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Measuring and analyzing child wellbeing in Ethiopia

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Submitted in Partial Fulfillment of the Requirements for the Master of Art in Developmental Studies

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DECLARATION

This is to certify that this thesis entitled "measuring and analyzing child wellbeing in Ethiopia" submitted in partial fulfillment of the requirements for the award of the Degree of MA in Developmental Studies to the College Of Business and Economics, Mekelle University through the Department of Management, done by Mr. Biniam Gidey Teklu, Id.No. CBE/PR093/02 is an authentic work carried out by him under my guidance. The matter embodied in this proposal has not been submitted earlier for award of any degree or diploma to the best of my knowledge and belief.

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CERTIFIED

I, Biniam Gidey Teklu, hereby declare that the thesis work entitled "measuring and analyzing child wellbeing in Ethiopia" submitted by me in partial fulfillment of the requirements for the award of degree of master of Art in Developmental Studies to the college of Business and Economics, Mekelle University through the Department of Management, is original work carried out by myself. The matter embodied in this thesis work has not been submitted earlier for award of my degree or diploma to the best of my knowledge and belief.

Name of the student_____

Signature_____

Date_____

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ABSTRACT

In Ethiopia out of the total population of the country, the younger population under age 15 is almost 45% of the country's population. The purpose of this research is to identify the wellbeing status of children in the country. For measure and analyze child wellbeing in Ethiopia the appropriate method for analyzing the data was by using Z score for each variables, by average z score value of the variables form a domain and by average z score value of the domains to form a cluster and finally by average of the cluster form index child wellbeing. To know which of the variable affects the domain or the cluster correlation and covariance between the variables or the domains was made. The general framework of the study was developed from FCD-Land index for US and that of Bradshaw for European. While the living conditions of people of the country in general gained increasing recognition but the wellbeing status of children is not monitored on country base. Therefore, to find wellbeing status of children across the country and ranking them across the five regions this paper brings new concepts. The base for this research was different opportunity and legal base of children for their survival therefore; it was based on a rights-base and multi-dimensional understanding of child wellbeing. The research analyzed longitudinal data collected since 2002 available from young lives project that was collected to address the achievement of Millennium Development Goal in Ethiopia in addition to another four countries like India, Vietnam And Peru. The data for addressing the wellbeing status and ranking of the regions on child wellbeing the index was classified in to seven clusters(material situation, health, education, housing, subjective well-being, , children's relationships and risk and safety) with in these cluster there are domains and within the domains there are indicators. Therefore for analyzing child wellbeing the latest version of both Special Package for social Science (SPSS) and that of STATA was applied for simplifying the work.

ACKNOWLEDGMENTS

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LIST OF ACRONYMS

ACRWC	African Charter on the Rights and Welfare of the Child
BCG	Bacillus Chalmette Guerin
BMI	Body Mass Index
CRC	Convention on Right of Children
CSA	Central Statistics Authority
CWI	Child Wellbeing
DHS	Demographic Health Survey
DPT	Diphtheria Pertussis Tetanus
ECCE	Early Childcare and Education
EDHS	Ethiopian Demographic and Health Survey
EFA	Education for All EFA
EFA	Education for All
ESDP	Education Sector Development Program
FMH	Federal Ministry of Health
GER	gross enrollment rate
HFA	Height for Age
HICE	Household Income and Consumption Expenditure
HICE	Household Income and Consumption Expenditure
HNP	World Bank, Health, Nutrition and Population
MDG	Millennium Development Goal
MDG	Millennium Development Goal
Mill	Millions
MOLSA	Ethiopian Ministry of Labor and Social Affairs
NNP	National Nutrition Program
NNS	National Nutrition Strategy
OC	Old Cohort
PA	Peasant Association
PA	Peasant Association
PASDEP	Plan for Accelerated and Sustained Development to End

	Poverty
PIRLS	Progress in International Reading Literacy Study
R1	Round One
R2	Round Two
SDPRP	Sustainable Development Poverty Reduction Program
SWOC	The State of the World's Children
UN	United Nations
UNICEF	United Nations Education, science and cultural organization
UPE	Universal Primary Education
WDI	World Development Indicator
WeD	Wellbeing in Developing Countries
WFA	Weight for Age
WFH	Weight for Height
WHO	World Health Organization
WMS	Welfare Monetary Survey
YC	Young Cohort Group

CHAPTER ONE

INTRODUCTION

The Ethiopian population, based on the national census of 2007, was 73,913,505, of which 50.46 per cent was male and 49.54 per cent was female. The proportion of younger population under age 15 is almost 45% of the country's population (CSA, 2008). According to (Nicolas C. Pron, 2009) the true measure of a nation's standing is how well it attends to its children access to different health center for their safety, their material security, their education and socialization, and their sense of being good citizen, valued for themselves, families and societies into which they are born.

Children are more likely to be poor in the sense that they make up a disproportionate number of the total number of poor (Gordon et al., 2005). Children who grow up in poverty are more vulnerable and are more related to different problems specially they are more likely to be in poor health, low access to education and possess different behavioral difficulties, poor educational results, early age pregnant, lower skills and objective, low paid, unemployed, and welfare dependent

Children with all of their problems are categorized in low status of their wellbeing. There is an unequal concentration of poverty among children compared to adults in Africa. This shows the fact that their economic wellbeing is not good.   According to a report (UNICEF, 2007. P. 7) show that   children fall in to different status a catalogue of poverty's, the risk of failing to respect that many children of low-income families do fall into any of the different category of life. "*But it does not alter the fact that, on average, children who grow up in poverty are likely to be at a decided and demonstrable disadvantage*" (UNICEF report 7, 2007. P.7).

Child wellbeing is generally represented by how children are doing in a number of different domains of their life. At national and international level these domains have included those covered in the CWI (Bloor, k, et al, 2009. p.7). Wellbeing also contains a vast indicators which includes different other domains of well-being like subjective well-

being, relations with family and friends, civic participation, behaviour and risks for children.

1.1. Back Ground of the Study

Ethiopia is one of the poorest countries in the world and ranks among the lowest for most human development indicators. Child wellbeing indicator gives the general understanding on every phase of childhood in whole of the country. According to (Caroline, H, 2007) most poor people's are relatively powerless, economically, socially and politically, and children often particularly so poor in all aspects of live.

The child wellbeing is multidimensional approach which includes clusters, with in this cluster there are domains and within these domains there are indicators (Bradshaw et al. 2007: P.135). The clusters are grouped in to different parts, and one of the clusters is material need for the fulfillment of children desire with the intension of addressing their level of poverty, the level of intensity of the poverty and what and how much should be imposed to put out of those children's form poverty. To understand their material status issues like the level of parents income, whether both or one of its parents are employed, intensity of household composition. In general the material need of the child lies on financial and human capital of its parent's. Financial capital is generally defined as income and/or wealth, and human capital is usually defined as education and skills. These are central resources from the family that are believed necessary for a child's successful development and resources which will be valuable for the child's success in the future (Jason and Kristin, 2007). Children successful progress in the school system is one important indicator for their well-being. Education is one of the clusters that uses compile a child status for its wellbeing therefore, concepts like access to education, proxy to school, enough material like books, pen… time to read. Health status of the child determine their current and future conditions therefore, this should have to be included in the cluster of well being. Children relation to their family peers and environment they live determine their social relationship of they have and also the future confidence they develop.

Because, such a research has only done in European, South Africa and United States of America, but not yet in Ethiopia by including the commonly accepted child wellbeing indicators. Therefore the aim of this paper is to measure and analyze to what extent in Ethiopia this variables are ranked in the sample selected regions.

1.2. Statement of the Problem Research Question

In Ethiopia Children's are living in unknown condition of live with so many problems especially to the status of their wellbeing. Child access to different services and necessities that meets their basic needs ensures their wellbeing. Due to the difference in wealth of their family, children have different access to their material situation like weather an addition of household sources of income to the family will help to decrease the number and severity children's form poverty.

Children have different access to health and safety starting from the time of infant until they become adults. The likely hood of children access to be health center, get immunization, feel safety, omission is different according to sex, proximity, educational level of parents or caregiver, and other related factors. In addition to these there are other measurements that address the level of children to their health status issues like infant mortality rate, low birth weight babies, children that are overweight or obese, proximity to health institutions and life expectancy.

Children in Ethiopia have different status and access to education like proxy to school, material in school, pre primary enrollment, enough books, chair, table, parental or care givers educational level and others. In relation to these factors other concepts like the level of their understanding and children's educational achievement in reading, math, writing and children's perception about the teacher's quality.

The relationships between children to their family and peer have many effects to the children status and the characteristics of children they behave also affect to surrounding environment in which they live. As (Land, 2001) argued ….characteristics such as family structure, family relationship and peer relationship and other associated compositions are the variables that show the trend of children while they are growing.

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The effect of children behaviors and risks of children when they grow will affect first to themselves next to their family and the community in which they live, and at last to the country in general, therefore it is some of concern that every citizen fears about. A study by (Bradshow, 2006) shows that health behavior, risk behavior and violence experience affect the overall status of child characteristics. The level of understanding of children to their level of status or their subjective judgment about their living condition gives many highlights in the near future for the general understanding of wellbeing.

1.3. Research questions

1. Do children's have equal access to educational opportunity?
2. Do children's have equal access to health?
3. Did all children have equal access to material situation?
4. Does the relationship between children to their families and peers have any effect on child wellbeing?
5. What is the level of understanding of children to their subjective well being and level of risk?

1.4. Objective of the Study

General Objective

The general objective of study is that to measure and analyze child wellbeing in Ethiopia.

Specific Objectives

➢ To identify and analyze whether children have equal access to health
➢ To determine whether children have equal access to education
➢ To analyze material situation of children
➢ To analyze weather the relationships between children's family and peers have any effect to child wellbeing.

➢ To identify whether a housing and living environment has an effect on children wellbeing.

➢ To understand the level of understanding of children to their subjective well being

➢ To identify whether risk of children affect their wellbeing

1.5. Significance of the Study

The purpose of the study is to identify and rank the level of child wellbeing in Ethiopia based up on the performance of regions in the different pillars like clusters, domains and variables that constitute the index wellbeing. Therefore, it's essential for policy makers because, it gives in which variable and in which region of country should give focus for poverty reduction and ensure sustainable development in the country. This paper may contribute to know which of the regions are doing well at a cluster level, domain level and at indicator level for the overall child wellbeing. Therefore the paper may contribute something for this area.

Such concerns call for the necessity to investigate the underlying the main determinants of child wellbeing in regard to economic and social factors. Hence, such studies are beyond doubt important for the success of huge efforts made in the area to understand wellbeing. Policy makers and planners can also draw lessons on designing effective strategies for further efforts in addressing issues regarding child poverty and wellbeing by taking some of the determinant variable of this paper to identify the status of children and their wellbeing. Besides adding a brick to the body of knowledge on the subject, the output of the study could also be informative for development practitioners, donors and nongovernmental organizations interested to operate in the area. Furthermore the findings of this study may also serve as a spill over for further research in the area.

1.6.   Scope of the Study and Limitation

The paper covers the index of child wellbeing for analyzing child wellbeing in Ethiopia. The measurements of child wellbeing are organized in to clusters, domains and indicators. But all of indicators of child wellbeing are not analyzed since same of the indicators like Children with health insurance coverage, and others are not give more attentions, since this indicator are not engaged in our country and most of developing countries. The scope of study is limited to the variables, domains in this research and also to relationship between the domains of child wellbeing among each other.

The Z score which was used in this study gives equal weight to all variables but in practice this may not be true, since some variables may affect the domain and the cluster more and they have dominant effects.

1.7.   Organizational of the Paper

This research is organized in five chapters. The first chapter gives a general background of the study, statement of the problem, objective, its significance and limitation of the study. The second chapter dwells on reviews of conceptual as well as empirical literature pertinent of objectives of the study with review of literature on child wellbeing in Ethiopia and the rest of the world, whereas chapter three exclusively deals with general features of the study area and the research methodology pursued mmethods of data analysis are also described in this chapter. Chapter 4 reports results from the statistical data analysis and provides discussions. Finally, the last chapter presents discussion, conclusion and policy recommendations based on the findings of the study.

CHAPTER TWO

LITERATURE REVIEW

2.1. Review of Related Literature

2.1.1. Overview of child wellbeing and development

Children in all developing countries taking the United Nations Convention on the Rights of the Child (UNCRC) definition of a child is less than18 years, this children account for on average 37 per cent of the population and 49 per cent in the least developed countries (UNICEF, 2008: 12). However, demographics are not the only reason to advocate a greater focus on child poverty and wellbeing in development research and policy. According to (Andy, S 2010) the difference between adult and child poverty experiences is a key to both advocating greater focus on and understanding of child poverty and wellbeing.

In 2000, the millennium declaration was signed (UN, 2000). Accordingly Ethiopia has signed the declaration (MoFED, 2010). In this declaration lies the famous MDG, in which countries pledged to fight global poverty and hunger, protect the environment, improve health and sanitation to the poor, and promote education and gender equality. One of the key targets of the MDGs is to 'halve, by 2015, the proportion of peoples without sustainable access to safe drink water and basic sanitation', taking 1990 as the base year (O'Hara et al., 2008 P: 2).

Child wellbeing is developed basically on rights of children. It was developed on international and national laws. Ethiopia approved many international and human rights agreements by UN and African charter on the rights and welfare of the child (ACRWC) others organizations and are included in EPRDF constitution. In (MOLSA, 2006) considers the right of the child to education as a basic right because education is important instrument for human development, in article 28 of the CRC which says that state parties recognize the right of the child to education' and also consider primary education compulsory, and states that all children should get free access to education.

African Charter on the Rights and Welfare of the Child (OAU, 1999). In article 11, it is concerned on education, 1. Every child shall have right to education: 2. the education of the child should be directed: a. the promotion and development of the child's personality, talents and mental and physical abilities to their fullest potential. Article 14: health and health services. 1. Every child shall have the right to enjoy the best attainable state of physical, mental and spiritual health. 2. States Parties to the present Charter shall undertake to pursue the full implementation of this right and in particular shall take measures: (a) to reduce infant and child mortality rate; (b) to ensure the provision of necessary medical assistance and health care to all children with emphasis on the development of primary health care; (c) to ensure the provision of adequate nutrition and safe drinking water; (d) to combat disease and malnutrition within the framework of primary health care through the application of appropriate technology;

The CRC initiates a general understanding on children's, by giving equal weight to different concepts related to children's civic, political, social, economic and cultural rights, with special focus on the mainly on their general right. The CRC highly points to the double responsibility of children as being good citizens with right privilege and at the same time as being waiting support from their families.

First children with all their personal characteristics interact with their family, and also with other peoples and situations: friends, neighbours, health care, child care, school etc. According to (Bradshow, 2006 p.7) there is a direct interactions embrace the child's with their nearby environment and this is the level with the strongest direct influence on children. Connections between the different structures within this environment, e.g. parents – school are same what greater relation for children. Greater relation beyond parents and school goes to for societal circumstance in which families live, including among others parents' social networks, the conditions in the local community, access to and quality of services, parents' workplace and the media. The societal relation affects the child mainly indirectly by influencing the different structures within the first to family next and neighbours. The finally relation of children is to the wider societal context of cultural norms and values, policies, economic conditions and global developments. The different systems are dynamic and interdependent, influencing each other and changing

over time (Stevens 'et al' 2005; Lippman 2004). In interacting with the different systems and subsystems children and their families encounter both barriers and facilitators. Social inclusion results from a good match between an individual with its abilities, resources and limitations and the environment with its infrastructure, demands and resources while a lacking fit triggers processes of exclusion

Child well-being in its broadest logic has a long intellectual history; the concept has been particularly strongly debated over the last 10 years or so. There was practice about how to measure wellbeing and it was group work by psychologists, economists and researchers in a field of social policy and development studies. In the Millennium Development Goals and United Nations Development Program (UNDP) report brings same new concepts on child wellbeing as it is a multidimensional rather than it is only as economic vision. Many in international development practice was focused specifically on external things people should have or should be able to do, but human wellbeing is at least as much about what people think and feel about their life, this means children and peoples subjective understanding of their life is an important in addition to evaluate development outcomes but also to understanding for social change.

Child wellbeing is relatively a recent phenomena as (Laura, 2005 P:4) child wellbeing was developed in the late 1980s, a series of comprehensive reports on indicators of child well-being was produced by Child Trends for the Select Committee on Children, Youth, and Families of the U.S. A major example of child well-being reporting at the state level began in 1990, when The Annie E. Casey Foundation released its first Kids Count report, presenting data for the nation and all 50 states on 10 indicators of child well-being (The Annie E. Casey Foundation, 1991). In 1994, researchers met to assess the current status of child and youth indicators in the United States, and to make recommendations for their future development. As (Hauser et al, 1997) In 2001, Child Trends and the Family and Child Research Network once again brought together many of the nation's leading researchers in child and youth development to identify the progress that had been made since the 1994 conference in the development, collection, dissemination, and use of key social indicators of child and youth well-being, and to

identify key opportunities for new indicators development and application in the coming decade. In 2002, Child Trends launched the Child Trends Databank, a continuously updated on-line resource for 70 initial indicators of child well-being, which has now grown to over 90 (Laura.p, 2005 P: 10). In 2003, Child Trends convened 23 researchers working in various domains of positive well-being to present their scales to a wide audience, with the objective of presenting solid research supporting the validity and reliability of the measures so that those conducting child well-being surveys would consider using them more widely (Moore and Lippman, 2005).

(Laura, P, 2005), produced and ranks states on low-birth weight babies, infant mortality, child deaths and violent teen deaths, teen births, dropouts, idle youth, secure parental employment, child poverty, and single-parent families, as well as providing background demographic and economic data.

As a report of (child wellbeing in Africa) argued child wellbeing means a multidimensional concept that includes many ideas like whether children are secure have a good health and feel happy. It is also includes the opportunities of a newly born baby to grow, chance to get learn and to know. In general child wellbeing is about whether children have a good personal and social relationships and feeling safe, secure and respected. Child well-being indicators in general assess health condition, social and emotional status and encompass a wide range of variables including educational opportunity, economic security, food security, and family/neighborhood environments (McGregor, 2006).

According to (Copestak and Camfield, 2009 P. 3) Wellbeing in developing countries (WeD) was developed as a group in 2003 and funded by the UK economic and social research council. Its formal goal was to develop a conceptual and methodological framework for understanding the social and cultural construction of wellbeing in developing countries. In addition to UK, the group included researchers from Bangladesh, Ethiopia, Peru and Thailand. The proposed WeD measure planned to build by giving more weight to health in recognition of their importance as basic human needs and acknowledge the culture and context specificity of subjective wellbeing

outcomes. Further development of the WeD measure was informed by review of a wider range of approaches, including measures arising for self determination theory like happiness or satisfaction with life as whole, domains of life.

2.1.2. Definition of child wellbeing

Child wellbeing was defined by different individuals with different but conceptually almost the same meaning. It means a lot of things primarily; it is about children being secure, healthy and happy. It is about having opportunities to grow, to learn and to know. It is about positive personal and social relationships and about being and feeling safe, secure and respected. It is fundamentally about freedom from fear – fear of the present and the future – and about full security and total peace, at home and in the larger community that encompasses school and country. It is about being given a voice and being heard. In short: it is all about the full and harmonious development of each child's personality, skills and talents (African report on child wellbeing).

According to (Bradshaw, 2007.p:6)

> *"…well-being can be defined as the realization of children's rights and the fulfillment of the opportunity for every child to be all she or he can be in the light of a child's abilities, potential and skills. The degree to which this is achieved can be measured in terms of positive child outcomes, whereas negative outcomes and deprivation point to the neglect of children's rights." (Bradshaw et al. 2007: 135)*

(White, 2007) try to distinguish the classification of wellbeing "*provides a useful framework for encompassing the diversity of well-being concepts, distinguishing between having a good life (material welfare and standards of living), living a good life (values and ideals), and locating one's life (experience and subjectivity)*". According to (White, 2007) the having concept refers to child assessed to the external environmental and it includes non-feeling features of a person's life, as concepts like economic poverty indicators such as income per capita, income poverty, and income inequality are included. According to (Sen, 2002) living concept refers to the expansion of people capabilities to lead the kind of lives they need to achieve and concepts like what people

motive that might be able to do. As to (Gasper, 2007) locating concept as understanding to the feeling and/ or decision of the person on their wellbeing to be as they need to maintain, complicated ideas are bound up with another issue on the degree on identifying the constitutes human happiness and to dig out the path to good live.

According to (Andy, S 2010) well-being approach is about positives. It is more respectful as it is based on what people and children can do/be/feel, rather than deficits in what they can do/be/feel. (Grantham-McGregor et al. 2007) argued that child well-being and vulnerability are the different sides of the same coin. From a child rights direction well-being can be defined as the understanding of children's rights and the fulfillment of their basic needs for every child to ensure their dream came true. But the degree to which this can be achieved will realize the positive outcomes of child, whereas negative results and vulnerability gives to the denial of children's rights. One influential estimate suggests 200 million children under five years are not fulfilling their developmental potential. well-being is used more as an umbrella term to encompass specific concepts and indicators such as 'psychosocial adjustment', 'positive self-concept', "environmental relationships", 'nutritional status' or 'educational achievement'.(Laura Comfield, 2008).

According to UNICEF's 'State of the World's Children' report (2007), there are 2.2 billion people aged less than 18 years and most of them are living in poverty. As (child wellbeing in Africa,) try to show the primary care givers of child wellbeing on the views, perceptions and practices are families that determine the way they should have to treat and care for their children, the second importance next to their family for child are communities and traditions in which they grow up. Perhaps the most enduring feature of Africa's wellbeing regime is the decisive role played by these actors. These actors have withstood the test of time in their credibility as guard of human. Wellbeing and security, long before formal states emerged. In many African cultures regard human wellbeing as a result of an extension to that of child wellbeing, and therefore there must a unique and privileged position should be given to children's. As (Evans 1993, 22 cited in Luzze 2002) try to express child is seen as a means of income generating and as divine that solves a complex social problems of the family and even to the community and event

these is the believe but in same part of Africa the material being that needed for the child to be handled with for their great care are not enough.

2.1.3. Types of wellbeing

Child wellbeing is also different between adult and children. The difference between adult and child poverty experiences is a key to both advocating greater focus on and understanding of child poverty and well-being (Andy. S, 2010). And a decent standard of living is measured by the un-weighted average of people without access to an improved water source and the proportion of children under age 5 who are underweight for their age (UNDP, 2008). Children have differing needs, wants and capacities depending on the stage of childhood (e.g. infancy, early childhood, middle childhood and adolescence) and the meaning of 'childhood' itself is defined by the prevailing context and culture. (Andy, S 2010) childhood poverty and well-being are also more intensely 'relational' in nature because for children there is greater reliance on 'others' for care and nurture; (typically adults or older children) which means constrained autonomy and agency.

Children are more likely to be poor in the sense that they make up a disproportionate number of the total number of poor (Gordon et al., 2005). Further, the long-run impacts of poverty experienced during childhood are well documented (Bird, 2007). There are also numerous areas in which child poverty is distinct to adult poverty and well-being because children's needs and capabilities differ not only from adults but also from other children according to their age (Moore and Lippman, 2005).

Children and adults differ significantly in society. Children have smaller worlds, fewer more intense relationships (Jack, 2006; Jordan, 2006), less maturity and strength (Axford, 2008) and different thought patterns, concerns, experiences and aspirations (Bradshaw et al, 2006). Therefore, the literature suggests some alternative indicators to those used for measuring adult wellbeing are necessary, for example, school achievement, school enjoyment and family structure. There is an overlap in a number of the indicators used for measuring adult and child wellbeing, such as: child poverty/income; employment and so on. The difference lies in the interpretation and

weighting of these indicators. For example, Jordan (2006) using Layard's 2005 work, highlighted a number of traditionally used measures for adult wellbeing. These included work-life balance, less mobility, less performance related pay and more family friendly work environments. He argued that although these are of obvious importance and relevance to children, the vast majority relate primarily to the adult world and only affect children indirectly

2.1.4. Indicators of child wellbeing

Measurements of the indicator of child wellbeing across the globe are framed around the following three basic starting points for having clear understanding child wellbeing. This child wellbeing index had been used for regional comparison of wellbeing in their countries. Currently, there are two main types of indicators being used to measure children wellbeing. They are objective (observable facts) and subjective measures (the person's valuation of those facts). Distinction is also made between positive (success in school; family support) and negative (neglect, abuse) aspects of a child's life and the importance of longitudinal (Moore and Vandivere, 2007) and personal development measures.

A. EU Child Well-being Index

Derived from the recognition that too little attention is paid to the children's wellbeing in Europe, Bradshaw et al. (2006) constructed a child well-being index to compare the 25 EU Member States. Based on the CRC and other studies on the multidimensional nature of poverty, they formulated eight different clusters. Conditions in these clusters are thought to have a strong impact on children's lives and well-being.

The clusters are as follows:

1. Material situation;
2. Housing;
3. Health;
4. Subjective well-being;
5. Education;
6. Children's relationships;

7. Civic participation;
8. Risk and safety.

Due to the acknowledgement of the importance of multiple dimensions for the assessment of children's well-being, the measure can be placed among the multidimensional child poverty approaches.

B. Use of the EU Child Well-being Index

This specific index was used was developed by (Richardson, Hoelscher and Bradshaw, 2007). The index was constructed along the same lines as the EU index, using the structure of cluster, domains and separate indicators and aggregate these accordingly. To fit the context of this specific region, the clusters, domains and indicators were adjusted, giving the following list of indicators:

1. Material situation
2. Housing
3. Health
4. Education
5. Personal and social well-being
6. Family forms and care
7. Risk and safety

C. The US Child and Youth Well-being Index (CWI)

The US Child and Youth Well-being Index (CWI) was developed by Land et al. (2001) to answer the question how well children and youths are faring in America. The index is designed to consider changes in child and youth well-being over time for specific demographic and geographical groups. The underlying concept used for the construction of the index is based on the assessment of the quality of life, including objective as well subjective measures of well-being. Land et al. (2001) capture child well-being in seven different domains of life. Although these domains were originally designed to represent quality of life areas for the entire population, they are considered

to capture the majority of areas of well-being for children. These domains include the following:

1. Material well-being;
2. Health;
3. Safety;
4. Productive activity;
5. Place in community;
6. Intimacy;

2.1.5.

2.1.6. Conceptual frame work of child well-being in Ethiopia

The data gathered on child poverty or/and child wellbeing was in the five regions of Ethiopia Addis Ababa, Amhara, Oromia, SNNPRs and Tigray. The data was collected by young lives to measure the trend of MDG in Ethiopia. The initial search for indicators from the data collected 1601 indicators which are relevant to child wellbeing. First there was an organization of the variables in to grouping to their respective clusters, and then a selection of the domains was made of the most representative indicator to domains within these clusters. This was a primary prevailing for section indicators that best represent the domain. The best represented ingredient to cluster and domain of the concept of child wellbeing was formed. The data use as far as possible the child as the unit of analysis except for the young cohort group family or care givers were used because they are so young. The data used for the study from the whole country or the sample surveyed regions was form the same source for all variables on the ground because a data from different sources may risk comparability. Some perfectly satisfactory indicators that should had to include in the cluster risk and safety like whether a child had experience to cigarette smoking, darkness, cannabis, inhalants, teenage pregnancy, children who practiced sexual intercourse and use condom were excluded because they were not available in the young lives data and the children were not matured enough to participate in such activity. In this research the sample are tended to use a 75 per cent test and representativeness of the total population because the sample surveyed regions holds 86.3% of the total population (CSA, 2007) therefore

it is used a variable which is available for more than 80% per cent of the countries coverage.

Child wellbeing indicators and measurements in Ethiopia are framed and conceptualized in this paper from EU Child Well-being Index developed by Bradshaw et al. (2006) and (Land et al. 2001).

1. Health
2. Education
3. Material situation
4. Housing and environment
5. Relationship
6. Subjective wellbeing
7. Risk

The seven cluster of child wellbeing in this paper and the domains that constitute and the variables that form the domains are listed in appendix.

The seven cluster of child wellbeing in Ethiopia
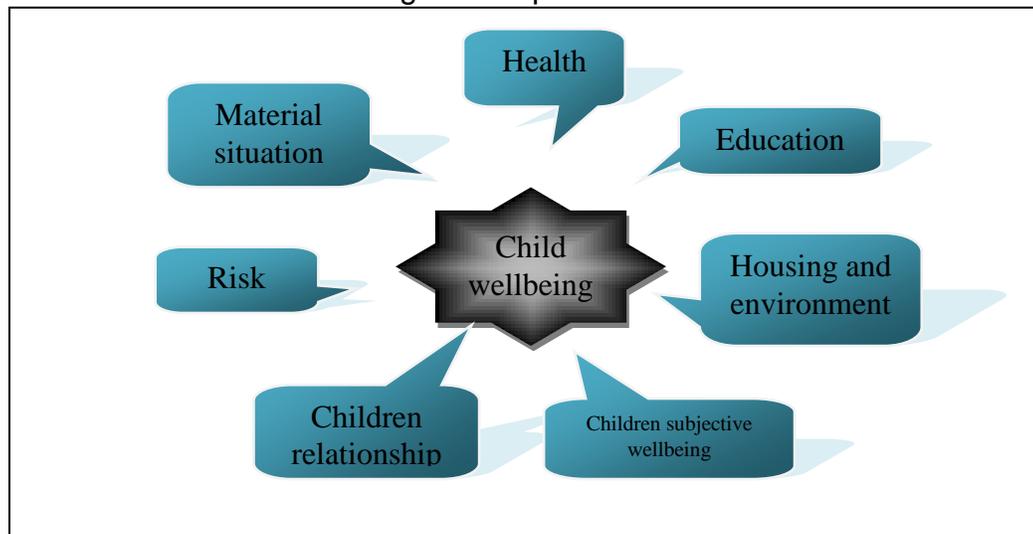
2.2. Empirical literature

2.2.1. Studies in other countries

For measuring child wellbeing in 25 European countries based up on level of achievement that Cyprus, the Netherlands, Sweden and Denmark are at the top of the league table of child well-being. The Slovak Republic, Latvia, Estonia and Lithuania are at the bottom of the league table of child well-being. Germany, Ireland, France, Malta, Italy, Austria, Luxembourg, Poland, Greece at the bottom of league table of child wellbeing (Bradshow, 2006.p.60).

Child wellbeing for five English speaking countries of child and youth wellbeing across all domains and all indicators was studied. Canada was ranked the first in family economic wellbeing, social relationships, educational attainment and health but second in educational attainment and third in safety and emotional wellbeing. Australia ranked in the first in health, second in family economic wellbeing, third in health and educational attainment /community connectedness. United States ranked first in educational attainment /community, second in family economic wellbeing, safety/ behavior, and emotional wellbeing. New Zealand ranked first in education, second in family economic wellbeing, third in educational attainment /community, fourth in health and fifth in safety and emotional wellbeing. United Kingdom ranked first in emotional wellbeing, second in health, fourth in social relationships, safety and educational attainment and fifth in educational attainment /community. According to average rank across all indicators and across all domains united kingdom, new Zealand, Australia and Canada are ranked according to their respective rank from first to fifth (Mather et al, 2007 P:10).

As (Land, 2007 P: 13) testing the validity of the kids count state level index for child wellbeing in United States based on 25 item index and kids count index. Ranking for state on 25 item index found that Minnesota, New Hampshire, Utah, Connecticut and New Jersey were ranked form the first to fifth respectively. And Arizona, Arkansas, Nevada, Louisiana, New Mexico and Mississippi were ranked for the last 5 regions in United States. Based on the kids count index New Hampshire, Vermont, Connecticut,

Minnesota and Iowa ranked from the first to fifth respectively and the last six are Arkansas, Texas, South Carolina, New Mexico and Louisiana and Mississippi respectively.

2.2.2. Studies in Ethiopia

Ethiopia is adjudged as one of the poorest countries of the World, with very poor performance in the Human Development Indicators (HDI). As at 2005 the HDI for Ethiopia was 0.406, which gives the country a rank of 169th out of 177 countries and the Human Poverty Index (HPI-1) value of 54.9 for Ethiopia, ranks 105th among 108 developing countries for which the index has been calculated (Ajala O.A, 2008)

The general wellbeing in Ethiopia understood as (Camfield, L, 2006 P.10) argued were having a large size of farmland, livestock (including oxen), access to fertiliser and agricultural equipment, and being able to feed your family throughout the year. In order to grasp and have general understanding on the overall child wellbeing in Ethiopia some of the following data shows the trend; the number of students in primary school in million 11.44, Gross Primary Enrolment (79.8%), Pre-natal care coverage (42%), Infant mortality rate 77/1,000, Under five mortality rate 123/1,000, Diphtheria Pertusis and Tetanus (DPT3) coverage (50%), Measles vaccination(61%), wasting(weight-for-height) is a reflection of recent malnutrition, the prevalence of wasting at country level is about 8%, Height-for-age, or stunting prevalence is much higher among rural children (40%) than urban (30%) (PASDEP, 2005). Poverty is among the greatest threats to childhood today, over half the children in the developing world still live without the basic service, protection that are critical for their survival and development Conventions of the right of children together with basic needs (CRC, 2009).

Being in good health was a source of pleasure for people in Ethiopia as (Camfield, L, 2006 P. 17) describe the happiness of the family due to a good health will become a good status to the wellbeing of children's. However, complication or lack of access to health facilities, which contributes to high child morbidity and mortality for instance, the proportion of women who gave birth with the help of skilled antenatal was only 57 per

cent for the 2000-2006 periods (UNICEF 2007b). Percentage of under-fives with suspected pneumonia not taken to an appropriate health provider, 2000-2006, in Ethiopia is 81%. The amount and quality of available food is a basic factor not just for survival, but for good health. About 60 per cent of under-five mortality in some parts of Africa is attributable to malnutrition (African Union 2007b), and those undernourished children that survive to adulthood have increased risk of heart disease, diabetes and renal damage. Malnutrition affects growth and has a direct impact on labour productivity. More encouraging, however, is the fact that child malnutrition has steadily declined in Africa, to 28 per cent in 2006 (WHO 2007). There are interesting variations in social relationship all over the world. As (Camfield, Laura and Copestake, James, 2009) argued that in Ethiopia the two main priorities are how people feel about their lives or engage with others

As (Sen, 2002) argued education is not linear but the variables holding it are linear. Child wellbeing holds the issue of educational attainment related to other indicator of child wellbeing and our overall index. The Ethiopian Ministry of Education (MOE) prepared five-year (2005/2006–2010/2011) Programme of Educational Action Plan in 2005 with the vision that 'all school-age children get access to quality primary education. In the educational wellbeing cluster of our index we included domains covering educational attainment, educational participation with its educational outcomes. This domain includes data on reading literacy, mathematical literacy and science literacy

In 2002 the EPRDF introduced its first donor supported poverty reduction strategy, the sustainable development poverty reduction program (SDPRP). Between 2002 and 2005 policies and program related too human development, rural development; a revised food security strategy, decentralization and capacity building were introduced. In 2005 the second poverty reduction strategy come into being - the plan for accelerated and sustained development to end poverty 2005-2010 (PASDEP). This took forward the SDPRP program to achieve the MDGs by intensifying spectral program in health, education, and infrastructure, PASDEP conceptualize issues specially related education for all children, all aged children's should attend first school, immunization, vaccination for polio.

CHAPTER THREE

MATERIAL AND METHODS

3.1. Site Selection and Description
3.1.1. Background of the Study Area

Ethiopia is situated in horn of Africa between 3° 14' N latitude and 33° 48' E Longitude with the, mosaic of people and diverse cultures, highest economic activity and beautiful landscape. The total area of the country is around 1.1 million square kilometers (FMH, 2005 p: 6), the country shares boarders with Eritrea in the North, in the East with Djibouti, in West with the Sudan and in the South with Kenya and Somalia in South East.

The topography of the country is specified by different structure a prominent feature of the country is its rugged topography, comprising alpine mountains, flat-topped tablelands, deep canyons and rolling plains.

Ethiopia is a Federal Democratic Republic. It has a bicameral parliament: the House of Representatives, whose members are elected from the regions, zones, Woredas (districts) and Kebeles, and the House of Federation, whose members are designated from their respective regions (FMH, 2005 p:6). Ethiopia has a federal system of government consisting of ethnic based nine regional states and two city administrations. Regional states have considerable authority and responsibility which they exercise and discharge through councils at regional, zonal (in some cases), wereda and kebele levels. From which Oromiay, Amhara and SNNP (southern nations, and nationalities and people's region) account for more than 80 percent of the total population. In (2008), there are over 720 weredas and close to 18,000 kebeles.

Ethiopia has an estimated population of 74 million (2007), with about 86 percent living in rural areas. In respect to age structure, those under 15 years old constitute 48%; those

between 15–64 years old make up 49% (CSA 2007 p: 10). The country is characterized by its ethnic and geographic diversity. About 70 percent of highly variable seizes are spread all over the country. The two largest ethnic groups are the Oromo (36.7 percent) and the Amhara (23.3 per cent), followed by Tigray (6 per cent) and the Somali (6 per cent), SNNP (20.4 percent). The country is divided into nine ethnic based regions and two cites. The distribution of Ethiopia population generally is related to attitude, climate and soil. (FMH, 2005 p: 7)The average population density is 52.2 per square km, with great variation among regions. Population densities are highest in the highland regions and lowest in the eastern and southern lowlands Therefore physical factors explain the concentration of population in the highlands.

The majority of the population, about 85%, live in the highlands of the three largest regions (Amhara, Oromia, Southern Nations, Nationalities and Peoples), and Tigray. Other people are living in the relatively lowland regions of Afar, Somali, Benshangul – Gumuz, and Gambella. About 80 different languages of Semitic, Cushitic, Omotic, and Nilo-Saharan origin are spoken in the country. With regard to religion, Ethiopians are Orthodox Christians, Muslims, Protestant Christians and followers of other faiths

The central area of Ethiopia is on a high plateau, with elevations that vary from 1800 to 3000 meters above sea level and some mountains reaching 5620 meters (Mol 1960). Due to its topography, Ethiopia has a variety of agro ecological condition between and within regions and this, in turn, conditions the economic activities, form farming in the highlands to herding in the lowlands.

Agriculture is the main economic activity, accounting for 54 per cent of the gross domestic product (GDP) and employing about 80 percent of the population (CSA 2006). Ethiopia is one of the least developed countries in the world with a human development index (HDI) rank of 170 (out of 177 countries) and with a gross national income (GNI) per capita of us $110 in 2004 (World Bank 2006).

As (MoE, 2008) education policy in Ethiopia was formulated 1995 for the successful implantation of policy and its stratifies a five year Education Sector Development Program (ESDP I) was aimed to improve quality of education, expand , expand access with special emphasis on primary education in rural area as well as the promotion of education for girls. The second ESDP II has also been prepared as a continuation of ESDP I for the period 2003-05. 2015 was a year set as for achieving good quality of education. Currently ESDP III is currently being implemented and it targets the achievement of Universal Primary Education (UPE) in accordance with Ethiopia's international commitment to the Education For All (EFA) BY 2015MOE devised to improve coverage of primary education as measured by enrollment in grade 1-8 expand rapidly at an average annual rate of growth of 11.3% during 1998/999-2002/03 (MOE, 2004).

Regional map of Ethiopia

http://www.google.com.et/search?q=regional+map
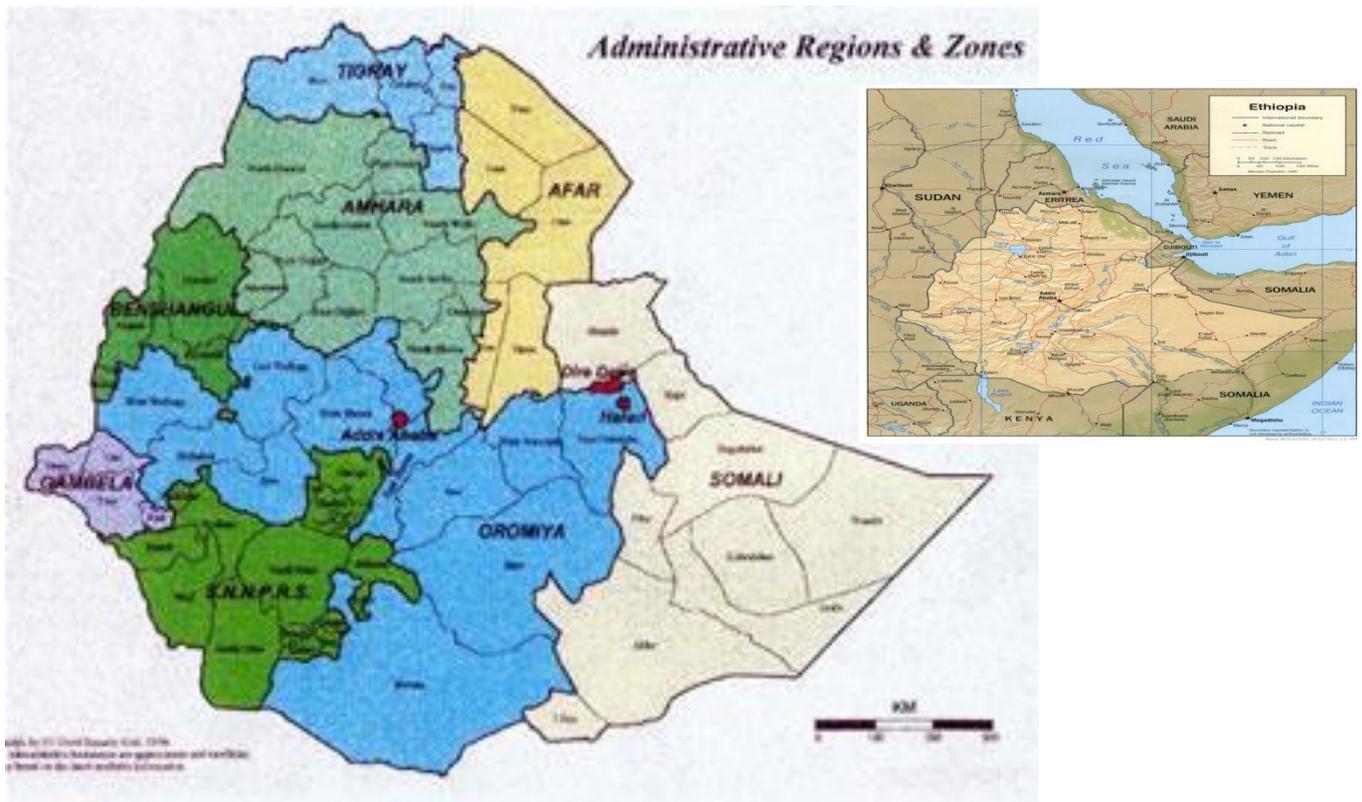
3.2. Data sources

Data type used in this research are both of qualitative and quantitative for analyzing and measuring child wellbeing. The quantitative and qualitative data were collected at the individual, household and community level. The quantitative data gathered through comprehensive survey that include interviews with the children themselves as soon as they are old enough to participate directly, with their parents and caregivers, with key community members. The data is collected in each round on household's economic circumstances, livelihoods, assets, parent education, and the extent to which children and their parents and caregivers use services such as healthcare, preschool care or education and social capital. The data collected creates a detailed picture of children experiences and wellbeing linked to their households and communities and set within national context.

In round 2 (2006) children were check whether they were died, migrated and untraceable children. But from the total sample of 2999 children in round 1 (2002), only few children were not surveyed 2892 children were surveyed in round 2 that are from the original data 96.43 percent of the original sample or 95.65% of the young cohort and 98% of the old cohort. The death rate since round 1 is 2.23% for total sample (3.05% for the young cohort and 0.6% for the older cohort). Therefore, the total attrition rate is 1.33% (1.3% of the younger and 1.4% of the older cohort). Therefore, the study used cross sectional data that was collected in 2002 and 2006 for comparison of child wellbeing in the selected regions at different year.

3.2.1. Data gathering tools

The young live is designed as a panel study that follow 3000 children in each country over 15 years. It is a long term international research project investigating the changing nature of childhood poverty in developing countries Ethiopia, Peru, India and Vietnam. The 15 years was the time frame set by the UN to assess progress to words the Millennium Development Goals. The sample consists of two cohorts: a younger cohort of 2000 children who were aged between 6 and 18 months when the first survey round

was carried out in (2002) and an old cohort of 1000 children then aged between 7.5 and 8.5.

The data was collected by interview, group work and case studies with children, their parents, teachers, community representatives and others. In each round, children caregiver was interviewed as well as the older cohort children (the younger children were still too young in 2006, being aged 5). The height and weight of each child was measured and a community level questionnaire was completed for each sentinel site to give contextual information about the children lives and facilities available to them.

Young lives sampling strategy and response rate

The first young lives survey was carried out in 2002 when the Ethiopia team selected a cohort of 2000 aged 6 to 18 months referred as young cohort and an older cohort of 1000 children aged 7.5-8.5 using a sentinel site sampling approach. Twenty sentinel sites were selected across the country using a purposive strategy, and within each site households were randomly sampled until 100 and 50 children of the appropriate ages were found.

A purposive methodology was followed in the first stage to ensure that the sample had a pro poor bias and to protect the sustainability of the project over the next 15 years.
1. woreda with food deficiency status were over sampled.
2. The profile of the selected districts/sited was intended as much as possible to capture Ethiopia diversity across regions and ethnicities, in both urban and rural areas.
3. Sites were chosen which were relatively more accessible in order to make the cost of tracking children in the future more manageable and reduce the probability of attrition in remote areas

Based on these criteria the selection procedure followed four stages

The sampling methodology adopted for Ethiopia is known as sentinel site surveillance system. It consists of a multi-stage sampling procedure, whereby households within sentinel site were selected randomly, while sentinel sites were chosen on basis of a number of predetermined criteria, informed by the objectives of the study. Specifically, in the Ethiopian context sentinel sites have been selected so as to ensure that (i) the cultural and geographic diversity of the country is reflected in the sample, (ii) the urban and rural differences are captured, and (iii) the pro-poor bias of the project is fulfilled.

1. The first stage was to select one city administration Addis Ababa and four states namely Amhara, Oromia, SNNPRs and Tigray form Ethiopia's 11 administrative regions in order to ensure national coverage. The 5 regions selected account for more than 85 percent of Ethiopia's population.

2. Next, between three and 5 district woreds were selected in each region to represent the following groups of population; rural poor, urban poor, and relatively less poor for both urban and rural households. Among the food deficit district, three woredas with the highest proportion and one district with the lowest proportion of people who need food aid were selected

3. At least one Peasant Association PA in rural areas or kebelle in urban areas. The lowest level of administrative structure in the country in each district was picked. The selected PA or kebelle could either be considered as a sentinel site in its own right or as a centre for creating a sentinel site along with adjacent PAs or kebelles depending on the number of eligible households nearby.

4. Finally, 100 children who were born between April 2001 and June 2002 and 5o children who were born between April 1994 and June 1995 were selected in each sentinel site using simple random sampling. There was no one response (refused by caregivers to participate) reported. This is typical of Ethiopia surveys, where households no not refuse during the first round data collection.

The study used targeted children aged up to 18 years old. The study was used a two-stage sampling procedure involving a purposive selection of four regions. It was followed by a random selection of 20 sites form the country. Therefore the data collected by the young live project was a longitudinal and the survey was carried out in 2002 when the team selected a cohort of 2000 children aged 6-18 months (referred as young cohort) and an older cohort of 1000 children aged 7.5-8.5 years (referred to as young cohort) and using a sentinel site sampling approach. In general the children in young lives sample are poorer than the average Ethiopia households and children.

The data collected was investigated whether it was consistent with indicators from nationally representative samples. This by testing form similarity of the means of set of individual variables and other moments of the distribution form the young lives and the comparison samples. The statistical test chosen depends on characteristics of the variable (whether it is discrete or continuous and if discrete, whether it is dichotomy or non dichotomy), on the moment of distribution that are compared, and on the objectives of the comparison.

3.3. Data analysis

For analyzing the data a number of statistical tools were used in this study. The STATA program version 10 was used to analyze the data. For analyzing the variables each was standardized by Z score to look by how much the variable was deviated from the national mean

3.3.1. Method of Data Analysis

Quantitative analysis techniques have been employed to analyze the data collected from the young lives project. The study used statistical tools including descriptive statistics as well correlation techniques among the variables.

The descriptive analysis: descriptive analysis such as percentage, average and standard deviation as measure of central tendencies and dispersions was used to make analysis in the form of figures.

Child wellbeing measurements or indicators are many. There are different methods of explaining the extent of child wellbeing at region and national level. Among the methods of measuring child wellbeing was used by descriptive method and ranking of the regions.

The preferable method to estimate child wellbeing is by indentifying the variables that was collected through out of the country and bring them to one domain. Through identifying the indicators or the variables and ranking them their coverage among the regions. But since the nature of child wellbeing indicators are implemented for comparison therefore, the variables should have to be standardized to look by how much each variable is deviated from the national mean.

3.3.2. Measurement of child wellbeing

To examine child wellbeing, we need several and multidimensional variables that constitute the index wellbeing. Child wellbeing has most commonly been assessed the level of wellbeing of children and to rank at between nation and among region with in a nation. In this paper for the study Z score of each variable was adopted for analysis.

Each of the seven clusters contains a number of component domains and indicators. The criteria aspire for including these indicators was that they should be related to the domain; measure a major feature of well-being. Child wellbeing is conceptualized in to two broad categories that are economic and non economic or social indicators. For indentifying the economic aspect of child material measures was used that are relative poverty as a major index measuring child material situation. Economic indicators are not the only measures for child wellbeing. Social indices are also added to these general measurements. Therefore to measure and analyze child wellbeing the indicators are classified in to two economic and social to understand on the wellbeing of children.

The variables or indicators are summarized in to domains and further the domains are summarized in to cluster and the seven clusters are averaged in to a single term that is child wellbeing. Each Z score of a variables of the domain was averaged to form the domain and the average of each domains confined by the Z score also averaged to form

one cluster. At last each of the clusters Z score is averaged to form the general term that is wellbeing.

Z score is a common statistical way of standardizing data on one scale so comparison can take place using a Z score. Z score is telling us how mach a sample deviates from the normal mean distribution or specific point.

$$z=(x- \mu)/ \sigma$$

Since Z score gives equal weight to all variables to come the general conclusion but all variables may not affect the domain equally, therefore to give more emphasis on the variables that highly affect the domain correlation among the variables will address. Child wellbeing was correlate with the cluster to identify which of the seven clusters (material situation, access to health, educational, relationship to family and peers, housing and environment and behaviors and risks of children affects wellbeing more.

A correlation among the domain was used to identify which of the domain affects the cluster more. The same is true to correlation of variables among each other to identify which affects more. Please refer to appendix to see the relationship among the variable, domain, cluster and wellbeing.

Formally, the calculation of z-scores can be denoted as follows:
$$z=(x- \mu)/ \sigma$$
$$Z\text{-score}_i=(x_i- x)/ \sigma$$

Where x_i represents the raw indicator value, x represents the average indicator value and σ stands for the standard deviation. In other words, the use of z-scores converts indicators into a common scale with a mean of zero and standard deviation of one. The domain index averages the z-scores for those indicators within a given domain.

$$\mathbf{DId} = \sum_{i=1}^{d} \frac{z-zcorei}{d}$$

Where *DId* stands for the domain index and *d* is the number of indicators per domain.

The overall Ethiopia CWI is constructed by averaging the cluster z-scores over all Domains

$$ETHCWI = \sum_{i=1}^{D} \frac{DId}{D}$$

Where *ETH* stands for the overall Ethiopian Child Well-being Index and *D* represents all domains that are included in the CWI.

CHAPTER FOUR

RESULT AND DISCUSSION

In this paper child wellbeing is conceptualized in to seven cluster, domains and variables. To form the index child wellbeing each variables were standardized by using Z score. The Z score value of each variable help us to know by how much the variable was deviated from the national mean. Therefore, each standardized variables were averaged to form the domain. And each domain was averaged to form the clusters that compel them. At last the entire clusters were averaged and form the index child wellbeing. The clusters in this paper are basically material situation, health, education, house and environment, relationship, subjective wellbeing and risk and safety.

1. Child health

Health of Children is the main for their further cognitive development and their further economic development status. Child health is represented by the following domains like health at birth, immunization, health behavior, breastfeeding, and nutrition.

1.1. Health at birth

Healthy child at birth determines further positive physical development in addition to different improvement in their thinking and conscious mental process it provides. Health at birth for round one is determined by the variable birth weight of children. A born child having a weight that is greater than or equal to 2500 grams refers as health birth but, if it is less than 2.5 kg that child is below health birth weight. In Ethiopia Children who born above 2.5 kg were 87.34%. Form these percentages of children who live in urban and born above 2.5 kg were 92.6% but in rural areas hold 73.8%. Relative to their sex, male children born above 2.5kg were 88.9% but female 84.8%. Birth weight according to Z score value at regional distribution was in Addis Ababa number of children who born above 2.5kg were 91.54%, in Amhara 99%, Oromia 57.14%, and SNNPRs 83.64% and in Tigray 96.97%.

Figure 1
Birth weight R1

Birth Weight
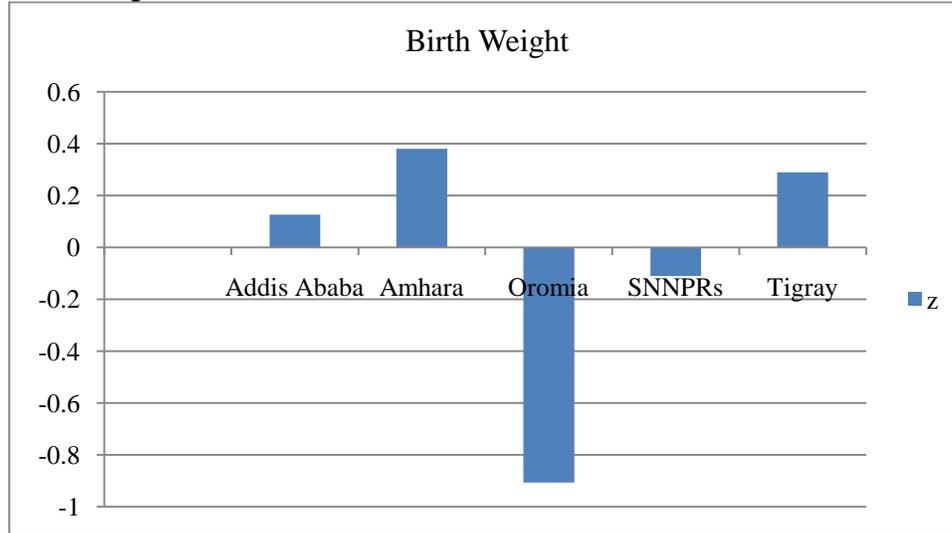
1.2. Health behavior

Obesity and overweight pose a major risk for serious diet-related chronic diseases, including type2 diabetes, cardiovascular disease, hypertension and stroke, and certain forms of cancer (WHO, 2006). In a study by (Zeleke. A, p: 6) overweight in children and adolescents are generally caused by lack of physical activity, unhealthy eating patterns, or genetics and life style.

Children who were not overweight according to their Z score value of BMI in the Ethiopia were 46.9%. According urban children who were not overweight holds 53.9% but in rural only 42.5%. Relative to their sex, male children not weighted according to BMI were 51.4% but female 41.9%. At regional level based up on the z score value of children who were not overweight according to their BMI in Addis Ababa 58.77%, in Amhara 45.39%, Oromia 40.41%, in SNNPRs 44.9% and in Tigray 48.17%.

On the other hand in the second round children who were not overweight according to their BMI in Ethiopia holds 48.3%. From the national level children those who live in urban and were not overweight 55.4% but rural children 43.3%. Relative to their sex, male children not overweighed according to BMI were 47.4% but female 49%. Regional

comparison of children according to Z score value of this variable in Addis Ababa was 63.3%, in Amhara 27%, in Oromia 57%, in SNNPRs 59% and in Tigray 35%.

Figure 2
Overweight BMI
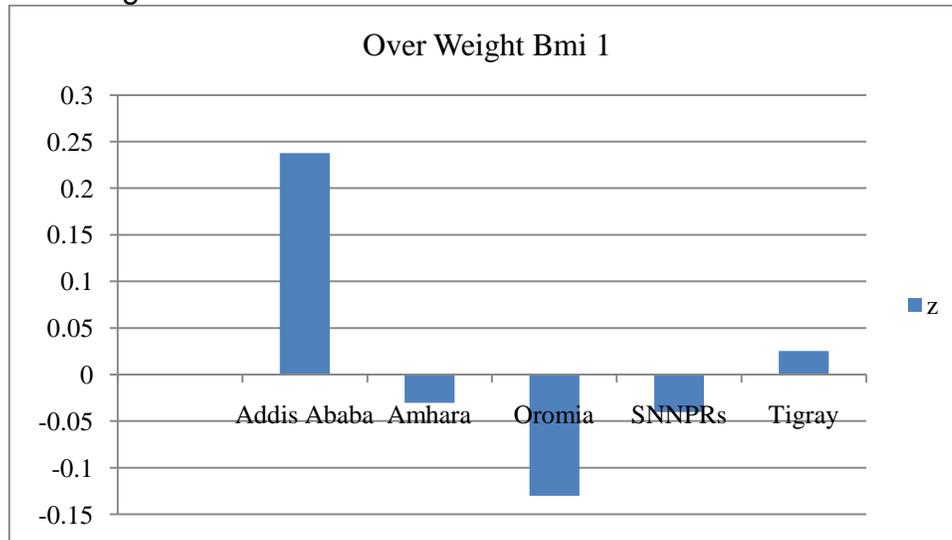
Over Weight Bmi 1

Figure 3
Overweight BMI


Overweight Bmi 2
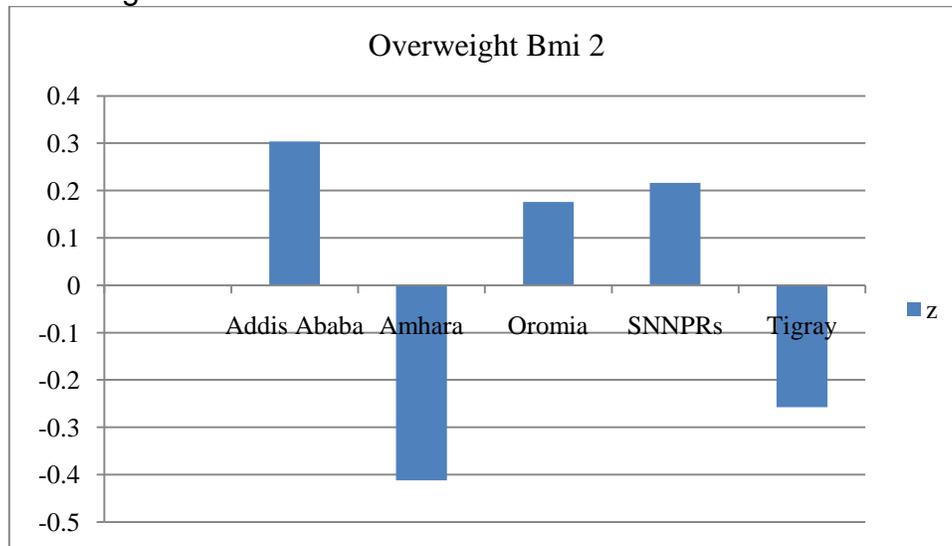
1.3. Immunization

Immunization prevents children from different disease since it is known for preventive measures and health promotion in early childhood. As (Negussu, A. 2006.p:1) argued immunization is the most cost effective intervention in public health and it is one of the indicators of development in most developing countries namely, tuberculosis, measles,

poliomyelitis, diphtheria and whooping cough. Lower vaccine coverage threatens drove immunity so that the risk of an outbreak and spread of infectious diseases rises. (Mekonen, et al, 2000 p: 413) full immunization package includes when a child received three doses of OPV and DPT and one dose of Measles and BCG. As (Endrias, Z.2010. p: 11) BCG is the only vaccination available against TB.

Round 1

a. BCG vaccination is one of the vaccinations that are given to children against TB. BCG vaccination in national coverage was 73.4%. Form the national coverage those children who live in urban get vaccinated against BCG was 82.6% but in rural only 68.5% were vaccinated. Relative to their sex, male children vaccinated against BCG were 73.8% but female 73.1%. From regional point of view on Z score value of the variable, children who got BCG vaccination in Addis Ababa was 98.33 %, 82.66 % in Tigray however, children with low coverage was in Amhara 71.03 %, in SNNPRs 66.32 % and in Oromia 56.89 %

b. Measles vaccination coverage in the country was 58.2%. Measles Vaccination coverage relative to type site in the country was 64.2% for children who live in urban but rural children get vaccinated was 54.9%. Relative to their sex, male children vaccinated against measles were 60.3% but female were 55.85%. From regional point view children who were vaccinated against measles highest in 73% Addis Ababa, 81.95% in Tigray, however, the lowest coverage was 51.75% in SNNPRS, 46.82% in Oromia and 42% coverage in Amhara.

There is positive correlation between BCG and measles immunization (r= 0.47, p<0.00). Figure 4 depicts the coverage of immunization in the country by combined the variable that form a domain and it is the average Z score value of variable. Addis Ababa and Tigray shows high immunization coverage with the lowest coverage was in Oromia and Amhara.

Figure 4
Immunization by region R1
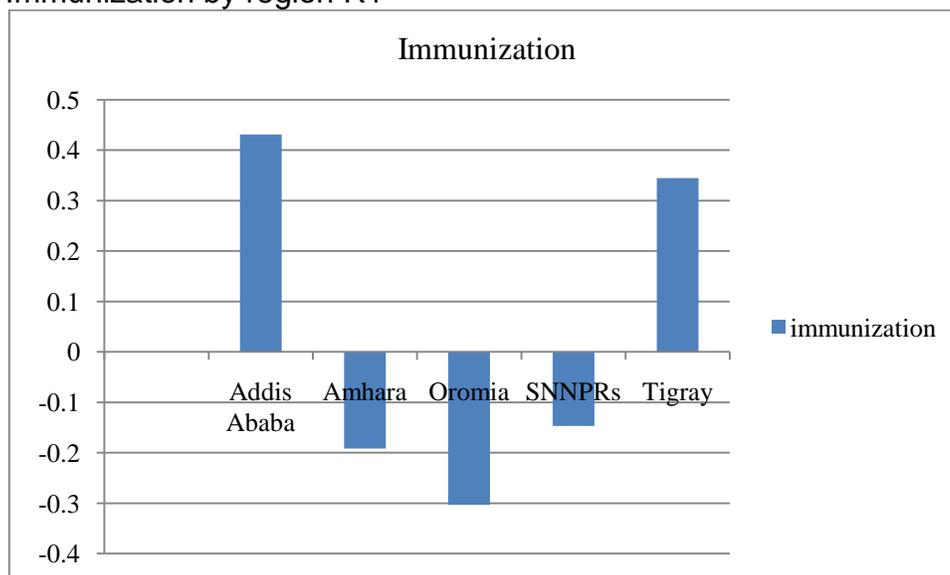
Round 2

a. BCG vaccination in national coverage was 90.7%. Form the national coverage those children who live in urban get vaccinated against BCG was 94.3% but in rural only 88.3% were vaccinated. Relative to their sex, male children vaccinated against BCG were 91.4% but female 90%. From regional point of view based up on the z score value of the variable children who got BCG vaccination in Addis Ababa was 98%, 93.5% in Tigray, in Amhara 92.6%, in Oromia 91.3% % however children with low coverage was in SNNPRs 81.4%.

b. Measles vaccination coverage in the country was 93.5%. Measles Vaccination coverage relative to type site in the country was 96.3% in urban but in rural 91.6%. Relative to their sex, male children vaccinated against measles were 93.6% but female 93.5%. From regional point view by the Z score value of the variable children who were vaccinated against measles was highest in Addis Ababa 97.83%, in Oromia 97%, in Amhara 95.96%, in Tigray 95% and lowest in SNNPRS 84.43%.

c. OPV (Polio) vaccination is a final dose in serious of immunization that can prevent polio. In Ethiopia the vaccination coverage against OPV holds 96.7%. Form this national percentage 99.1 % were in Oromia, 98.3% in Addis Ababa,

98.7 % in Amhara, 94.6% Tigray and 94% SNNPRs. Relative to type site vaccination coverage of OPV in the country for urban children was 98.6% but in rural 95.4%. In relation to their sex males vaccinated against OPV were 96.9% but females 96.5%.

d. DPT vaccination is a final dose in serious of immunization that can prevent diphtheria, pertussus, and tetanus. In Ethiopia the vaccination coverage against DPT was 93.63% percent. From the total the percentage Addis Ababa holds 98.8%, Amhara 96.56%, Oromia 98.17%, SNNP 83.54% and Tigray 94%. Children who live in urban get vaccinated against DPT was but in rural were. Male children who got vaccinated aginst DPT was 94.2% but females were 92.8%

There is positive correlation between BCG and measles immunization (r= 0.58, p<0.00), DPT and measles (r=.67, p<0.00), BCG and OPV immunization(r=.44, p<0.00), POV and measles immunization (r= 0.54, p<0.00), and BCG and OPV immunization (r= 0.59, p<0.00) moreover, there is strong positive correlation DPT and measles immunization (r= 0.74, p<0.00),

Figure 5 depicts the coverage of immunization in the country by combined the variable that form a domain and it is the average z core value of variable. Addis Ababa Oromia and Amhara show high immunization coverage with the lowest coverage SNNPRs and Tigray.

Figure 5
Immunization by region R2
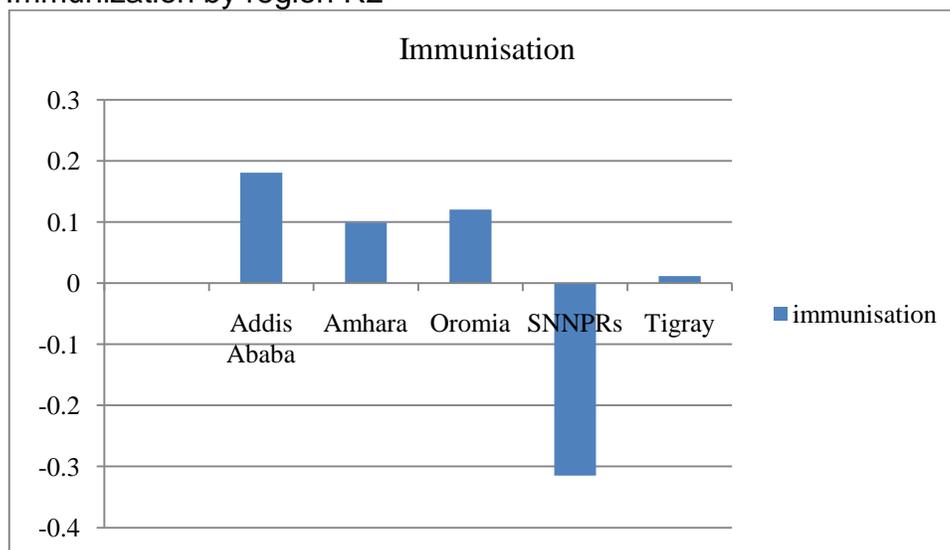
1.4. Nutrition

Level of children to their nutrition is determined by several indicators with regard to child health. According to a study by (LINKAGES/Ethiopia, 2009) many babies are born malnourished due to poor maternal nutrition before and during pregnancy. Maternal malnutrition increases the risk of stillbirths and newborn deaths, intrauterine growth restriction, low birth weight, preterm birth, and birth defects. Low birth weight babies are at increased risk of death in the neonatal period, and are more likely to become stunted and wasted children. Micronutrient deficiencies during pregnancy also have lasting effects on the child.

For a children to be stunted that is low height for age (HFA) is for those children HFA Z score <-2 are said to be stunted and. Percentage of children wasted that is low weight for height (WFH) is when WFH Z score <-2 are said to wasted. Percentage of children underweight that is low weight for age (WFA) is when WFA z score <-2 are said to be underweight. For a child said to be severely stunted, severely underweight and severely wasted Z score value should be <-3 (WHO).

The indicators for understanding child nutrition are whether a child is wasted severely wasted, underweight, severely underweight, stunted and severely stunted.

Round 1

a. Underweight refers to low weight for age. Children who are not underweight throughout the country an average was 66.59%. Form the national coverage those children who live in urban not underweight were 81.8% but in rural 57.9%. Relative to their sex, male children were 64.1% but female 69.3%. Form the average Z score value of the variables in Addis Ababa were 86%, in Amhara 62.07%, in Oromia 58.42%, in SNNPRS 62.42% and in Tigray 68.82%.According to (Michael, T. 2006) similarly, the prevalence of underweight is very high in that almost half of the children (44 percent) are underweight and 14.7 percent are severely underweight. This simply means that one out two Ethiopian children is either stunted or underweight.

b. Severely underweight refers to extremely low weight for age. On average children who are not severely underweight throughout the country holds 85.55 %. Based up on the average Z score value of the indicators in Addis Ababa was 95.67%, Amhara 85.17%, Oromia 79.89%, SNNPRs 82.80% and in Tigray 87.37%. In relation to type site those children live in urban not severely underweight were 93.7% but in rural 80.8%. In comparison to their sex males were 83.7% but females were 87.5%.

c. The measurement for a children height-for age measure (stunting) this is related to liner growth retardation or inability of a child to reach genetic potential in terms of height. Stunting measures long term measures of deprivation. Stunting has a strong relationship with mental function and mortality. Children who are not stunted in Ethiopia on average are 65%. Based up on the average Z score value children who were not stunted in Addis Ababa 78.06%, in Amhara 52.75 %, Oromia 61.27%, SNNPRs 68.86% and Tigray 66.94%. In comparison to type site urban children were 75.5% not stunted but rural children 59.5%. Relative to their sex males were 60.2% but females 70.7%. In 1999/2000 the prevalence of stunting, which is a reflection of long term malnutrition was 57% in Ethiopia (CSA, WMS 2004)

d. In Ethiopia children who are not severely stunted are almost 84.54%. Based up on the average Z score value of the indicator children in Addis Ababa who were not severely stunted account 91.37%, Amhara 81.59%, Oromia 81.70%, SNNPRs 82.63% and in Tigray 84.54%. Those children who live in urban not severely stunted were 90.9% but rural children account 81%. Male children not severely stunted were about 81.5% however, females 87.9%.

e. The measurement of a child weight for height (wasting) which is more sensitive to short term or seasonal variations in food availability. On average children who are not wasted throughout the country holds 79%. Based up the Z score value of this variable children in Addis Ababa 90.25% were not wasted, in Amhara 82.7%, in Oromia 73.57%, in SNNPRs 72.19% and in Tigray 81.99%. Urban children not wasted were relatively higher 88.4% than rural children 73.6%. Male children were 77.4% but females were 80.8%.

f. Not Severely wasted children in Ethiopia on average are 91.32%. But at regional level children not severely wasted in Addis Ababa was 98.19%, Amhara 94.12%, Oromia 91.28%, SNNPRs 83.44% and in Tigray 94.09%. Relative to rural urban children 97.2% and 87.9% were not wasted. According to their sex ratio males were 90.3% but females 92.3% not severely wasted.

There is significant positive correlation between Underweight and severely Underweight (r=0.58, p<0.00) and Stunting and severely Stunting (r=0.59, p<0.00) and wasted and severely wasted (r=-0.59, p<0.00). In Figure 6, the average Z score value of the above variables that form children nutrition level. In round 1 show that children in Addis Ababa was performing high followed by Tigray and regions Oromia and SNNPRS were performing less.

Figure 6
Z score Nutrition by region round1
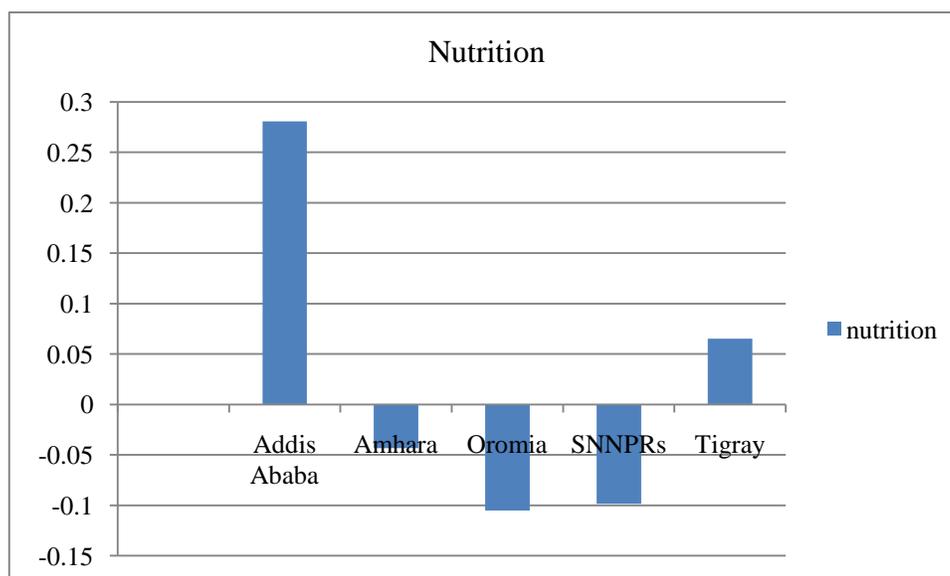
Round 2

A study by (MoFED, 2010) reported that in malnutrition, the percentage of Stunted Children declined from the 2004/05 level of 47 percent to 40.5 percent in 2005/06. Similarly, the percentage of wasted children declined from 8% to 5.9% in the same period. There is an improvement reduction in the current level of underweight children less than five years. The government aiming to achieve this goal developed National Nutrition Strategy (NNS); National Nutrition Program (NNP) focuses on immediate causes of malnutrition by supporting a basic package.

a. Children who are not underweight throughout the country an average is 76.22%. Accordingly children who live in urban were 83.7% but rural children 71.1%. Male children not underweight were 77.2% but females 75%. Based up on the average Z score value of this variable in Addis Ababa was 87.68%, in Amhara 68.77%, in Oromia 79.21%, in SNNPRS 76.05% and in Tigray 72.5%.

b. On average children who are not severely underweight throughout the country holds 95.97%. Relative to type site those children who live in urban were not severely underweight were 97.4% but in rural 94.9%. From the total population male were 95.4% however, female 96.5%. based up on Z score value of the

variable in Addis Ababa children who were not severely underweight 98.19%, in Amhara 94.49%, Oromia 97.11%, SNNPRs 94.7% and Tigray 96.23 %

c. Children who are not stunted in Ethiopia on average were 68.67%. Urban children who were not stunted 76.4% but rural children 63.3%. Accordingly males were 66.9% but female 70.5%. Form the Z score value of the variable children who live in Addis Ababa not stunted were 78.93%, in Amhara 68%, in Oromia 57.8%, SNNPRs 67.8% and Tigray 73.7%.

d. In Ethiopia children who are not severely stunted was 91.8%. Urban children were 95.6% not severely stunted but in rural 89.3%. Relative to sex males were 91.7% but female were 92%. Based up on the Z score value of the variable children in Addis Ababa who were not severely stunted 97.4%, Amhara 95.2%, Oromia 87.8%, SNNPRs 87.6% and Tigray holds 93.8%.

e. On average children who are not wasted throughout the country holds 97.4%. Urban children who were not wasted in the country was 99.2% but in rural 96.1%. Male children were not wasted 97% and female 97.7%. Based up Z score value of this variable in Addis Ababa 97.6% children were not wasted, Amhara 97.3%, Oromia 99.9%, SNNPRs 98.4% and Tigray 93.4%.

f. Not Severely wasted children in Ethiopia on average were 97.6%. Urban children who not severely wasted were 99.2% but in rural 96.5%. Relative to their sex males were 97.2% but female 97.9%. Based on the average Z score value of the variable at regional level in Addis Ababa 97.8% were not severely wasted, in Amhara 97.6%, Oromia 99.9%, SNNPRs 92.75% and Tigray 94.04%.

There is positive correlation between Underweight and severely Underweight (r= 0.37, p<0.00) and Stunting and severely Stunting (r= 0.48, p<0.00) and wasted and severely wasted (r=0.46, p<0.00). There is a negative correlation between wasted and Stunting (r= -0.04, p<0.00), between wasted and severely Stunting (r= -0.02, p<0.00) and wasted and Stunting (r= 0.046, p<0.00). Figure 7, show that the average Z score value of the above variables that form domain children nutrition. In round 2 children in Addis Ababa was performing high 13.4% above the national mean level and followed by oromia 1.2% above the national mean. But regions Amhara, Tigray and SNNPRS were performing

less than the average national mean. As a study by (FMH, 2005. p:20) shows that nutritional status varies greatly by region, with the highest rates of malnutrition being found in Tigray, Amhara and SNNP regions, and the lowest rates in the two urban regions, Addis Ababa and Dire Dawa

Figure 7
Z score Nutrition by region round2
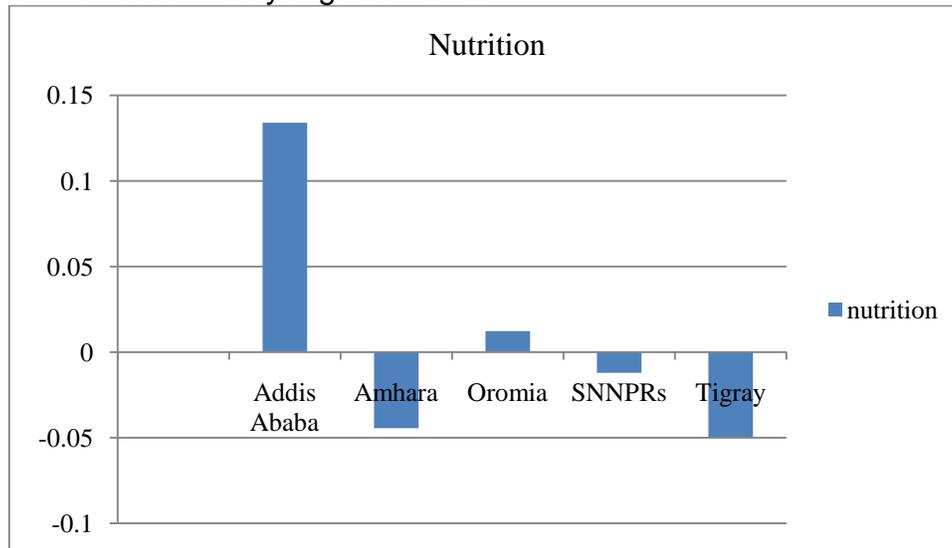
1.5. Breast feed

For a child to be healthy mother should breastfeed the child at list 6 months starting with in an hour of delivery and continuation of breastfeeding for at least 24 moths (FMH, 2005 p: 47). Based on first round data children who were breastfeed for at least 6 months throughout the country were 97.2%. On country base urban children were 92.2% but in rural 99.6%. Relative to their sex male children were 96.6% however, females 97.7%. The Z score value of the variable across the region in Addis Ababa was 87.27%, Amhara 99%, Oromia 97%, SNNPRs 98% and Tigray 99%. The 2005 Demographic Health Survey (DHS) reported that only 49 percent of infants less than 6 months old were exclusively breastfed. The 2004 Child Survival Strategy for Ethiopia estimates that breastfeeding could prevent 4 percent of child deaths. Poor complementary feeding practices also contribute to malnutrition. The DHS found that one-fourth of children between 9–11months of age were not receiving complementary foods. Those who were fed complementary foods received too few meals, and these

foods lacked critical micronutrients. (FMH, 2005 p: 11) Women continue to breastfeed for an extended period. At 24 months of age 72% are still breastfeeding and at 36 months 31% are still breastfeeding.

Figure 8
Z score breastfeed by region round1
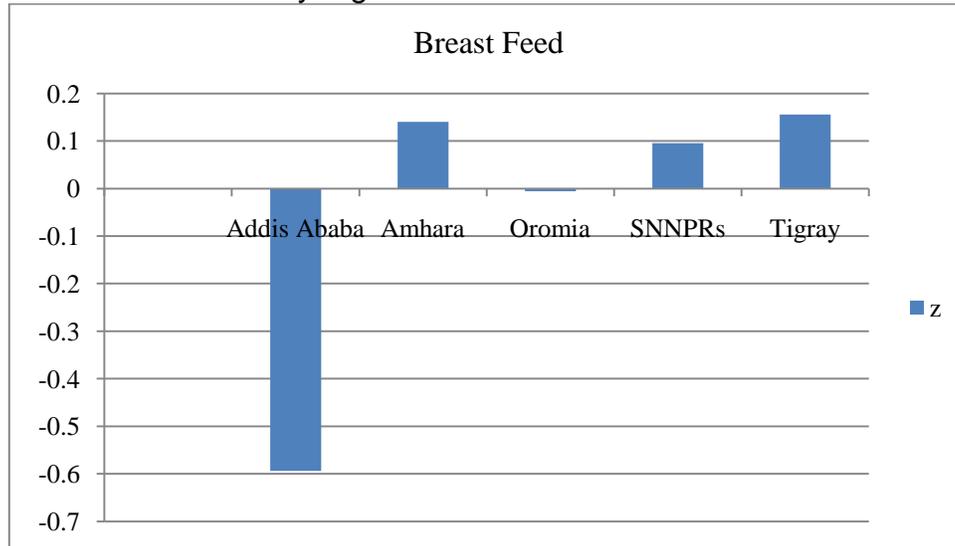
There is positive correlation between birth weight and overweight for BMI (r= 0.24, p<0.00). There is positive correlation between birth weight and breastfeed (r= 0.59, p<0.00) and between birth weight and immunization (r= 0.07, p<0.00) and between breastfeed and immunization(r= 0.049, p<0.00) and between nutrition and immunization(r= 0.049, p<0.00). Figure 11 depicts the cluster health for first rounds. Based on the variable health for children in the first round and it is the average of value of all Z score of the variable. Therefore, health of children for the first round shows that Tigray perform high 17% above the national mean followed by Addis Ababa and the lowest performed region was Oromia 28% below the national mean.

Figure 9
Health of children R1
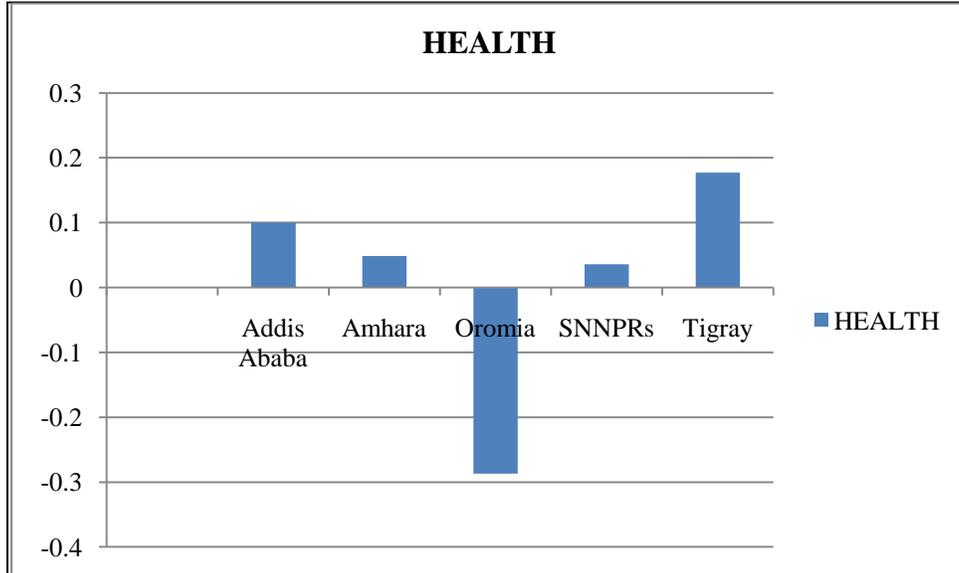
Figure 12 depicts the cluster health for round two. Based on variable of health for children this domain is the average value of all Z score of the variable. Based on this domain, health of children for the second round shows that Addis Ababa perform high followed by Oromia and the lowest performed region were Amhara and Tigray.

Figure 10
Health status of child in R2
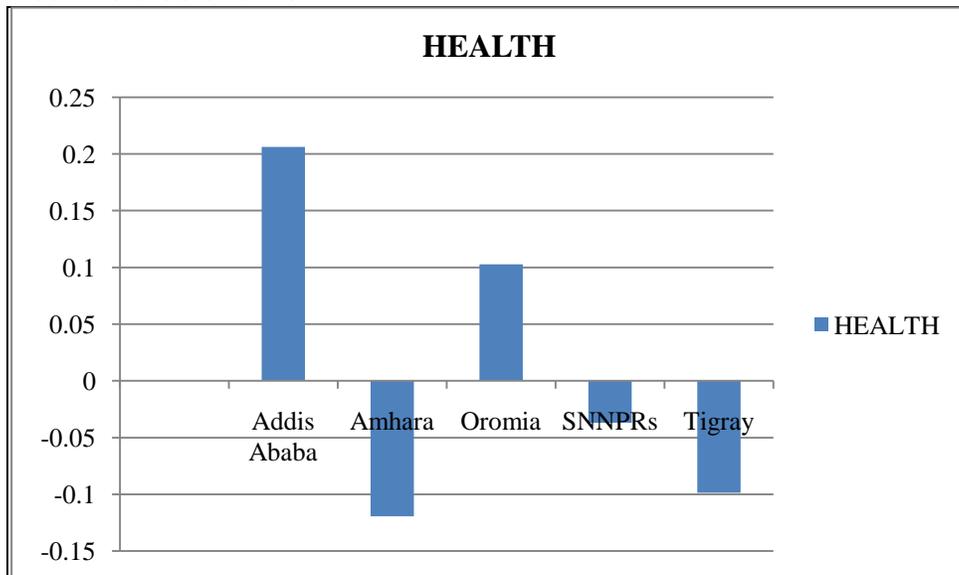
2. Child Education

Education for children is the basic for their today and especially for their future life chance they face. In the MDG analysis of formal education and learning is particularly relevant. Goal 2 is "achieve universal primary education". In many countries the educational chances of children are still linked to their family educational level, education of the household head and proximity to school. The cluster of education for children contains educational attainment and educational participation domains.

In the year of a new millennium (the year 2000) at the world summit in Dakar, 160 countries committed themselves to provide basic education to all children, youth, and adults by the year 2015 and to six specific goals of Education for All (EFA). As (Arieh, A 2006) argued this six goals they could considered as six primary social indicators or six outcome measures of child well-being on which the global community has agreed to implement them. As in (MoFED, 2010) the achievements of the Government of Ethiopia for the MDG in terms of higher gross enrolment ratios , as well as increases in the total number of primary and secondary schools in the country are noted by both the PASDEP progress report and UNESCO's Education for All Global Monitoring Report (2009)

1. Educational attainment

A new Education and Training Policy (ETP), along with the Education Sector Strategy (ESS), was introduced in 1994; the ESS came with the objective of providing good quality primary education with the ultimate aim of achieving universal primary education over a period of 20 years.

The Ethiopian Ministry of Education (MOE) prepared another five-year (2005/2006–2010/2011) Programme of Educational Action Plan in 2005 with the vision that 'all school-age children get access to quality primary education': The main aim of the Education Sector Development Programme is to extend quality, relevance, equity, efficiency and to increase access with special emphasis on primary education in rural areas and to enhancing education for girls. (MOE 2005a:6) the figure increased significantly to 91 per cent in the second round survey of 2006. Children with a higher level of educational level parents show higher enrolment rate (Woldehanna et al. 2008).

In this domain it contains variables like primary school enrollment rate, child reading level, child writing level and mathematical results.

Net primary enrollment rate for children to primary school is guided by international negotiations like the achievement of millennium development goal for a child is reach 7 years old should be enrolled in primary education. The gross enrolment rate at country level was as low as 2.3 percent. This shows that only a few children had access to pre-school education (MOE 2005a:7),

Although pre-school education has a positive role in children's learning potential, their future academic success, and the development of integrated self-identity. The gross enrolment rate at primary school level in 1996 was 42.9 per cent (Admassie and Singh 2001). There was a fast growth in enrolment rate and reached 79.2 per cent in 2005 (MOE, 2005).

Round 1

    a. In Ethiopia the coverage of primary enrollment rate on average is 43%. From national coverage urban children were 53.3% but rural children were 29.2%. Relative to their sex also males were 43.5% but female 40.7%. Based up on the z score value of this variables children who live in Addis Ababa reach age 7 and currently in school was 57% , in Amhara 43.97%, in Oromia 33%, in SNNPRs 39% and in Tigray 35%.

    b. Children who can write sentences throughout the country contain 44%. Relative to type site Urban children were 70.2% but in rural 25%. Relative to their sex male children were 44.5% however, female children hold 41.7%. Based up the z score value of the variable children in Addis Ababa who can write sentences holds 75%, Amhara 30%, Oromia 42%, SNNPRs 43% and Tigray 33%.

    c. Children who are primary enrolled and who can read sentences in the country was 46%. Urban children those can read sentences were74.8% however, in rural was 26.5%. Relative to their sex in the country males were 48% but, female 43.8%. Based up on the z score value of the variable in Addis Ababa children

who can read sentence were 87%, Amhara 37%, Oromia 36%, SNNPRS 48% and Tigray holds 31%

d. In the country children who are primary enrolled have got good a mathematical understanding was 44%. Urban children those having good mathematical understanding were 53.1% but rural 34.2%. Relative to their sex male children were 47.3% but females 39.2%. The average Z score values of the variable in the regions show those children in Addis Ababa who are good in math were 51.43%, in Amhara 41.73%, Oromia 32%, SNNPRs 47% and Tigray 42%.

There is significant positive correlation between level of primary enrollment and level of read (r= 0.31, p<0.00) and primary enrollment and level of write (r= 0.2, p<0.00) and level of read and level of write (r= 0.42, p<0.00). Figure 11 shows that children educational attainment in Ethiopia in the first round throughout the five regions. The highest educational attainment form the country is Addis Ababa followed by SNNPRs and the lowest educational attainment regions are Tigray and Oromia. This domain is the average value of Z score of the above variables.

Figure 11
Educational attainment R1
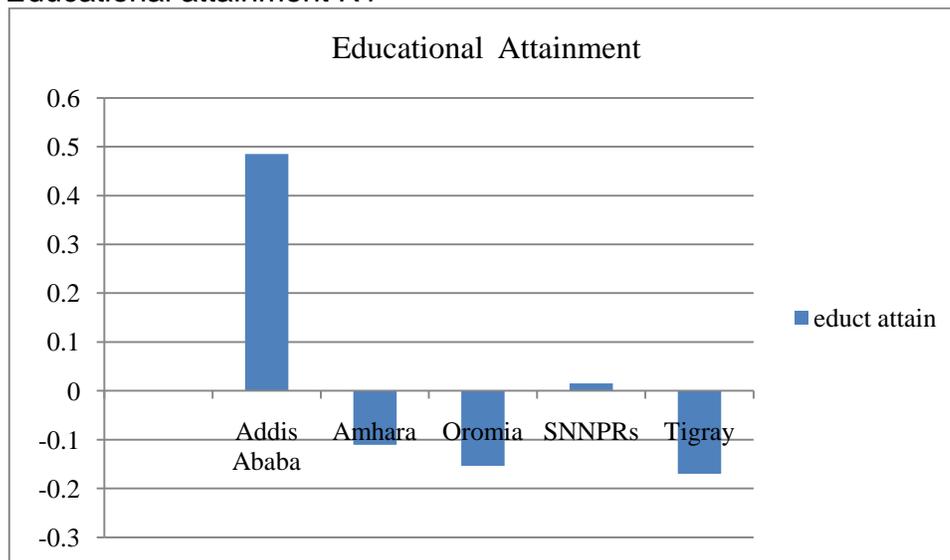
Round 2

a. In Ethiopia children who are attended formal school are 97.6%. The Z score value of the variable show that In Addis Ababa children who attend formal school were 97.8%, Amhara 97.6%, Oromia 99%, SNNPRS 98.4% and in Tigray 94.04%. Urban children those who attend primary school were 99.7% but in rural 95.7%. Relative to their sex male were 96.8% but female 97.9%. The Young Lives research report shows that primary school enrolment for Older Cohort children increased from 66 per cent to 94 per cent between 2002 (when the children were aged 7.5–8.5) and 2006. According to (MoE, 2008/09) that the number of children primary school GER was 32 in 1990, 79.8%in 2004/05, 92.3%...

a. Children who can write sentences throughout the country were 57%. Urban children in Ethiopia those who can write sentences without difficulty were 72.1% however, in rural children 45.7%. Relative to their sex male children were 58.3% but, female were 54.7%. Based up on the Z score value children who can write sentences in Addis Ababa was 84.40%, in Amhara 70.11%, in Oromia 39.38%, SNNPRs 44.49% and Tigray 55.22%.

b. Children who attend formal school can read sentences in Ethiopia coverage was 61%. Urban children who can read sentences were 72.5% but in rural 52.6%. Relative to their sex males were 57.6% but females 64%. Level of read of children based on the Z score value of the variable show in Addis Ababa was 71.33%, in Amahara 70.97%, in Oromia 56.06%, in SNNPRs 53.53% and in Tigray 57.21%.

c. Children who are primary enrolled having got good mathematical understandings were 87%. Urban children those had good mathematical understanding was 96.2% but in rural 79.5%. Relative to their sex males were 84.9% however females 89.6%. Based up on the average Z score value children In Addis Ababa who were good in math hold 99.12%, in Amhara 87.38%, Oromia 90%, SNNPRs 69.43% and Tigray 94.81%.

d. Children who currently great than fourth grade in Ethiopia are 70%. Urban children those who reach expected grade level were 87.3% but rural children were 56.8%. Relative to their sex Males were 68.2% however, female 70.8%.

Based up on the Z score value of the variable in Addis Ababa children who attended formal school and reach expected grade were 93%, Amhara 76%, Oromia 59%, SNNPRs 58% and Tigray 67%.

There is positive correlation between level of attending primary school and level of read (r= 0.27, p<0.00) and ever school and level of write (r= 0.22, p<0.00) and ever school and level of math (r=0.10, p<0.00). But there is negative correlation between level of write and math (r=0.27, p<0.00). Figure 12 shows that children educational attainment in Ethiopia in the second round. This domain is the average Z score value of the above variable and it shows each region by how much a deviate from the national average. Based on this Addis Ababa perform highest in overall educational attainment followed by Amhara and the lowest performance was absorbed in SNNPRs and Oromia.

Figure 12
Educational attainment R2
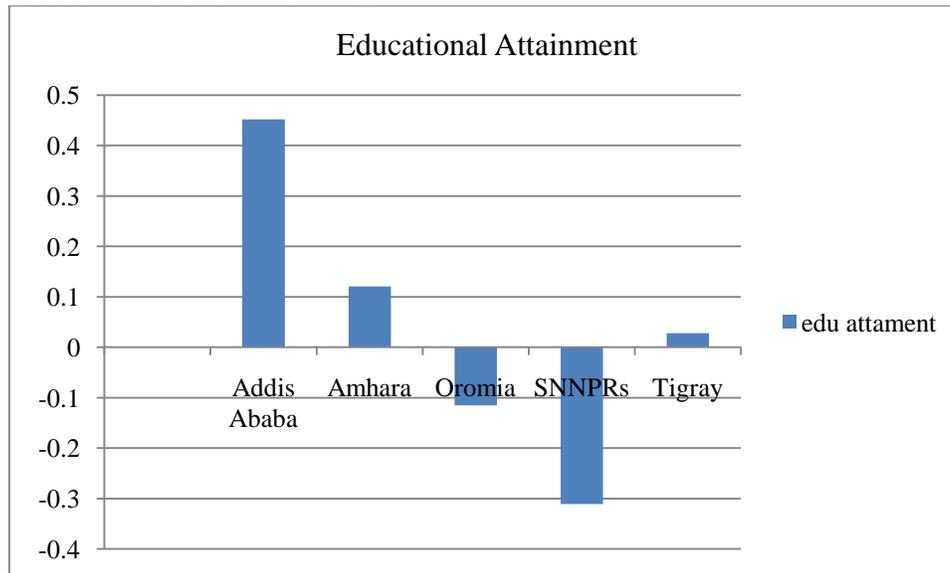
2. Educational participation

Children participation in education indicates their wellbeing rather than necessarily their right. Early childcare and education (ECCE) is an extension to and have potential to support a range of MDG at country level. While primary and secondary enrolment in school is compulsory and universal across the country there are considerable difference

in participation in childcare/preschool on one hand and further education on the other hand.

Round1

a. Children who register and attend crèche aged 3-6 year

ECCE interventions can improve children nutrition, support parenting, and improve children's cognitive development, by doing so they can ensure children arrive at school better prepared. In the country this crèche is limited indicator of preschool participation in childcare because it does not cover the provision of childcare and nursery education for the important pre statutory school entry years the participation rate ranged from 2.5% in Oromia and 1% Tigary, 0.3% in Addis Ababa Amhara 0.5% and SNNPRs 0.4%. Children who participate in crèche hold 9.44 %. Relative to their sex males were .8% but female were .9%.

Figure 13
Educational participation R1
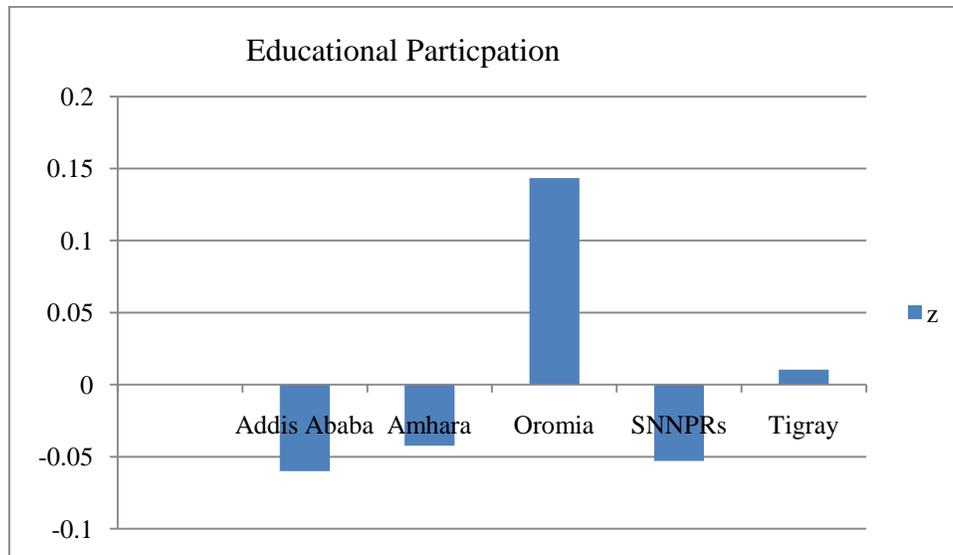
Round 2

a. Children who register and attend crèche aged 3-6 years

In the country this crèche is limited indicator of preschool participation in childcare because it does not cover the provision of childcare and nursery education for the

important pre statutory school entry years. The participation rate ranged from 9.45% in Oromia , 34.36% in Tigary, 11.9% in Addis Ababa, Amhara 17.16% and SNNPRs 19.69%. In the whole country out of the total children 19% are attending crèche. Urban children those who attend crèche were 21.3% but in rural 17.4%. Relative to their sex males were 19% however, female were 18.9%.

b. Children who attend preschool ranges from highest 73.7% in Addis Ababa, 40.7% in Amhara, 35.5% in Oromia, 40.5% in SNNPRS and 8.5% in Tigray. The overall country children who attend preschool are 38%. Urban children those who attend preschool were 51.1% but rural children 29.1%. Relative to their sex males were 38.3% however females were 37.5%.

There is positive correlation between whether a child attend and start preschool (r= 0.09, p<0.00) Figure 14 shows the domain educational participation which is the average Z score value of all domains that form it.

Figure 14
Educational participation R2
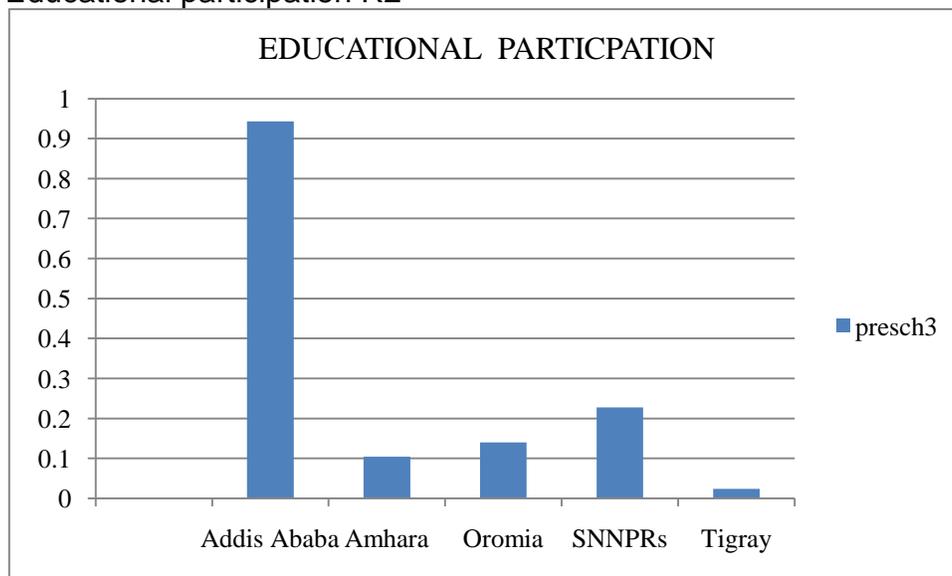
The overall cluster of the child education is the average value of the Z score of domain. And the domain is the average value of all variables that constitute it. Figure 17 depicts that educational coverage of child in the country in round one in

which Addis Ababa perform good educational coverage is above the average national coverage of the country with the least in Tigray.

Figure 15
Education R1
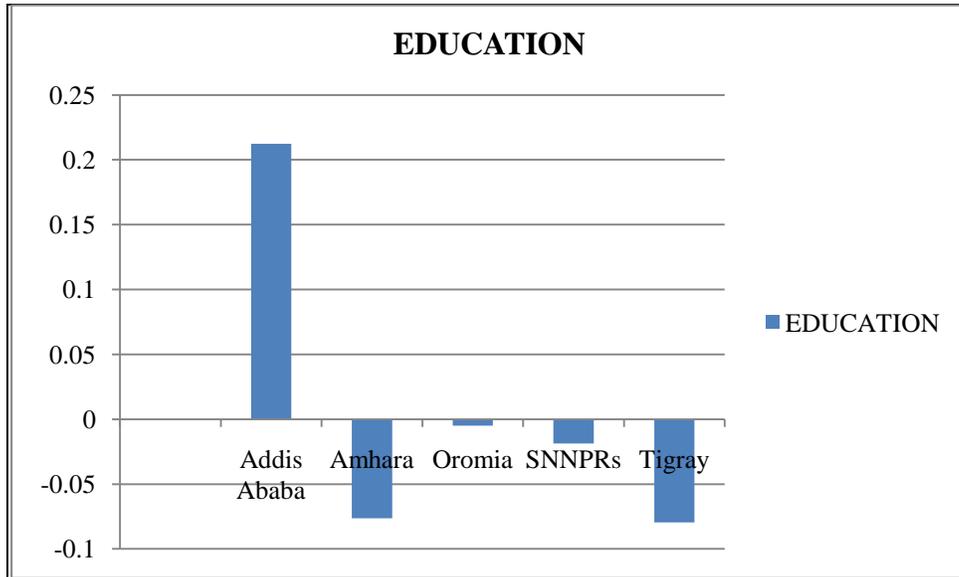
EDUCATION

Figure 16 depicts that cluster educational coverage of child in the country in round two. Regional comparison for child education as Addis Ababa performs good educational coverage it is above the average national coverage of the country with the latest in SNNPRs.

Figure 16
Education R2

EDUCATION
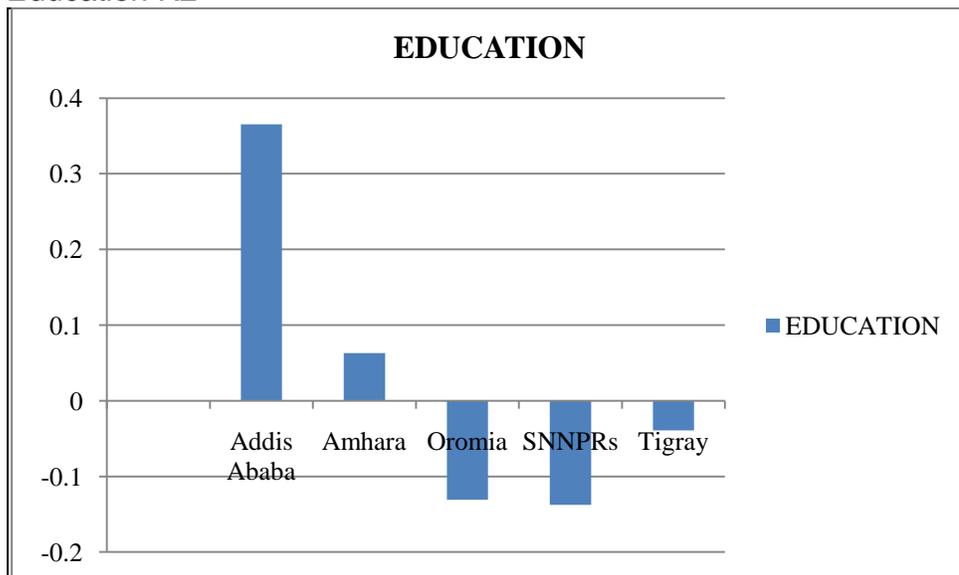
3. Material condition

Child material situation can be measured using relative child poverty, absolute child poverty, poverty gap for children, and an indicator of persistent poverty for children and a subjective poverty measure. But in this paper only relative child poverty measure was applied. The relative child poverty was measured using (at 1996 constant price in birr) national poverty line that was deflated using that year current price. To know whether a child is poor or not in both cohort groups and both rounds of the study relative child poverty was applied

Based on the first round data from the young cohort group children who are less poor are 12.5%. Urban children who were less poor were 33.8% but rural children 1.04%. Relative to their sex male were13.4% but female.4%. Based up on the Z score value of the variable at regional level Addis Ababa 40% of the children are less poor, Amhara 7% Oromia 5.3% SNNPRs 12.5% and Tigray 4.7%.

For the first round old cohort group children who are less poor in the country was 10%. From this study Addis Ababa 32.6% of the children are less poor, Amhara 5.2%, Oromia 4.6% SNNPRs 9% and Tigray 5%. Urban children in the old cohort who were less poor 25% but rural were all most all were poor.

The HICE survey shows that real per capita consumption averaged 1256 birr. Food consumption accounted for just half of this 577 birr with the remaining (non food expenditures) average 678 birr. Real per adult equivalent consumption in 2004/05 was 1542 birr,

In line with the young lives focus on child hood poverty, poor rural and urban sites were over-sampled in the selection of the 20 young live sites. While the national annual average consumption expenditure at 1996 constant prices in 2004/05 was 1542 birr in per adult equivalent terms, the equivalent figure for the younger cohort of young lives children was 1045 birr and 974 birr for old cohort.

Children who live in a family having jobs hold 80.9%. Based up on Z score value of the variable In Addis Ababa children live in an employed family were 59.6, Amhara 88.75%,

Oromia 68.28%, SNNPRs 89.82% and Tigray 88.49%. Urban children who were less poor 41.1% but rural children were .8%. Relative to their sex males were 15.7% but females were 18.5%.

Figure 17 below combines the relative poverty level of children in first round for both cohort groups. Addis Ababa SNNPRs have the lowest relative poverty level and Amhara, Oromia and Tigray have the highest poverty level.

Figure 17
Relative poverty
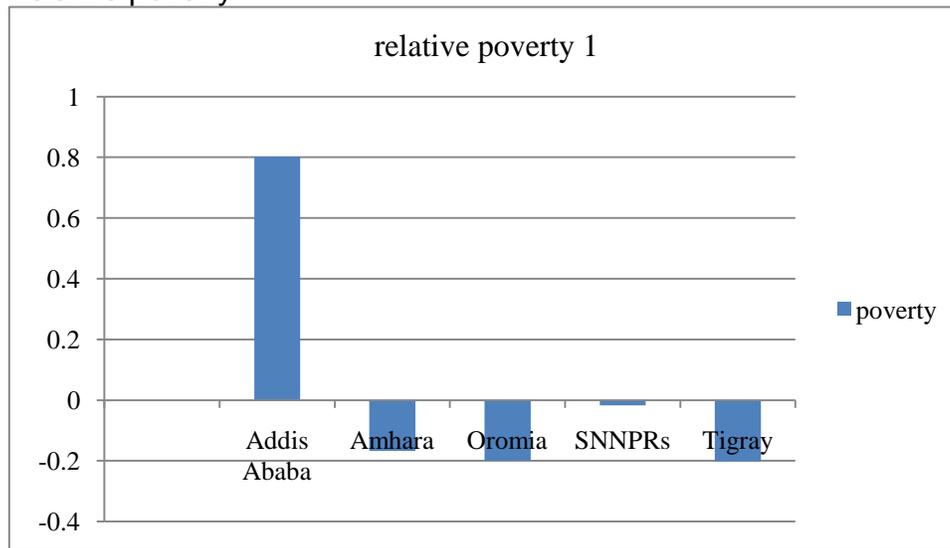
Relative child poverty level for young cohort group in second round range from 50.35% Addis Ababa, 19% of Oromia, 14.34% in SNNPRS, 7.81% in Amhara and 3.98% in Tigray with high poverty level. For the old cohort group children it ranges from 50% in Addis Ababa, 14.03% in Oromia, 12.948% SNNPRS, 9.66% Amhara and 4.68% Tigray. Relative poverty of children for young cohort and old cohort hold 17.1% and 16.2%. Urban children were 39.2% but rural children 1.04%. Relative to their sex males were 17.3% but females 15% respectively.

Figure 18 below combines relative poverty level of children in second round for both cohort groups. Addis Ababa shows the lowest poverty level but Amhara and Tigray show the more.

Figure 18
Relative poverty level
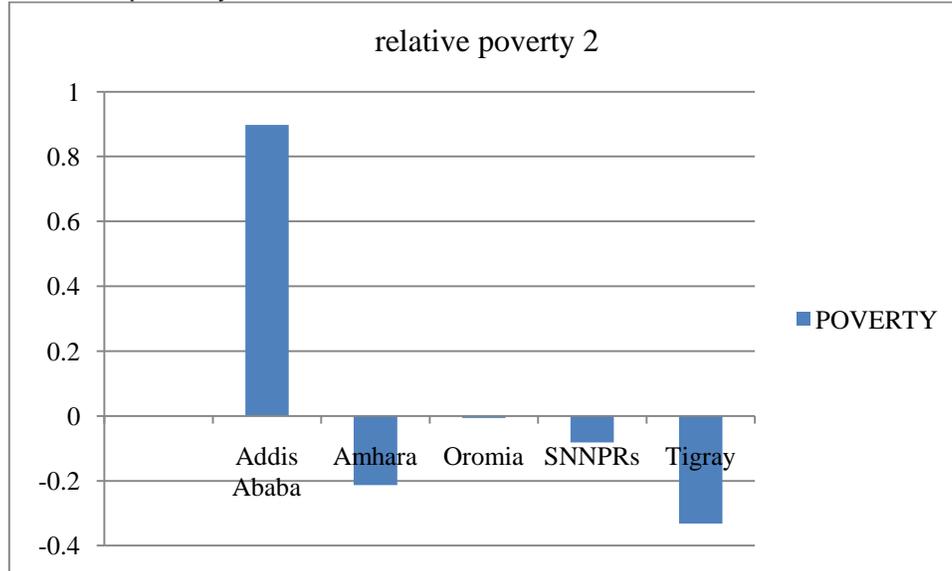
Figure 19 depicts that material situation of children in first round ranges form highest material situation having region Addis Ababa and SNNPRs to lowest Oromia

Figure 19
Material situation R1
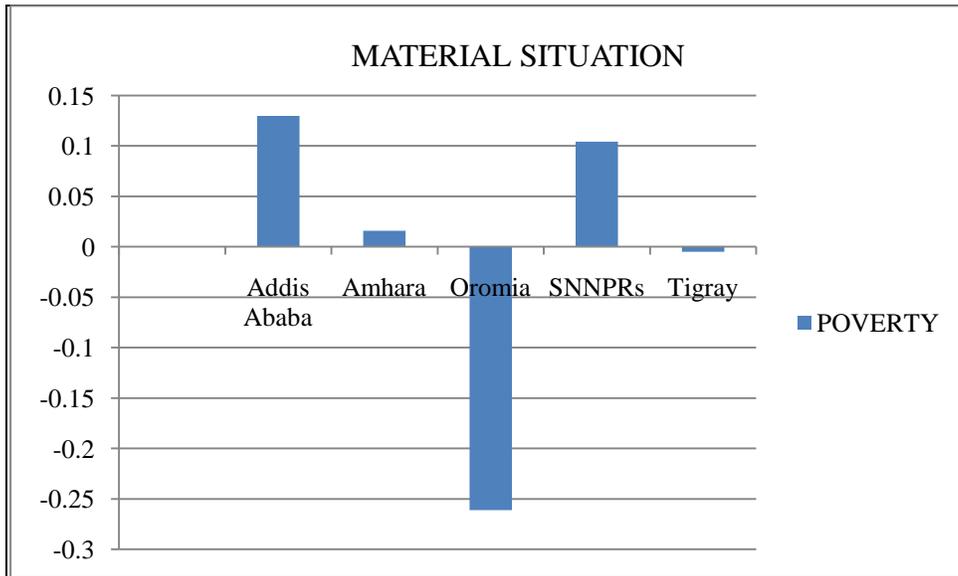
Figure 20 depicts that material situation of children in second round ranges form highest material situation having region Addis Ababa and SNNPRs to lowest Oromia

Figure 20
Material situation R2
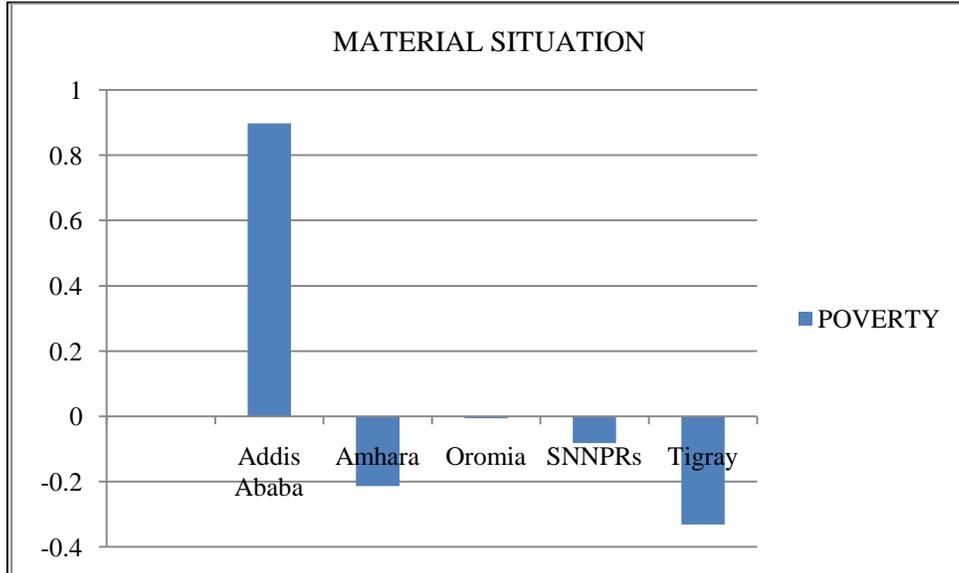
Material situation for children in the second round shows that Addis Ababa performs well but Tigray the least.

4. Housing and environment

Children housing and environment is a situation that determine the relationship to their house and environment they live. Therefore it is represented by overcrowding and quality of environment they face. Child interact with their environment and thus play an active role in creating their wellbeing by balancing the different factors, developing and making use of resources and responding to stress (Bronfenbrenner and Morris 1998).

1. Overcrowding

Round 1

Overcrowding; represents number of rooms per person in household. In general children in Ethiopia who are not overcrowding holds 56% out of which regions 64.33% in Amhara, 62.89% in Addis Ababa, Oromia 56.59%, SNNPRs 48.67% and Tigray 50.25% are the regions having with less overcrowding but regions like SNNPRs and Tigray holds most overcrowding. Urban children who were not overcrowded were 68.8% but rural children were 48.2%. Relative to their sex males were 56.2% but females 55.3%.

Figure 21 below shows the relative children who are not overcrowding in the country relative to national range children who are not overcrowding. In round one child who was not overcrowded was Addis Ababa and Amhara but regions SNNPRs and Tigray were showed with high overcrowding.

Figure 21
Not overcrowding children round 1
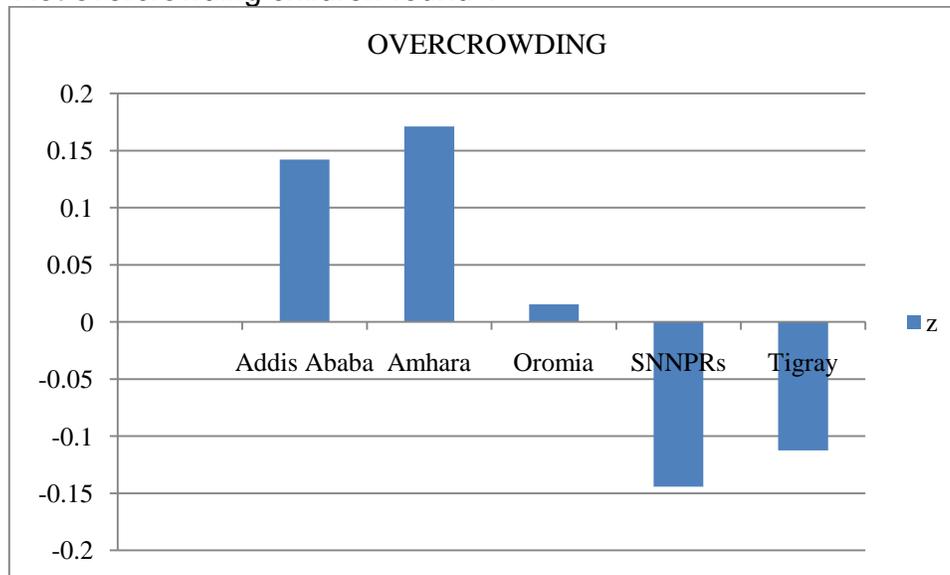
Round 2

a. Overcrowding this represents by a number of rooms per person in household. In general children in Ethiopia who are not overcrowding holds 24% out of which almost all regions have the same level with slightly regions Addis Ababa 24.35%, Amhara 23.3%, Oromia 25.6%, SNNPRs 21.58%and and Tigray 24.74%. Urban children who are not overcrowded were 27.5% but rural areas 21.2%. Relative to their sex 23.4% however, females were 24.1%.

Figure 21 below shows the relative children who are not overcrowding in the country relative to national children who are not overcrowding. The Z score value of overcrowding in regions shows those regions Oromia and Tigray show with low overcrowding but SNNPRs and Amhara show high overcrowding in their house.

Figure 22
Not overcrowding round 2
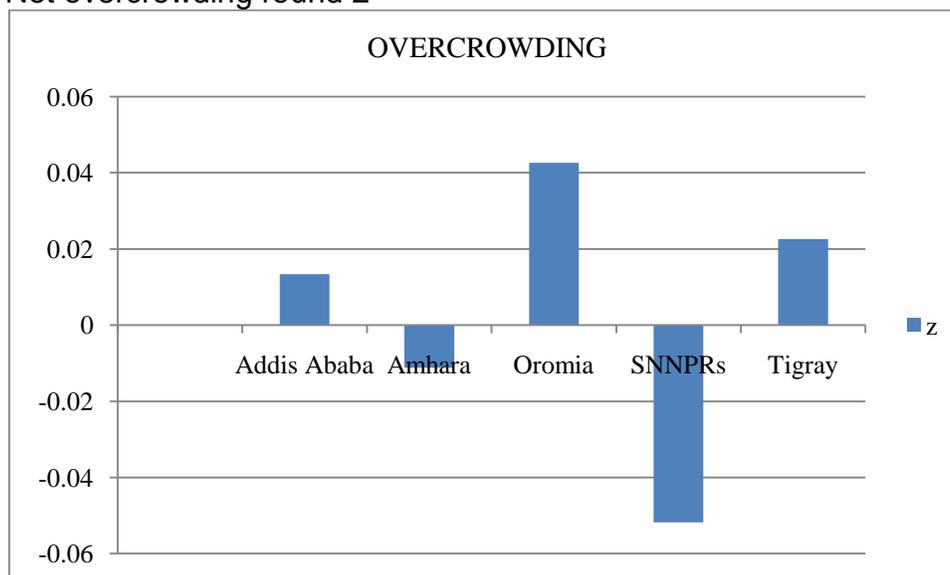
2. Quality environment

This domain includes percentage of children who are living in environment in which it is good for their survival and it includes percentage of children that think it is safe to walk around in this area, percentage of children who have good access to clean water and sanitation.

As (Gelan, 2003) suggest that the environment plays a negative role in the health of children in the country. He states that environmental and socioeconomic factors in Ethiopia have a negative effect on the health of children. Children in deprived rural households are affected by poor sanitation and unhygienic living conditions. A lack of resources has prevented people, especially children, from accessing environmental health services. These services are mainly safe water supplies and improvements in sanitation (mainly latrines).

Round 1

1. percentage of children that think it is safe to walk around in the area they live show that children feels free to do their daily activity like playing with their friends walking around and other things. In Ethiopia children who think the environment

they live is safe for them to live and to play holds 76.2%. Urban children who think it is safe for them to live were 71.7% but rural children 79.3%. Relative to their sex males were 75% however, females were 77.4%. Based up on the z score value of the variable children who feel safe in their live in Tigray was 88% Oromia holds 82.2% and regions who feel less safe to live are Addis Ababa 60.8%, Amhara 77.01% and SNNPRs 70.73%.

2. Percentage of children having access to clean water; In Ethiopia children who have access to clean water was 89.5%. Urban children those have access to clean water was 97.3% bur rural children 83.9%. Relative to their sex males were 89.6% but female 89.2%. The Z score value of children who have access to clean water in Addis Ababa 99%, Amhara 95.5%, Oromia 81.2%, SNNPRs 83% and Tigray 93% get clean water.

3. Percentage of children who have access to sanitation; Building and using improved latrines in Ethiopia was reported at low status (MoH, 2005. P: 12). In Ethiopia children who have access to sanitation facility are 38%. Urban children who have access to sanitation were 71.4% but rural children were 17.8%. Relative to sex males were 36.6% how have access to sanitation however, females were 38.5%. The Z score value of the variable shows that Addis Ababa has a good toilet facility about 84.8% but, the other regions Amhara had only 19%, in Oromia 28.5%, in SNNPRs 35% and in Tigray 33.2%. As (MoH, 2005. P:6) form the total regions SNNPRs can be an example that have good coverage with sanitation and hygiene.

There is positive correlation between access to water and toilet (r= 0.10, p<0.00) and between access to water and safety(r= 0.123, p<0.00). Figure 23 depicts that the overall quality of environment for regions by having an average of Z score value of variables. Form the figure Addis Ababa having good quality of environment and the least quality of environment is SNNPRs and Oromia.

Figure 23
Quality of environment R1

QULITY ENVIRONMENT
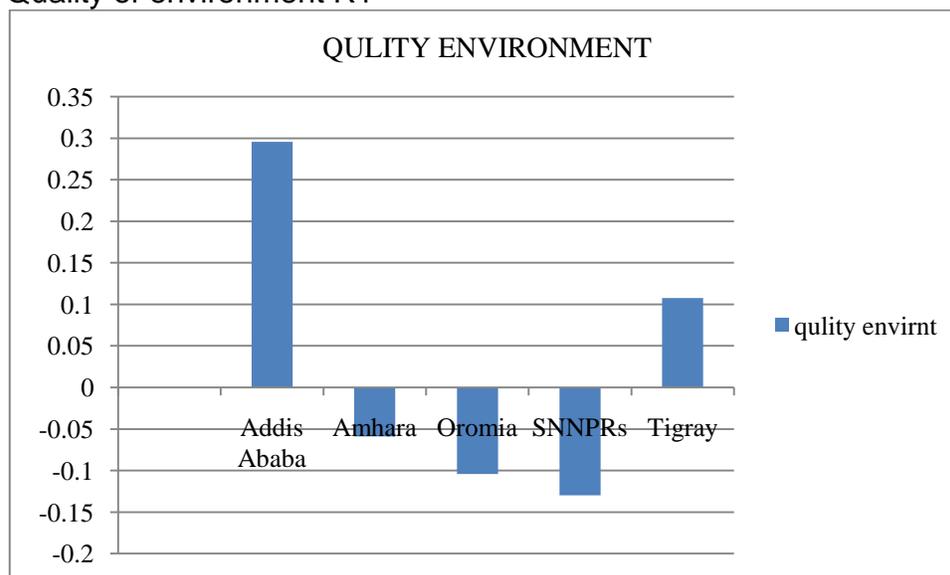
Round 2

1. Percentage of children that think it is safe to walk around in the area they live; this shows that children feels free to do their daily activity like playing with their friends walking around and trust their neighbors. In Ethiopia children who think the environment they live is safe for them to live and to play holds 86.2%. Urban children who feel safe in the environment they live were 79.9% but rural children 90.5%. Relative to their sex males were 85.3% however, female 87.2%. Based on Z score value of variable children who feel safe in the environment they live were in Tigray holds 96% Oromia holds 85.4%, SNNPRS 83.95%, Amhara 86.32% and Addis Ababa 76.9%.

2. Percentage of children having access to clean water; In Ethiopia children who have access to clean water are 87.9 %. Urban children who have access to clean water were 98.4% but rural children 80.8%. Relative to their sex males were 87.2% however, female 88.7%. Children who have access to clean water in Addis Ababa 100%, Amhara 83.3%, Oromia 96.5%, SNNPRs 73% and Tigray 92% get clean water. According to (MoFED, 2010) the proportion in rural areas with access to clean water has significantly increased from 35% in 2004/05 to 65.8% in 2009/10, compared to increases from 80% to 91.5% in

urban areas for the same period. This little variation in access for clean water with national survey was because of the remaining regions provision of access water for the society.

3. Percentage of children who have access to sanitation; In Ethiopia children who have access to sanitation (pit latrine) facility are 65.8%. Urban children who have access to sanitation were 76% but rural children 58.9%. Relative to their sex males who have access to sanitation were 65.5% however, females were 66.1%. z score value of sanitation shows that children who live in Addis Ababa had a good toilet facility about 93.7% but in the other regions like Amhara 64.5%, Oromia 61.2%%, SNNPRs 33.6% and Tigray 91%.

There is positive correlation between access to water and toilet (r= 0.22, p<0.00) but negative correlation between access to sanitation and safety(r=-0.03, p<0.00). Figure 24 show that the overall quality of environment for regions by having an average of z scores value all variables. From the figure Tigray has good quality of environment Addis Ababa and the least quality of environment is SNNPRs.

Figure 24
Quality of environment R2
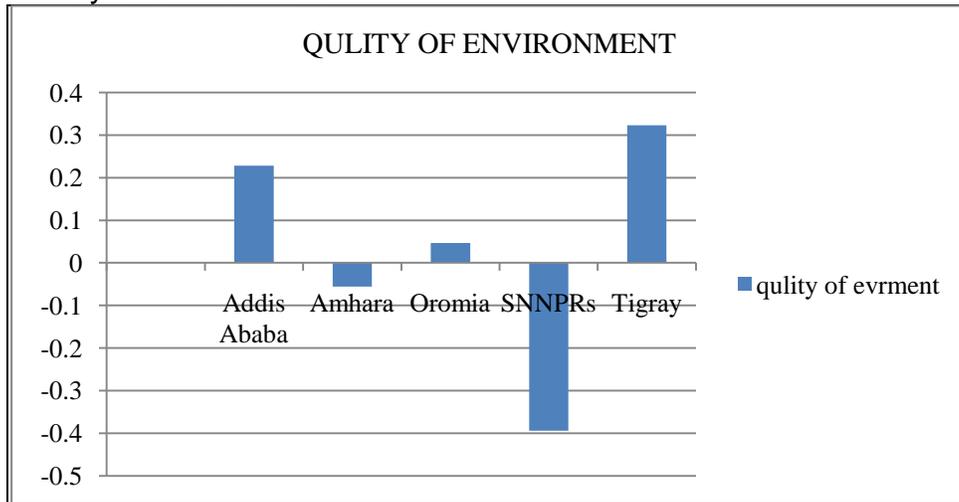
Children housing and environment is a cluster which is the average of Z score value of the domains. As in the figure 25 below Addis Ababa is the highest with good housing and environment for children followed by Amhara and the poor housing and environment regions are SNNPRs and Oromia there are below the average national housing and

environment. In round two in figure 26 Tigray, Addis Ababa and Oromia had a good housing and environment for their children but the only regions that do not show an improvement was SNNPRs with poor housing and environment for the children.

Figure 25
Housing and environment R1
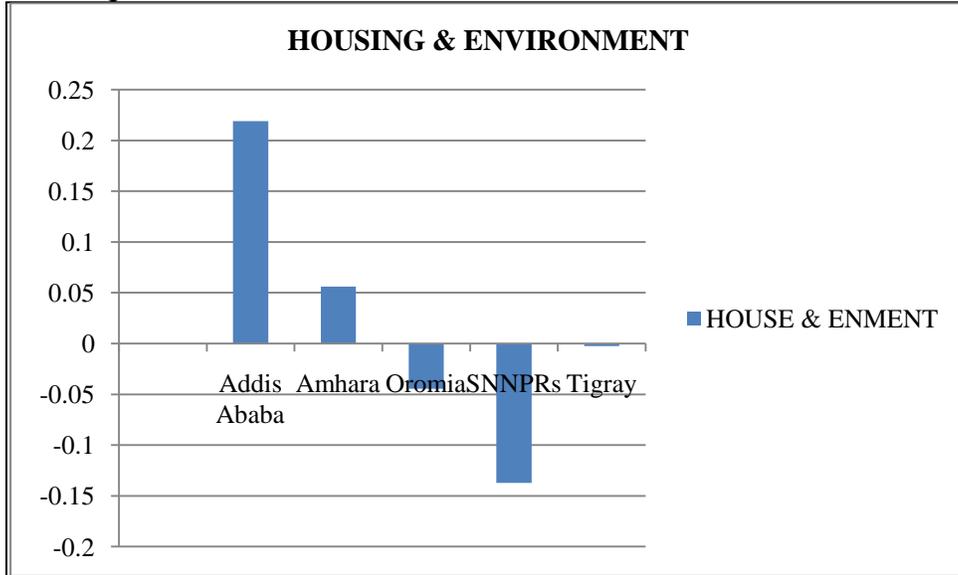
Figure 26
Housing and environment R2
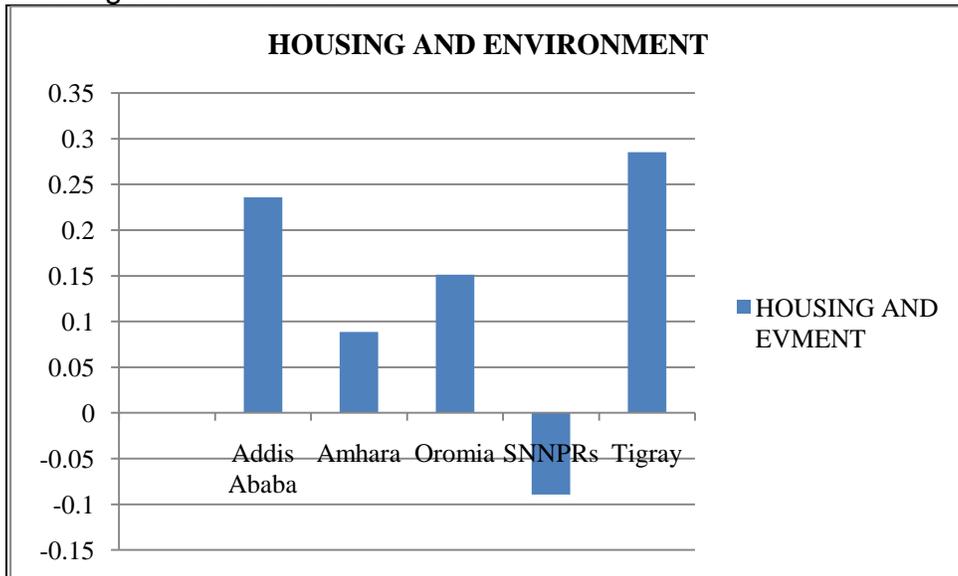
5. Children Relationship to Environment

Relationship to environment shows the relationship of children to their social net work staring from the family structure and relation with parents and peers. Therefore in this paper there are three domains the makeup this cluster. The domains are family structure and relation with their parents and relation with peers.

1. Family structure

The family structure indicate major events in the life of children and their parents that require adjustment in the organization of family life and relationships and are as such a risk factor for children wellbeing. However there is substantial evidence that children in single parents as well as in step families tend to have worse outcomes than peers living with both biological parents.

Round 1

a. Children who live with both of their parents or one of them; Children who grow in either of this condition in Ethiopia are about 99.6%, Almost all children in this study have both or at least one of their parents. Urban children who live either one or both of their parents were 99.3% but rural children 99.8%. Relative to their sex males were 99.7% however, females were 99.5%. Based up on the Z score value children live who with one or both of their parents in Addis Ababa were 99.1%, in Amahra 99.6 %, in Oromia 99.8%, in SNNPRs 98.8% and in Tigray 99.6%.

Round 2

a. Children who live with both of their parents or one of them; Children who grow in either of this condition in Ethiopia are about 98.4%. Almost all children in this study have at least one of their parent or both. Urban children have either of the parents were 96.9% but rural children who have either of their parents were 99.3%. Relative to their sex male children how live with either of their parents were 99.1% however, females 97.6%. Based up on the Z score value children

who live with one or both of their parents In Addis Ababa were 97%, in Amahra 98%, in Oromia 98 %, in SNNPRs 99 % and in Tigray 98 %.

2. Relation with parents

Round 1

   a. Children who see their parents daily shows good relationship among children. In Ethiopia children who have daily connected either both or either of their parents are 94.7%. Urban children who see their parents' daily holds 91.3% but rural children were 96.5%. Relative to their sex males have high opportunity and see their parents 97.8% but females were 91.3%. Based up the Z score value of the variable In Addis Ababa children who see both or one of their parents are 89%, Amhara 90.4%, Oromia 97.3%, SNNPRs 97.4% and Tigray 95.9%.

Round 2

   a. Children who see their parents' daily showing good relationship between them. In Ethiopia children who have daily connected either both or either of their parents are 95.8%. Urban children who see their parents daily were 92.9% but rural children 97.3%. The Z score value of children who see both of their parents or one of their parents in Addis Ababa were 90.15%, in Amhara 96.95%, in Oromia 96.6%,in SNNPRs 97.19% and in Tigray 95.54%.

   b. Children who get support from their family in Ethiopia reach around 74%. Urban children who get supported by their parents were 74.7% but rural children 72.5%. Relative to their sex males were 72.2% however, female 74.7%. Based up on the average value in Tigray was 80.6%, in SNNPRs were 75.3% get high support for children and in Addis Ababa was 72%, and Oromia was 67.5% with less support for children from their family.

   c. Children who talk with their parent on their feeling and views; In Ethiopia children who have got the chance to talk to their parents are 86.2%. Urban children who talk their parents freely were 88.1% but rural children 849. Relative to their sex males were 84.8% however females were 87.6%. Based up on the Z score value children heard by their parents they talk in Addis Ababa were 90% and Tigray 89.5percent and with less chance to speak their family are SNNPRs 82.3%.

There is positive correlation between see their mother and see their father (r= 0.38, p<0.00) and between see their mother and speak daily about their felling (r= 0.033, p<0.00) but there is negative correlation between see their father and speak (r=-0.03, p<0.00) and between see their mother and no support (r=-0.06, p<0.00). Figure 27 shows the domain relation to parents and it is an average Z score value of the variables. In this domain Tigray had children with good family relationship but Addis Ababa less family children relationship.

Figure 27
Relationship to parents R2
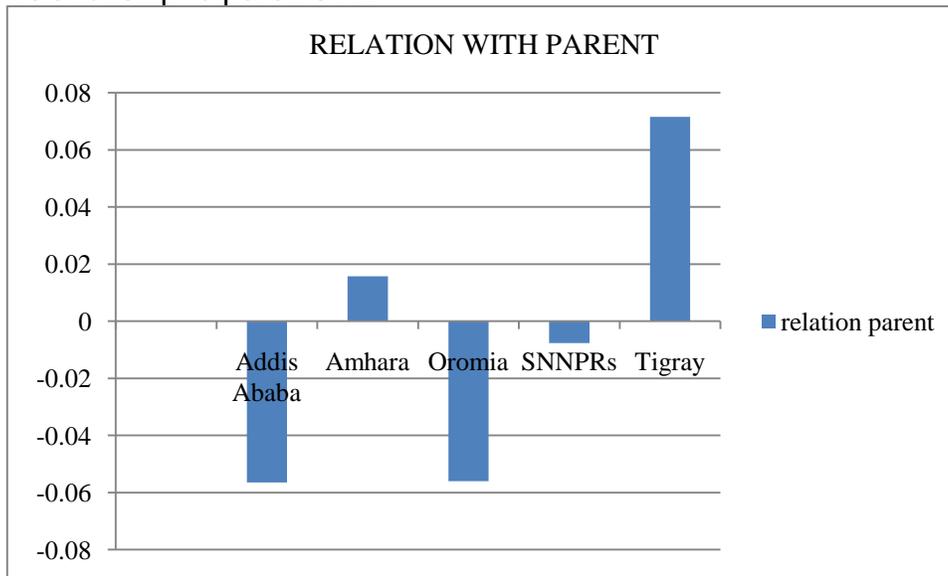
3. Relation with peers and neighbors

Children see their friends next to the family as the most important factor for their wellbeing. In fact friendship, the possibility to spend time with friends, to have fun and share problems is of high significance in children lives. A best friend is often the only person with who children talk about difficulties they have with their family or friends while being part of wider group of peers strengthens feeling of belonging. Children are at risk of execution from their peer group if they stand out in one way or the other. This can be due to personal characteristics of the child (e.g. appearance, having a disability of belonging to a minority), poverty of a high level of psychosocial stress. Against this background are children relationships with their peers as well as their wider social networks, crucial for their psychosocial development.

Reliable comparative data on the quality of children peer relationships is however scarce. We include an indicator on children perception of peer as kind and helpful. Though this indicator does not give information on children social networks or their friends and activities it is an indicator for feeling accepted by peers and being engaged in meaningful interaction.

Round 1

a. Children find their peers and neighbors respect them and treat them well; In Ethiopia children find their friends helpful and respect them are 90.2%. From the whole country urban children who get respect by their peers were 87.5% but for rural children was 91.8%. Relative to their sex males were 90.7% however, females 89.3%. Based up on the Z score value of the variable children in Addis Ababa get respect from their peers were 85.5%, in Amhara 85.56%, in Oromia 93.4%, in SNNPRs 95.2% and in Tigray 88.6% Children find their friends helpful and respect them high in SNNPRs and Oromia and the least in Addis Ababa.

b. Children who trust their friends and neighbors in their surrounding in the whole country reach 88.2%. From the whole country those children who live in urban and trust their peers were 81.1% but rural children 91.9%. Relative to their sex males were 89.1% but females 86.8%. Based up on z score value of the variable in Addis Ababa was the lest in trust their peers 70 %, Amhara 87 %, Oromia 93%, SNNPRs 88 % and Tigray 95% get trust their peer more..

There is a positive correlation between children trust their friends and respect them (r= 0.16, p<0.00). Figure 28 indicates that regions Oromia, SNNPRs and Tigray have a good relation of children with their friends but Addis Ababa and Oromia were showing poor relationship of children with their friends.

Figure 28
Child relationship to peers and neighbors
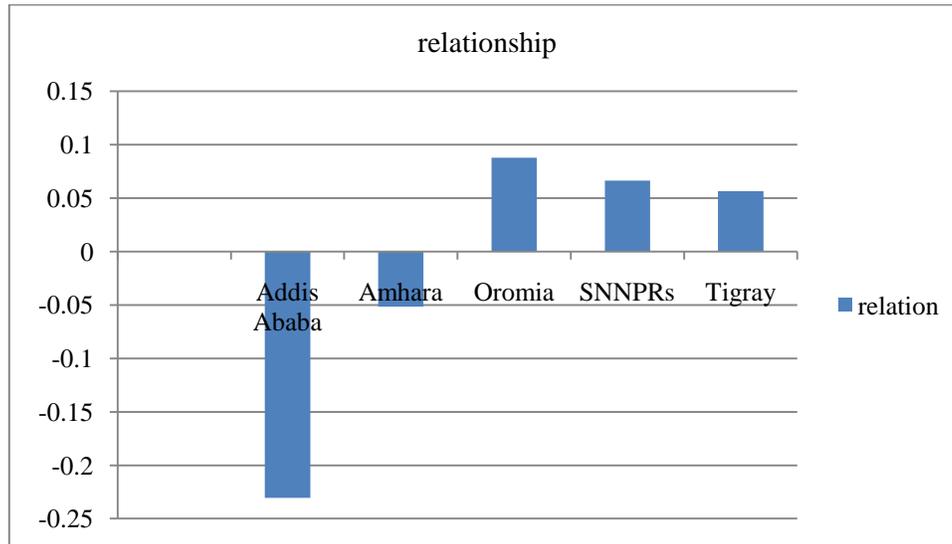
Round 2

a. Children who trust their friends in the whole country reach to 90.4%. Form the whole country children in urban that trust their friends were 82% but rural children 77.1%. Relative to their sex males were 84.9% but females were 73%. Based up on z score value children who live in Addis Ababa 74 %, Amhara 89 %, Oromia 95%, SNNPRs 89 % and Tigray 96%trust their peer

The cluster children relationship shows the relationship of a child to parents, peers and neighbors. This cluster is an average of Z score value of the domains. As in figure 29 shows children who have good relationship are Oromia, SNNPRs and Tigray but regions with poor relationship are Addis Ababa and Amhara. In figure 30 show in round two for the relationship of children with their friends and neighbors in Tigray there was good relationship of children with their family, peers and neighbors but there is poor relationship in Addis Ababa.

Figure 29
Children relationship R1
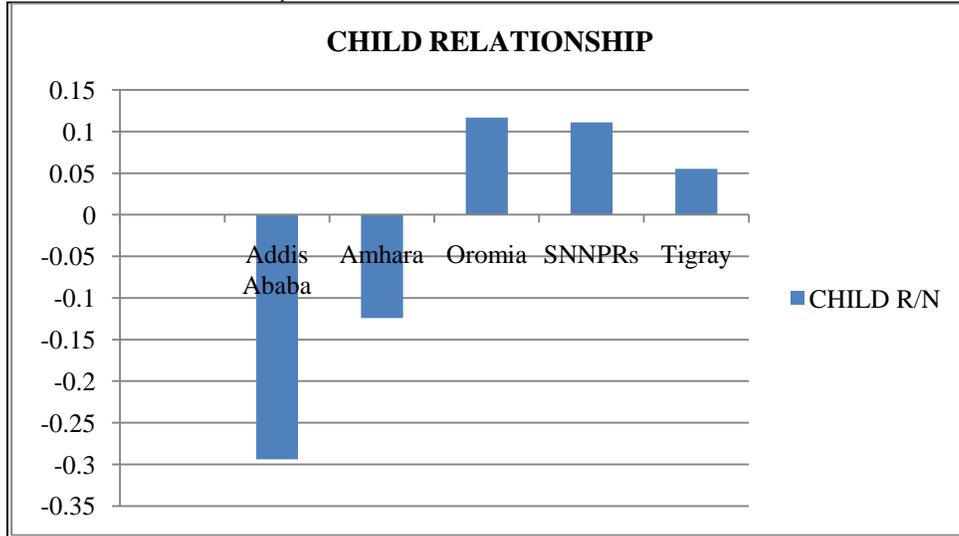
Figure 30
Children relationship R2
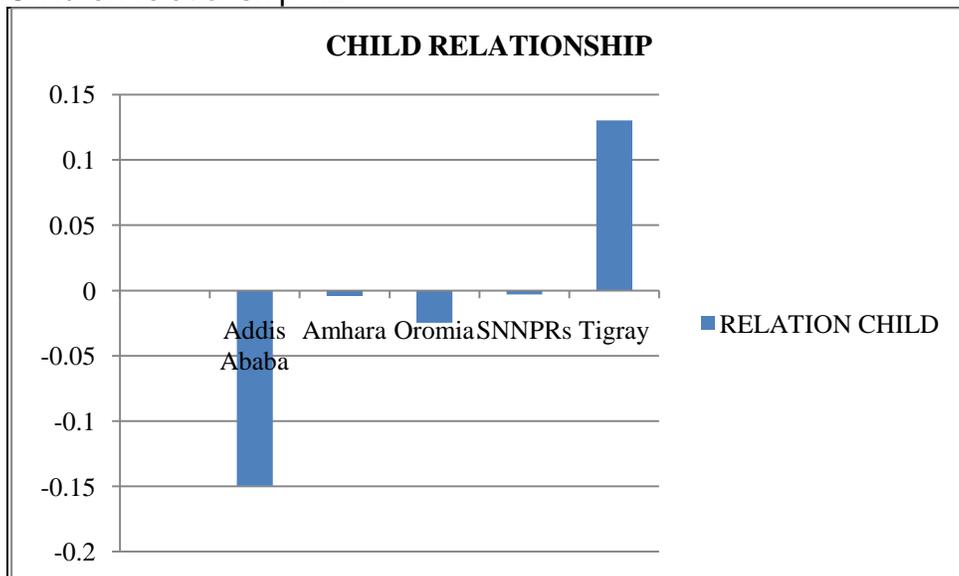
6. Subjective Wellbeing of Children

Children perception of their wellbeing is associated with a number of factors. In this paper there are domains like child self explained health, personal or subjective wellbeing and wellbeing at school.

1. Self Define Health

Round 1

    a. Self explaining of children health compared to others, this is associated with different points and understanding of a child to health. Form the whole country children who explain their health is good in urban was 80.9% but rural children were 83.1%. While relative to their sex male children In Ethiopia perception of their own health as good 80.3% however, females 84.2%. On average children in the country who perceive their health was good were 82.3% on. Based up on z score value children in Addis Ababa perceive their health good is 84.3%, Amhara 75.4%, Oromia 87.6%, SNNPRs 85.2% and Tigray 77.6%

Round 2

    a. Self explaining of children to their health compared to others as good in the country was 88.8%. Form the whole country urban children perceive their health as good was 90.6% but rural children 87.6%. Relative to their sex males were 91.3% however, female 86.2%. Based up on the Z score value children those live in Addis Ababa perceive their health good was 93.7%, Amhara 84.3%, Oromia 89.9%, SNNPRs 93.4% and Tigray 83.08%.

2. Personal wellbeing

Perceptions of Children on themselves and their peers determine the social experiences they have with their peers and their future perceptions. This is to know whether the children felt they were treated fairly by adults and perception of children at present and they want to be in the future determining whether children are optimistic and pessimists about their future. Negative self perceptions are associated with feeling of depression and hopelessness and less assertive styles of interaction so, that children may become an easy target for bullying. In a similar way feeling of loneliness are mediated by the duration and quality of best friendships, acceptance by peers, friendships and experiences of victimization.

Round 1

a. Children perceptions of their wellbeing as good in Ethiopia were 75.4%. From the whole country children who live in urban and their wellbeing was good holds 76.6% but rural children were 74.4%. Relative to their sex males were 73.9% however, females 76.8%. Based up on Z score value performance of children across regions was in Amhara 81.8%and Tigray 82.3%children define their wellbeing is good but regions SNNPRs 69.6%, Addis Ababa 69.2% and Oromia 75.4%.

b. Children who are happy in their live in Ethiopia were 61.3%. Urban children who were happy in their live were 57.7% but rural children 63.2%. Relative to their sex males 61.6% but female 60.9%. Based up on Z score value happy children are in Tigray 71.9% next by Oromia 64.3% and SNNPRs 64.7%. Children who are less happy than the average are Addis Ababa 51% and Amhara 51.2%.

c. Children who feel worth in their activity in the country reach 75.2%. Urban children those feel their live was worth 67.8% but rural children 79.1%. Relative to their sex male 74% but female 76.4%. Based up on the average z score children who are worthy in their daily activity SNNPRs 79.7%, Oromia 78.5% but children less worthy are in Addis Ababa 65%, Amhara 73.1% and Tigray 75.5% .

d. Children who are enjoying their daily activity in Ethiopia 73%. Urban children who enjoy their live were 72.7% but rural children 73.1%. Relative to sex males were 73.4% but females 72.5%. Based up on Z score value children who are enjoying their lives more are in Tigray 75%, in SNNPRs 74.7% and those enjoy less are in Amhara 69% Addis Ababa 71.04% and Oromia 73.93%.

There is a positive correlation between child enjoy their life and fell worth (r= 0.35, p<0.00) and between happy and enjoy (r= 0.38, p<0.00). Figure 31 depicts personal wellbeing of children which is average Z score value of variable. Tigray show high personal wellbeing of children and Addis Ababa with low personal wellbeing.

Figure 31
Children personal wellbeing R1
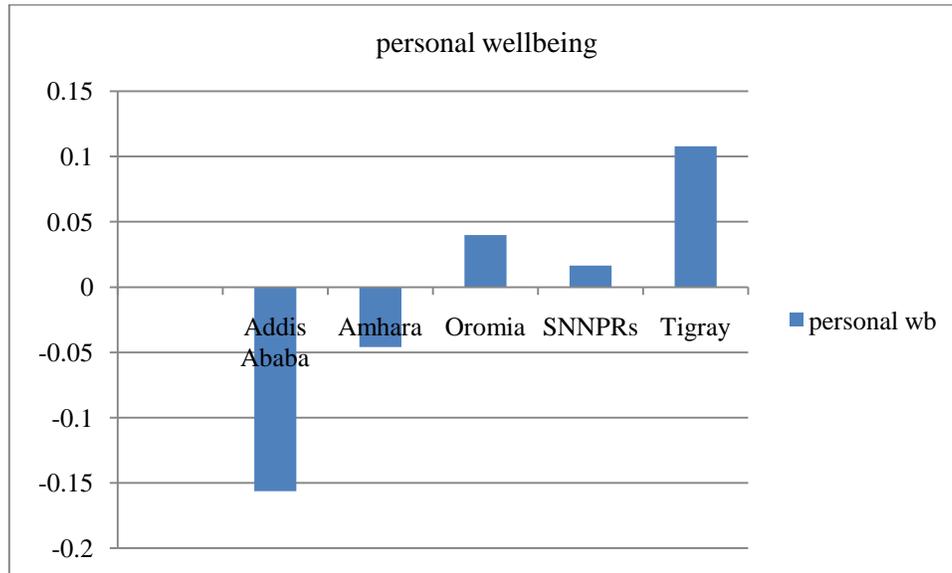
3. School wellbeing

Children spend a great part of their day at school. How they fell about school is therefore an important aspect of their wellbeing. A positive school environment that is characterized by socially inclusive school climate, supportive peers and good academic achievements with a low level of stress, can increase young peoples' sense of success and competence. This self confidence in turn increase children health and wellbeing which again strengthens the likelihood that they will continue to manage well at school

Round 2

a. Children find their teacher treat them good in Ethiopia 96.8%. From the whole country urban children treated by their teacher was 94.8% but rural children 98.3%. Beside these males were 96.7% while females 96.9%. Based up the z score value children treated good by their teachers is high is 99.48 % in Tigray and 98.9% in Oromia but children who treated less by their teachers was in SNNPRs 96.05%, in Addis Ababa 90% and in Amhara 98.35%.

b. Children treat by class children with respect in Ethiopia was 89.4%. Urban Children who are fairly treated by their class friends was 87.8% but rural children 90.6%. Relative to sex male was 86.9% however, females 92%. Based up on the

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z score value children fairly treated by class children was high in Addis Ababa 87.4%, Amhara 91.2% Tigray 96.9% and SNNPRs 91.2% but regions with less respect are in Oromia 84.7%.

c. Children who found their home environment convenient for study 80.5%. Urban children their home convenient for study was 77.1% but in rural 82.9%. Relative to their sex males 78.6% and females 82.5%. base up on z score value for children convenient for study is high in Tigray 88.9%, Amhara 85.5% and Oromia 85.4% but less convenient in SNNPRs 69.7% and Addis Ababa 73.9%

There is negative correlation between teachers fair treatment and class friend respect (r= -0.15, p<0.00) and between class friend respect and home convenient for study (r=-0.05, p<0.00). There is positive correlation between teacher's fair treatment and home convenient for study (r=0.04, p<0.00). Figure 32 shows the domain which is the average z score value of variables. This domain shows children school wellbeing is high in Tigray and low in Addis Ababa

Figure 32
School wellbeing R2
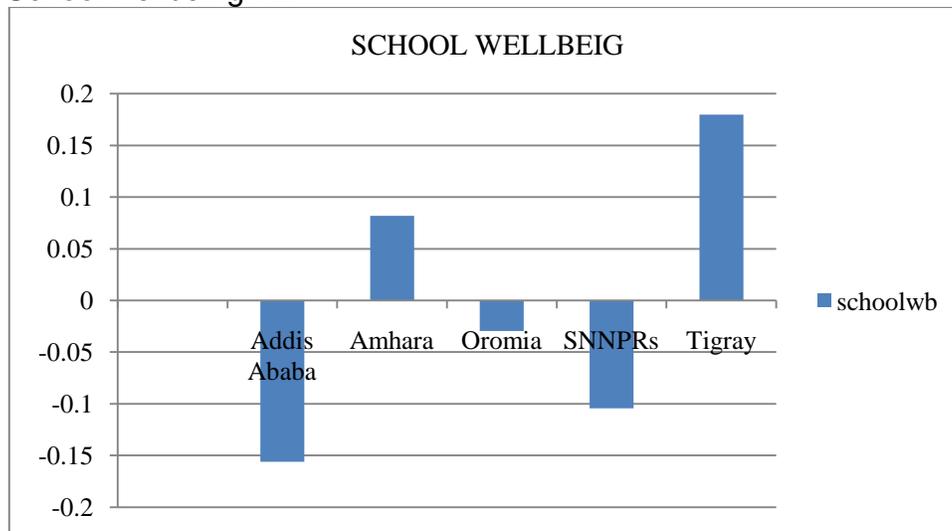
Figure 33 shows the index subjective wellbeing which is the average Z score value of all domains and the domains are average Z score value of variables. Regions Oromia and SNNPRs are regions with children perception of their wellbeing are good. Regions Amhara and Addis Ababa are having children with poor subjective perception their wellbeing.

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Figure 33
Subjective wellbeing R1
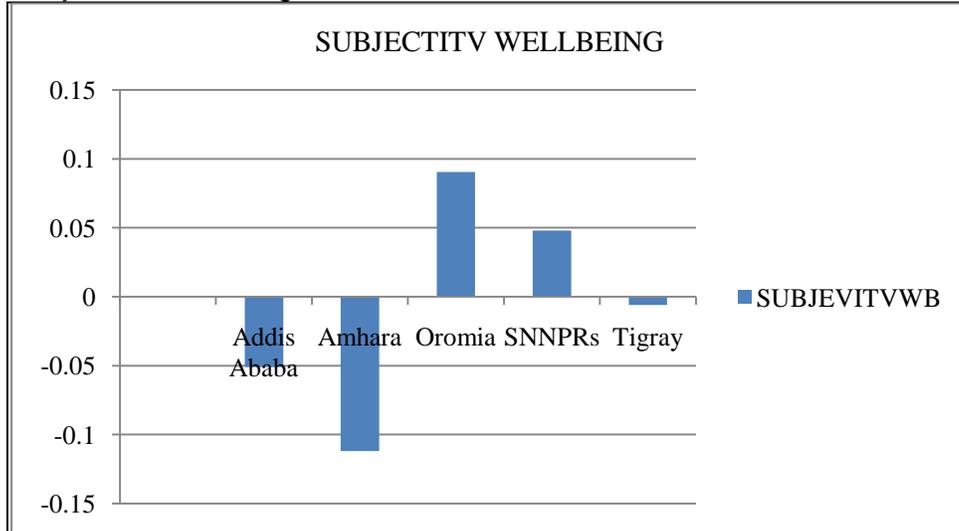
Figure 34 shows the index subjective wellbeing for round two which is the average Z score value of all domains and the domains are average Z score value of variables. Regions Oromia and SNNPRs are regions still those have a children perception of their wellbeing is good. Regions Amhara and Addis Ababa were showing same improvement but Tigray is the only region that the perception of children of their wellbeing is deteriorated.

Figure 34
Subjective wellbeing R2
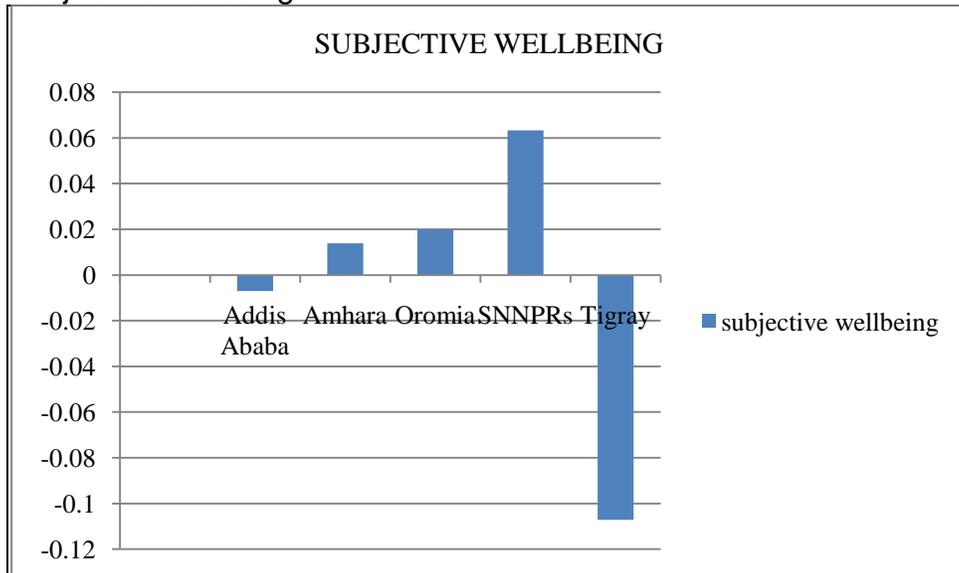
7. RISK

This cluster shows the risk children have in the environment like risk to theft and crime. Bullying and fighting are different facets of violence among children. Experiences of peer violence are associated with a range of negative outcome. A child who is a victim tend to experience higher level of social anxiety and depressive symptoms, they act as feel lonely and have lower self esteem. Theft and crime for children in this paper are

a. Children who do not face theft to their family in Ethiopia were 86.2%. From the whole country urban children do not face theft were 90.5% and rural children 83.4%. Relative to their sex males were 87.4% but females 85%. Based up on z score value Children in which they do not face theft at their home in Addis Ababa 95%, amhara 83.81%, oromia 90.13%, SNNPRs 74.53% and Tigray 93.2%

b. Children who do not face crime in house they live in the country were 99%. Urban children who do not face crime hold 98.9% but rural 99.8%. Male's children who do not face crime 99.8% however, female were 99.1%. Based up the z score value shows that children who do not face crime was High in Addis Ababa 99.3%, Tigray99%, Oromia 99% and Amhara 100% but in SNNPRs 98%.

Figure 35 shows a cluster risk a children face it is the average Z score value of the domain and the domain are the average value z score value of variables. In Ethiopia regions Tigray, Addis Ababa and Oromia having less risk for children to live in their environment but children in SNNPRs have high theft and crime.

Figure 35
Risk and safety in R2
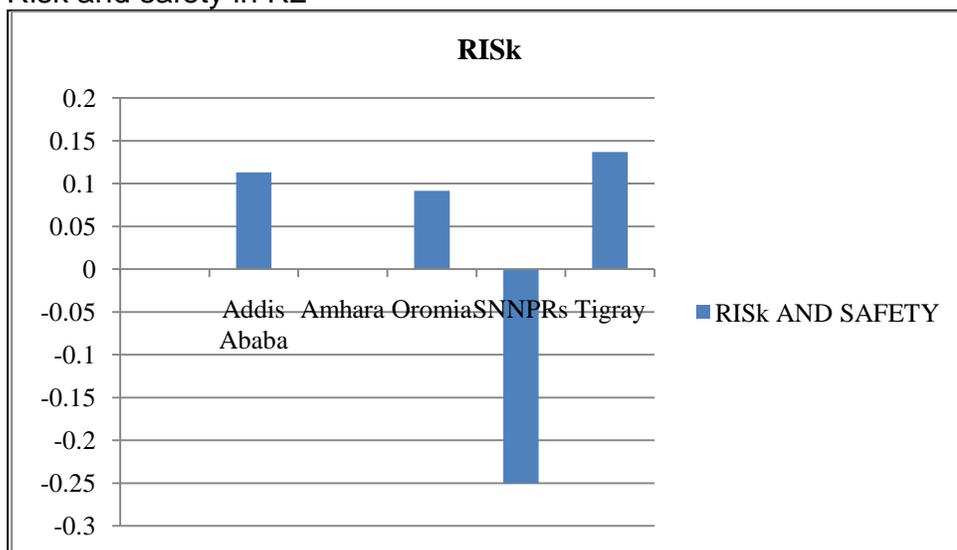
Figure 36 shows the index child wellbeing is the average Z score values of the clusters. The clusters are the average value of the indicators or variables that constitute it. In round 1 rank of wellbeing of children in the country to regional distribution Addis Ababa, Tigray, SNNPRs, Amhara and Oromia consequently. As table 2 shows there is strong positive correlation between children health and wellbeing but there significant negative correlation between children relationship and subjective wellbeing of children to child wellbeing.

Table 1 Ranking Wellbeing of children in the Regional based up on clusters

Domains	Regions				
	AA	Amhara	Oromia	SNNPR	Tigray
Health	2/1	3/5	5/2	4/3	1/4
Education	1/1	4/2	2/4	3/5	5/3
Material situation	1/1	3/4	5/2	2/3	4/5
Housing and environment	1/2	2/4	4/3	5/5	3/1
Relationship	5/5	4/3	1/4	2/2	3/1
Subjective wellbeing	4/4	5/3	1/2	2/1	3/5
risk	5/2	4/4	4/3	/35	2/1

Table 2

Correlation of child wellbeing round1
```
. correlate material health education houseenment childrn  subjevitvwb wellbing
(obs=5)

             | material   health educat~n housee~t  childrn subjev~b wellbing
-------------+------------------------------------------------------------------
    material |   1.0000
      health |   0.7309   1.0000
   education |   0.3524   0.0611   1.0000
  houseenment|   0.3279   0.4717   0.7022   1.0000
     childrn | -0.5409  -0.5145  -0.6914  -0.9462   1.0000
  subjevitvwb| -0.5477  -0.7111  -0.0762  -0.6493   0.7662   1.0000
     wellbing |   0.8379   0.7756   0.5376   0.4762  -0.5245  -0.3318   1.0000
```

Figure 36
Child wellbeing R1
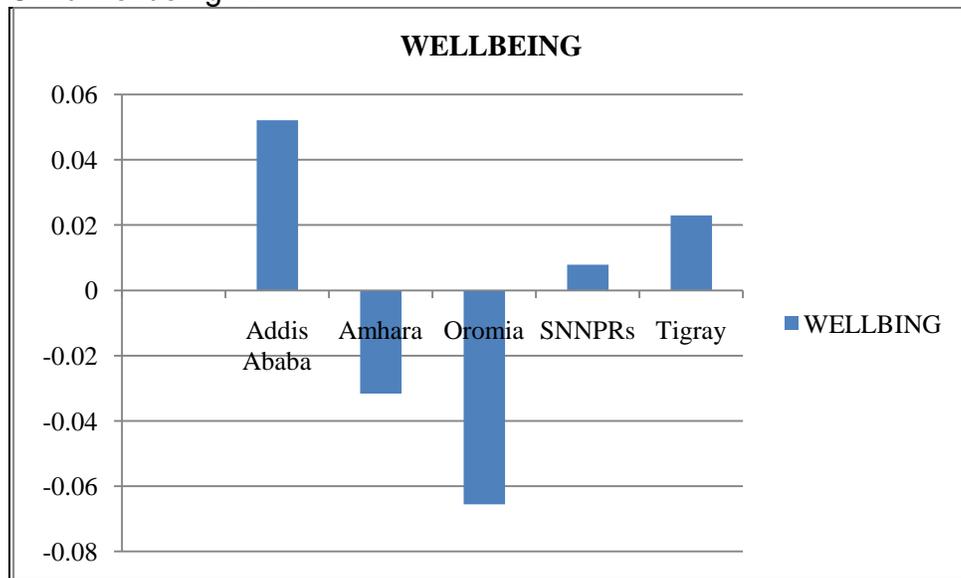
Figure 37 depicts the index child wellbeing is the average Z score values of the clusters. The clusters are the average value of the indicators or variables that constitute it. In round 2 rank of wellbeing of children in the country to regional distribution Addis Ababa, Oromia, Amhara Tigray, SNNPRs, and consecutively. As table 3 depicts that there is a positive correlation between child wellbeing and material situation, health, education, housing and environment, subjective wellbeing and risk and safety but there is negative correlation to subjective wellbeing.

Table 3
Correlation of child wellbeing round1

```
. correlate materil health education housingandevment relationchild subjectivewellbeing riskandsafety wellbing
(obs=5)

             |  materil    health  educat~n  housin~t  relati~d  subjec~g  riskan~y  wellbing
-------------+------------------------------------------------------------------------------
     materil |  1.0000
      health |  0.8931    1.0000
   education |  0.8225    0.5399    1.0000
housingand~t |  0.2424    0.2658    0.4688    1.0000
relationch~d | -0.8941   -0.8142   -0.6692    0.0846    1.0000
subjective~g |  0.1768    0.2063   -0.1591   -0.8455   -0.5493    1.0000
 riskandsaf~y |  0.2306    0.3120    0.4268    0.9657    0.0051   -0.7246    1.0000
     wellbing |  0.9193    0.8370    0.8790    0.5989   -0.7224   -0.1743    0.5897    1.0000
```

Figure 37
Child wellbeing R2

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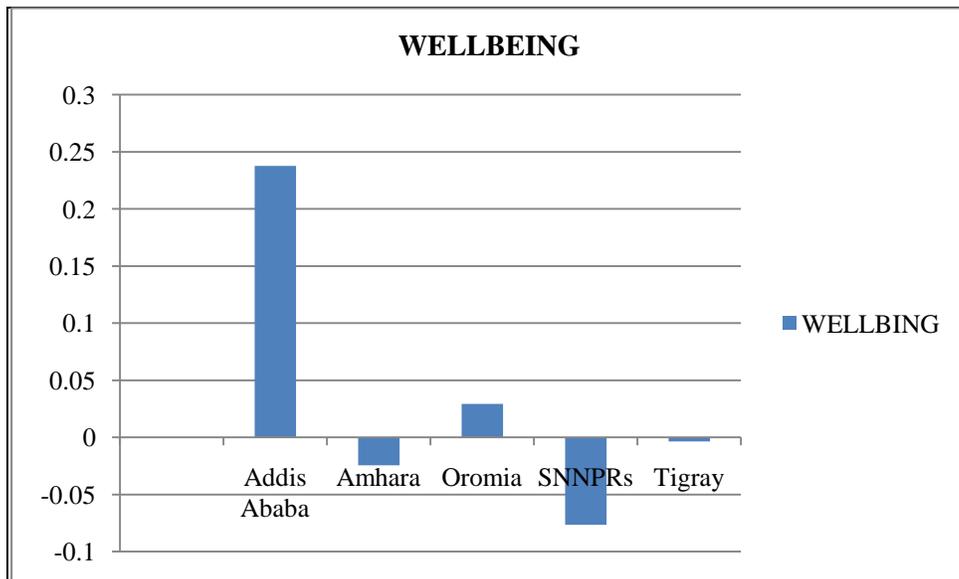
CHAPTER FIVE
CONCLUSION AND RECOMMENDATIONS
5.1. Conclusion

This paper designed to measure and analyzes child wellbeing in Ethiopia or in the sample selected regions Addis Ababa, Amahara, Oromia, SNNPRs and Tigray which cover more than 80% of the total population of the country. In order to have a clear understanding of child wellbeing in the in the country and ranking of the regions by their wellbeing status, this paper brings new concepts and findings in this area. The finding of the paper provides which of the regions and in which of the variable, domains or cluster should make adjustment for balanced wellbeing status in the country.

The overall objective of the study is to describe the level of child wellbeing in the Ethiopia by ranking the index of child wellbeing between the five regions Addis Ababa, Amhara, Oromia, SNNPRs, and Tigray. In order to show the direction and distance by which each region deviates from the national mean level, Z score was applied. An econometric descriptive technique was used, one of which is a correlation and covariance to identify factors that determine or affects the domain, cluster more.

The comparison of child wellbeing in the regions was based up on the recommended variables or indicators for both rounds that are round one and round two. The comparison of child wellbeing among the regions can be made at variable level, domain level and cluster levels and finally at index wellbeing level. Based up on the variable level, domain level and cluster level of analysis was made in detail with the performance of the regions on the variables based on the national level in the results and discussion in detail.

The finding of study show that regional ranking on the level of wellbeing in the country based up on the standardized Z score value of the variables. In round one ranking of regions on the overall wellbeing index of children shows that Addis Ababa ranked first this was due Addis Ababa perform the first for most of the clusters education for children and housing and environment. And at a domains level also like good health behavior,

fully immunization, having good nutrition, educational attainment that include primary enrollment rate, not relative poor children, good quality of environment that includes feeling safe to live, access to clean water and sanitations and less crime and theft however, the only cluster that was ranked last in relation of children to the environment. In the second round Addis Ababa ranked the first this is because in most of the clusters ranked first like in education, health, material situations. and in domain like health behavior, children fully immunized, educational attainment, educational participation, quality of environment and children with good nutrition however, the only cluster that ranked last was children relationship this is same as the first round.

Amhara ranked on the index child wellbeing in the first round fourth. Since the index is the average of the cluster and Amhara is ranked greater than third in all clusters except it perform the second in housing and environment. At domain levels also like children subjective school wellbeing, children who are not overcrowded and breastfeed. In the second round also perform the fourth in the index wellbeing; this is because, Amhara performed greater than the third in the most of the cluster but the only cluster show improvement was in education. And at domain level in relation of children with parents, educational participation, educational attainment, nutrition and immunization show improvement. At the health cluster Amhara was ranked third in the first round but ranked and deteriorated fifth in second round with the regional comparison of performance in the second round.

Oromia was raked in the fifth in the first round this is due to at clusters health, material situation was ranked fifth and also forth in housing and environment. However, ranked first in children relationship and subjective wellbeing and at domain level performed well like at breastfeed children, children not overcrowded and personal wellbeing. In the second round ranked the second at wellbeing index level because of many improvements in the cluster health, material situation, housing and environment, and risk and domains like birth weight immunization, nutrition, and educational participation, children are not relatively poor, not crowded children, quality of environment, relation with peers and neighbors, subjective wellbeing relative to other regions and to national

mean. But deteriorated in the second round form the first round rank was in relationship and subjective wellbeing.

Southern Nations and Nationality of the People ranked the third in the first round in the index child wellbeing. This is because at the clusters material situation, relationship and subjective wellbeing ranked the second. And at domain level also like subjective wellbeing, personal wellbeing, relation with peers and neighbors, educational attainment and breastfeed performed good but, the only cluster performed the last was in housing and environment. In the second round SNNPRs deteriorates and ranked fifth relative to other regions and because in education, housing and environment and risk ranked fifth. At domain level like subjective wellbeing, educational participation, children are not overweight according to BMI.

Tigray was ranked second in index wellbeing in the first round this was due to at clusters level in education, housing and environment, subjective wellbeing ranked less than third. And at domain level like birth weight, children who are not over weight according to BMI, immunization, breastfeed, children with good nutrition, not overcrowded children and quality of environment performed well. In the second round Tigray ranked third in index wellbeing relative to other regions. This is due to performed first in housing and environment, second in health and education. And at domains level like educational participation, quality of environment, relation with parents, relation with peers and neighbors, personal wellbeing, school wellbeing performed well.

Based up on the finding of the studies Addis Ababa ranked the first in the first and also first in the second round. This is because in majority of the study perform good and ranked the first even based up on the cluster level and domains. Amhara ranked the fourth in both rounds, this is because in many of the variable and domains ranked out in cluster level and domain level specially regarding to health of children ranked the last and with regarding to material situation and housing and environment perform less than the average. Oromia ranked the last in the first round this is because in education, housing and environment was raked last. In the second round Oromia ranked second

this is due to relative to other regions in that round relative to the first round made improvement in education, material situation, housing and environment and risk.

5.2. Recommendations

Wellbeing and development of children in Ethiopia cannot be explained in terms of a single independent economic and/or social factor but should be as a result of interwoven socio economic condition/background of the family. The paper dealing with measuring and analyzing child wellbeing in the country by giving regional performance and ranking of regions based up on the Z score value of each variables, domain, clusters and index wellbeing. Based up on Research findings and national report on different variables with national survey has made the following recommendations:

Health of children in child wellbeing was seen as a cluster that includes different domains and variables. In the country base regions like SNNPRS and Oromia perform and ranked below the national average. This was because immunization of children in SNNPRs was very low therefore children in SNNPRs should get full immunization like vaccination to BCG, OPV, DPT and measles. And for Oromia children were malnourished and these children are underweight, severely underweight, stunted and wasted. Therefore to bring the children form this malnourishment short term and long term health care should be giving to the children. In Tigray children were malnourished in the second round relative to the national average this is because their performance was below average of the national coverage for children this region are not underweight, stunted, wasted and severely wasted. Therefore in order to bring the children form malnourishment especially treatment should be giving the children form bring out that malnourishment.

Education for children in regions Amhara, Oromia, and SNNPRs were performed below the national educational attainments of children in school and this is due to the primary enrollment rate was below the average, level of children write and reading was also below the average of children in Ethiopia level of writing and reading therefore, children whose their age reach for school must attend school in addition to this children whose their age reach 3-6 should attend crèche and preschool since this improves their level of

writing and reading levels. In SNNPRs and Amhara were performed below the national level in educational participation and this is because children their age is 3-6 years were not attend in crèche in first round therefore children whose their age reach 3 must attend crèche and preschool because it is the base for their further educational achievements.

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APPENDIX

The following are the clusters with their domain and indicators

Health
1. Health at birth
    A. low weight birth (births under 2500 grams % total live births)
2. Breastfeeding
    A. Was a child breastfed
    B. For how many moths child breastfed
    C. of children still breastfed at
3. Immunisation
    A. DPT3 children vaccination
    B. Polio: % children vaccination
    C. Measles: children vaccination
    D. OPV
4. Nutrition
    A. Prevalence stunting (% of children under 5)
    B. Prevalence severe stunting (% of children under 5)
    C. Prevalence of severe underweight (% of children under 5)
    D. Prevalence of underweight (% of children under 5)
    E. Prevalence of severe wasting (% of children under 5)
    F. Prevalence of wasting(% of children under 5)
5. Health behaviour
    A. Overweight by BMI

Education
1. Educational participation
    A. Pre-primary enrolments
    B. Reading literacy achievement
    C. Science literacy achievement
    D. Maths literacy achievement
2. Educational participation
    A. Child attend regular preschool (net rate, % of population aged 3-6)
    B. How long a child attend crèche

Material situation
1. Relative income poverty measure
2. Deprivation
    A. Children live unemployed family

Subjective well being
1. Peer relationships
   A. children reporting that their peer care about each other
   B. children reporting that their peer help each other with their work
2. Wellbeing at school
3. children reporting teachers are good
4. Personal wellbeing
   A. Children's perception of their future quality of live in the future in comparison with his/her parents' current life
   B. Children's reporting that they feel happy most of the time
5. Family relationship
   A. children reporting that their feeling and opinions in the home are not give enough or any consideration
   B. Children reporting a very good relationship with my father
   C. Children reporting a very relationship with my mother (aged below 18)
   D. Children reporting when they behave well, their parents reward them (aged below 18)

Living environment
1. Environment
   A. Children reporting that the place where they live is rather unsafe or every unsafe to walk around at might time (aged below 18)
2. Facilities
   A. Access to improve sanitation facilities
   B. Type of sanitation
   C. Access to improve water sources
3. Housing
   A. Overcrowding how many rooms a person in household

Children relationship
1. Family structure
   A. Single family structure
2. Relationship with parents
   A. Family meals around a table several times
3. Relationship with peer
   A. Peoples get along with each other
   B. Young people finding their peers kind and helpful
   C. Peoples around trusted
   D. Children Feeling part of community

Risk and safety
1. Experience of violence
   A. Child having ever been victim of crime (aged below 18)
   B. Child having ever been victim of theft (aged below 18)

- over weight according to BMI

-stunting
-severely stunting
- wasting
-severely wasting
-underweight
-severely underweight

Children Health

Health at birth

- birth weight

Nutrition

-Pre-primary enrolments
-level of write
-level of read
-level of numeracy

-% of children
still breastfed at
20-23 months

Breastfeeding

-Measles
-DPT3
-POL3
-BCG

Immunisation

Educational attainment

Educational participation

- Preschool enrolments
-(crèche)

-Relative child poverty rate

Relative child
income poverty

Health

Education

Parental workless

Children aged 0-17
living in jobless hh

Material
deprivation

Child
wellbeing

Children's
subjective
wellbeing

-children's perception their
health
-children are feeling happy

Personal well-being

Well-being at school

-child victim of
crime
- Child victim of

Experience of violence

Risk and
safety

Children
relationship

- Children's teachers
good
-school friends helpful
--home good to study

Living
environment

-place is safe (unsafe)
to work around

Environment

Family structure

- Children live with
both of parents

Facilities

Relation with parents

Overcrowdin

Relation with peers

- Children see daily
parents
-Children get support
-speak with parents

-Access to improved
sanitation
- Access to improved
water sources

-Rooms per person
in households

- Children respect
- Children trust

Regional ranking by indicators

No	Cluster	Domains	Indicators	Regional rank R1 /R2 and z score in percentage of achievement in R1 and R2										National mean
				AA		Amhara		Oromia		SNNPRS		Tigray		
				rank	%	rank	%	rank	%	rank	%	rank	%	R1/R2 %
1	Health	Health at birth	Birth weight	3/	91	1/	99	5/	57	4/	84	2/	97	87.34
		Health behavior	Over weight according to BMI	5/1	96/63	1/5	99/27	2/3	99/	4/2	98/	3/4	99	98.6/48.3
		immunization	BCG	1/1	98/98	3/3	71/92	4/4	57/91	5/5	66/81	2/2	83/93	76/
			Measles	1/	73/98	5/3	42/96	4/2	47/98	3/5	52/84	2/4	81/95	59/
			OPV	/2	/98	/3	/94	/1	/99	/5	/94	/4	/94	/96.7
			DPT	/1	/99	/3	/96	/2	/98	/5	/83	/4	/94	/93.6
		nutrition	wasted	1/3	98/97	2/4	94/97	4/1	89/98	5/2	81/98	3/5	93/93	90.1/97.4
			Severely wasted	1/2	98/97	2/3	94/97	4/1	91/99	5/5	83/92	3/4	94/94	91.3/97.6
			Stunted	1/1	78/79	5/3	52/68	4/5	61/57	2/4	69/67	3/2	67/73	57/68.7
			Severely Stunted	1/1	91/97	5/2	81/95	4/4	82/87	3/5	83/87	2/3	84/93	84.5/91.8
			Under weight	1/1	86/87	3/5	62/68	5/2	58/79	4/3	62/76	2/4	68/73	66.5/76.2
			Severely Under weight	1/1	96/98	3/5	85/94	5/2	80/97	4/4	82/95	2/3	87/96	85.6/96
		breastfeed	Breast feed for >6months	1/	87/	2/	99/	5/	97/	4/	98/	3/	99/	97.2/
2	education	Education attainment	Primary enrolment	1/1	57/99	2/5	44/94	5/2	33/99	3/4	39/96	4/3	35/97	43/97.4
			Level write	1/1	75/84	5/2	30/70	3/5	42/40	2/4	43/44	4/3	33/55	44/57
			Level read	1/1	87/72	4/2	37/71	3/4	42/56	2/5	43/53	5/3	31/57	46/61
			Level math	1/1	51/99	4/4	41/87	5/3	32/90	2/5	47/69	3/2	42/94	44/87
		Education participation	Crèche	5/3	.3/12	3/4	.5/17	4/5	2.5/9	4/2	.4/19	2/1	1/34	9.4/19
			preschool	/1	/73.7	/2	/41	/4	/35	/3	/40	/5	/9	/38
3	Material situation	Relative poverty	Relative poor	1/1	36/80	3/3	6/20	4/5	5/6	2/4	8/9	5/2	4/30	12/30
			Workless family	5/	59/	2	88/	4/	68/	1/	89/	3/	88/	80.9/
4	Housing and evvir	overcrowding	nº in the house per person	2/2	62/24	1/4	64/23	3/1	56/25	5/5	48/21	4/3	50/24	56/24
		Quality envir	Safe	4/5	61/76	5/2	60/86	2/3	82/85	3/4	70/84	1/1	88/96	24/86
			Water	1/1	99/99	2/4	95/83	5/2	81/96	4/5	83/73	3/3	93/92	89.5/89
			toilet	1/1	85/93	5/3	19/64	4/4	28/61	2/5	35/61	3/2	33/91	38/66

5	Children r/ship to enviromnt	Family structure	Live both parents	-	99/97	-	99/98	-	99/98	-	99/99	-	99/98	99.6/98.4
		Relation with parents	See daily parents	5/5	89/90	4/2	90/97	1/3	97/96	2/1	97/97	3/4	96/95	94.7/95
			support	4/	/72	5/	/71	1	/96	3/	/75	2/	80	/74
			talk	1/	/90	3/	/87.5	4/	/83.5	5/	/82	2/	/89	/86
		Relation peer	respect	4/	86/	5/	85/	2/	93/	1/	95/	3/	88/	90.2/
			trust	5/5	70/74	4/4	87/89	2/2	93/95	3/3	88/89	1/1	95/96	88/90.4
6	Subjective wellbeing	Self define health	Health compared	3/1	84/93	5/3	75/84	1/4	87/89	2/2	85/93	45/	77/83	82.3/88.8
		Personal wellbeing	Perception wellbeing	5/	69/	2/	81/	3/	75/	4/	69/	1/	82/	75.4/
			worth	5/	65/	4/	73/	2/	78/	1/	79/	3/	75	75.2/
			happy	4	51/	5/	51/	3/	64/	2/	65/	1/	72/	61.3/
			Enjoy	1/	75/	5/	69/	3/	74/	4/	74/	2/	75/	73/
		School wellbeing	Teacher good	1	/90	3/	/98	1/	/99	4/	/96	2/	/99	/96.8
			School friend treat	4/	/87	3/	/91	5/	/84	2/	/91	1/	/99	/89
			Home good to study	4/	/73	3/	/85	2/	/85	5/	/69	1/	/88	/80.5
7	risk	Crime	crime	5/	97	4/	98	1/	99	3/	98	2/	99	99
		theft	theft	1/	/95	4/	/83	3/	/90	5/	/74	2/	/93	86.2