Jemal Yuosuf (PHD)

---	---	---
Major Advisor	Signature	Date

Lemma Zemedu (PHD)

---	---	---
Co- advisor	Signature	Date

As member of the Board of Examiners of the MSc Thesis Open Defense Examination, we certify that we have read, evaluated the Thesis prepared by **Muluken Demissie** and examined the candidate. We recommended that the Thesis be accepted as fulfilling the Thesis requirement for the Degree of Master of Science in Rural Development and Agricultural Extension (Agricultural Communication and Innovation).

Endrias Geta (PHD)

---	---	---
Chairperson	Signature	Date

Prof. Ranjan S. Karippai

---	---	---
Internal Examiner	Signature	Date

Mahdi E. (PHD)

---	---	---
External Examiner	Signature	Date

DEDICATION

I dedicate this thesis to my family

STATEMENT OF THE AUTHOR

First, I declare that this thesis is my bonafide work and that all sources of materials for this thesis have been duly acknowledged. This thesis has been submitted in partial fulfillment of the requirements for an advanced MSc degree at Haramaya University and is deposited at the University Library to be made available to borrowers under rules of the Library. I solemnly declare that this thesis is not submitted to any other institution anywhere for the award of any academic degree, diploma, or certificate.

Brief quotations from this thesis are allowable without special permission provided that accurate acknowledgement of source is made. Requests for permission for extended quotation from or reproduction of this manuscript in whole or in part may be granted by the head of the major department or the Dean of the School of Graduate Studies when in his or her judgment the proposed use of the material is in the interests of scholarship. In all other instances, however, permission must be obtained from the author.

Name: Muluken Demissie Signature: ----------

Place: Haramaya University, Haramaya

Date of submission: June 2012

BIOGRAPHICAL SKETCH

The author was born on February 18, 1986 in Water district of kersa, East Hararghe Zone of Oromia National Regional State. He attended his elementary education in Water elementary school; and junior education in Dire Dawa Medanialem elementary and junior school. He completed his secondary school education in Dire Dawa Comprehensive Secondary School in 2003. He joined the then Wukro Agricultural College in 2003 and graduated with Diploma in Animal Science in 2005. Again in 2006 he joined Haramaya University continuing education program and graduated with B.A degree in Economics 2008.

Soon after his graduation of 2005, he employed in the then Dire Dawa Agricultural Development Office. Then after, he joined the School of Graduate Studies at Haramaya University in 2009 academic year.

ACKNOWLEDGEMENTS

First and for most I am delighted to praise and honor the almighty God for his love, mercy and protection upon me.

I would like to extend my heartfelt thanks to my major advisor Dr. Jemal Yousuf for his devotion of his precious time, valuable suggestions, comments and systematic guidance from the early design of the proposal to the final write up of the thesis. My special gratitude and deepest thanks also go to my co-advisor Dr. Lemma Zemedu. He devoted his precious time and energy to provide me with ever teaching and valuable comments and guidance's from the inception until the completion of this study. I, really, appreciate his kind and tireless effort.

I am very grateful to extend my most profound appreciation to Dire Dawa Agricultural Development Office for offering me the opportunity to study and for logistics support during data collection. My sincere thanks are also extended to Rural Capacity Building Project (RCBP) for covering the expenses of my study at Haramaya University. And also, special thanks are to Moges Huluf RCBP Coordinator, Endal Teju and Fikadu Belba Haramaya University Summer Office Coordinator, Wegene Berihane and Abdujebar Abdusemed for their cooperativeness and good support during my study. Without their support, this study would not have been on track and completed on time.

My heartfelt thank goes to Henok Sintayehu for his encouragement and providing me Laptop Computer until the end of this study. I also thank the Management and Staff members of Dire Dawa Administration Rural Development Bureau and acknowledge all enumerators for their efforts to get more reliable data in time of interviewing households.

Above all, my heartfelt and deepest thanks go to my family who received all suffering while I was in study. They were with me and paid all scarifications required for the success of my study. Special thanks are due to my brother Daniel Demissie for his encouragement and financial support.

LIST OF ABBREVIATIONS

BoFED	Bureau of Finance and Economic Development
CBR	Crude Birth Rate
CDR	Case Detection Rate
CMR	Child Mortality Rate
CPR	Contraceptive Prevalence Rate
CSA	Central Statistical Agency
DAs	Development Agents
DDAC	Dire Dawa Administrative Counsel
EDHS	Ethiopia Demographic Health Survey
FGAE	Family Guidance Association of Ethiopia
HEP	Health Extension Program
HEW	Health Extension Workers
ICPD	International Conference on Population and Development
IMR	Infant Mortality Rate
IPPF	International Planned Parenthood Federation
MLE	Maximum Likelihood Estimation
MMR	Maternal Mortality Rate
MOFED	Ministry of Finance and Economic Development
NGOs	Non-Governmental Organizations
OLS	Ordinary Least Square
SRS	Simple Random Sampling
TFR	Total Fertility Rate
TLU	Tropical Livestock Unit
VIF	Variance Inflation Factor

TABLE OF CONTENTS

STATEMENT OF THE AUTHOR iv

BIOGRAPHICAL SKETCH v

ACKNOWLEDGEMENTS vi

LIST OF ABBREVIATIONS vii

LIST OF TABLES xi

LIST OF FIGURES xii

LIST OF TABLE IN THE APPENDIX xiii

ABSTRACT xiv

1. INTRODUCTION 1

1.1. Background of the Study 1

1.2. Statement of the Problem 3

1.3. Objectives of the Study 4

1.4. Research Questions 5

1.5. Scope and Limitation of the Study 5

1.6. Significance of the Study 5

1.7. Organization of the Thesis 6

2. LITERATURE REVIEW 7

2.1. Over view of World Population Growth 7

2.2. Population Size and Growth in Ethiopia 9

2.3. Overpopulation as a Cause of Poverty 10

2.4. The Need to Control Population Growth 11

2.5. Family Planning Program and its Benefits for Women 12

2.6. Current Contraceptive Situation and Population Policy in Ethiopia 15

2.7. Reproductive and Public Health in Dire Dawa 17

2.8 Related Empirical Studies on Family Planning 17

TABLE OF CONTENTS *(Continued)*

2.9. Analytical Framework of the Study 21

3. RESEARCH METHODOLOGY 23

3.1. Description of Study Area 23

3.1.1. Location and physical situation 23

3.1.2. Demographic situation 23

3.1.3. Land use patterns 24

3.2 Sample Size and Sampling Procedures 26

3.3. Types and Sources of Data 27

3.4 Methods of Data Collection 28

3.5 Methods of Data Analysis 28

3.5.1. Descriptive and inferential statistical 29

3.5.2. Econometrics models 29

3.6 Model Diagnosis 31

3.7 Definition of Variables and Working Hypotheses 33

3.7.1. Definition of dependent variables 33

3.7.2. Definition of independent variables 33

4. RESULTS AND DISCUSSION 38

4.1. Descriptive Statistics Result 38

4.1.1. Household Characteristics 38

4.1.2. Access to family planning 39

4.1.3. Practice and knowledge of modern family planning 40

4.1.4. Constraints of family planning utilization 41

4.1.5. Knowledge about traditional family planning method 41

4.1.6. Knowledge of respondents about condom 42

4.2. Factors Affecting Utilization of Family Planning 42

4.2.1. Personal factors 43

4.2.2. Socio cultural factors 44

4.2.3 Gender decision on utilization of family planning in household 47

TABLE OF CONTENTS *(Continued)*

4.2.4. Institutional factors for the utilization of family planning 49

4.2.5. Economic factors for the utilization of family planning 54

4.2.6. Psychological factors for the utilization of family planning 56

4.3. Summary of Independent Variables on Utilization Family Planning: Results of Descriptive Statistics 59

4.4. Determinants of Family Planning Utilization 61

4.4.1. Result of model diagnosis 61

4.4.2. Econometric results for the binary logistic regression model 63

4.4.3. Interpretation of empirical/ model results 65

5. SUMMARY, CONCLUSIONS AND RECOMMONDATION 68

5.1. Summary and Conclusions 68

5.2. Recommendations 70

6. REFERENCES 72

7. APPENDIX 79

7.1. Livestock Conversion 80

7.2. Survey Questionnaire 81

7.3. Questions for Key informants and Focus groups Discussions 89

LIST OF TABLES

Table		Page
1.	Women's risk of death from pregnancy and childbirth	14
2.	Demographic situation of Dire Dawa and National comparison	17
3.	Land use patterns of the DDAC	24
4.	Family size of respondents	38
5.	Access to family planning and source of family planning information	39
6.	Specific modern family planning methods ever used and practiced	40
7.	Reasons given by respondents for not getting family planning education	41
8.	Knowledge of the respondents about specific traditional family planning	42
9.	Distribution of family planning users and non-users sample respondents by age and number of children	43
10.	Education of wife and husband relation with family planning utilization	45
11.	Association of family size preference and another sex preference with family planning utilization	46
12.	Gender decision power on family planning utilization	48
13.	Association of health extension contact and health education training with family planning utilization	50
15.	Association of distance health service provided with family planning utilization	51
16.	Association of access to radio and community role participation with family panning utilization	52
17.	Association of respondent's economic factors with family planning utilization	55
18.	Association of respondent's attitude with family planning utilization	57
19.	Fear of side effects relation with family planning utilization	58
20.	Results of t-test of continuous independent variables	59
21.	Results of chi-square test of dummy variables	60
22.	Result of multicolinearity test for continuous variables	62
23.	Contingency coefficient for dummy variables	62
24.	The maximum likelihood estimates of the binary logit model	64

LIST OF FIGURES

Figure		Page
1.	Analytical framework of the determinants of family planning utilization	22
2.	Map of the study area	25
3.	Sampling procedure	27

LIST OF TABLE IN THE APPENDIX

Appendix Table	Page
1. Conversion factors used to estimate tropical livestock unit	82

Determinants of Rural Household's Access to Information and Utilization of Family Planning Practices in Dire Dawa Administration

ABSTRACT

In Ethiopia, especially in rural areas, a high fertility rate is a defining feature of rural household. This has potentially significant implications for women's and children's health and economic development problems. Family planning is considered as the main strategy of the national population policy that aims to decrease the population growth rate. However, anecdotal evidence shows that the use of family planning far below expected. To this end, this research was set out to assess determinants of rural household access and utilization of family planning in Dire Dawa Administration. The study employed multistage sampling technique to draw four kebeles out of 38 rural kebeles in the administration. Pre-tested and semi-structured interview guide were employed to gather primary data from 154 sample respondents and key informants respectively. Besides, the study gathered secondary data from Dire Dawa Health Bureau and Family Guidance Association of Ethiopia. Descriptive statistics such as mean, frequency and an econometric model (binary logit regression model) were employed to analyze the data. From the total family planning user's sample 60% of the respondents were using injectables contraceptives, 20% were using Norplant/ implant, 16.7% were using pill, and 3.3% were using loop. The key finding of the study was that age of wife, educational status of the wife and husband, contact with health extension worker, radio access, fear of side effects to utilize family planning, attitude towards family planning and gender decision power significantly affected the utilization of family planning. To this end, future intervention by the Administration's Bureau of Health need to consider such multitude of factors to bring desirable change in the use of family planning.

1. INTRODUCTION

1.1 Background

The main goal of health service delivery is to provide equitable utilization and access to health care services. Making health services accessible is therefore an immediate concern. It is an immediate concern since access to health services is one of the basic human rights. Most governments, including ours, declare that their citizens should enjoy universal and equitable access to good quality service. Ethiopia as one of the countries of the world that endorsed international human right conventions and treaties, clearly indicate in its constitution article 9/4 that all international agreements ratified by the country are integral part of the law of the land. The constitution in its article 39/9 stated that women have the right to access to family planning and in article 41/ 4 indicates that government has the obligation to provide public health and other social services.

Ethiopia has experienced high population growth rate, 2.9%, and total fertility rate of 5.4 children per woman. Other health status indicators, such as maternal mortality ratio 673 deaths per 100,000, infant mortality rate 77 per 1000 live births and under five child mortality rate 123 per 1000 (CSA, 2007), all are the worst. Maternal health care is also very poor. According DHS, 2005, only six percent of women are delivering their child with the help of skilled health personnel in a clinic or hospital and the rural condition is lower than the average with only 2.6 percent get the stated standard delivery. Post natal care is also the same as delivery service with only six percent of women get post natal health care.

The government is the main health provider in the country. The primary health care system is comprised of a health center with five health posts attached to it. In order to enhance basic health services in rural area, the government is currently launching Health Extension Program (HEP) which is aimed at deploying two health extension workers at each health post to achieve universal primary health care. A health post serves primary health care for 5000 people and a health center supported by five health post give curative service for 25000 people. In addition to the effort made by the government, the role of NGO in the health

provision especially in family planning program is indispensable. NGOs such as Family Guidance Association of Ethiopia (FGAE), Pathfinder International Ethiopia, Packard Foundation, Merry stops and others played prominent role for the current contraceptive prevalence rate achievement.

Despite the great effort made by different stakeholders, the status of reproductive health in general and family planning in particular is still poor like most aspects of health situation in the country. The ever increasing population due to high fertility in the country makes the issue of family planning service so critical.

Rapid population growth puts tremendous strain on the resources for the health sectors. High fertility triggers high demand for health facilities. The high demand for health services will result in high expenditure for the health sector. This in turn will create overstretching of resources allocated to other sectors.

On the other hand, frequent pregnancies are usually accompanied with high levels of maternal and infant mortality and morbidity. These high levels of mortality and morbidity will cause a change in population size, age, sex structure, growth rate and geographic distribution. On top of that, they will affect income, health and education status of a family. Generally, the rapid pace in fertility pattern in a backward economic situation will hinder the health care services that have direct linkage to the growth and development of a country and to the welfare of a society (BOFED, 2010).

This research focuses on the utilization of contraceptives. Accessibility refers to the ability to reach desired goods, services, activities and destinations in which together called opportunities (Margaret, 2000). Accessibility to the service from demand point of view in which this study tries to look is acceptability. Even though all the health facilities are well equipped and staffed, physically and economically accessible, still acceptability will influence the usage of service. What matters here is the information a women has about the service. Knowledge of the women about the service provision (where it is found, how effective it is, how convenient it is for health etc.) and the attitude of the women (perception on the health

providers with regards to gender and approval of birth spacing) are information which directly act as barriers for the service use. In general the knowledge and attitude of the client towards the service provision and service providers are the most serious aspect of accessibility to contraceptives. Hence, this research will focuses on the physical, socio-demographic, economic aspects of contraceptive utilization.

1.2 Statement of the Problem

Programs to promote family planning in the country began in the 1966 (Andargachew, 1991) in response to improve high rate of morbidity and mortality among mothers due to frequent and un-spaced pregnancy, high rate of infant mortality and large number of abandoned children. Since then, the combined family planning program efforts have produced significant achievements in contraceptive knowledge and practice in the country.

After four decades of efforts, though there were relatively high improvement, family planning situation is still poor. High maternal and child mortality is among typical problem in the country. Contraceptive prevalence is low with only 13.9 percent married women getting access to modern contraceptive method which lead discrepancy between total wanted fertility and total fertility rate. The total wanted fertility rate is 3.7 percent, whereas the total fertility rate is 5.4 percent (CSA, 2009). There is also high unmet need for contraceptive among married women (34 percent), out of which 20 percent of which is for spacing and the rest 14 percent to limit childbearing (CSA, 2006). Both the met and unmet need create 47.9 percent of total demand for contraceptives which makes the provision of equitable access to services so challenging.

Low family planning coverage in the country results in high fertility. Un-spaced birth with low maternal health access seriously affects the health of mothers which is attested /proven/ by the current prevailing high maternal and child mortality rate. High fertility also affects food and income security, provision of social and economic service.

In Dire Dawa, the fertility level is high through the rate varies from urban to rural areas. Its annual growth rate was revealed to be 2.5% per annum (CSA, 2009). In urban areas, the fertility level is lower than in rural area. The total fertility rate (measures the expected number of children per women in her reproductive age) of the Dire Dawa administration was estimated to be 2.99. The figure is considerably much higher in rural areas than urban ones. In the rural parts the total fertility rate (TFR) was found to be 5.46 and in urban it was 2.16 (BOEFD, 2010). The target community to be served by the family planning programs is expected to respond to the use of contraceptive methods. The behavior of using or not using birth control methods is determined by different sets of psychological, social-cultural, economic, personal characteristics of couples, demographic and contraception utilization related factors.

However, no study has been conducted in the Dire Dawa Administration on contraception utilization. Therefore, this study was intended to assess determinants of rural households' access to information and utilization of family planning in Dire Dawa Administration.

1.3 Objective of the Study

General Objective

The general objective of the study is to measure the determinants of rural households' access to information and utilization of family planning practices in Dire Dawa Administration.

Specific objectives of the study are:

- to analyze the access to family planning information in the study area;
- to assess the current level of contraceptive utilization in the study area;
- to assess the extent of decision making power of women regarding family planning utilization; and
- to identify the determinants of family planning methods utilization by the household.

1.4 Research Questions

This study has attempted to answer the following research questions.

1. What is the accessibility of contraceptive methods information by the household in the study area?
2. What is the current level of contraceptive methods utilization?
3. What is the level of decision making power of women with regard to contraceptive use?
4. What are the determinants of family planning methods utilization in the context of the study area?

1.5 Scope and Limitation of the Study

This research is concerned with identification of factors that determine the utilization of family planning methods in rural Dire Dawa. The study is limited to rural households who are married. It does not include utilization of family planning to youth: girls and boys who reached reproductive ages. This is because access by the woman in the household does not guarantee the exposure of the member of the whole family. Also the study will not include people who are living in towns.

The scope of the research, also examine the level of awareness and utilization of family planning. Further, the study tries to identify constraints in access and utilization of health extension packages. Though diversified health extension packages and services are being carried out in rural parts of Dire Dawa, the study focus in family planning utilization. Family planning programs are endorsed in the study area by public health institutions and NGOs.

1.6 Significance of the Study

This study will contribute toward understanding of the level of awareness, utilization, and coverage of health extension programs provided for the rural house hold in Dire Dawa. It also explains the reasons why the rural households are not efficiently using the contraceptive as compared to urban resident. Also it will give a direction and evidence for the administration

planners and for those who have interest to work on issues relevant to this study. Besides, the study can help academicians or researchers who have interest to conduct studies in similar area. Moreover, above all it benefits rural women and men of the council to realize their reproductive health rights' related to family planning.

The result of the study will also inform government and non-government organizations working for the sustainable family planning program.

1.7 Organization of the Thesis

This thesis is organized into five chapters. Chapter one already set out background to the study. Chapter Two present review of relevant literature. Chapter Three presents Methodology employed by the study. Results and discussion of the study is presented in chapter Four. The final chapter presents summary, conclusion and windup by recommendation.

2. LITERATURE REVIEW

2.1 Overview of World Population Growth

The global population was about 5.4 billion in 2007 and 6.8 billion in 2009 with 5.6 billion (82% of the world total) living in the less developed regions. The population of the more developed regions remained largely unchanged at 1.2 billion inhabitants. Three least developed countries including Bangladesh, Ethiopia and the Democratic Republic of the Congo were among the ten most populous countries in the world. Whereas the population of more developed regions was rising at an annual rate of 0.34 per cent, that of the less developed regions was increasing four times as fast, 1.37 per cent annually, and the least developed countries as a group were experiencing even more rapid population growth, at 2.3 per cent per year (UN, 2009).

The population growth is still increasing. World population hit 1 billion people in 1804. It took 123 years to add the next billion, but less than a century to pass the next four billion from 2 billion people in 1927 to 6 billion people in 1999. The number of people on the planet has doubled since 1960. While the rate of population growth has slowed in most parts of the world, the overall number of people continues to grow. We increase by nearly 80 million people every year the numerical equivalent of adding another U.S. to the world every four years (UN, 2010).

The world's population reach 7 billion people on Oct. 31, 2011, and according to United Nations projections, we are on pace to add 3 billion or more by the end of this century. Already, millions of women in developing countries are unable to determine the size of their families because they lack access to contraception. Worldwide, the largest group of young people in history is entering their reproductive years. The decisions and policies we make today, and the options available to these young people, will ultimately determine whether our numbers climb to anywhere from 8 billion to 11 billion by 2050 (Population Action International, 2011).

The world's population grew more rapidly in the late 1990s. The UN had projected earlier in the decade, which the world population would increase each year by 1.6% but actual growth rate for the late 1980s averaged 1.7 percent. Another obvious character of population growth is its skewness that the developing world is experiencing tremendously high growth rate above the mean in relative terms where as developed one enjoying stability and few countries treated with possible trend of decline. Currently, the central problem for developing countries is the growing imbalance between the size of population and available resources to meet the need. Thus, obvious effect of population growth would have positive and/or negative impact on the process of development (Szirmai, 1997).

Regarding population growth, Malthus' theory in brief was that humankind is permanently trapped by the intersection of two 'laws'. The first concerned the rate at which populations can grow. He took the passion between the sexes to be constant and investigations showed that under conditions of 'natural' fertility (with early marriage and no contraception, abortion or infanticide), this would lead to an average of about fifteen live births per woman. This figure is confirmed by modern demography. Given normal mortality at the time, and taking a less than maximum fertility, this will lead to what Malthus called geometrical growth, namely 1, 2, 4,8,16. It only needs 32 doublings like this to lead from an original couple to the present world population of over six billion persons. The second premise was that food and other resource production will grow much more slowly. It might double for a generation or two, but could not keep on doubling within an agrarian economy. Thus there could, in the long run, only be an arithmetic or linear growth of the order of 1,2,3,4. Incorporated in this later theory was the law of diminishing marginal returns on the further input of resources, especially labor. Underpinning the scheme was the assumption that there was a finite amount of energy available for humans through the conversion of the sun's energy by living plants and animals.

The conclusion was that humankind was trapped, a particular application in the field of demography of the more general pessimism of Adam Smith. Populations would grow rapidly for a few generations, and then be savagely cut back. A crisis would occur, manifesting itself in one (or a combination) of what he called the three 'positive' checks acting on the death rate, war, famine and disease (Alan, 2005).

2.2 Population Size and Growth in Ethiopia

According to the census conducted in 2007 the size of population of Ethiopia is 73.9 million. However, the growth rate is increasing from time to time with the current growth rate of 2.62 percent. Census is the best method that is essential to determine the size of a population of a nation. Thus, Ethiopian conducted the first census / enumeration of people in a given nation / in the period of 1984. According to this census the population of Ethiopia was estimated to be 40 million. But this estimate was reconstructed to know the population of Ethiopia during 1900 and it was found that 11 million. After 60 years, by the year 1960, the population had doubled itself and become 22 million. Only after 27 years, by 1987, it was again doubled and become 44 million. Ethiopian conducted the second census on 11 October 1994 and had a total population of 53.5 million. According to CSA projection if the present trend continues, by the year 2012 the total population of Ethiopia would be 88 million which is the third doubling from 1987 in a period of 25 years. The UN, in 1998, projected the population of Ethiopia by the year 2030 would reach around 128 million (CSA and ORC Macro, 2006).

The demographic significance of Ethiopian population growth on the African continent is substantial. The country is one of the largest and poorest that even in the midst of crisis, have maintained high levels of fertility (Short and Kiros, 2002). Its population has increased nearly seven times from 11.8 million at the beginning of the 20th century to about 80 million in 2007.

The estimated annual rate of growth was 2.7% and doubling period 26 years (MOH, 2007). The use of contraception in Ethiopia is tripled in the fifteen year period between 1990 and 2005 from five percent to 15 percent for currently married women. But more than half of currently married women who were not using any family planning method at the time of the survey say they intend to use a method in the future. The maternal mortality ratio (MMR) of the country was 871 and 673 per 100,000 live births in 2000 and 2005, respectively. Similarly the infant and under-five mortality rates were 77 and 123 per 1000 live births in 2005 (CSA and ORC Macro, 2006).

Further projection was given by the CSA about the growth rate of Ethiopia during the year 2025-2030. And it is indicated that the annual growth rate will decline and reach 1.85 during these years. But this does not mean the annual increment in absolute number to decline. The average annual addition to the population is expected to increase from 1.77 million in 1995-2000 to 2.29 million people by 2025-2030.

The situation in Ethiopia clearly illustrates that demographic and developmental factors reinforce each other. High fertility and rapid population growth exert negative influences on economic and social development and low levels of economic and social development provide the climate favoring high fertility and hence rapid population growth (PASDEP, 2005).

2.3 Over Population as a Cause of Poverty

Over population, the situation of having large number of people with too few resources and too little spaces is closely associated with poverty. Excessively high population densities put stress on available resources. Only a certain number of people can be supported on a given area of land, and that number of people depends on how much food and other resources the land provide (Getachew, 2009).

Children are taken to be the assets to many poor families because they provide labor. Thus, high birth rate contributes to over population in many developing countries and children are assets to many poor families because they provide labor, usually for farming. Cultural norms in traditional rural societies commonly sanction the value of large families (Frances, *et al*., 1988).

Rapid growth population remains a major challenge to sustainable development and poverty reduction. The population grows by about two million persons per year (CSA 2009) and this imposes a constraint on resource base of the country, its economy and ability to deliver services. In the face of rapid growth of population, it may be difficult to fight poverty, create

employment opportunities, and raise agricultural productivity to feed the massive additions of people. It is a factor that reduces income per capital despite economic growth.

The total population of children and young people below age 15 is reached 45 percent of the total population. Also the size of population aged 15-64 is 51.9 percent of the total population by the same year. Youth dependency ratio per 100 productive people is 78. Old dependency ratio is to remain the same level 3.2 percent of the total population. Total dependency ratio was reached 83 dependent people per 100 productive people (CSA 2009).

As indicated, about 45 percent of the Ethiopian population is young. With a young population structure, the potential for rapid growth remained high due to additions of women of reproductive age to the population. The young population could turn itself into high dependency burden. Taking into account unemployment, underemployment and other economically inactive population, an economically active person would be forced to carry more than one inactive person, including the young one. And also high population density created negative impact on agricultural production and environmental security. Rapid population has created pressure on arable land and forest resources, particularly in the northern and central highlands. It has caused soil erosion, loss of fertility, land degradation and ecological imbalances. The man/land ratio has increased reducing farmland per household (Getachew, 2009).

2.4 The Need to Control Population Growth

The justifications of regulating human fertility emanates from the fact that rapid population growth brings several problems on human kind. Rapid population growth obstructs socio-economic development attempts of developing countries in many ways: those are: it increases pressure of population on land retired productivity of agricultural labor, it diverts resources from investment in capital good to feeding and clothing of young dependents, and it creates age structure, which has large number of dependent in relation to adult workers.

In general, the rapid population growth has an impact on environment, employment, provision of social services like school and health. It also creates ultra-rapid urbanization which brings problem of shanty towns, slum and squalors, etc (UNFPA, 2009).

As it is known, majority of Ethiopian population live in rural areas derive their livelihood from agriculture. But the size of cultivable land of the country decrease, while population grows rapidly. Thus, the rapid population growth causes agricultural land to be fragmented. The study conducted by the government authorities indicates only 0.89 hectare of land is available for a household in rural areas. However, minimum of 1.53 hectare of land is cultivable and required to meet current demand of households of five members. This clearly indicates the increasing demand of cultivable land with increasing population to meet their needs (FGAE, 1991). Recently the issue of population growth and fertility level in relation to family wellbeing got attention by the government in order to balance the rate of population growth with socio-economic development. Policy issues that raising the level of contraceptive prevalence and reducing total fertility rate were also enacted by the current government.

2.5 Family Planning and its Benefits for Women

The concept of family planning as a means of influencing the family size is developed many years ago. In the 1990s many people around the world who are committed to improving access and quality of family planning and related reproductive health services are working together more closely than ever before. Since the 1960s the family planning programs have helped women around the world and avoid unwanted pregnancies (WHO, 2006).

The international conference on population and development held in Cairo, Egypt, in 1994 was a land mark in that, for the first time the concept of reproductive health and reproductive rights was clearly defined. Besides, the linkages between populations, sustainable developments were articulated (UN, 1994). Reproductive health implies that people are able to have a satisfying and safe sex life and that they have freedom to decide it, when and how often to do so. Implicitly, it is the right of men and women to be informed and to have access to safe, effective, affordable and acceptable methods of family planning of their choice.

Reproductive rights, means the recognition of the basic right of all couples to decide freely and responsibly the number, spacing and timing of their children and to have information to do so and attain highest standard of reproductive health (IPPF, 1997).

Family planning methods have been grouped in to two major's categories: modern family planning method and natural family planning method. Natural family planning method also known as periodic abstinence, breast feeding, fertility awareness, or the rhythm method, is a type of birth control in which a couple abstains from sexual intercourse during the most fertility days of a women's menstrual cycle. Modern family planning method is another method of birth control in which a couple may deliberately prevent pregnancy using any of the several methods (MoH, 2004).

There is close relationship between population growth and family planning program. However, the concepts of population programs are wider in scope than family planning programs. In Africa, projects and programs based in family planning have not had high level of success in increasing the prevalence of contraceptive and simultaneously reducing the overall capacity and hence bringing economic development. Because, early family planning programs in Africa focused on population growth control and put little emphasis on the health benefits of women and children. Furthermore, such programs did not take into account the socio-economic and cultural aspects of the people (IPPF, 1997).

In general, family planning activities can be undertaken by both government and/or non-government organizations. These activities are undertaken for various purposes or reasons:-

- Health reason - to reduce infant, child and maternal mortality.
- Human reason - person to determine the number and spacing of their children.
- To influence demographic trends - fertility and population growth rates.
- Economic reasons - benefits for national development growth, food security (MoH, 2004).

However, it is necessary to recognize the usefulness of family planning and child spacing on the stability and well-being of a family and then a nation. Family planning has various

importance's, it promotes the health of mother as well as infants. It gives an opportunity for mothers to improve their own health by enabling them to plan, when and how many children to have. Between 25-40 percent of maternal deaths took place in developing countries/world could be averted by avoiding unwanted pregnancies (WHO, 2009).

Family planning has major impact on child's survival. Infant mortality can be reduced if mothers are able to space the birth of their children and numbers of children they want. Hazardous pregnancy that occurs at too young age and too old can be controlled through family planning. In a demographic work family planning helps to reduce levels of fertility if it is practiced by large number of people (FMOH, 2007). Most women welcome pregnancy and childbirth, yet the risks of illness and death associated with these events are very high in some parts of the world.

Table 1: Women's risk of death from pregnancy and childbirth

Region	Lifetime risk of maternal death
World	1 in 92
Developed countries	1 in 7,300
Developing countries	1 in 75
Sub-Saharan Africa	1 in 22
Asia	1 in 120
Latin America and Caribbean	1 in 290
Ethiopia	1 in 150

Source WHO, 2007

In developing countries, a woman's lifetime risk of dying due to pregnancy and childbirth is 1 in 75, or almost 100 times higher than the 1 in 7,300 risk in developed countries (Table 1). In sub-Saharan Africa, the risks are the highest in the world; a woman's lifetime chance of dying from pregnancy or childbirth-related causes is 1 in 22. Of all health indicators, maternal

mortality shows the greatest disparity between rich and poor nations. Of the estimated 536,000 maternal deaths that occur annually worldwide, more than 99 percent occur in developing countries 86 percent in sub-Saharan Africa and South Asia alone.

2.6 Current Contraceptive Situation and Population Policy in Ethiopia

According to the 2005 Ethiopian Demographic Health Survey, general awareness of family planning in the country is almost universal in which 86.1 and 91 percent of all women and men of reproductive age are aware of modern contraceptives. The awareness varies with different contraceptives method. The highest is for pills and injectable with 84.2 and 82.6 percent among currently married women and the smallest is for male sterilization and diaphragm with 4.4 and 5.5 percent respectively. The awareness for long term reversible contraceptives (IUD and Implants) is 12.2 and 20 percent for currently married women respectively (CSA and ORC Macro, 2006).

More than half of the unmet need for family planning and demand for contraceptive of married women is targeting to limit child bearing and the current family planning prevalence is highly depending on short term contraceptives specially on injectable (9.9 percent) and pills (3.1 percent) which account 93.5 percent of all methods and 88.4 percent of any modern types of contraceptive use. The national contraceptive prevalence rate also increased from 4.4 percent in 1990 to 8.1 percent in 2000 and 14.7 percent in 2005. The highest usage rates for currently married women, according the EDHS 2005, for injectable (9.9 percent) followed by pills (3.1 percent) and the rest methods account 0.2 percent each (CSA, 2006). Though there was relatively high increment in the contraceptive use in 15 years.

According to the recent 2011 Ethiopian Demographic Health Survey the percent distribution of currently married women contraceptive method used. Overall, 29 percent of currently married women are currently using a method of family planning, and nearly all use is a modern method; only one percent of currently married women are using a traditional method. The most popular methods are injectables (used by 21 percent of currently married women) and implants (3 percent). Two percent of married women reported using an IUD and less than

one percent reported having been sterilized, using the pill, and male condoms (CSA and ORC Macro, 2011).

Despite the increase in contraceptive use in Ethiopia over the years, a substantial proportion of women still have an unmet need for family planning. According to the 2005 DHS, 34 percent of currently married women have unmet need for family planning. Thought the desire for children differ with the number of children a women already had, generally 78 percent of currently married women need either to stop or post pond child bearing which shows that one out of five married women need family planning service (CSA and ORC Macro, 2006).

Ethiopia has endorsed its first national population policy in 1993. According to TGE (1993) the major goal of the policy is the harmonization of the rate of population growth and the capacity of the country for the development and rational utilization of natural resources to the end that the level of welfare of the population is maximized over time.

High population growth is mentioned as a major challenge to the country's development and could slow down efforts to alleviate poverty. According to (PASDEP, 2005) the country receives 2.5 million new born babies every year. The strategy underscores the need to promote the use of contraceptives in a bid to curb population growth Ethiopia is suffering from high rate of population growth. Providing basics services like education, health, safe water etc. is becoming more difficult. When the past experience, of the country is seen from, it is not in a position to cater basic services even for the current population. Seven to eight million people are receiving food aid each year.

There is difference between rural and urban areas of the study area with regard to total fertility rate (TFR). The recent 2011 Ethiopian Demographic Health Survey (EDHS) revealed that there was high disparity in TFR between rural and urban areas. If fertility were to remain constant at current levels, an Ethiopian woman would bear an average of 4.8 children in her lifetime. This represents decrease of 0.6 children in the five years since the 2005 EDHS, when the TFR was 5.4 births per women. Fertility is substantially higher among rural women than

among urban women; rural women will give birth to nearly three more children during their reproductive years than urban women 5.5 and 2.6, respectively.

2.7 Reproductive and Public Health in Dire Dawa

The variables that determine population growth are fertility, mortality and migration. These variables also influence the size and composition of a population.

Table 2 Demographic situation of Dire Dawa and National comparison

Demographic situation	Dire Dawa	National
Crude birth rate /CBR (per 1000)	26.36	34.5
Crude death rate /CDR (per 1000)	11	10.75
Total fertility rate /TFR	2.99	4.8
Infant mortality rate /IMR (per 1000)	77	80
Crude mortality rate /CMR (per 1000)	45	50
Under five mortality rate (1000)	136	123
Maternal mortality rate /MMR (per 100,000)	200	673

Source: BoFED, policy, plan and coordination office, 2010a and 2010b; CSA (EDHS), 2011.

2.8 Related Empirical Studies on Family Planning

Contraceptive use is substantial proximate factor affecting fertility among countries. At the same time, culture and socio-economic condition have significant roles in the use of contraceptive method. By and large, it is found that an increase in contraceptive prevalence rates is consistent with an increase in the proportion of woman who needs to avoid pregnancy, which then leads to a decrease in fertility (Feyisetan, 2000). The prevalence of use of contraceptive methods increases with the increase in the number of living children as well as education level of the respondent (Sajid *et al.,* 2005; Azhar and Pasha, 2008). Similarly this

association was also found in rural Tanzania where the number of living children and education were the main factors in use of contraception (Marchant *et al*., 2004). This was also found in Nepal where the sex preference was an important barrier to the increase of contraceptive use and the decline of fertility in the country (Tiziana *et al*., 2003).

The relationship between education attainment of parents and family planning utilization generally noted in surveys of sub-Saharan African countries and other parts of the world has been related. Groups with high educational attainments (either husband or wife) have higher contraceptive users than low educational groups (Dejene, 2000; Vilaysook, 2009). Education can affect birth rate through a number of channels including changes in the level of contraceptive knowledge, desire for children and economic productivity. Educated women are more likely to postpone marriage, have smaller families and use contraception more than uneducated women. The educational level of the parents (wife or husbands) influences access to modern knowledge and new ways of life. In addition, education tends to break down barriers to communication about family planning between spouses (Derebssa, 2002). Similarly it has important implications in raising family planning discussion like the use of contraception, which ultimately reduces the fertility level. Woman's education, directly and indirectly influences contraceptive use (Azhar and Pasha, 2008).

Communication between partners is a key factor in joint decision-making and contraceptive use. Talking with one's partner about reproductive and contraceptive decisions making is likely to increase understanding and help support one's partner's decision. According to the Demographic and Health Survey data in West Africa, about three quarters of the men and women had not discussed family planning with their partners in the year preceding the survey. In Tanzania, 45 percent of married women did not know what their husbands thought about family planning or thought their husbands disapproved of family planning, when in fact many of the husbands approved (Ezeh *et al*., 1996).

In line with the above, a study in Tigray region revealed that the frequency of discussion between partners and contraceptive utilization by the couples are positively associated. But by the same study, more than third of the couples had no discussion on these issues (Gebrekidan,

2002). The Ethiopian Demographic and Health Survey (EDHS) 2011 also showed that there are minimal couples discussions on matters related to family planning. For example, 67% of women who know at least one method of contraception had not discussed issues of family planning with their husbands in the twelve months prior to the EDHS, and one third of the women reported that they didn't know about their husbands' attitude towards family planning. Spousal communication is only one element of support to one's partner choices of preference.

A study conducted by Firew (2007) indicated respondents earning an average monthly income above 500 Birr were also found to be statistically significant predictor for modern contraceptive use and couples who freely discuss Family planning issues were found to be more likely to use contraception.

Income affects fertility through its effect on child survival which in turn affects maternal mortality, environmental contamination, nutritional status, personal illness, and controlling the use of medical services. The 2005 EDHS showed that Ethiopian women in the lowest wealth quintile have twice as many children as those in the highest wealth quintile. The fact that 84 percent of women in the lowest quintile have no education compared with 38 percent in the highest quintile shows the obvious fact that wealth and education go hand-in-hand and, together, make the biggest fertility impact. It is no wonder, then that the wealthy countries of the world have low fertility while most African countries plagued by poverty and illiteracy have, as a group, the highest fertility in the world (CSA, 2006). The lower the income levels the higher the child mortality. Higher child mortality is followed by lower family planning utilization in individuals (Dust, 2005).

According to the study conducted by Banti (2005) in Shebe Town in Jimma Zone, indicated that educational status of women, and their husband and inter-spousal communication have significant association with contraceptive use. However, by the same study it was reported that age and number of desired family size were not found to have significant association with utilization family planning. Study conducted in Konta Special Woreda in southern Ethiopia by Haile (2007) indicated statistically non-significance difference in age of wife between family planning users and non-users.

Asres (2005) indicated that level of education, social participation/community role, extension contact and sharing of available information had significant and positive relation with access to development communication including family planning. However, income, family size and age were not significant as reported by the same study.

Haile (2007) reported in his study that as there was difference between the two, user and non-users with respect to husband's sole decision in contraception use decisions implying that there is relationship between husband's domination of contraception decisions and use of birth control methods. Moreover, the same study indicated that there was statistically significant difference between users and non-users of family planning with regard to land holding, livestock holding and fear of side effects. In the same study with regard to family planning education, it was reported that there was no significant difference between users and non-users regarding to utilization of family planning. And also a study conducted by Amare (2004) indicated respondents not using contraceptives among married women because of side effects.

A study conducted by Yigzaw (2006) in Dembia District, North west Ethiopia, showed that distance from health institutions, age of women, education of the women, education of husband, and religion were found to be significantly associated with usage of contraceptives. According to this study as age increases usage increases; the more the women and their husband are educated the more likely the use of contraceptives. The study conducted by Haile (2007) indicated a decline in utilization of contraceptive as distance between the service centers and residence of people increases.

According to the study conducted by Tilahun (2008) in Adama District, indicated that media exposure/radio listening habit, contact to health extension workers, decision power in the family and attitude were found to be significantly associated with family planning utilization. According to the study as women contact with health extension agent to obtain health extension services found to be more users as compared to those who have no contact; the rural women who have favorable attitude (high score attitude) are more likely to be family planning user than those who do not have favorable attitude towards family planning; the rural women

in the study area, in those families where the decision is made by women and men there is high probability that the women in these families to be the user of family planning information than those families where the decision power is made only by men; and use modern family planning information increases for those rural women who are listening to the radio programs. And also a study conducted by Seifu (2007) indicated respondents have favorable attitude towards the use of emergency contraceptive.

A strong preference of one sex can be a constraint on family planning utilization if a couple that achieved their preferred family size continues to bear child until they achieve their desired number of sons or daughters. Reasons parents give for their son/daughters preferences include the continuity of the house. Some of the reasons stated for desiring more children are that children are wealth, a source of help in old age, that they may or may not grow, and honors etc (Yohannes *et al*., 2003).

According to Kwame (2002) the fertility behavior in Ghana is influenced by a multitude of socio-demographic and economic, and cultural factors. These factors, in turn, affect contraceptive practice in a variety of ways. The outcome of the analysis appears to support the view that knowledge of, and contraceptive adoption is gradually making an impact on fertility behavior in Ghana. Every use and current use of contraceptives is not significantly associated with the level of fertility (Fantahun *et.al*, 2001; Getu and Alemayehu, 2008; Samson and Mulugeta, 2009).

2.9 Conceptual Framework

The conceptual framework of the study that deals with the determinants of family planning utilization is showed in figure1. The selected personal, economic, institutional, socio cultural and psychological factors in the model list the proximate determinant variables, the independent variables expected to affect and influence the dependent variables. This conceptual framework is constructed based on the literature review, empirical studies and personal observation of the author. The definition of these variables and explanations of working hypothesis are provided in section 3.6.

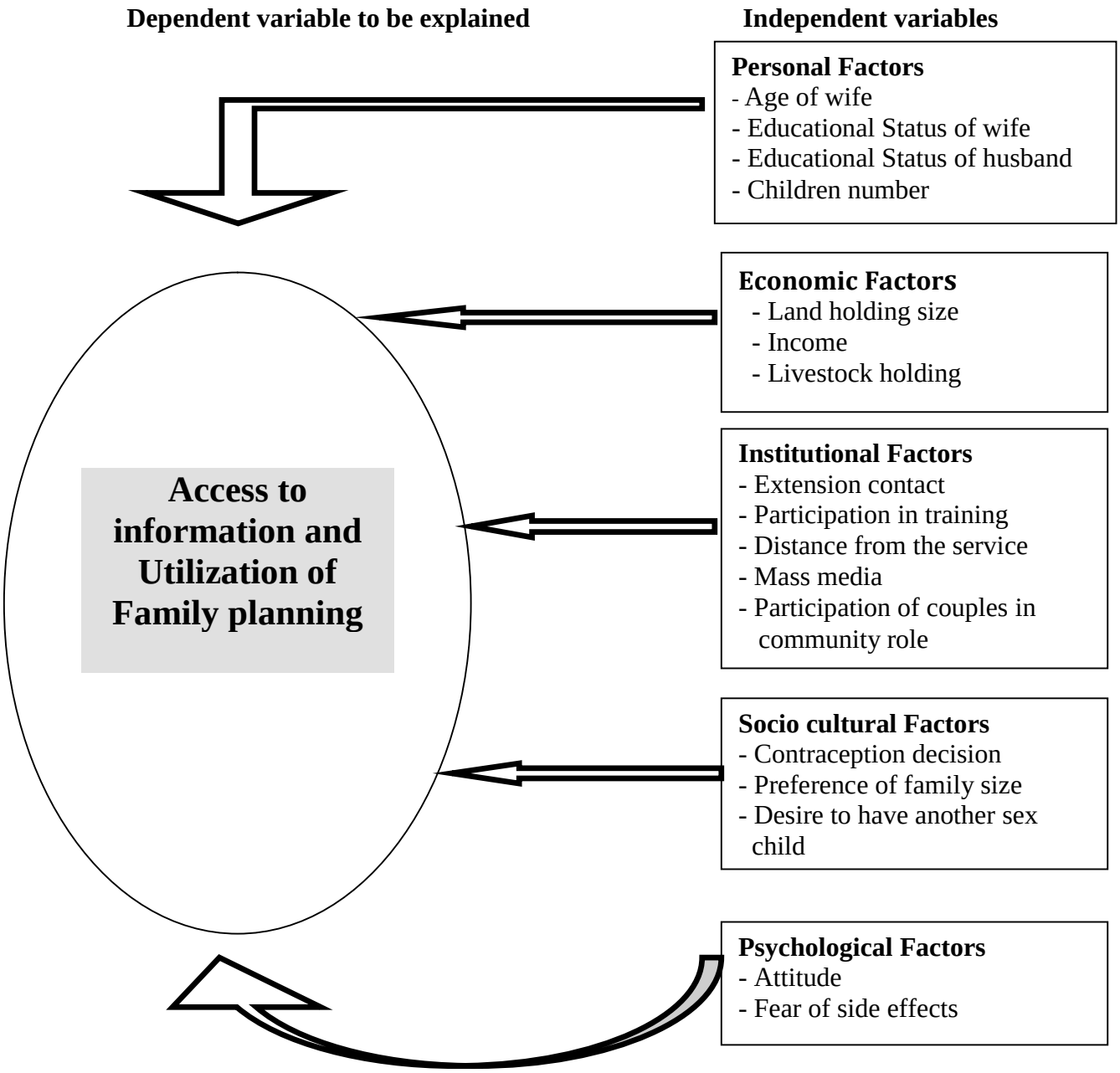

Figure 1. Conceptual framework

Source: own sketch

3. METHDOLOGY

3.1 Description of the Study Area

3.1.1 Location and physical situation

The Dire Dawa Administrative Council (DDAC) is located in the eastern part of the country lying between 9^0 49^1 N latitude and between 41^0 38^1 and 42^0 19^1 E longitude. In the West, North and East it is bounded by the Somali National Regional State and in the south by the Oromia National Regional State. In the DDAC, only two broad agro ecological zones (AEZs) mainly based on altitude, moisture and physiographic are identified. The DDAC comprises of diversified topographic futures with altitude varying from 950m.a.s.l in the northeast to 2260 m.a.s.l in the southwest. Due to the narrow altitudinal ranges, using the 1500m contours as a line of separation, the Kolla AEZ (below 1500m) and the woinadega AEZ (above 1500m) have been recognized (Agricultural Development Office of DDAC, 1998).

Dire Dawa, which is one of the largest cities in Ethiopia, is the center of the Administrative Council. It lays 515 kms east of Addis Ababa and is located at the center of Ethio- Djibouti Railway line. This gives Dire Dawa city the advantage of being a commercial city which encourages the rural farmers to intensify and diversify their agricultural production so that it can be either consumed within or exported through the Dire Dawa city. The administrative council has 38 kebeles (BoFED, 2010a).

3.1.2 Demographic situation

According to the 2007 population and housing census of Ethiopia, the total population of the Dire Dawa Administrative Council was 341,834 out of which the urban population was 233,224 and that of the rural population 108,610. The overall population density of the administrative council was 281.76 person/ km^2. In the DDAC, the average family size varied; in the urban it was 2.15 persons per household, where as in the rural part it was 5.45 persons per household.

3.1.3 Land use patterns

The land use/cover types of the DDAC comprise of grasslands, shrub lands, cultivated lands, bare lands and urban areas. The extent and percent coverage from the total study area of each of the units are shown in Table 3.

Table 3. Land use patterns of the DDAC

Description	Area (ha)	Percentage coverage
Open grassland	28529.6	22.15
Open shrub land	32741.5	25.42
Dense shrub land	231.8	0.18
Intensively cultivated land	244.7	0.19
Moderately cultivated land	22205.5	17.24
Homesteads	528.1	0.41
Bare lands	41461.4	32.19
Urban area	2859.4	2.22
Total	128802.0	100.00

Source: DDAC Agricultural Development Office (1998)

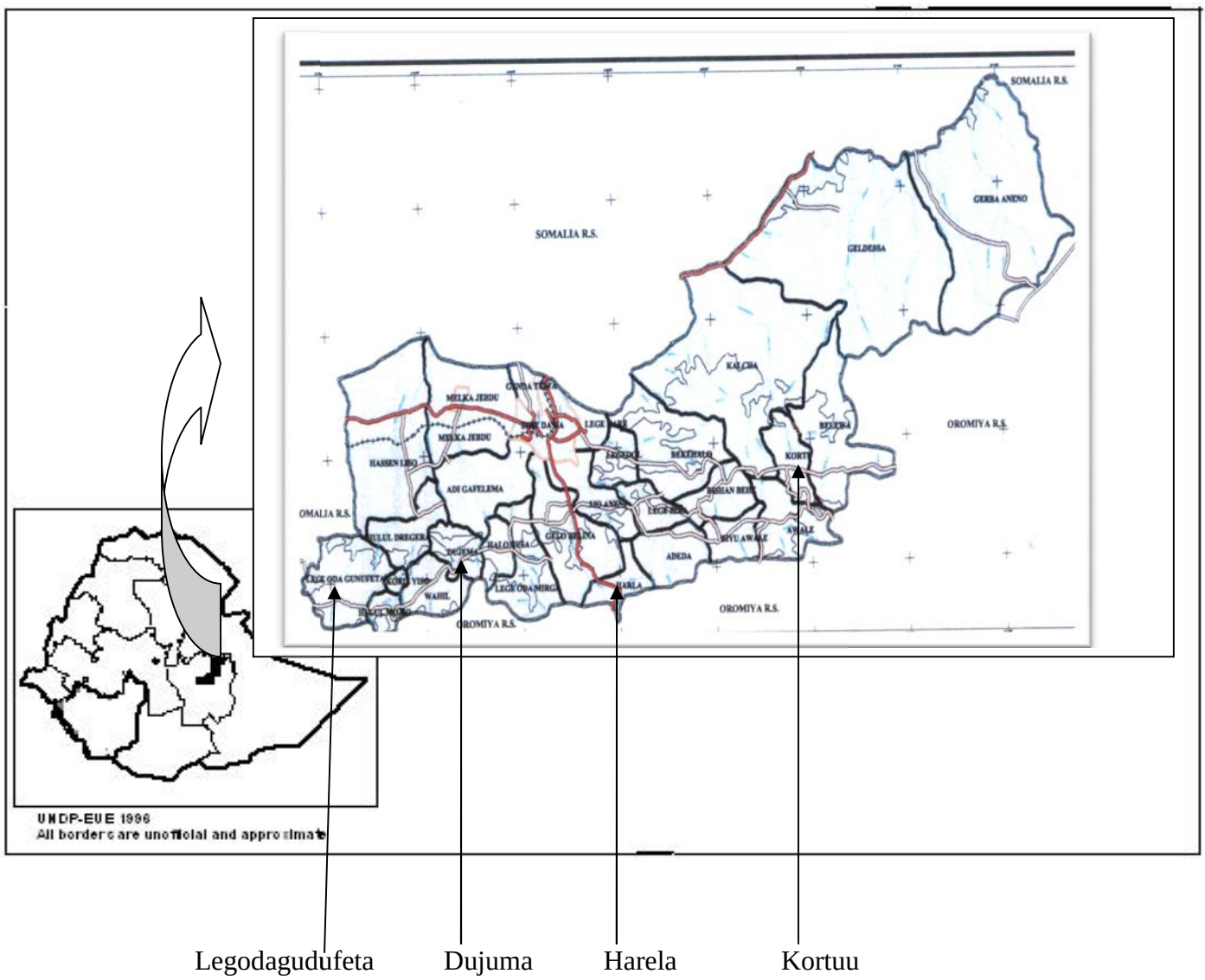

Figure 2 Map of the Study Area

Source: Ethiopian Mapping Agency

3.2. Sample Size and Sampling Procedures

The number of respondents is one of the most important issues an investigator has to critically consider in conducting research. It may be possible to gather information about each and every unit in the target population through a complete enumeration or census procedure. However, complete coverage of a population is in many cases unbearable due to many factors, one of which is resource scarcity in terms of money, personnel and equipment (Keller *et al.*, 1988).

Thus, taking the above points into consideration, a multistage-stage sampling technique was employed in the study. In the first stage rural parts of the administration selected purposively. In the second stage of sampling, 38 rural kebeles were stratified into distance of kebele from town (far and near). Those Kebeles located in less than and 20 kms radius from towns, and have accessible roads and transport were categorized as near Kebleles. Alternatively, those Kebeles located more than 21km radius from nearby towns were classified as far Kebeles. In the thired stage, sample household were selected on the basis of probability proportional to size random sampling technique from the total four kebeles (two sample kebeles from near and two sample kebeles from far), which yielded the final sample size of 160 households. The sample households covered in this study were 160. Out of the total respondents 6 respondents were excluded because of extreme/wrong value. Therefore, 154 samples receive for survey discussion.

Schematic Representation of the Sampling Procedure

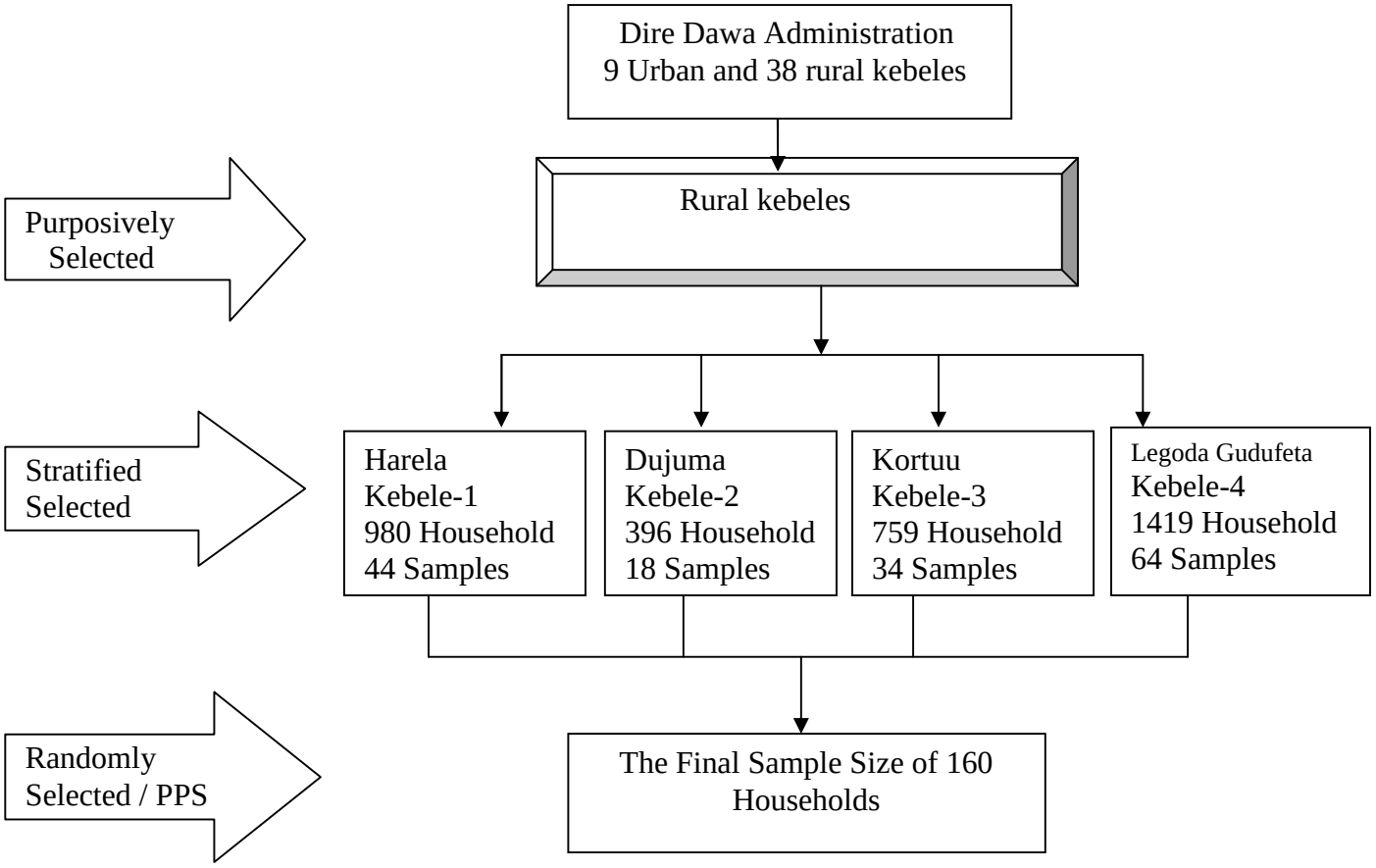

Figure 3: Sampling Procedure

Source: Own sketch

3.3. Types and Sources of Data

For this study, both primary and secondary data were collected, which are of qualitative or quantitative in nature. Primary data were gathered from the 154 sample respondents/ households and key informants in the community. Whereas, the secondary data were obtained from secondary sources such as documents of Administration line departments, NGOs and relief organizations operating in the Administration.

3.4. Methods of Data Collection

The primary data in this study were collected through various data collection techniques as discussed below.

Structured interview schedule: Primary data on respondents' psychological, socio-economic, and cultural characteristics and environmental factors were gathered using structured and semi structured interview schedule. These interview schedules, involving both open-ended and close-ended questions, were constructed, pre-tested and administered by enumerators under the close supervision and monitoring of the researcher. Enumerators were selected carefully from the health extension workers (HEW) and DAs working in the rural of the administration were oriented on objectives of the study, and trained on the procedures of filling out the interview schedule, and ways of approaching the respondent. Primary data were collected in November, 2011. The interview schedule was pre-tested and modification was made in the light of suggestion and context of the area before conducting the survey.

Participatory methods: participatory methods like focus group discussion, key informant discussion were employed to gather general and specific information on socio-psychological, economic and cultural situations of sample HHs related to utilization of family planning and its factor determining the utilization in the Administration. This would help the researcher to substantiate the data collected from the sample respondents through the interview schedule methods.

3.5. Methods of Data Analysis

Data were analyzed using both descriptive statistics and econometrics models, so as to draw meaningful inferences about the problem under investigation. In addition, qualitative data analysis methods were employed to explore the implications of qualitative data collected using participatory methods.

3.5.1 Descriptive and inferential statistic

Descriptive statistical and inferential statistic tools such as mean, standard deviation, percentage, frequency, chi-square, t-test etc. were employed for analysis and description of the current status and patterns of family planning utilization. These tools were also used to categorize and present other qualitative data collected through the structured interview schedule and other supplementary survey instruments. In addition, Likert Scale was used for the analysis of attitude towards family planning utilization.

3.5.2 Econometrics models

An econometric analysis (binary logit model) was used to identify the determinants of family planning utilization. Thus the model suggested for analysis of such a dependent variable (Amemiya, 1981; Maddala, 1992). This model enables to establish a relationship between household socioeconomic characteristics and personal attributes of their members and the dependent variable, family planning services utilization. It also helps to predict the level of inference of each explanatory variable.

Specification of the binary logit model

Following Hosmer and Lemshew (1989), the binary logistic distribution can defined as follows:

$$P_i = \frac{1}{1+e^{-(\ _1+\ _2X_i)}} \text{..... ....} \quad (1)$$

For the ease of exposition, the above formula can be re-written as:

$$P_i = \frac{1}{1+e^{-Z_i}} \text{.....} \quad (2)$$

where: P_i is the probability that the i^{th} couple has got a utilize, and Z_i is function of *m* explanatory variables, and is expressed as:

$$Z_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \ldots + \beta_m X_{mk} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3)$$

where β_0 = the intercept and β_is = the slope coefficients in the model.

Since the conditional probability of the outcome variable follows a binomial distribution with a probability given by a conditional mean P_i, interpretation of the coefficient will be understandable if the logistic model can be written in terms of odds (Gujarati, 1995). The odds to be used can be defined as the ratio of the probability that a couple will utilize a family planning service (P_i) to the probability that it will not utilize ($1-P_i$), i.e, $\frac{P_i}{1-P_i}$

But,

$$1 - P_i = \frac{1}{1+e^{Z}} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\

The model is estimated using the iterative maximum likelihood estimation (MLE) procedure. The conceptual difference between OLS and the MLE is that the former is concerned with picking parameter estimates that yield the smallest sum of squared errors in testing the fit between the model and the data. Whereas the latter is concerned with picking the parameter estimates that imply the highest probability or the highest likelihood of having obtained the observed data.

3.6 Model Diagnosis

There are two measures that are often suggested to test the existence of multicollinearity or association problems among independent variables. These are: Variance Inflation Factor (VIF) for multicollinearity problem among continuous independent variables and contingency coefficients for existence of high degree of association among independent discrete variables. VIF shows how the variance of an estimator is inflated by the presence of multicollinearity (Gujarati, 2003).

It is obvious that multicollinearity problems might arise when at least one of the independent variables shows a linear combination of the others; with the rest that we have too few independent normal equations and, hence, cannot derive estimators for all our coefficients. More formally, the problem is that a high degree of multicollinearity results in larger variances for the estimators of the coefficients. A larger variance implies that a given percentage (eg.95%) confidence interval for the corresponding parameter will be relatively wide; a large range of values of the parameter, perhaps including the value zero, will be consistent with our interval. This suggests that, even if the corresponding independent variable problem may make it quite difficult for us to estimate accurately the effect of that variable. Consequently, we may have little confidence in any policy prescriptions and biased on these estimates (Kelejian and Outes, 1981).

Very often the data we use in regression analysis cannot give decisive answers to the questions we pose. This is because the standard errors are very high or the t-ratios are very low. This sort of situation occurs when the explanatory variables display little variation and/or

high inter-correlations. The situation where the explanatory variables are highly inter - correlated is referred to as multicollinearity (Maddala, 1992).

According to Maddala (1992), VIF can be defined as:

$$\text{VIF}(x_i) = \frac{1}{1 - R_i^2}$$

where R_i^2 is the square of multiple correlation coefficients that results when one explanatory variable (Xi) is regressed against all other explanatory variables. A statistical package known as SPSS was employed to compute the VIF values. Once VIF values were obtained the R^2 values can be computed using the formula. The larger the value of VIF, the more will be trouble-some or the collinear is the variable X_i. As a rule of thumb, if the VIF of a variable exceeds 10, there is multicollinearity. If R_i^2 exceeds 0.90, that variable is said be highly collinear (Gujarati, 2003).

Similarly, contingency coefficients were computed to check the existence of high degree of association problem among discrete independent variables. Contingency coefficient is a chi-square based measure of association. A value of 0.75 or more indicates a strong relationship.

The contingency coefficients are computed as:

$$C = \sqrt{\frac{\text{i}^2}{N + \text{i}^2}}$$

where, C= coefficient of contingency

χ^2 = chi-square and

N = total sample size.

which assumes a value between 0 and 1 to indicate the degree of association between the discrete variables. The decision rule for contingency coefficients states that when the value approaches 1, there is a problem of association between independent discrete variables.

3.7 Definition of Variables and Working Hypotheses

3.7.1 The Dependent variable

Utilization of family planning: it is a dummy variable, representing household family planning service utilization decision. The response to questions such as whether a couple have utilized contraceptive or not, that is, the value 1 is given if couple has utilized contraceptive and 0 otherwise. Accordingly, it was represented in the binary logit model as users and non-users of family planning utilization in the study area. Tilahun (2008) also used this model for decision to use for family planning information in his study.

3.7.2 Definition of independent variables

1. Age of wife (AGEWIF): Measured on continuous scale in terms of the respondent's number of years of age at the time of data collection. Child bearing is highly desired and expected culturally after marriage. Hence, it is hypothesized that women with higher age will have more exposure and access to family planning information and use the information i.e. age will have positive relationship with access to and utilization family planning information. Wegene and Enquesillassie (2007) reported the existence of positive relationship between age and utilization of contraceptives. Therefore, it was expected that, increase in age level have a positive effect on the utilization of family planning methods.

2. Educational status of wife (EDUWIF): Educational status of wife was assumed to increase couples' ability to obtain, process, and use information relevant to available health extension packages. Wife education level is one of the factors that determine the access to information and utilization of family planning of the families. Hence educated wife in the families expected to increase family planning utilization and thereby facilitate utilization of the accessed information. Therefore, it was expected that, their educational level/status have a significant and positive impact on the utilization of family planning methods. The education level of wife as independent variable measured as dummy: will take the value of 1 if the wife is literate and 0, if he is illiterate.

3. Educational Status of husband (EDUHUS): One of the factors that influence access to social, cultural and economic services has been the education level of husband in married couples. As information is the source husband education level is one the factors that determine the access to and utilization of family planning information of the families. Hence educated husbands in the families expected to increase access to information and utilization of family planning. Vilaysook (2009) reported presence of positive relationship between education level of husband and utilization of contraceptives. The education level of husband as independent variable measured as dummy: will take the value of 1 if the respondent's husband is literate and 0, if he is illiterate.

4. Number of children (CHILNO): It is measured as the number of children a couple has during the survey**.** Number of children can be one of the indicators that can influence access to family planning information. Those couples who have small children due to a need for children they may be hindered to use the existing information sources and services. The prevalence of use of contraceptive methods increases with the increase in the number of living children (Azhar and Pasha, 2008). Therefore, it is hypothesized as the variable has negative relationship with utilization family planning.

5. Decision on family planning (DECFP): It refers to the role and ability of wife and husband to make decisions regarding contraceptives use. Women are generally given less chances and power to make decisions. The variable is represented as 1 if the couple makes contraception decision and 0 if husband solely makes the decision. The accumulation of decision making role in hands of husband hinders women from making contraception decision when they want; therefore it is hypothesized to affect contraception method utilization negatively.

6. Preference of family size (FAMSIZ): This variable refers to the couple's preference of the size of the family. There are differences among couples as to their preferences for children, in terms of the number of children (Ghazi and Deborah, 1988). It takes a value 1 if the couple prefers large family size and 0 if they choose smaller family size. Preference of large family

hinders the utilization of family planning methods and hence it is hypothesized to affect the utilization of contraception methods negatively.

7. Child sex preference (SEXPRE): This refers to the couple's desire to have additional another sex child to what they already have. Studies have explored the possibility that stronger preferences for sons than for daughters may have a bearing on fertility, and in many societies this appears to be the case. A strong preference of one sex can be a constraint on family planning utilization (Yohannes *et al*., 2003). However this also can be interpreted as a result of differential economic costs and benefits of male and female children rather than as a consequence of differential preferences. The variable is a dummy and takes the value of 1 if there is a desire another sex child and 0 otherwise. The desire to have additional another sex children is hypothesized to affect the utilization of family planning methods negatively.

8. Land holding size (LANSIZ): It represents the size of land holdings owned by the couple. In many empirical studies, it has been noted that adequate size of land holding is the basic resources for utilization of different production. The larger the size of land a household operate, the higher will be its farm produce on average, and this will minimize risk aversion. In this sense, this study hypothesizes that land size and utilization of family planning decisions are positively correlated.

9. Income (INCOHH): is among the most widely studied of the variables put forth as important determinants of contraception utilization. It is a continuous variable and operationalized as the total annual earnings of a family from sale of agricultural produce, off-farm and non-farm activities. The income level was anticipated to have a positive relationship with the dependent variable since normally it becomes a facilitating factor.

10. Total livestock holding (LIVHOL): it is the total livestock owned by a household, measured in tropical livestock unit (TLU). Livestock hedges a household against various risks, or serves as insurance so that they become less risk avert. The size of livestock a family owns affects the willingness to use contraceptives because children's labor is required to

manage the resources Thus, in this study, it was hypothesized that ownership of livestock is negatively correlated with utilization of family planning methods.

11. Participation of couple in community role (COMROL): This variable refers to participation of couple in community activities. This variable refers to one of the couple's wife or husband participates in community role activities. The social participation of rural people in local and formal institutions exposes them to information and better ideas than their practices. Wife or a husband who is in the leadership position, committees and informal institution has more opportunities than ordinary people. This variable was also assumed to have a positive relationship with the dependent variable.

12. Attitude towards family planning (ATTIFP): It is one of the psychological factors that govern an individual's behavior. If a couple does not have positive attitude towards family planning the inspiration to obtain and utilize information from the potential sources and media will be less. It is hypothesized that those couples who have favorable attitude towards family planning have high access than those who have unfavorable attitude. This study hypothesized an optimistic attitude on family planning utilization as positively correlated with dependent variable.

13. Fear of side effects (SIDEFF): This refers to any health risks on women that might occur because of using contraception. Women usually fear long term contraceptive methods that they may be permanently sterile, if they utilize contraception. A study conducted by Amare (2004) indicated respondents not using contraceptives among married women because of side effects. It will be represented as 1 if couples assume side effect and 0 otherwise. Hence, fear of side effect is hypothesized to influence utilization of family planning methods negatively.

14. Extension contact (EXTCON): This refers to the frequency of contact that the couples made with the various information sources. The higher the linkage between couples and health extension workers or development agents, the more the information flows will be between them. The variable is a dummy that takes the value of 1 if a couple has contact with health extension workers on issues related to family planning services, and 0 if a couple has

no contact. Therefore, it was expected that, contact with extension agents have a significant and positive impact on the utilization of contraception.

15. Participation in training (HEDTR): This is a dummy variable, which takes a value 1 if the couple participated in the training and 0 otherwise. This represents the couple's participation in extension training in the past two years. Participants in extension training lead to have more information and understanding about the available health extension packages, so that they most likely develop a change in their knowledge, attitude and behavior. Therefore, it was hypothesized that participation in health extension package training has a significant and positive impact on the utilization of family planning.

16. Distance from the service provided (DISHSC): It refers to distance between family planning service centers and place of residence of sample couples in kilometers. This variable affects utilization of family planning, if the center provides the service far. The variable is expected to have a negative relationship with the utilization of family planning. Haile (2007) indicated negative relationship between utilization of modern health services and distance in his study. Hence, distance from the service provided is hypothesized to influence utilization of family planning negatively.

17. Accessibility of mass media (RADACC): Mass media listening/attending is one of the facilities that enable the family to get information and it is believed, therefore, that the media availability makes the couple to be more accessible to family planning information than those who do not access. The variable is expected to have positive association among rural couple. Mass media hypothesized to influence the use birth control methods positively. The study conducted by Tilahun (2008) indicated that media exposure/radio listening habit significantly associated with family planning utilization. Hence, it was hypothesized that listening/attending mass media devices such as radio, television, newspaper, poster, leaflets, etc. will have significant and positive association with access to and utilization of family planning utilization.

4. RESULTS AND DISCUSSION

This chapter presents and discusses results of the study. It is organized as follows. First, characteristics of sample respondents, access to family planning education, practice and knowledge of family planning are presented. Second, factors affecting utilization of family planning are discussed in detail. Finally, discussions on determinants of family planning utilization based on the binary logit model output are presented.

4.1 Descriptive Statistics Result

4.1.1 Household characteristics

In order to understand the sample households, it is very important to describe their demographic characteristics. The sample households covered in this study were 160. Out of the total respondents 6 respondents were excluded because of extreme/wrong value. Thus from the considered 154 sample respondents, 60 (38.96%) utilize family planning method and 94 (61.04%) did not utilize family planning method. Out of the total 154 respondents in the sample, 141 (91.6%) were male headed household and 13 (8.4%) were female headed households.

Table 4 Family size of respondents

Family size	Number	Percent	Minimum	Maximum	Mean
1-4	43	28.0	-	-	-
5-8	96	62.3	-	-	-
9 and above	15	9.7	-	-	-
Total	154	100.0	2	13	6.03

Source- survey result, 2011

The average family size of the sample respondents is 6.03 persons, which is above the national average of 5.4 persons. As indicated in Table 4, majority of the respondents had five to eight children.

4.1.2 Access to family planning

The rural households in were obtaining the service of family planning totally from Dire Dawa Health Bureau which takes the major responsibility of the family planning services, others like Family Guidance Association of Ethiopia (FGAE), Dehandra K.T. Yaji (DKT) Ethiopia and Merry-stops international are also bringing community awareness about family planning practice and expanding the service in urban areas. For the past ten years from 2001 to 2010, FGAE used to work in rural part of Dire Dawa administration; however, currently this service stopped.

Table 5 Access to family planning and source of family planning information

Response	Number	Percent
Yes	154	100
No	-	-
Major Source of information		
Health extension workers	98	63.6
Agricultural extension workers	9	5.9
NGOs like FGAE	22	14.2
Mass media	9	5.9
Neighbors/relatives	12	7.8
School	4	2.6

Source: survey result, 2011

The survey result revealed that the respondents had access to family planning education from health extension agents, agricultural extension workers, mass media, NGOs like FGAE, school and informally from their neighbors/relatives (Table 5). According to the result all

respondent have access to family planning information. The findings in Table 5 showed that 63.6% of the respondents had major source of information related to family planning from health extension workers. The rest 5.9%, 14.2%, 5.9%, 7.8% and 2.6% of the respondents' source of information related to family planning wear agricultural extension workers, NGOs like FGAE, mass media, neighbors/relatives and school, respectively.

4.1.3 Practice and knowledge of modern family planning

Current family planning utilization is low among rural women in the study area. Out of the total sample respondents 38.96% were family planning method users, but the rest are non users. As shown in table 5, the majority of the clients were on temporary family planning methods such as injectables (60%) and pills (16.7%).

From the modern methods of family planning indicated in the family planning extension package, four methods were being used by the respondents in the study area; namely injectable, pills, norplant/implant and loop. From the total 60 family planning users 60% were using injectable contraceptives, 20% were using norplant/ implant, 16.7% were using pills; and 3.3% were using loop (Table 6).

Table 6 Specific modern family planning methods ever used and practiced (n=60)

Family planning Method used	No of HH	Percent
Injectables	36	60
Norplant/ implant	12	20
Pills	10	16.7
IUD/loop	2	3.3
Condom	-	-
Surgical	-	-
Total	60	100

Source: survey result, 2011

4.1.4 Constraints of family planning utilization

The respondents raised different reasons for why they were not using family planning methods. According to respondents, the main reasons for not utilizing family planning methods are lack of awareness, fear of side effects, religious restriction and interest of having large family size, which constitute 15%, 23.4%, 18% and 43.6% of the respondents, respectively (Table 7).

Table 7 Reasons given by respondents for not using family planning (n=94).

Reasons	Number	percent
Lack of awareness	14	15
Fear of side effects	22	23.4
Religious restriction	17	18
Large family size interest	41	43.6

Source: survey result, 2011

4.1.5 Knowledge about specific traditional family planning method

The traditional family planning methods has been listed and categorized as breast feeding, abstinence and calendar. In the study the sample respondents were asked to tell which traditional family planning method they know. From the sample respondents of households who know traditional family planning methods, above half of them knew about breast feeding and 44.1% and 29.8% of them knew about calendar and abstinence, respectively.

In addition to type of traditional family planning methods know (Table 8) indicated that from the total of 154 respondents 97.4% of them had knowledge about traditional family planning methods.

Table 8 Knowledge of the respondents about specific traditional family planning methods

Response	Number	Percent
No	4	2.6
Yes	150	97.4
Type of traditional Family Planning method know	No	%
Breast feeding	114	74.0
Calendar	68	44.1
Abstinence	46	29.8
Total	>154*	>100*

Source: survey result, 2011; * the sum of the frequency is greater than the sample size and the percentage is greater than 100 because of multiple response

4.1.6 Knowledge of respondents about condom

There is no respondent, who uses condom in the study area. Many couples mentioned that it is not acceptable to use condom with their spouses as condom is seen as a sign of not trusting their partners. They associated condom use with having sexual intercourse outside the marriage and HIV/AIDS which is banned culturally by the respondents and society in the study area. Use of condoms is known to prevent unwanted pregnancy.

4.2 Factors Affecting Utilization of Family Planning

In order to understand the existing socio-economic, institutional, and psychological factors of sample households with respect to family planning utilization, the descriptive analysis of explanatory variables with utilization to family planning is presented in the following sub sections. The description was made using mean difference for continuous variables and frequencies of dummy variables tested using t-test and chi-square test, respectively.

4.2.1 Personal factors

Household characteristics are very important factors that are used in explaining decision behavior of people for different technologies and information. Depending on the strength of influence of these household characteristics, each variable has its own contribution in making decision and extent of utilization of family planning methods.

Age of wife

From the total sample respondents (154), 45% were family planning information users and 55% of the respondents were non-users. The mean age of the total respondents was 30.18 years with standard deviation of 7.4. The maximum age was 47 years and the minimum was 18 years. The result of mean test showed that there was statistically significant mean difference (t= 4.698, p=0.000) among users and non-users (Table 9). The mean age of users and non-users were, 33.5 and 28.1 years, respectively. The research works of Yohannes (2004) and Haile (2007) also indicated the existence of statistically significant with age and utilization of family planning methods.

Table 9 Distribution of family planning users and non-users sample respondents by age and number of children

Characteristic	Family Planning Utilization				T-value	Significance Level (2-tailed)
	Users(60)		Non-Users (94)			
	Mean	SD	Mean	SD		
Age of wife	33.48	7.892	28.06	6.334	4.698***	0.000
Number of children	4.86	1.85	4.09	1.60	2.739***	0.007

Source: own survey data, 2011; *** Significant at <1%

Number of children

Regarding to the number of children, of the total sample respondents, the number of children ranged from 1 person to 11 persons, with an average family size of 4.4. The mean family size of the users and non-users was 4.86 and 4.09, respectively. The mean differences between the two groups were found to be statistically significant (Table 9).

4.2.2 Socio cultural factors

In this sub-section there are four variables, such as educational status, contraception decision, preference of family size and desire to have other sex/childs are presented for discussion. Accordingly, description of these variables and then influences on dependent variable i.e. utilization of family planning are explained in the following paragraphs.

Educational status of the respondents

Educational status of wife and husband is one of the crucial determinants that increase couple's capacity and give power to them to claim and use social and economic services for the betterment of their life. Hence, educational status of the respondent was hypothesized to influence the utilization of family planning methods positively. The survey result of educational status of the respondents is summarized in Table 10.

The distribution of total wife sample respondents in relation to educational status was 74.7% illiterate and 25.3% literate. From non-users 87.2% were illiterate and from users 55.0% were illiterate, while 12.8% and 45.0% were literate from non-users and users respectively. This indicates as the proportion of literate increases when we observe results from non-users to users of family planning utilization also increases. The chi-square test = 20.122 of the sample respondents also indicated statistically significant difference in the educational status between users and non-users of family planning at less than 1% probability level. Educated rural women were more likely to be user of family planning than less educated rural women (Table

10). The finding of the study is similar with the study conducted by Haile (2007) and Tilahun (2008).

Table 10 Education of wife and husband relation with family planning utilization

Education of wife	Family planning utilization				Total		χ2 value	P-value
	Non-users		Users					
	No	%	No	%	No	%		
Illiterate	82	87.2	33	55.0	115	74.7	20.122***	0.000
Literate	12	12.8	27	45.0	39	25.3		
Education of husband								
Illiterate	77	81.9	25	41.7	102	66.2	26.527***	0.000
Literate	17	18.1	35	58.3	52	33.8		
Total	94	100	60	100	154	100		

Source: own survey data, 2011 *** Significant at <1% probability level

Educational status of husband was also considered as one the factors that affect utilization decision of family planning in the study area. Thus, educated husbands were expected to influence the utilization decision of family planning of the rural women positively than uneducated husbands.

From results of the descriptive statistics presented in Table 10, out of sample respondents of household the educational status of husband was 33.8% literate and 66.2% illiterate. Whereas from the user group of respondents 58.3% of them had literate husbands and from non-user group 18.1% of them had literate husbands. 81.9% and 41.7% are illiterate from non users and users respectively. Accordingly, the Chi-square test ($\chi 2 = 26.527$) indicated statistically significant association between educational status of husband and utilization decision of

family planning at less than 1% probability level. This reveals that rural couple who have educated husbands were more likely to be family planning users than those who have uneducated husbands (Table 10). This finding is consistent with Tilahun (2008); and Amha and Enquesilassie (2006).

Preference of family size

There are differences among couples as to their preferences for children, in terms of the number of children. Preference of large family hinders the utilization of family planning methods and hence it is hypothesized to affect contraception negatively.

Table 11 Association of family size preference and another sex preference with family planning utilization

Family Size Preference	Family planning utilization				Total		χ2 value	P-value
	Non-users		Users					
	No	%	No	%	No	%		
Large	91	96.8	58	96.7	149	96.8	.002 NS	0.961
Small	3	3.2	2	1.3	5	3.2		
Another Sex Preference								
No	53	56.4	35	58.3	88	57.1	.057 NS	0.811
Yes	41	43.6	25	41.7	66	42.9		
Total	94	100	60	100	154	100		

Source: own survey data, 2011 NS = Non Significant

The sample household were asked about the size of the family they want to have and 96.8% of them wanted to have large family size (containing >5 people) while the rest 3.2% reported that they want to have small family size (containing<4 people). The chi-square test on the family size preferences of the non-user and user shows that there is no significant ($\chi2=0.002$, P=.961) Table 11. The result of chi-square test indicates that there is no relationship between

family size preference and the use of family planning methods. The reason why the variable insignificant is all of the household or sample respondents need large family both the users and non-users. The same has been found during focus group discussions with women and men group with both user and non-user of family planning utilization.

Desire to have another sex (child preference)

Studies have explored the possibility that stronger preferences for sons than for daughters may have a bearing on fertility, and in many societies this appears to be the case. However, this also can be interpreted as a result of differential economic costs and benefits of male and female children rather than as a consequence of differential preferences. The desire to have additional another sex children is hypothesized to affect the utilization of family planning methods negatively.

The community in general seems to favor having male or female children than already have. Having children is preferred by 42.9% of the total sample couples and 57.1% of the sample couples there are no another sex/child preferred. Chi-square test indicates that there is statistically insignificant sex preference between user and non-users of family planning utilization ($\chi 2=0.057$, P=.811) insignificance level (Table 11).

4.2.3 Gender decision power on utilization family planning in household

The power structure in the family may influence women's access to social, cultural, and economic benefits and services in a community. In Ethiopia males are the sole decision makers in major life issues including reproductive decisions. The accumulation of decision making role in hands of husband hinders women from making contraception decision when they want. Therefore, it is hypothesized to affect contraception utilization negatively. It was measured as a dummy variable; if both couples have right on decision on resources it took the value of one, and if it is only the right of husband it took the value of zero.

From the sample respondents 42.9% decision to use family planning methods should be totally the responsibility of husband while 57.1% decision made both by husband and wife. The data shows that from the non users group more than half of the respondents have view that male are sole decision maker of contraception. In the non-users groups of the respondents 64.9% the decision on family planning utilization was made only by husband and in the user group of the respondents 8.3% decision on family planning was made only by husband.

The results of descriptive analysis with regard to power relation in the family planning utilization are summarized in Table 12. Decision power in the family found to have statistically significant association at less than 1% ($\chi 2$ =47.841; p=000) with utilization of family planning.

Table 12 Gender decision power on family planning utilization

Decision on family planning	Family planning utilization Decision				Total		$\chi 2$ value	P-value
	Non-users		Users					
	No	%	No	%	No	%		
husband	61	64.9	5	8.3	66	42.9	47.841***	0.000
couples	33	35.1	55	91.7	88	57.1		
Total	94	100	60	100	154	100		

Source: own survey data, 2011 ***Significant at 1% probability level

The decision on family planning utilization was made only by husband decreases when compared to the proportion of non-user and user group. This indicates strong association between the power in the household and utilization of family planning. Which means rural household in the family where decision on family planning utilization is by both wife and husband were more likely to be family planning users than those in the household where

decision is made only by husband (Table 12). The finding of the study is similar with the study conducted by Tilahun (2008).

4.2.4 Institutional factors for the utilization of family planning

Under the institutional variables namely health extension contact, participating in training, mass media exposure, community role and distance of the health center are presented and discussed with regard to their influence on the utilization of family planning, in the subsequent sections.

Health extension contact

Extension contact refers to the frequency of contact that the couples made with the various information sources. The higher the linkage between couples and health extension workers or development agents, the more the information flows between them. Health extension agents are workers assigned at grass root levels to provide services of health extension package. Hence, they are primary and major sources for family planning information and services. Based on this fact it was expected that, contact with extension agents have a significant and positive impact on the utilization of contraception.

The results of descriptive analysis with regard to health extension contact, from the total respondents 98% had contact with health extension agent; however, in non-user group 83% of the sample respondents had contact with the health extension agent. From total user group of respondents only 1.7% did not have contact with the health extension agent. The result of Chi-square test showed ($\chi 2=8.792$, $P=.003$) positive association between extension contact and utilization of family planning at less than 5% significance level (Table 13). Asres (2005) and Tilahun (2008) reported similar result.

Table 13 Association of health extension contact and health education training with family planning utilization

Health extension contact	Family planning Utilization				Total		χ2 value	P-value
	Non-users		Users					
	No	%	No	%	No	%		
No	16	17.0	1	1.7	17	11.0	8.792***	.003
Yes	78	83.0	59	98.3	137	89.0		
Participate in training								
No	83	88.3	27	45.0	110	71.4	33.642***	.000
Yes	11	11.7	33	55.0	44	28.6		
Total	94	100	60	100	154	100		

Source: own survey data, 2011 *** Significant at, 1%

Participation in training

Participants in health education training lead to have more information and understanding about the available health extension packages, so that they most likely develop a change in their knowledge, attitude and behavior. Getting information about contraceptive methods through family planning education is essential in influencing the behaviors of individuals to adopt contraception. Attendance of family planning education increases access to information on family planning utilization. It also helps making informed decisions about family planning issues. It was hypothesized that participation in health extension package training has a significant and positive impact on the utilization of family planning.

Out of the total sample household 28.6% attended health education training over the past two years and 55.0% of the user household attended training. The result shows 88.3% of non user household have not attended health education training. The chi-square test shows that there is statistically significant difference between users and non users with regards to attendance of health education training ($\chi 2=33.642$, P=.000) (Table 13).

Distance from the service provision center

It refers to distances between family planning service centers and place of residence of sample couples. This variable affects utilization of family planning, if the center provides the service far. The variable is expected to have no such statistical significance; which means that the health service centers have almost the same result for two groups. The maximum distance from the health service center is 6.0 Km and the nearest one is 0.10 Km. The mean distance from health service center is 1.20Km. The difference between the distance of user and non-user in mean distance from health service center is statistically insignificant (t-value=-0.466, P=.642). The reason for the insignificance is there is health post or health center accessibility in each sample kebeles of the administration (Table 15).

Table 15 Association of distance of health service provided with family planning utilization

Characteristic	Family Planning Utilization				T-test	Significance Level (2-tailed)
	Users(60)		Non-Users (94)			
	Mean	SD	Mean	SD		
Distance	1.26	1.54	1.15	1.34	0.466	0.642 NS

Source: own survey data, 2011 NS = Non significant

Access to mass media

Mass media listening is one of the factors that enable the family to get information and it is believed, therefore, that it makes the couple to be more accessible to family planning information than those who do not have access. Access to mass media was also considered as one of the important factors to provide different development information. For the purpose of this research radio was taken as it is the only major mass media serving the study area for majority of the people. Other mass media like print media and television were not included in the study because they were very rarely used in the study area. The variable is expected to have positive association among rural couple. Mass media hypothesized to influence utilization of family planning positively.

Table 16 Association of access to radio and community role participation with family panning utilization

Radio access	Family planning utilization				Total		χ2 value	P-value
	Non-users		Users					
	No	%	No	%	No	%		
No	64	68.1	24	40.0	88	57.1	11.796***	0.001
Yes	30	31.9	36	60.0	66	42.9		
Community role of couple								
Low role	63	67.0	22	36.7	85	55.2	13.645***	0.000
High role	31	33.0	38	63.3	69	44.8		
Total	94	100	60	100	154	100		

Source: own survey data, 2011 ***Significant at 1% probability level

The survey result of radio accessibility of the respondents is summarized in Table 16. The distribution of total sample respondents in relation to media access was; 57.1% are no access

and 25.3% have access to media. From non-users and users 68.1% and 40.0% was no access to radio respectively, while 31.9% and 60.0% were access to radio from non-users and users respectively. This indicates as exposure to media like radio increases when we observe results in Table 16 from non-users to users of family planning utilization. The Chi-square test ($\chi 2$= 11.796) of the sample respondents also indicated statistically significant difference in the family planning utilization between users and non-users at less than 1% probability level. Respondents have an access of mass media like radio were more likely to be user of family planning than no access. The finding of the study is similar with the study conducted by Tilahun (2008).

Participation of couple in community role

Community role activities are the activities that need to be done by men and women at community level. Since the issue involves both the job needs to share by both equally. In real life women continue to do an extension of their domestic or reproductive work at community level (water, health care, fuel wood and processing food). Men possess the responsibility of chairing, judging, decision-making, leading and controlling and ownership of property. The concern here is the men do the status giving economically advantageous jobs at community level. The jobs are unpaid voluntary for both, but women are screened out from exposure, experience, status and power (FAO, 1998).

This variable refers to one of the couple's wife or husband participates in community role activities. The social participation of rural people in local and formal institutions exposes them to information and better ideas than their practices. Especially, those who are in the leadership position, committees and informal institution have more opportunities than ordinary peoples. The chi-square test ($\chi 2$= 13.645) showed that there is significant relationship at less than 1% level between users and non users for high community role participation couples. As it is shown in Table 16 from the total respondents 44.8% and 55.2% are high and low community role participation respectively.

4.2.5 Economic Factors for the Utilization of Family Planning

Land holding

The average land holding size in the study area was 0.608 ha. In the users group, the average land holding size of the sample households was about 0.581 ha and that of the non users of the sample respondents was about 0.625 ha (Table 17). The results of statistical analysis show that (t= -0.468, p=0.640) there was statistically insignificant difference between respondents in the users and non users of land holding size. This shows that the land holding of household of the study area is not such a factor being users and non users of family planning methods.

Income

Income is defined for the purpose of the study as the total annual earnings of a family from sale of agricultural produce, off-farm and non-farm activities like petty trade, handicraft, daily labor etc. As income is one of the essential factors that enable the people to make use of the existing services like information, it was hypothesized to influence the utilization decision of modern family planning information significantly and positively.

As can be seen in Table 17, the result of the descriptive statistics indicated that the average income derived from these activates was about Birr 2161 and 2471.8 in the users and non-uses, respectively. The difference, however, was not statistically significant (t= -1.162 and p=0.247), the result of the statistical analysis also showed that there was a statistically insignificant difference between family planning utilization and household income.

Table 17 Association of respondent's economic factors with family planning utilization

Characteristic	Family Planning Utilization				T-value	Significance Level (2-tailed)
	Users (60)		Non-Users (94)			
	Mean	SD	Mean	SD		
Land size in ha	0.581	0.312	0.625	0.382	-0.468	0.640^{NS}
Income	2161	1607	2471.8	1625.2	-1.162	0.247^{NS}
Livestock holding	2.75	1.35	3.06	1.38	-0.642	0.522^{NS}

Source: own survey data, 2011; NS = Non significant

Total livestock holding

It is the total livestock owned by a household, measured in tropical livestock unit (TLU). Livestock hedges a household against various risks, or serves as insurance so that they become less risk avert. Furthermore, caring for livestock calls upon family labor, which is additional burden besides the ordinary farm operation. Therefore, the size of livestock a family owns affects the willingness to use contraceptives because children's labor is required to manage the resources.

The mean livestock holding of the respondents is 2.93. The mean livestock holding of user is 2.75 TLU and that of non-users is 3.06 TLU with mean difference of 0.6 TLU. The mean difference between livestock holding of users and non-users is statistically insignificant (t=-0.642, p=0.522). The result of t-test shows there was a statistically insignificant difference between livestock holding and family planning utilization as shown in Table 17.

4.2.6 Psychological factors for the utilization of family planning

Attitude

It is one of the psychological determinants that govern an individual's behavior. If a couple does not have positive attitude towards family planning, his inspiration to obtain and utilize information from the potential sources and media will be less. It is hypothesized that those couple who have favorable attitude towards family planning have high utilization than those who have unfavorable attitude. This study hypothesizes that an optimistic attitude on family planning utilization is positively correlated with dependent variables.

A total of 7 attitude statements (five positive and two negative statements) were developed. The response for each question was coded with numbers (5= strongly agree, 4= Agree, 3= Neutral, 2= Disagree, 1= strongly disagree for positive statements and 1= strongly agree, 2= Agree, 3= Neutral, 4= Disagree, 5= strongly disagree for negative statements). Finally, by summing up the value of each statement, the attitude was coded with positive and negative values towards the attitude object, i.e., family planning utilization. The values of maximum attitude scores were 34 and minimum value 10 then by taking the mean value (which was 23) and the Standard deviation (7) the results were categorized as High attitude (which means > 30), medium attitude (16-30) and low attitude (<16).

Similar to the hypothesis the respondents who have positive attitude were found to have significant and strong association with the utilization of family planning at less than 1% significance level ($\chi 2$ =25.961; p=000). From the total users the entire 100% of the sample respondents had positive attitude and from total non-users 44.7% positive attitude for family planning as it is shown in Table 18.

Table 18 Association of respondent's attitude with family planning utilization

Attitude to family planning	Family planning utilization				Total		χ2 value	P-Value
	Non-users		Users					
	No	%	No	%	No	%		
High attitude	12	12.7	25	41.7	37	24.0	25.961***	.000
Medium attitude	30	32.0	35	58.3	65	42.2		
Low attitude	52	55.3	0	0	52	33.8		
Total	94	100	60	100	154	100		

Source: own survey data, 2011; *** Significant at <1%

Fear of side effects

This refers to any health risks women that might occur to them because of using contraception. Women usually fear long term contraceptive methods that they may be permanently sterile, if they utilize contraception. Hence, fear of side effect is hypothesized to influence utilization of family planning methods negatively.

Fear of side effects of family planning utilization influence the behavior of using them. Out of the sample couple 73.4% reported that they fear side effects of using contraception. When the fear of side effects of birth control methods is seen in terms of use and non-use of family planning utilization, 78.7% and 65.0% of the non-users and users reported that they fear side effects of contraceptives respectively. The data indicates more than half of the non-user fears side effects of contraceptives (Table 19).

Table 19 Fear of side effects relation with family planning utilization

Fear of side effects	Family planning Utilization				Total		χ2 value	P-Value
	Non-utilizes		Utilizes					
	No	%	No	%	No	%		
Side effects	74	78.7	39	65.0	93	73.4	3.531*	.060
No side effects	20	21.3	21	35.0	61	26.6		
Total	94	100	60	100	154	100		

Source: own survey data, 2011; * Significant at <10% respectively

The chi-square test shows that the difference between two groups in terms of their fear of side effects significant at 10% probability level ($\chi 2=3.531$, P=.060). Chi-square test indicates that there is some relationship between fear of side effects of contraceptives and family planning utilization.

During group discussion with user and non-user groups, focus group discussion and personal in depth interview of women users mentioned that pills and injectable have some health effects like affect menstrual cycle, may produce amenorrhea, delays the return of fertility, may cause menstrual irregularities, head ache and causing hyper tension. Some non-users mentioned that modern contraceptives need high calorie and intake and nutritious food.

4.3 Summary of Independent Variables on Utilization of Family Planning: Results of Descriptive Statistics

A total of seventeen independent variables were considered to see their relationship with the utilization of family planning. The summary of all the results of descriptive statistics analysis that shows the association of independent variables with dependent variable i.e. utilization of family planning, have been presented in Tables 20 and Table 21.

Table 20 Results of t-test of continuous independent variables

Characteristic	Family Planning Utilization				T-test	Significance Level (2-tailed)
	Users(60)		Non-Users (94)			
	Mean	SD	Mean	SD		
Age of wife	33.48	7.892	28.06	6.334	4.698***	.000
Land size	0.581	0.312	0.625	0.382	-.468NS	.460
Income	2161	1607	2471.8	1625.2	-1.162NS	.247
Livestock holding	2.75	1.35	3.06	1.38	-.642NS	.522
Distance	1.26	1.54	1.15	1.34	.466NS	.642

Source: Survey data, 2011; ***Significant at 1% probability level and NS=Non Significant

Table 21 Results of chi-square test of dummy variables

Variables	Categories	χ2-value	P – value
EDUWIF	Illiterate	20.122***	.000
	Literate		
EDUHUS	Illiterate	26.527***	.000
	Literate		
DECFP	Husband	47.841***	.000
	Couples		
FAMSIZ	Large	0.002NS	.961
	Small		
SEXPRE	No	0.057NS	.811
	Yes		
EXTCON	No	8.792***	.003
	Yes		
HEDTRA	No	33.642***	.000
	Yes		
RADACC	No	11.796***	.000
	Yes		
COMROL	Low role	13.645***	.000
	High role		
ATTIFP	High attitude	25.961***	.000
	Medium attitude		
	Low attitude		
SIDEFF	Yes side effect	3.531*	.060
	No side effect		

Source: own survey data, 2011; ***, **, *; significant at 1%, 5% and 10% probability level, respectively; NS= not significant

4.4 Determinants of Family Planning Utilization

In the preceding parts of this thesis the descriptive analysis of explanatory variables that were expected to have impact on the decision of a given household in utilization of family planning were presented. In this section, the explanatory variables were used to estimate the binary logistic regression model to analyze the determinants of household's family planning utilization. A binary logistic regression model was fitted to estimate the effect of hypothesized explanatory variables on the probabilities of being users or not.

Binary logistic regression model was used to identify determinant variables in family planning utilization. The model was selected based on the justification illustrated earlier. Therefore, in this section, procedures followed to select independent variables (continuous and dummy) and results of logistic regression analysis conducted to identify determinants family planning utilization in rural Dire Dawa administration are presented.

4.4.1 Results of model diagnosis

Before including the hypothesized variables and running the model analyses the existence of a serious of multicollinearity or high degree of association problem among independent variables for all continuous and discrete variable were checked.

Multicollinearity existence among dummy and continuous variables was tested for the independent variables before entering binary logit regression model. Accordingly all independent variables were tested. The VIF values displayed in Table 22 have shown that all the continuous independent variables have no multicollinearity problem. As indicated in Table 23 that there is no a problem of high degree of association among independent discrete variables.

Table 22 Result of multicolinearity test for continuous variables

Variables	R^2_i	Variance Inflation Factors (VIF)
Age of wife	0.066	1.071
Children number	0.102	1.114
Land size	0.123	1.141
Income	0.143	1.168
Livestock holding	0.042	1.044
Distance HSC	0.128	1.147

Source: Own computation

Table 23 Contingency coefficient for dummy/discrete variables

	A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**G**	**k**
EDUWIF / A	1										
EDUHUS / B	0.35	1									
RADACC /C	0.50	0.38	1								
EXTCON / D	0.11	0.16	0.11	1							
HEDTRA / E	0.37	0.46	0.47	0.22	1						
DECFP / F	0.14	0.17	0.02	0.03	0.25	1					
ATTIFP / G	0.14	0.30	0.35	0.12	0.42	0.20	1				
COMROL/H	0.25	0.28	0.29	0.23	0.45	0.17	0.53	1			
SEXPRF / I	0.08	0.18	0.03	0.14	0.06	0.09	0.05	0.09	1		
SIDEFF / J	0.28	0.16	0.22	0.03	0.17	0.37	0.01	0.22	0.16	1	
FAMSIZ / k	0.06	0.18	0.21	0.05	0.20	0.16	0.13	0.19	0.16	0.06	1

Source: Own computation

If there will be serious multi-collinearity or a high degree of association problems among independent variables, these situations can create difficulties to differentiate the separate effects of independent variables on dependent variables and also seriously affect the parameter estimate because of strong relationship among them. But since there is no a serious multicollinearity or high degree of association problem among independent variables in this study all variables were decided to be included in the models analyses.

4.4.2 Econometric Results for the Binary Logistic Regression Model

Finally based on the analysis of multi-collinearity test results, the above listed continuous and dummy independent variables were considered for further analysis using the binary logit model. Estimates of the parameters in the binary logit model were computed by making use of SPSS 16 version and STATA 10 version.

The logit model results used to study determinants of family planning utilization are shown in Table 24. The various goodness-of-fit measures validate that the model fits the data well; and thus value of Pearson Chi-square test shows the overall goodness-of-fit of the model at less than 1 percent probability level. To this effect, the goodness-to-fit of the model is measured by count of R2 which works on the principle that if the predicted probability of the event is greater than 0.50 the event will occur otherwise the event will not occur.

Another measure of goodness of fit is based on a method that classifies the predicted value of the dependent variable, determinants of family planning utilization, as 1 if users and 0 otherwise. The model explained about 90.9% of correctly predicted / overall percentage of the sample household. Correctly predicted/ sensitivity figures for users were about 88.3%; while correctly predicted/ specificity sample size for non-users were 92.6%.

Table 24 The Maximum likelihood estimates of the binary logit model

Variable	Estimated Coefficient	Standard error	Wald Statistics	Sig. Level	Exp/logs of odds ratio
AGEWIF	0.223	0.8774	6.482**	0.011	1.111
EDUWIF	2.738	1.140	5.763**	0.016	5.59
EDUHUS	2.678	1.547	2.996*	0.083	6.34
CHILNO	0.371	0.281	1.741	0.187	0.690
LANSIZ	-1.742	1.732	1.012	0.314	0.802
INCOHH	0.00004	0.00043	.010	0.922	0.999
LIVHOL	-0.750	0.4928	2.318	0.128	0.924
RADACC	3.200	1.570	4.155**	0.042	3.2
EXTCON	4.325	1.932	5.011**	0.025	4.243
HEDTRA	1.045	1.836	0.324	0.569	9.222
DISHSC	0.285	0.3481	0.671	0.413	1.055
DECFP	16.40	1.612	15.792***	0.000	20.33
SIDEFF	-2.421	1.181	4.204**	0.040	1.992
SEXPRE	-1.180	0.9901	1.422	0.233	0.923
FAMSIZ	-3.073	2.026	2.300	0.129	1.045
COMROL	-1.188	1.425	0.696	0.404	3.51
ATTIFP	4.571	1.696	7.259***	0.007	9.00
CONSTANT	-16.127	5.282	9.321	0.002	0.000

Pearson- ¡ ^{2} value	138.84	P= 0.000
-2 Log Likelihood	67.076	
Nagelkerke R Square	0.806	
Correctly Predicted / Overall Percentage	91.6	
Sensitivity /Users	86.7	
Specificity/Non Users	94.7	
Number of observation	154	

Source: Model output, ***, **, *, Significant at < 1%, 5% and 10% probability level respectively.

4.4.3 Interpretation of Empirical/ Model Results

Out of the independent variables entered in the binary logit model, eight variables were found to have significant effect on utilization of family planning. These variables are AGEWIF (age of wife), EDUWIF (education status of wife), EDUHUS (education status of husband), RADACC (radio access of HH), EXTCON (health extension contact), HEDTRA (health education training), DECFP (decision on family planning), SIDEFF (fear of side effects) and ATTIFP (attitude towards family planning). The effects of these significant explanatory variables on family planning utilization of the households in the study area are discussed below.

Age of wife (AGEWIF): The variable is significant at less than 5 percent significance level and has a positive association with the utilization of family planning. This implies that all other things being kept constant, the odds ratio in favor of showing interest to use family planning increases by a factor of 1.11 for higher age women. The positive effect of this variable indicates higher age of women influencing household to utilize family planning than those families with lower age. This result is consistent with Yohannes (2004).

Education status of wife (EDUWIF): Educated person tend to use modern technologies, use health extension package advice and information. The output of the model indicates that, holding other explanatory variables constant, educated wife had a probability of being more family planning utilization by a factor of 5.59. It is significant at 5 % level. The possible elaboration for this is that education helps the literate rural women to access the information, analyze and interpret and make use of it than uneducated women of the study area. This result is in agreement with the findings of Tilahun (2008).

Education status of husband (EDUHUS): Like educational status of partners the variable was significant at 10 percent significance level and positively related with family planning utilization among rural household in the study area. This indicates that all other things being kept constant, the odds ratio in favor of deciding to use family planning increases by a factor

of 6.34 for literate husband. The result is similar with Haile (2007) and Amha and Enquesillassie (2006)

Access to Radio (RADACC): Access to radio listening showed significant and positive influence at less than 1% probability level on utilization of family planning among rural household in the study area. The odds ratio implies that, keeping other factors constant, the probability of household to use family planning increases by a factor of 3.2 for those rural household who are access to listening the radio. Haile (2007) reported that radio ownership has positive relationship with utilization of family planning.

Extension Service (EXTCON): The sing of this variable is consistent to our prior expectation and it was positive and statistically significant to influence utilization of family planning. The increase in the intensity of health extension services which is significant at less than 10% probability level and diversity of information on family planning increases the likelihood utilization of family planning. The odds ratio is an indicator for the probability that households who have access to health extension service/contact on family planning would utilize family planning increased by a factor of 4.243. This agrees with the finding of Tilahun (2008).

Decision on family planning utilization (DECFP): As hypothesized earlier, it was found significant at less than 1% probability level and affects the utilization of family planning negatively. This implies that rural household in the study area, in those families where the decision is made by couple there is high probability that the women in these families to be the user of family planning than those families where the decision power is made only by men. When the influences other variables being kept constant a shift of value of husband makes the decision of using family planning would result in decrease of odds ratio by a factor of 20.3 in favor of family planning utilization. The result of this study agrees with the findings of Haile (2007) and Tilahun (2008).

Fear of side effects (SIDEFF): This variable has negative effect on the use of family planning methods and its influence is significant at 10% confidence interval. When the influences other

variables being kept constant a shift of value of fear of side effects of using family planning methods from zero to one would result in decrease of odds ratio in favor of family planning methods utilization by a factor of 1.99. This agrees with the finding of Hanifi and Bhuiya (2001).

Attitude towards family planning (ATTIFP): The variable attitude towards family planning was related positively and significantly with family planning utilization. The result was in line with that of the expectation. It significantly affected family planning utilization at 1% probability level. The model result indicated that those household who have positive attitude found to be more users as compared to those household who have negative attitude towards family planning. Keeping the effects of other predicting variables constant, a shift of the value of positive attitude towards family planning from zero to one increases the odds ratio in favor of family planning utilization by a factor of 9.0. The study result was in agreement with works of Korra (2002) and Wegen and Enqusillassie (2006).

5. SUMMARY, CONCLUSIONS AND RECOMMENDATION

5.1. Summary and Conclusions

This study has identified factors influencing family planning utilization among rural household in Dire Dawa Administration. The rural Dire Dawa Administration was purposively selected based on its high fertility rate. The total fertility rate of the administration was to be 2.99. The figure is considerably much higher in rural areas than urban ones. In the rural parts the total fertility rate (TFR) was found to be 5.46 and in urban it was 2.16 (BOEFD, 2010). In this area, health extension package activities like other rural parts of the country, conducted by the Administration Health Bureau which comprises several health professionals in different disciplines at office level and Health Extension Workers (HEW) at Center and Kebele Administration level. According to the structural framework of the Dire Dawa Administration, the rural health center/ health post is accounted to and organized under Health Bureau.

This study has tried to look into the socio-economic, institutional and other related factors, which can affect household family planning utilization. For this, data were obtained from 154 randomly selected respondents through personal interview schedule, group and individual discussions, as well as the researcher's personal observations. The respondents, involved in the interview were respond 94 (61.04%) non users and 60 (38.96%) users of family planning methods.

Descriptive analyses were used to analyze socio-economic, institutional, technical and physical factors affecting utilization of family planning. Evidences from the descriptive analysis indicate that most of family planning users are higher age household with relatively positive attitude than non-users couples. Users of family planning methods also have better education standards of both wife and husband, have relatively participate in health education training, have better access to radio and health extension service and most of them involved in community role activities. Most users' couples have exposures to participate in health education training, which made them aware of the means and uses of family planning.

The mean differences were observed on variables age of wife and children number were significant at less than 1% level. Variables such as education of wife and husband, decision on family planning, health extension contact, participate health education training, radio access, community role participation and attitude towards family planning significant relationship with utilization of family planning at 1% probability level. Again fears of side effects were significant at 10 % probability level for family planning utilization. According to the analyzed result the remaining hypothesized variables were not found statistically significant relationship with family planning utilization.

Multicollinearity existence among dummy and continuous variables was tested for the independent variables before entering binary logit regression model. Accordingly all independent variables were tested. There were no significant relation between the variables (Table 21 and 22). The result from the regression model shows eight variables for the determinants of family planning utilization. The variables like, age of wife, educational status of wife and husband, radio access, health extension contact, decision of family planning, fear of side effects and attitude towards family planning.

Age of the wife was found to have a positive and significant impact on family planning utilization at less than 5% level of significance implying that higher age women households have better exposure and access to family planning information and utilize family planning than lower age women households that helps for utilization of family planning.

Educational statuses of wife and husband also, have significant relations at 5 % and 10% level respectively with family planning utilization. The possible elaboration for this is that education helps the literate rural couples to access the information, analyze and interpret and make use of it than uneducated couples of the study area. Decision on family planning in the other hand, are decision made on family planning relatively only by husband. This means they do have low decision of wife in family planning utilization in the household. Most of the non users' households have fear of side effects to utilize family planning and the variables affect utilization of family planning.

Attitude towards the importance of family planning activities for utilization is another highly significant and positively related variable to affect the willingness of households to utilize family planning. This means that favorable attitude towards the importance of family planning is an important input to decide for utilization.

5.2 Recommendations

Based on the findings of the study the following policy implications have been suggested.

Improving couples access to education and encouraging continuous and constant exposure would significantly increase use of family planning. The household having relatively better education tend to use modern technologies, health extension package advice and information. Therefore, bringing informal education for the rural household is important.

Health extension workers (HEW) have been giving house to house health education that increases the chances to utilize family planning methods. Making more contact hours between women and health extension workers can also enhance willingness of community for family planning. Therefore, Service providers/HEW have to be encouraged and provided with the necessary training and motivation to effectively promote family planning services in health facilities on a regular basis.

Majority of those households who follow mass media are by chance. Hence, promoting mass media programs, specially targeting rural household, will help immensely to create comprehensive awareness and knowledge of family planning. Moreover, the Administration's Health Bureau and other concerned organizations should set up mobile units to perform different teaching methods to warn and guide the target population specially using local area media like FM radio is preferable.

Condom uses in the study area (rural part of the administration) almost no. Therefore, the family planning services providers have to intensively promote condom, because condom has a dual purposes; protecting unwanted pregnancy and sexual transmitted diseases.

This finding may invite the service provider using informal groups approach to disseminate family planning information can increase the awareness/attitude of couples and success of the family planning programs. Informal discussions involving peer education and informal social groups need to be promoted by family planning service providers.

Provided that/accessing all types of contraception to choice is one of the suitable methods to minimize fear of side effects and providing continuous training/awareness creation is necessary to promote contraception methods.

If both couples involved in reproductive decision making, there are significant change on family planning utilization. To enhance women to regulating their fertility, the family planning programs target men as well as women and promote communications about contraception between spouses. And also health extension programs should be given great emphasis, appropriate counseling and involvement of men in reproductive health should be necessary.

6. REFERENCES

Adane Nigus, 2002.Economic analysis of adoption of soil conservation technologies: A case study of Kobo woreda in North Wollo, M.Sc. Thesis in Agricultural Economics. Alemaya University, Ethiopia.

Agricultural Development Office of Dire Dawa , 1998. Land use development potential study of the Dire Dawa Administrative Council, Ethiopia.

Aldrich, J. and F. Nelson, 1984. Linear Probability, Logit and Probit Models: Quantitative application in the social sciences. Sera Miller McCum, Sage Pub. Inc. University of Minnesota and Iowa, London: pp49-54.

Amaha Haile and Fiqre Enqueselassie, 2006. Influence of women's autonomy on couples contraception use in Jimma Town, southern Ethiopia. *Ethiopian Journal of Health Development* 20(3):135-205.

Amare Deribew, 2004. Perceived side effects of oral contraceptive in Jimma Town, South West Ethiopia. *Ethiopian Journal of Health Sciences, Vol. 14, No.2*

Amemiya, J., 1981. Qualitative Response Models: "A survey." Journal of Economic Literature 19: 1483-1536

Andargachew Tesfaye, 1991. Twenty five years of family planning service in Ethiopia: It's Achievement, Drawback and Future prospect. FGEA, Addis Ababa.

Asres Elias, 2005. Access and utilization of development communication by rural women in Dire Dawa Administrative Council, Eastern Ethiopia, M.Sc. Thesis presented to the School of Graduate Studies of Haramaya University, Ethiopia.

Assefa Hailemariam and Fikrewold Haddis, 2011. Factors affecting unmet need for family planning in southern nations nationalities and peoples region, Ethiopia. *Ethiopian Journal of Health science 21(2) 77-89.*

Azhar Saleem and G. R. Pasha, 2008. Modeling of the women's reproductive behavior and Predicted Probabilities of Contraceptive Use in Pakistan pp. 1-15

Banti, N., 2005. Fertility preference and contraceptive usage among currently married women of reproductive age group in Shebe Town, Jimma Zone, Ethiopia. Student Research Program. Jimma University.

BoFED (Bureau of Finance and Economic Development), 2010a. Dire Dawa Administration Statistical Abstract.

BoFED, 2010b. Dire Dawa Population Image. Policy, plan and coordination office, Dire Dawa.

CSA (Central Statistical Agency), and ORC Macro, 2006 .Ethiopia 2005 Demographic and Heath Survey, Addis Ababa, Ethiopia and Calverton, Maryland, USA.

CSA (Central Statistical Agency/, and ORC Macro, 2011. Ethiopia 2011 Preliminary Demographic and Heath Survey, Addis Ababa, Ethiopia and Calverton, Maryland, USA.

CSA (Central Statistical Agency), 2009. The 2007 population and housing census of Ethiopia, results for Dire Dawa City Administration statistical Report. Addis Ababa, Ethiopia.

Derebssa Dufera Serbessa, 2002. Differential Impact of Women's Educational Level on Fertility in Africa: The Case of Ethiopia*: Cice* pp.1- 17.

Dejene N., 2000. Impact of socio-demographics on fertility in urban Addis Ababa: OLS and Tobit analysis. *JESA*; 1, 49-77

Dust, K., 2005. The effect of education, income, and child mortality on fertility in South Africa. Master of art thesis presented to the school of graduate studies of Simon Fraser University pp. 22-28.

Ezeh Alex C., Seroussi Michka, Raggers Hendrik, 1996 .Male fertility, contraceptive use and reproductive preferences, demographic health surveys comparative studies. Macro International Inc. Maryland.

Fantahun M, Kumb S, Degu G, Kebede Y, Admassu M, Haile W, Hailu S, 2001. Dabat Rural Health Project, North West Ethiopia: Report of the baseline survey. *Ethiop J Health Dev 15(1) 19-25.*

FAO (Food and Agriculture Organization), 1998. Rural women and food security, current situation and perspectives, Food and Agricultural Organization of the United Nations.

Feyisetan, B. B, & Casterline, J. B., 2000. Fertility preferences and contraceptive change in developing countries. International family planning perspectives, 26 (3), 100-109.

Firew Tafesse, 2005. Assessment of factors influencing utilization of modern contraceptive methods among women in the reproductive age group in Oromia Zone, Amhara National Regional State. MPH Thesis presented to Addis Abeba University, School of Graduate Studies.

FMOH (Federal Ministry Of Health), 2008. Health fact sheet-pdf. [on-line]. Retrieved August 18, 2011 from theWorld Wide Web: 134Hhttp://moh.et/index.php/.

Frances Moore Lappe and Rachel Schurman, 1989. Taking Population Seriously. Endsleigh Street, london.

Gebrekidan M., 2002. The role of men in fertility and family planning programme in Tigray region, *Ethiop. J. Health Dev.*; 16(1) 247-255.

Getachew Minas, 2009. A fiften-year review and assessment of the Dakar/NGOR declaration and the ICPD program of action in Ethiopia. Population coordination core process, MoFED, Addis Ababa.

Getu Degu and Alemayehu Worku, 2008. Differentials of fertility in North and South Gondar zones, northwest Ethiopia: A comparative cross-sectional study. *BMC Public Health*, 8:397

Ghazi M. Farooq and Deborah S. DeGraff, 1988. Fertility and development: An Introductionn to theory, empirical research and policy issues. International Labour Office, Geneva.

Gujarati, D.N., 1995. Basic Econometrics, 3rd Edition. McGraw-Hill, Inc.

Gujarati, D.N, 2003. Basic Economics, 4th edition. McGraw Hill,New York.

Haile Dolango, 2007. Determinants of birth control methods use in Konta Special Wereda, southern Ethiopia. Unpublished master's thesis, School of Graduate Studies, Haramaya University.

Hanifi and Abbas Bhuiya, 2001. Family-planning Services in a Low-performing Rural Area of Bangladesh: Insights from Field Observations. *Journal of Health Population Nuttrition; 19(3):209-214.*

Hosmer, D.W. and S.Lemshew, 1989. Applied Logistic Regression. A Willey Inter-Science Publication, New York.

IPPF (International Planned Parenthood Federation), 1997. Family Planning Hand Book for Health Professionals. England: Stephen Austin and Sons Ltd., Hertford.

Joseph A. Mc Falls Jr., 2003. Population: A Lively introduction, 4 th edition. Population Reference Bureau, Washington, DC.
Keller, G., B. Warrack and H. Bartel, 1988. Statistics for management and economics. Wadsworth publishing company, Belmont California, pp204-220

Korra Antenane. 2002. Attitudes toward Family Planning, and Reasons for Nonuse among Women with Unmet Need for Family Planning in Ethiopia. Calverton, Maryland USA: ORC Macro.

Kwame Boadu, 2002. The Effect of Contraceptive Practice on Fertility in Ghana: *A Decade of Experience Canadian Studies in Population, Vol*. 29(2): pp 265-291.

Maddala, G.S., 1992. Introduction to Econometrics, Second Edition. Ohio State University, McMillan, New York.

Marchant, T., A. k. Mushi, R. Nathan, O. Mukasa, S. Abdullah, and C. Lengelen,2004. Planning a family: priorities and concerns in rural Tanzania. *Afr. J. Reprod Health*, 8:111-123. Oromia, Ethiopia. *Ethiop.J.Health Dev*. 2009; 22(3):28-33.

Margaret Whitehead, 2000. The Concepts and Principles of Equity and Health. WHO, Regional Office for Europe, Copenhagen.

Ministry of Health, 2004. Family Planning Extension Package, Addis Ababa.

MoFED (Ministry of Finance and Economic Development), 2009. Ethiopia population and development indicators of 2008. Addis Ababa, Ethiopia.

Nuwagaba, A., 1997.Population Crisis in Sub-Saharan Africa: Who is Responsible? An illustrative Analysis of Population Trends in Uganda. *Eastern Africa Social Science Review 13 (2):78-85.*

Plan for Accelerated and Sustained Development to End Poverty, 2005. Ministry of Finance and Economic Development, Addis Ababa, (PASDEP).

Planning and Programming Department, Ministry of Health of Ethiopia , 2007. Health and health related indicators Addis Ababa

Population Action International, 2011 . Policy and Issue Brief; 7 Billion and Counting [On-line] retrieved December 29, 2011 from the World Wide Web: http://www.populationaction.org

Population Reference Bureau, 2009. Family Planning Saves Lives, 4th edition, Rhonda Smith, Lori Ashford, Jay Gribble and Donna Clifton, Washington, DC USA.

Population Reference Bureau, 2011.The World's Women and Girls Data Sheet March 2011 [On-line] retrieved septmber 2, 2011 from the World Wide Web: www.prb.org

Samson Gebremedhin and Mulugeta Betre, 2009. Level and differentials of fertility in Awassa Town,Southern Ethiopia : *Afr J Reprod Health* 13(1):93-112.

Sajid, A.and M.M. Franklin White, 2005. Family planning practices among currently married women in Khairpur district, Sindh, Pakistan. *JCPSP*, 15(7):422 425.
Sarantakos, S., 1998. Social Research, Second Edition. Charles Sturt University, Australia: pp139-164.

Seifu Mengistu, 2007. Assessment of level of awareness and emergency contraception among college female students in Oromia Regional State, Arisi Zone, Assela Town, South East Ethiopia. Consortium of Reproductive Health Associations.

Simelela N., 2006. Women's access to modern methods of fertility regulation: Technical knowledge and support, International Planned Parenthood Federation, London, UK.

Sizmari A. 1997. Economic and Social Development: Trends, Problems, Policies. Prentice Hall. London. 91p

Short SE, Kiros GE, 2002. Husbands, Wives, Sons, and Daughters: Fertility preferences and the demand for contraception in Ethiopia. *Population Research and Policy Review*, 21: 370-410.

Storck, H., Bezabih Emana, Birhanu Adnew, A. Borowiecki and Shimeles W/Hawariate, 1991. Farming Systems and Farm Management Practices of Small Holders in the Hararghe Highlands: Farming systems and resources economics in the tropics. Wssenshaftsver lag vauk, Kiel, Germany. 11: 41-48.

Tilahun Seyifu, 2008 .Access to and utilization of family planning information among rural women in Adama District, Oromia National regional state, Ethiopia. Unpublished master's thesis, School of Graduate Studies, Haramaya University.

Tiziana, L., M. and D.Z. Gianpiero, 2003. Impact and determinants of sex preference in Nepal. *Int Fam Persp,* 29(2):1-12.

The Transitional Government of Ethiopia, 1993. National Population Policy of Ethiopia, Office of the Prime Minister. Addis Ababa, Ethiopia.

Wegene Tamire and Fiqre Enqueselassie, 2007. Knowledge, attitude and practice on emergency contraceptives among female university students in Addis Ababa, Ethiopia. *Ethiopian Journal of Health Development* 21(2):109-182.

Uffo Bonga, 2005. Formative evaluation of Quality of Family planning Services and Prescriptions of Clients; The Case of Soddo Town, Wolaayta Zone, SNNPR State. An M.Sc Thesis Presented to Addis Ababa University School of Graduate Studies, Institute of Development Research.

UNFPA, (United Nation Population Fund) , 2009. State of world population. Retrieved July 22, 2011 from the World Wide Web:13http://www.unfpa.org /puplic/ home/puplications/ pid / 397

United Nations, Department of Economic and Social Affairs, Population Division, 2009. World Population Prospects: *The 2008 Revision, Highlights, Working Paper No. ESA/P/WP.210*

United Nations, Department of Economic and Social Affairs, Population Division 2010. World Population Prospects: *The 2010 Revision.* New York: UN. http://esa.un.org/unpd/wpp/index.htm. Accessed 20 June 2011.

United Nations, 1994. Report of the International Conference on Population and Development (document A/CONF.171/13) pdf. New York. [on-line]. Retrieved 7Hhttp://www.un.org/millenniumgoal/goals.htm/.

United Nations, 2006. Demographics Ethiopia [On-line] retrieved July 20, 2011 from the World Wide Web:13http://en.wikipedia.org./wiki/demographics_of_Ethiopia

World Health Organization, 2007 . Maternal Mortality in 2005: Estimates Developed by WHO, UNICEF, UNFPA and the World Bank, Geneva.

World Health Organization, 2009 .WHO country page. Retrieved August 13, 2011 from the World Wide Web: http://www.who.int/countries/eth/en/.

Vilaysook Sisoulath, 2009. Relation shiopie between child mortality and fertility amongevery married women in Lao PDR. Master of art thesis (population and reproductive research) presented to the school of graduate studies of Mahidol University. pp. 35-37.

Yigzaw Kebede, 2006. Contraceptive prevalence in Dembia District, northwest Ethiopia *Ethiopian Journal of Health Development* 20(1):1-71.

Yohannes F., Yimane B., Alemayehu W., 2003. Differentials of fertility in rural Butajira. *Ethiop J Health Dev*, 17(1):17-25.

Yohannes Tolassa, 2004 .The role of men in family planning in a rural community of western Ethiopia. M.Sc. Thesis presented to Addis Abeba University, School of Graduate Studies.

7. APPENDIX

7.1. Livestock Conversion

Table 1: Conversion factors used to estimate Tropical Livestock Unit

Animal Category	TLU
Calf	0.25
Weaned Calf	0.34
Heifer	0.75
Cow and Ox	1.00
Horse	1.10
Donkey (adult)	0.70
Donkey (young)	0.35
Camel	1.25
Sheep & Goats (adult)	0.13
Sheep & Goats (young)	0.06
Chicken	0.013

Source: Stork, *et al.,* 1991.

7.2. Survey Questionnaires

HARAMAYA UNIVERSITY
SCHOOL OF GRAGUATE STUDIES

DETERMINANTS OF RURAL HOUSEHOLD'S ACCESS TO INFORMATION AND UTILIZATION OF FAMILY PLANNING PRACTICE IN DIRE DAWA ADMINISTRATION
SURVEY QUESTIONNAIRE INTERVIEW SCHEDULE

1. Household type
   A= Male headed household
   B= Female headed household

2. Age of husband _____

3. Age of the wife _____

4. Duration of your marriage____ Years

5. How many wives do you have? (only for husbands).
   A. One B. two C. three D. four E. more than four

6. Education level of:-
   Wife _____ year/class, Husband _____ year/class

7. Religion
   A. Muslim B. Christian C. Others (specify) _____

8. Family size (number of persons in the family)
   Male _____ Female _____

9. Detailed information about children

No	Name	Sex	Age	Relation ship
1				
2				
3				
4				
5				
6				

Economic Variables

10. Do you have land for agricultural production and other activities?
    0) No 1) Yes

11. If yes, Land owned/size _____ qindi.

12. What are the main sources of your income and the corresponding annual amount in 2003 E.C?

No	Income source	Annual harvest (Qt)	Amount consumed (Qt)	Amount Sold (Qt)	Unit price	Total price
1	Sorghum					
3	Maize					
4	chat					
6	Sugar cane					
7	Potato					
8	Sweet potato					
9	Coffee					
10	Onion					
11	Tomato					
12	Others					
13	Total income					

13. Livestock holding

Type of animal	Number	Number of animal put up for sale	Price of the livestock at this time
Cow			
Heifer			
calves			
Oxen			
Sheep			
Goat			
Donkey			
Camel			
Chicken			
Others (specify)			

14. Non-farm Income

Operations Involved	**Selling Interval (weekly, monthly)**	**Total Income/Birr obtain in a year**
Selling fire wood		
Selling charcoal		
Petty trading		
Others (Specify)		

15. What do you think of your socio-economic status relative to others in the neighborhood?
    1. Rich 2. Medium 3 Poor

16. Type of house you own?

House type	Number of room	Purpose
Grass roofed		
Corrugated iron roofed		

Extent of Access to Family Planning Information in the last 2 years

17. What are the sources of family planning information available for you?
    A) Health extension worker B) Agricultural extension worker/DA
    C) NGO worker D) Friends/relatives
    E) Mass media like radio F) others/specify _____

18. Which sources information you prefer and why? _____

19. How frequently you obtain information on family planning from the available sources?
    A) Never B) once in a year C) 1-2 times in a month D) others (specify)

20. If 'never' Why? _____

21. How frequently you obtain information on family planning?
    0) never 1) once in a year 3) 4 times in a year 4) 1-2 times in a month
    5) Others (specify) _____

22. Can you tell me how to take and its dose?
    0) No 1) Yes

23. If yes, tell me its dose and how to take it, _____

24. How frequently you obtain information on male condom?
    0) never 1) once in a year 3) 4 times in a year 4) 1-2 times in a month 5) others (specify)

25. Do you know condom prevent pregnancy?
    0) no 1) yes

Mass Media

26. How frequently do you have access to media for the last three years?

Mass media exposure	**Frequency**			
	Daily	**Once in a week**	**Some times**	**Never**
Radio				
Television				
News paper				
Posters				
Leaflets				

27. If the answer is 'never' what are the reasons?
1) I do not have the media 2) I have no time because I am busy
3) It has no use for me 4) others (specify) _____

28. If you do not have the above media but have exposure and listen to the above media from whom/where you get them?
1) Neighbor 2) Recreation places 3) When I go towns
4) Relatives 5) Others _____

Institutional variables (Extension Contact/Training)

29. Do you have contact with health extension workers?
0, No 1, Yes

30. How frequently the health extension workers visit you?
1) Never 2) Weekly
3) Monthly 4) Sometimes 5) other (specify)

31. For what purpose the health worker visit you? It can be multiple answers.
a) For family planning purpose
b) For sanitation and personal hygiene issues
c) To control epidemics and other diseases
d) For political and administration issues
e) Other specify _____

32. Have you ever participated on health education trainings?
0, No 1, Yes

33. If yes, on what topic/activities did you get training?
a) In family planning purpose
b) In sanitation and personal hygiene issues
c) In control of epidemics and other diseases
d) In HIV AIDS
e) Other specify _____

34. How frequently did you get the training?
1, once per month 2, once in three months
3, once in six month 4, once per year 5, others (specify)

35. During pregnancy, have you ever attended health professionals' advices?
0, No 1, Yes

36. If no, Why?
1, Far distance of health center 2, Lack of time
3, Lack of money 4, Lack of interest 5, others

Distance from social services and organizations

37. How far your residence from the following institutions?

Institutions	**In kilo meter**	**In hour**
Town		
Market		
Health center		
School		
Agriculture office		
NGOs		

38. Do you believe the health service center is far from your residence?
A. No B. Yes

UTILIZATION OF FAMILY PLANING

39. Do you need to utilize family planning?
A. No B. Yes

40. From where have you heard about birth control methods? (Multiple answer)
A) Friends B) Health workers C) Radio D) Television E) Newspapers, F) Posters
G) Leaflets and tracts H) other sources, (specify) _____

41. Do you utilize family planning?
A. No B. Yes

42. If your answer is yes, which methods did you use?
A) Condoms B) abstinence C) loop D) Injectables E) Oral pills
E) Implant F) Surgical G) others (specify) _____

43. Are you success or prevent pregnancy by using contraception?
A. Yes B. No

44. If your answer is No, why? (Multiple answer question)
A. Due to religion
B. since I need more children for economic or social reasons
C. Because there is no contraceptive services or any means to control births
D. I need large family size
E. other reasons (specify) _____

45. Have you ever heard of any traditional birth control methods?
A. No B. Yes

46. What traditional methods/ways of avoiding or delaying pregnancy have heard about?
1. Breast feeding 2.Calendar 3.Abstinence
4. Withdrawal 5.Othres (specify) _____

47. Whom do you think motivated you to use birth control methods? (Multiple answer)
A. Health extension workers B. Other accepters
C. Member of the family D. Husband
E. Friend / relatives F. mass media
G. NGOs H. others (specify) _____

48. Did you any side effects or complication utilizing family planning method?
A. No B. Yes

49. Have you ever received information on side effects of family planning method?
A. No B. Yes

50. If yes, tell me what to do when you face the side effects? _____
51. What was the action taken for this complication?
A. Talked to health worker B. Took home remedy
C. stopped the method use D. Other (specify) _____

CONTRACEPTION DECISION

52. Who can decide to contraception methods utilization?
A. Couples/both B. Husband
C. wife D. other relatives _____

53. Who decides the time of childbearing?
A husband B. wife
C. Both husband and wife D. Relatives
E. God F. others

54. Who decides the number of children to born?
A husband B. wife
C. Both husband and wife D. Relatives
E. God F. others

Family Size and sex preference

55. How many children do you (desire) want to have? ____

56. Do you have any desire to have another sex child preference either male/female or son/daughter?
    A. No B. Yes

57. Which family size do you prefer to have?
    A. Lager B. Small

58. Why do you want to have more children?
    1. Children's are wealth
    2. They can support in old age
    3. Children's may/may not grow
    4. Children's are honor
    5. To maintain posterity
    6 .Other/specify _____

59. How do you see the costs of raising additional children? (Multiple answer)
    A. It is not as such costly
    B. It is a costly
    C God will take of them and no need to worry about it
    D. Other (specify) _____

60. Children are sources of labor.
    A. We agree B. We Disagree C. Undecided

61. Giving birth to much number of children hurts the health of mother.
    A. We agree B. We Disagree C. Undecided

62. High population growth rate is a setback for economic and social development of a country.
    A. We agree B. We Disagree C. Undecided

63. In Your PA are there NGOs workers who provide counseling and contraceptives services for the past 2 years?
    A. No B. Yes

64. If your answer is yes, are you serves provider?
    A. No B. Yes

65. Because of NGOs in your PA is there any change in family planning utilization?
    A. No B. Yes

Information access related to community roles of women/couples

66. How did you rate your community role in a community? A. High role B. Low role

67. How frequently did you participate in community roles for the last three years?

Community roles	Always	Sometimes	Never
Decision making in community issues			
Participation in committees			
Leadership position			
Organizing informal institutions like idir, ekub,			
Others / Specify			

68. Did you utilize information accessed from the above community role?
A. No B. Yes, if no why? _____

69. If yes, what type of difference in any technology adoption? Like family planning utilization and others, _____

Attitude towards family planning

70. What is your attitude towards family planning inspiration to obtain and utilize information from the potential source?
A. Favorable B. Unfavorable

71. Rate the following based on your view

No	Statements	SA	A	N	DA	SDA
1	Family planning is against the law of God (N)					
2	The number of children we desire is at our hand by using modern family planning methods (P)					
3	Modern contraceptive methods make the women permanently un pregnant (N)					
4	Use modern contraceptive methods has more advantages than its side effects on women (P)					
5	Family planning creates happy and healthy family (P)					
6	For fair and adequate use of natural resources like (farm land distributions) we should use modern contraceptives to control the number of people (P)					
7	Large number of children has many disadvantaged than advantages (P)					

SA= strongly agree, A= agree, N= neutral, D= disagree, SDA= strongly disagree

72. What is the attitude of local officials towards contraception? Are your community or religious leaders supportive of family planning and contraception? (Tick in appropriate column depending upon the response).

	1.Favorable	2.Unfavorable	3.Against
1.Local officials			
2.Community in general			
3.Religious leaders			

THANK YOU

7.3 Questions for Key informants and Focus groups Discussions

1. Let's discuss the provision of family planning service delivery in your PA
    - Service provider / Health extension workers, other organization
    - Communication and information about family planning
2. Let's talk about another child sex preferences (Male or female children)
3. For what purpose utilize family planning methods
    - Spacing
    - Limiting
4. Let's talk about the problems associated with of population growth.
7. Let's discuss the distribution of decision making power in family planning utilization
9. Let's discuss the religious leaders view and use of family planning methods
10. Let's talk about family size preference

    The disadvantages and disadvantages of large family size and small family size
11. Let's discuss the side effects of modern contraceptive methods
13. Let's talk about the power relation between husband and wife
    - Power distribution between husband and wife
    - Time of child birth/ number of births
    - Use of family planning methods
    - Other important issues