FINANCING PRIMARY EDUCATION IN NEPAL FROM AN EQUITY PERSPECTIVE AND ITS ROLE IN SOCIAL CHANGE

Hari Prasad Lamsal

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This thesis entitled *Financing Primary Education in Nepal From an Equity Perspective and its Role in Social Change* was presented by *Hari Prasad Lamsal* on January 03, 2014 and Approved by

…… January 03, 2014
Prof. Mana Prasad Wagley, PhD
Thesis Supervisor

…… January 03, 2014
Vishnu Karki, PhD
Thesis Supervisor

…… January 03, 2014
Prof. Bhuwan Bajra Bajracharya, PhD
External Examiner

…… January 03, 2014
Assoc. Prof. Bal Chandra Luitel, PhD
Member, Research Committee

…… January 03, 2014
Prof. Bhim Prasad Subedi, PhD
Member, Research Committee

…… January 03, 2014
Prof. Bidya Nath Koirala, PhD
Member, Research Committee

…… January 03, 2014
Prof. Mahesh Nath Parajuli, PhD
Member, Research Committee

…… January 03, 2014
Prof. Tanka Nath Sharma, PhD
Dean

I understand that my thesis will become part of the permanent collection of Kathmandu University Library. My signature below authorizes release of my thesis to any reader upon request for scholarly purposes.

……
Hari Prasad Lamsal
Degree Candidate

DECLARATION

I hereby declare that this thesis has not been submitted for candidature for any other degree.

……

Hari Prasad Lamsal

Degree Candidate

DEDICATION

To My Parents, Wife and Daughters

ABSTRACT

The main purpose of this thesis entitled *"Financing Primary Education in Nepal from an Equity Perspective and its Role in Social Change"* is to assess the impact of financing policies in primary education from an equity perspective and to explore their implications on the social change process. It also explores the relationship between equity in financing policies and education in terms of progresses. A mixed methods research design has been employed in this study, where the findings are drawn from both quantitative and qualitative analyses, using both primary and secondary data sources.

As evident from the analysis, the overall status of education in Nepal has improved over the years. However, this improvement has not been consistent for different groups of people and across all geographic regions. Inequities are visible in terms of inputs (access to schooling facilities, and access to resources), processes (student teacher ratio, school student ratio, and per child allocation) and in outcomes (enrolment, participation and learning achievements). Structural inequities in the education system have been found rooted in the society and public policies have seen to be inadequate in breaking the vicious circle of inequality in access to resources and other opportunities that remain prevalent. Hence, the presence of public policies can be seen as insufficient to ensure equitable benefits to all, irrespective of peoples' social, economic or cultural diversity.

The rationale behind allocation of public resources in education remains unclear among many policy makers and planners in the education sector in Nepal. For example, children of all Dalit families receive the same amount of scholarships regardless of the economic status of the households. There is no provision in response

to indirect and opportunity based costs to the poorer groups. Due to the absence of an integrated equity framework, the resource allocation and its distribution tend to vary from time to time as the authorities follow incremental approach and their own judgment in making decisions on resource allocation and distribution.

In terms of three dimensions of equity – horizontal, vertical and equality of opportunities – the country has hardly seen the use of the later two concepts in its resource allocation. Equitable financing policies play major roles to create an equitable situation for all to succeed in the education system.

Education being considered an inevitable component in the development process can be seen in Nepal as well. The visible changes in the society and social indicators that are observed, showing a gradual movement of the society, can be seen as a social change generated through education. Sustainable change in the society gradually occurs because of the increased level of awareness among people, in combination with technological advancement. Alternatively, radical changes are often caused through externally induced interventions. It is seen that there is a strong relationship between equitable education policies and quality education. Furthermore, the interrelationship between equitable financing policies, quality education and social change is evident.

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Degree Candidate Abstract Approved by

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ACRONYMS AND ABBREVIATIONS

ANOVA	Analysis of Variance
CBS	Central Bureau of Statistics
CD	Central Development
CDC	Curriculum Development Centre
CHIRAG	Cooperative Hands in Restoration, Advancement and Growth
DDC	District Develpment Committee
DFID	Department for International Development
DOE	Department of Education
EAI	Educational Attainment Index
ED	Eastern Development
EFA NPA	Education for All National Plan of Action
EFA	Education For All
FHD	Foundation for Human Development
FWD	Far Western Development
GDI	Gender Development Index
GDP	Gross Domestic Product
GEFONT	General Federation of Nepalese Trade Unions
GEM	Gender Empowerment Measures
GPI	Gender Parity Index
HDI	Human Development Index
HLNEC	High Level National Education Commission
JFA	Joint Financial Arrangement
LEI	Life Expectancy Index

LSMS	Living Standard Measurement Survey
MDGs	Millennium Development Goals
MOE	Ministry of Education
MOF	Ministry of Finance
MTEF	Medium Term Expenditure Framework
MWD	Mid Western Development
NDHS	Nepal Demographic and Health Survey
NER	Net Enrolment Rate
NESP	National Education System Plan
NGO	Non-Government Organization
NLFS	National Labor Force Survey
NLSS	Nepal Living Standard Survey
NNEP	National Education Planning Commission
NPC	National Planning Commission
NPR	Nepalese Rupees
OCE	Office of Controller of Examination
OECD	Overseas Economic Cooperation Development
PPP	Purchasing Power Parity
PSU	Primary Sampling Units
RIDA	Research Inputs and Development Action
SLC	School Leaving Certificate
SMC	School Management Committee
SSRP	School Sector Reform Program
STR	Student Teacher Ratio

SWAp	Sector Wide Approach
TA	Technical Assistance
UNDP	United Nations Development Program
UNESCO	United Nations Educational Scientific and Cultural Organizations
UNICEF	United Nations Children's Education Fund
VDC	Village Development Committee
WD	Western Development
WDR	World Development Report

CHAPTER I

INTRODUCTION

This chapter presents the overview of educational development in Nepal focusing on financing in primary education from the equity perspective. This chapter also includes some discourse on how an equitable education system helps bring about social change in the society in the long run. Further in this chapter, the issues associated with financing in primary education are highlighted giving some justification for the purpose and focus of the study. At the end of this chapter, the terminologies used in this study are explained followed by rationale and delimitations of the study.

Background of the Study

Nepal has ratified primary education as a fundamental human right – a principle which has been protected by several international tools including the Universal Declaration of Human Rights 1948 (Article 26), the Convention on the Rights of the Child (1989), the Convention on the Elimination of All Forms of Discrimination Against Women (1981), the World Declaration on Education For All (EFA), and the Millennium Development Goals (MDGs). However, a large number of children are still denied access to quality basic education in the world (UNESCO, 2010). Nepal is no exception in this regard. One of the reasons for this are deeply entrenched structural inequalities that act as a major barrier to universal primary education in most developing countries (UNESCO, 2010), which is applicable to the context of Nepal as well (The World Bank & DFID, 2006).

Disparities within and among countries are experienced because of lack of equitable access to public resources and opportunities, unequal power structures that persist in the society, and stereotype institutions that perpetuate inequalities in power, status and wealth (The World Bank & DFID, 2006). The major concern in this study is therefore to examine to what extent these disparities are visible and which factors are associated in preventing children from receiving quality primary education. Evidence suggests that only an equitable education system can cater to the needs of all children (The World Bank & DFID, 2006). Among others, an equitable education system depends upon the development and implementation of the financing policies (UNESCO, 2010). Hence, looking at financing policies in primary education from the perspective of equity is believed to provide important insights on the efforts made to realize the rights to education.

An equitable education system is strongly associated with the rights to education (available, accessible, acceptable and adaptable education) (Sandkull, 2005; Tomasevski, 2004), where national commitments on legal aspects, allocation of resources and targeted interventions are required, and that among them, financing policies have a strong influence on realizing the rights to education by providing certain benefits to the targeted group. Despite increasing public expenditure in education over the years, Nepalese children from certain groups within the society still face several barriers that prevent them from attending and continuing their education (Central Bureau of Statistics [CBS], 2011). Increasing allocation of resources to education is one aspect; equitable distribution among different socio-economic groups and regions is another major concern in financing of education. Therefore, the prime concern in this research is to assess whether all groups of people

(relating to primary education) have equally been benefited from the public spending/funding in education.

In order to ensure the right to education for all, irrespective of differences they possess, equitable financing has been taken as a major concern both globally and locally. The majority of literature on financing of education indicates that the rights-based approach promotes equitable access to quality basic education (UNICEF, 2007). Imbalances in the supply of education services such as the distribution of teachers and material supplies and in the supply of schools have strong relationships with the financing policies (UNESCO, 2010). In this context, equity in financing essentially helps to reduce such disparities that are deemed to generate imbalances in input, process and outputs as well as outcomes. In addition, it also takes into account the geographical and other socio-economic aspects while allocating the public resources.

The commitment of the Government of Nepal towards education for all has been reflected in several policy documents. Accordingly, the government has formulated education financing policies (including financing in primary education) for implementing educational programs in the country. The major aspects of financing policy in education includes determining the share of public budget to education, free and compulsory education policy, community participation in school management, and resource sharing in physical facilities improvement and development (Ministry of Education [MOE], 2009). Because of these policies, the government has been compelled to increase the share of public resources in the education sector. The annual allocation of national budget to the education sector has reached around 17 percent. In terms of share in the national budget, education is the largest sector to benefit from the national treasury. In addition, some resources are also spent directly

from local bodies (District Development Committee - DDC, Municipality and Village Development Committee - VDC), non-governmental organizations (both national and international), and the private sector. The actual contributions from these sources are yet to be recorded in the national accounts.

Though spending in the education sector has increased over the years, data reveal that that the opportunity to primary education is not equitable to everyone in the society. Along these lines, Shields and Rappleye (2008) argued about Nepalese context where benefits of the progresses in education have been unevenly distributed. The Flash Report (Department of Education [DOE], 2011a) also reveals that almost five percent of primary school age (5-9) children are out of school. However, only one fifth of children enrolled in grade one are able to complete ten years of education in time. Furthermore, those who graduate in time are not a reflection of the demographic composition across the region, representing the different social groups. These statistics reveal greater discrepancy among populations living with different social and economic identity (CBS, 2011).

There are two sides of the phenomenon of disproportional demographic trends in the primary education of Nepal. First, there are children who are not receiving primary education at all and second, there are those who are in the school but are receiving poor quality education. In both ways, the bottom quintile people seem not to receive significant benefit from public spending in education (CBS, 2011). This part of the populations is mostly not to compete with other children and acquire benefits from the public system (The World Bank & DFID, 2006). Because those children who graduate from better school with better grades will have better chance at the good job (Stiglitz, 2013). The situation of poorer group children does not support them to reach their full potential, which is considered an important condition for individuals to

become successful in obtaining quality of life outcomes and establishing overall well being. Therefore, the relationships of equitable public financing in education have far-reaching implications not only in an individual's career but in the prosperity of a society and the nation at large.

Education tends to produce both individual and social benefits (Organization for Economic Cooperation and Development [OECD], 2002). To ensure the same level of benefits from an education system, inputs to the individual should be based on their needs and capacities (Berne & Stiefel, 1999). It means equitable inputs in the education system should cater to the needs of all students, irrespective of differences that the individuals may possess. If all people in a society receive good quality education there is a high chance of improving the status of social development indicators, leading to improved living conditions of people (National Planning Commission [NPC], 2002; 2013). Consequently, visible changes in the areas of literacy, health, participation and living standards are observed in the society. Thus, this implies that equitable quality education brings about sustainable changes in the society, providing people with the capabilities to strengthen their livelihoods and improve their quality of life.

Equitable quality education can furthermore work as a catalyst for achieving wider development goals (UNESCO, 2013) in the society and the nation at large. Equitable quality education usually depends on several variables, of which equitable financing policy is the foundational one. Equitable quality education increases the critical awareness among the bottom quintile people that not only helps to empower themselves, it equally makes them able to find a better job, be healthier and participate in public discourses.

Impact of equitable education system is thus a process of bringing positive changes in the society (UNESCO, 2013), which are often measured in terms of people's living standard, education, health and participation. It is equally true that other factors (such as new technological development, new ideas, economic powers, crisis, visionary leadership, new interventions, religions, wars, and external influences) are responsible for bringing change in the society (Castles, 2001). Interestingly, all these factors are dependent on people - the most powerful actors for bringing changes in the society. What people have, what people think and what people value are the critical aspects to guide the change and all these conditions can only be achieved through education - equitable quality education.

In this way, education can work as a roadmap for bringing the social change in any society or a nation (UNESCO, 2013). If all people receive benefit equitably from the education system, it is highly likely that the society as a whole will prosper. A concern is how to establish whether all people have been receiving benefits from the education system equitably. To what extent have the education, living standards and participation of disadvantaged groups improved over the years? The answers to such questions are used to assess changes taking place in the society. The inter-relationships between equitable financing policies, equity in educational processes, and social change are therefore the prime discourse focus of this study.

Rationale of the Study

Investment in education both from public and private sources is increasing consistently with a view to maximize the benefits at social and individual level (OECD, 2002). Of them, public finance investment is considered crucial for people who cannot afford education themselves and would not be able to continue or complete their education. The nature and scope of public support depends on the

nature of public financing policies, and the way these are designed, put into implementation and are enforced. Equity approaches are a tool used to examine financing policies on the base of characteristics of people who are benefiting from the allocation of public resources. To carry out such analyses, various units should be considered for securing relevancy with regard to taking on a need based approach.

According to Lee (2002), access to various levels of education and opportunities for success of traditionally disadvantaged groups (such as girls), financially disadvantaged groups (income poor), geographically disadvantaged groups (people living in remote regions) and socio-culturally disadvantaged groups (such as ethnic minorities for example) are the major focus of equity analysis. Gender related equity concerns are usually associated with differences in literacy rates, enrolments, and drop out and repetition rates. Similarly, income related equity concerns are associated with access to quality education, cycle completion, and early drop out. Likewise, region related equity concerns are basically seen in terms of urban-rural and regional disparities, and socio-economic equity related concerns are in access and equity in education for minorities. Similarly, Berne and Stiefel (1999), Sherman and Poirier (2007), and Son (2011) have also suggested some categorization which are almost similar to that of Lee (2002). In line with these, all four equity related dimensions are taken as important areas of study mainly due to multi-level diversities that exist in communities.

The broader aim of the investment in education is to bring change within individual and in the society (OECD, 2002). This school of thought focuses more on the role of education in bringing changes (positive) in social indicators. Hence, education can be taken as a tool to empower the individual (NPC, 2002) because it allows people to acquire a critical consciousness, to be equipped with questions,

critique societal realities and assumptions (Freire, 2000). As a result, individuals grow themselves as active and self-conscious members of the society. They become co-creators of their reality. In this way, education helps to enable changes within individuals, as well as collective transformation of the individuals within that society brings social change and social transformation (Castles, 2001). However, a study on the role of education to reproduce inequalities and expanding established knowledge are also noteworthy.

From the social development perspective, every government is obligated to provide at least the primary education to its citizens irrespective of their differences as to how they live and what their social and economic status is. To fulfill such obligations, the government formulates policies based on different theoretical premises and then implements them. Such policies are expected to allocate public resources in the priority areas focusing on specific themes and targeted groups as well as individuals. While allocating funds to the targeted groups, equity is the most important consideration, when exploring the dilemma of "who" gets opportunity and "how" they benefit.

Statement of the Problem

Despite the political instability and a weak economic growth rate, the Government of Nepal has regularly increased public funding in education sector since 1990s, especially with regard to primary education. As a result, gains in access and participation (particularly in net enrolment rate) to primary education are substantial (NPC, 2013). Furthermore, gender parity has been achieved in students' enrolment at the same level (DOE, 2011a). However, participation of children belonging to poor, living in rural areas and from poor communities in school education varies significantly (CBS, 2011). Inter-district variations between girls and boys, poor and

rich, urban and rural areas in terms of achievements are also common (CBS, 2011; DOE, 2011a).

Disparities in supply of education provision are also quite visible. The Nepal Living Standard Survey (NLSS) report 2010/11 shows that the uneven distribution of living people within 30 minutes walking distance from a (primary) school by urban-rural (urban 99 percent coverage and rural 93 percent coverage), by consumption quintiles and by development regions, is evidence of the fact that resources have not been equitably distributed (CBS, 2011). The report further exposes significant disparities between rich and poor groups. Likewise, urban rural disparities are also visible in living standards (poverty head count rate: urban - 15.46 percent and rural - 27.43 percent), inequality ratio (Gini coefficient: urban - 0.353 and rural - 0.311) and literacy rates 6+ years (urban – 76.9 percent, rural - 56.9 percent). There are other several instances which highlight the disparities among groups and regions. In line with this report, Flash Reports (published by Department of Education) also provide the evidence on regional and district wise disparities, such as teacher allocation and school distribution.

The inequity in the education system in terms of capacity and resources is also highlighted in studies (The World Bank, 2004), as there are concerns over the use of available resources. The scholarships are provided to target students with almost the same amount, except in very few cases (MOE, 2011). Resource allocation to schools in general does not take into account the socio-cultural diversity, urban rural contextual variations and geographical isolations that exist from one community to another in the country. Current approaches only take the ecological belts such as Mountain, Hill, Terai and Valley into account when considering allocation of

resources to schools. The diversity that exists between east and west within the same geographic belt is often substantial and should therefore not simply be ignored.

Poverty is another barrier that tends to prevent children from being in school and completing their education. Educational expenses between the richest and the poorest households differ significantly which has a significant impact on children's learning (Foundation for Human Development [FHD] & Research Inputs and Development Action [RIDA], 2009). Children from poor households do not attend school among other reasons because of their inability to be provided with notebooks and pencil to take to school (FHD & RIDA, 2009). From a social phenomenon point of view, people living at the bottom of the wealth distribution do not have the same opportunities as people living in wealthier families (Lee, 2002; Stiglitz, 2013). Wealth distribution among different people in the society certainly creates differences in the opportunities available for them (Son, 2011). Such unequal opportunities reproduce further inequalities over time and across generations. In this way, inequality traps push people into further inequitable situations (The World Bank, 2006).

There are arguments in favor of the role of education in poverty reduction and strengthening individual capability and empowering society at large. Lee (2002) provides arguments in favor of this by mentioning that education can play a direct role in poverty reduction by enhancing people's skills and by expanding their ability to take advantage of income generation possibilities and available social services. Such ideas help to establish the relationship between education and social change. But in practice there are several pros and cons in making this possible.

From the above discussion, several questions can be raised which are the actual problems upon which the research questions of this study are built. Several indicators show there are disparities in education system. Does this mean that there

are inequities in the Nepalese education system? Do these indicators truly illustrate inequity? What factors or causes are responsible for this inequality? What has been the (lack of) contribution of government policy? What has been the (lack of) contribution of (poor) implementation of policies?

Policies (government's actions) are the means to allocate resources to the concerned (Sapru, 2000). These actions can shape the market forces and redistribute the income as well (Stiglitz, 2013). The opportunities of education are dependent on the nature of the government's actions. Education is the means to bring positive changes in the society, which triggers social change and social transformation in the long run. To make this happen, education systems should be equitable, which is considered the byproduct of appropriate financing policies. Such financing policies provide focus on how benefits are distributed among regions and groups. What provisions are being made available to address the disparities? And how far have such financing policies contributed to bring changes in the society?

In this way, the major concern of this study is to assess as to what extent the educational system has dealt with the disparities (gender, regional and economic quintiles) that exist in the education system through the formation, implementation and enforcement of financing policies, and how these policies have contributed to social change? In the existing scenario, as discussed in the paragraphs above, there appears to be a greater association with current financing policy in education causing a host of manifestations. Thus, it will be an assumption of the research that the difference in resource allocation is the source of all other discrepancies.

Therefore, looking into financing in primary education from equity perspectives and its role in social change is the primary theme of my study. The

specific question formulated for this study focuses on the state of equity in education financing with reference to the policy provisions and practice in Nepal.

Purpose of the Study

The main purpose of this study is to assess the financing policy in primary education from the equity perspective and to explore its implications on social change. More specifically, the purpose is to identify the relationship between financing policies and equity in educational results (inputs, processes and outcomes, and in some cases impacts) together with its implications on social change.

Research Questions

The research questions for this study are:

1. What is the status of equity in primary education in Nepal in terms of gender, location, and economic quintiles?
2. In what ways are equity dimensions practiced in primary education financing policies in Nepal?
3. What are the effects of financing policies in achieving equity in primary education?
4. How far have financing policies contributed to social change?
5. What measures of education financing could be suggested so that efforts towards social change could be achieved in a sustainable manner?

Significance of the Study

The importance of this study is not just limited within the analysis of financing policies in education, but it also investigates potential impact of financing policies on educational indicators at the outcome level. The result of the study will enable the practitioners to develop a critical understanding of the financing policies and practices in Nepal, and their effects on the educational outcomes. Such discourse will also help

to prepare a critical mass of people to actively advocate for equity during the formulation of financing policies in education.

In simple terms, public resources are for the people. Therefore, all people should get their rightful share in the public subsidies on a need base in order to make it equitable. To allocate public subsidies unbalanced towards needy targeted people, a thorough analysis of the existing situation is required and this study is believed to contribute to this aspect to a certain extent. The analysis of education financing system from the equity perspective requires an assessment of inputs, processes, outputs, and outcomes, which is quite comprehensive in articulating policy implications at different levels. Such analysis will provide the policy makers with rich information on financing in primary education which can be used to improve the overall system.

Establishing and maintaining equity in public finance is not an easy task. Sometimes it is understood as a relative concept rather than an absolute term. However, equity concept is useful to analyze education financing which provides the merit for value judgments to determine fairness and social justice in resource allocation. It helps to analyze the education financing policies by putting them into the equity framework. Analysis of the financing policies will also provide useful insights to the policy makers by highlighting on the policy gaps and challenges. This will ultimately help them to design more equitable education financing policies and to explore their relations with the social change.

Delimitations of the Study

One of the major delimitations is that this research heavily relies on secondary data. Secondary sources include the reports of Nepal Living Standard Surveys (Central Bureau of Statistics), Flash Reports (Department of Education) and the

expenditure details in primary education (Financial Comptroller General's Office). There are some concerns on the quality of both NLSS and flash data. However, there is certain information that we are compelled to accept on its face value – as it exists, for example, the population of a country or region. We all know that population is never a static phenomenon, yet we keep on referring to the population count taken in one point in time – the census. Similarly, financial records produced by the Ministry of Finance (MOF) and educational data produced by MOE/DOE are the authentic data that we are supposed to accept on their face value. This does not mean that the data produced by these institutions are flaw-less, which can be an objective for additional enquiry but is not part of this research. Nevertheless, to ensure validity and reliability of information, interviews and interaction with key informants were also undertaken to substantiate the findings received from the secondary data analysis. The availability of disaggregated data also remained as a major concern during this study.

This study is confined to examining financing policies in primary education from the equity dimension (gender, geography and socio-economic status- economic quintiles). It covers at least five years financing policies in primary education in the last five years. However, the data of three Nepal Living Standard Surveys (NLSSs) are taken for the analysis. In addition, the analyses and study are also confined to the Nepalese contexts only. However, inferences have been drawn from regional and international literature as appropriate.

One of the aims of the study is to see the impact of equitable financing policies in social change. As a matter of post development concept, social transformation is equated with the social change where the latter is taken as a process of change in existing parameters of a social system including technological, economic, political and cultural restructuring (Castles, 2001). However, the meaning

of social change, in this study, is confined with the process of change towards the positive direction in the status of people's lives in terms of education, health, living standards, participation and socio-economic status.

Definition of the Terms

Coefficient of variation: It is a tool used to measure the variability of access and resources around the mean value (Sherman & Poirier, 2007). It helps to capture the dispersion of access and resources across administrative units. It is calculated by dividing the standard deviation by the mean.

Disparity: It is a state or condition which indicates unequal situation or differences in situation. It also refers to the lack of similarity or equality or a difference between things.

Equity: It is a condition which indicates fairness and impartiality towards all concerned aspects (Son, 2011; The World Bank, 2006). In order to ensure equity, there is a need to look individual circumstances and relative positions (Son, 2011). It also refers to a process where fair and reasonable ways will be used to treat people. In equity concept, people are treated unequally because their circumstances and relative positions are unequal.

Equality: Equality relates with the concept that each person has the same amount of measureable good, such as income, wealth, welfare or utility (Son, 2011). It is easy to measure and it does not need to know the individual characteristics or identities. It is only concerned with whether equal opportunities or equal chances for all to succeed are available or not, whether things are distributed equally or not (The World Bank, 2006).

Gini Coefficient: It is a tool used to capture the dispersion of resources across administrative units (Sherman & Poirier, 2007). It measures how far a

country's or district's distribution of teachers and expenditure is from providing a particular percentage of students with an equal percentage of resources.

Inequity: It is a situation which expresses unfairness, bias and injustice situation in any aspect (Son, 2011).

Inequality: It is a situation in which people are not equal because some groups have more opportunities, power, and money than others. It refers to the quality of being unequal or different in any respect (The World Bank, 2006). It is a condition where lack of uniformity, disproportion, unevenness, disparity and diversity exist. It is expressed like inequality in size, stature, numbers, power, distances, motions, rank, property, etc.

Mcloone Index: It helps to capture the dispersion of expenditure across administrative units (Sherman & Poirier, 2007) which is calculated by taking the sum of expenditure per pupil for each region below the median and dividing this by the sum that would exist if each region below the median had expenditure per pupil equal to the median.

Range ratio: It is used to capture the dispersion of access and resources across administrative units (Sherman & Poirier, 2007). They further mentioned that it is the simplest of the horizontal equity measures and does not take into account how access, resources or results are distributed among the regions between the ends of the distribution. It is calculated by dividing the highest value by the lowest value in a unit's distribution of enrolment ratios, expenditure per pupil and pupil-teacher ratios.

Social changes: Social changes are taken as a process of change in society's systemic characteristics through internal and external forces (Castles, 2001). Such

changes in societies can be observed in the behavior (Patil, 2012) of the society and social structure (Chantia, 2006), such as values, norms, institutionalized structures, relationships, technology, and socio-economic status and living standards of people. But the changes in the societies in this study are observed through improvement in literacy, living standards of people, reduction in poverty and educational status.

Chapter Summary

This chapter presented the context and background of the study in relation to equity in primary education financing and its (potential) role in social change. The problems associated with the equity and primary education financing enlisted in this chapter guided me to highlight the need and rationale of the study. Building upon these problems and rationale, it outlined the purposes and research questions which provided an overarching framework for the study. The following chapter (Chapter two) provides detailed information from the relevant literatures on equity, equity measures in education finance and roles of equitable financing system in social change.

CHAPTER II

EQUITY IN EDUCATION FINANCING AND SOCIAL CHANGE

This chapter conceptualizes the meaning of equity from different perspectives, including its theoretical understanding. Though equity is considered a broad term and largely used in the social and economic sphere, it will also be applied in exploring how the concept of equity can guide education financing within this research. Besides providing a conceptual and theoretical framework of equity through which the data will be analyzed, this chapter explores what tools can be used to measure equity in education financing. Finally, this chapter includes a discourse on the relationship between equitable education system and social change.

Conceptualizing and Understanding Equity

Equity, inequity, equality, inequality and equality of opportunity are frequently used in the literature on education financing. Equity, equality and equality of opportunities are often used interchangeably which may mislead the actual discourse because these terms have different meanings and implications. I have attempted to explore the meanings of these concepts and clarify their differences in the context of my study.

Overall, equity is interlocked with the concept of fairness (Son, 2011). In this way, it adds a dimension to the concept of equality, which can be applied on a process (equal opportunities or distribution of resources) or a situation (equal outcomes). In this regard, equity goes one step further in focusing on the fair distribution of resources and outcomes (Reimer, 2005). This involves providing people with resources or opportunities on a need basis in order to enable them to reach the same

outcomes, regardless of their personal or communal features and capacity. A difference in the distribution or allocation of resource between groups results in inequity which is essentially lack of equity, unfairness, favoritism or bias. Hence, inequity refers to an unfair circumstance or proceeding. But equality is defined as the state of an ideal or quality of being equal as in enjoying equal social, political and economic rights (King, Swanson, & Sweetland, 2005).

Likewise, inequity and inequality are also used interchangeably. These two terms are closely related in origin and in some of their secondary definitions, but there are differences between them. As mentioned above, inequity means injustice or unfairness, which usually relates to more qualitative matters whereas inequality denotes primarily the condition of being unequal and thus usually relates to things that can be expressed in numbers. For example, one might say that income inequality results from inequity in society. In addition, inequality just means that two things are not the same. One can observe the difference between young and old men because there is an inequality in strength between them. Hence, inequality simply describes the state of the world.

To understand inequalities, one must talk about equities and inequities. Often, inequality and inequity are used interchangeably because the connotation of inequality usually assumes that a difference is unfair to begin with. This is due to the fact that many inequalities are also unfair and therefore inequitable. An inequality need not be unfair. The difference in strength between young and old men has nothing to do with fairness at all; it results from the natural process of aging. Inequality, often used in reference to disparities in rights or freedoms, is virtually interchangeable with inequity.

The concept of equal opportunity suggests that everyone has an equal genuine opportunity and is not discriminated based on ethnicity, nationality, sex, etc. Equal opportunities are basically treating people the same way regardless of their gender, ethnicity, religion or ability. Everyone should have the same chance to be successful (The World Bank, 2006). Although the focus of my study is equity in education financing, I have used equity, equality and equality of opportunity in the context where appropriate. Therefore, it is important to have a clear understanding on their common grounds and differences.

In one sense, the equity concerns are grounded in societal values such as justice. From such a perspective, it refers to equality of opportunity, fairness, and social justice under the broader social term. It is concerned with equal justice, not only in one or more aspects of the society, but in the entire society. Such justice is related to individuals' and groups' fair treatment and just share of the benefits of the society. It gives the meaning of having equal rights and opportunities but does not mean "treating people equally" (Jones, 2009). However, questions equally arise on the precise definition of the words 'just' or 'fair or 'equal'. Equity theories help to derive the meanings of these terms by focusing on individuals' perceptions of how fairly certain target groups' needs are treated in comparison to others. NSW Health Department (2000) defines equity in relation to gender by saying that to ensure the state of fairness and justness, there is a need to consider the specific needs of particular groups and act upon them accordingly. Another concept associated with the term equity is that there are certain basic needs that must be offered to all irrespective of where they were born, they live or they stay. From this notion, everyone must have access to food, safe shelter, medical care and education. Jones (2009) also sees the

relationship between three principles of equity (equal life chances, equal concerns for people's need and meritocracy) and a basic need approach to development.

From a political stance, equity equally endorses a just society. Social justice from religious point of view is defined based on beliefs, values and customs and is guided by the doctrines of religious faiths and rules. Hence, social justice comes from codes of morality from every culture and religion which also relates to equity. The concept of equity in the context of justice is also associated with the concept of equal rights. Equal rights are defined as equal access to and participation in opportunities that are so essential to achieving success in the society. The World Development Report (WDR) elaborates it in terms of two basic principles; these are equal opportunity and the avoidance of deprivation in outcomes (The World Bank, 2006). In this regard, anti-discrimination laws and equal opportunity could be much more relevant. In the broader social context, equity refers to equality of opportunity, fairness, and social justice (McGrath, 1993).

South Asia Forum for Education Development (SAFED) and United Nations Girls' Education Initiatives (UNGEI) (2011) also put forth the similar meaning of equity, which relates to the fairness without discrimination to personal and social circumstances and inclusion for basic entitlements that are outcome driven. Klasen (2006) also agrees with the statement of equity as fairness which has to do with the impartiality whereas equality is a mathematical concept that focuses on one item being of the same magnitude as another. By analyzing the meaning of these two terms, Klasen (2006) argues that equality is often seen as an impossible, idealistic and linked with socialism / communism. In contrast, equity is associated with equal opportunities that promote fairness. On the other hand, both the terms - inequity and inequality - are used in the field of economics. Both of them are problematic, and

more debate is probably seen on inequity. Thus, policy makers want to achieve greater equity (rather than equality) and complain about inequality (rather than inequity). In this way, equity can be taken as a means to achieve equality within the society, although achieving it might seem to be utopist.

Similarly, Reimer (2005) also used three broad sequential elements to define equity - these are equity of resources (support, finances, taxes), equity in process (the school experience, program, context, access), and equity of outcomes (learning achievement, impacts on later life).

As discussed above, scholars tried to clarify the concepts of equity. However, a postmodern concept shows a little doubt on the precise definition of equity by questioning such as can there ever be a just society or can we ever view all people as inherently equal and entitled to the same rights and privileges? It's hard to know, since most philosophers would argue that no one has ever created a completely just society where all people have an even chance to fulfill their potential. Even in the most socialist nations, there is poverty and distribution of wealth leading to unequal outcomes. From this notion, we can develop the argument that it is very difficult to fully achieve justice for all, and the debate of how to achieve justice is ongoing. This makes it difficult to derive a uniform evidence based definition of equity. But equity considerations are necessary and they should be in public sphere.

In this way, equity is taken as a complex concept which is conditioned by subjective criteria (Facio & Morgan, 2009) and has been widely debated in an international arena. It is a broad term which is interpreted in different ways (The World Bank, 2006). Several scholars have taken several approaches to define it. Such different perceptions and views on equity make the different meanings to different people in different contexts. The meaning of equity is different to lawyers,

economists, philosophers and educationists (The World Bank, 2006). McGrath (1993) states that equity is a social term rather than an economic one and is defined in relation to inequities or inequalities in the distribution of wealth or resources, and the adjustments which are required to allow for more equitable redistribution.

As discussed above, equity refers to equitable opportunities regardless of age, gender, social background, religious or ethnic background, and a place of residence and family education or family finances. As highlighted by The World Bank (2006), equity also requires fairness in processes. But measuring equitable opportunity is hard. It is understood to refer to the system as well as the individual levels. At the system level, it is based on overriding legislation, regulations and syllabuses, and at the individual level, it is relying to individual abilities and aptitudes. The following section opens the discussion on these theoretical understandings.

Overview of Theories Relating to Equity

In the development of the conceptual and theoretical framework of my research, I have attempted to select equity based theories that can be used in complementary ways to develop a holistic framework through which I can analyze my findings and explain them. It has provided a clear scope of looking at equity in a people centered and outcome focused approach, with the ideological foundation of social justice and fairness. Based on this, I have adopted a two folded theoretical approach of scrutinizing the concept of equity, first equity in (financing) policies through the perspective of policies as a societal tool to equitable (re)distribution of resources and opportunities from a need base perspective, whereas second relates with a scope of justice and fairness of these (re)distribution mechanisms.

In my study, I have used some of the prominent theories relating to the equities. These are (i) theory of justice (Rawls, 1971; 1999), (ii) theory of spheres of

justice (Walzer & Dworkin, 1983) (iii) theoretical framework of the capability Approach (Sen, 1993), and (iv) theory of equality of opportunity (Roemer, 2002). A brief explanation of each theory is given below.

Theory of Justice

Theory of justice has provided the needed foundation for developing the main concepts of social justice (Rawls, 1971; 1999). The concept of social justice was based on inequalities with regard to the status of people and resource allocation in the modern world. Rawls, in this context, argues that all vital economic goods and services should be distributed equally, unless an unequal distribution would work to everyone's advantage, including the worst off. In order to ensure the improvement in the lives of the worst off, unequal treatments are required based on difference principle (Rawls, 1971). Thus, the concept of equity, in this context, means fair shares and fair opportunities in the distribution of resources and peoples' access to these resources, including the services, such as healthcare and education. In this way, equity is different from providing equal shares or equal opportunities. It means that in order to establish equal outcomes for people, greater resources and more services should be made available to the most vulnerable and needy groups. As people are unequal in many ways, it relates with the ideas of the fair opportunity rule. According to this rule, the properties should be distributed as per the morally acceptable discrimination not by the lottery of social and biological life (location, ability, gender, etc.). This argument provides a justification for a corrective redistribution of shares to many classes of disadvantaged persons.

As per this theory (Rawls, 1971; 1999), those people in the society who have the greatest need should get more public resources and this should be ensured by the State. This is like establishing equal outcomes through unequal treatment for unequal

people. He further explained that inequalities of wealth and authority are only just, if they result in compensating benefits for everyone based on the people need base, in particular for the least advantaged members of the society. Hence, the redistribution permits both equal treatment of equals and unequal treatment of unequals in terms of access to the benefits of public spending.

Rawls presents his theory on how a society could be organized in the most just way through the concept of what he has labeled as the original position (Rawls, 1971). According to this, a society should organize the (re)distribution of resources without being aware of what this will mean for their own individual livelihoods. In addition, Rawls (1971) has developed two principles of justice to support his theory. The first principle of justice focuses on basic liberties whereas the second principle relates with the measures to overcome the social and economic inequalities. When changes or amendments are made in societal structures and frameworks, it will always have to be done according to the difference principle (Rawls, 1971).

Rawls' concept of distributive justice has supported the development of the school finance equity theory. This theory states that all children of the state should have an equitable portion of state educational funds regardless of the level of property wealth in the district in which they live.

Theory of Spheres of Justice

The theory of spheres of justice was developed by Michael Walzer (Walzer & Dworking, 1983). Walzer takes a distributive approach to social justice by asking the question how benefits and burdens are and should be distributed over the members of the society. He views society as a distributive community in which people produce a wide variety of goods that are subsequently shared, divided and exchanged in specific ways. He also states that equality should not be seen in the simple sense of the word,

as is the case in some other theoretical frameworks. Equality is a complex concept as it is context depending what equal measures in distribution will bring about for people that receive them. Therefore the claim is that variety of goods has varying social meanings and their distributions are primarily differentiated by dominant goods (Tutui, 2011; Walzer & Dworking, 1983). Hence, the distribution of each goods should be guided by a distributional principle that matches the meaning of that good. There is no single criterion in virtue of which all goods are to be made available to members of the society. Commonly defended criteria like free exchange, need cannot determine the distribution of all goods available in the society. Based on these theoretical considerations, they discussed on the concept of distributive spheres.

Distributive spheres are connected with goods that have a distinct social meaning in a particular society, which sets them apart from regular goods (Walzer & Dworking, 1983). Regular goods – or commodities – can be distributed through the market and their distribution being determined by the principle of free exchange. However, goods to which a particular society ascribes a distinct social meaning should not be distributed through free exchange. Such goods are in need of their own distributive sphere. A distributive sphere is characterized by two basic features (Tutui, 2011; Walzer & Dworking, 1983). First, it requires that the distribution of a particular good be guided by another distributive principle than free exchange. The principles can differ – ranging from equality to need – but are to match the social meaning of the good in a particular society. Second, the existence of a distributive sphere requires that the distribution of a particular good is not determined by the way in which other goods, most notably money and power, are distributed in the society (Walzer & Dworkin, 1983).

The Capability Approach

The capability approach is a broad normative framework for the evaluation of individual well-being and social arrangements, the design of policies and proposals about social change in the society (Sen, 1993). The capability approach is used in a wide range of fields, most prominently in development thinking, welfare economics, social policy and political philosophy. It can be used to evaluate a wide variety of aspects of people's well-being, such as individual well-being, inequality and poverty. It can also be used as an alternative evaluative tool for social cost-benefit analysis, or to design and evaluate policies, ranging from welfare state design in affluent societies, to development policies by governments and non-governmental organizations (NGOs) in developing countries.

At the academic level, it is being discussed in abstract and philosophical terms, but also used for applied and empirical studies. In development policy circles, it has provided the foundations for the human development paradigm (Fukuda-Parr, 2003). The core characteristic of the capability approach is its focus on what people are effectively able to do and to be, that is, on their capabilities. Sen (1993) further argues that "the capability approach to a person's advantage is concerned with evaluating it in terms of his or her actual ability to achieve various valuable functioning as a part of living" (p. 30). Thus, functioning is the state of 'beings' and 'doings' of people. Capability relates with the combinations of functioning that a person can achieve if s/he would desire to do so. They can be seen as collections of functioning. Thus, capabilities relate with the person's opportunity and ability to generate (valuable) and desired outcomes.

The capability approach therefore goes beyond resource based welfare theories. Capabilities are the opportunities to realize the functions of people. Sen

(1993) argues that in social evaluations and policy design, the focus should be on what people are able to do and be, on the quality of their life, and on removing obstacles in their lives so that they have more freedom to live the kind of life which, upon reflection, they find valuable. People typically differ in their capacity to convert the assets into valuable outcomes and achievements. For this reason welfare or utility approach would not be sufficient for all. How well people are able to function with the goods and services at their disposal is partly the result of the development, implementation and enforcement of public policies.

Theory of Equality of Opportunity

Roemer (2002) argues that society must take actions necessary to ensure that an individual's economic (or welfare) opportunities are not under the influence of personal features such as race, gender and socio-economic status of people. It means peoples' achievement should depend solely on the effort that s/he has made in life.

It seems that nowadays, a broad consensus among social scientists has evolved on the matter of equity. Equity is seen to be similar to Roemer's definition of equality of opportunity (Roemer, 2002). The central idea of this concept is that inequality should be tolerated only if it is due to persons' differences in levels of effort, but not due to circumstances which are beyond a person's control. For example student's educational performance would in this case not depend on their race, gender or family background but only on the effort they have made to internalize the information or master the skills. Thus, equity can be achieved in this example, even if there is inequality in educational outcomes. This is due to the fact that different students choose to put different levels of effort into their learning. In other words, a person's expected educational outcome should be a function of his or her effort, but not of his or her circumstances. The equity objective can be measured in terms of looking at

outcomes within for example education and training systems, such as through test scores. It can also be seen in a wider sense, for example in terms of labor-market outcomes. The assessment of equity can focus on whether a specific equity goal can be reached better by investments in education or by alternative uses of money. Furthermore, it can focus on how a given set of resources in the education and training system can be used in the most equitable way (Roemer, 2002).

In this way, the concept of equity is understood in terms of equality of opportunity that calls for an equal access to education. This access should be independent of students' circumstances. In addition, there is a need for an equitable treatment of all students independent of their circumstances. At the same time, this concept of equity does not automatically call for a strict equality of educational outcomes. This is because people are allowed to choose based on their interests and to differ according to their self-determined efforts.

Hence, on the one hand, equity is deeply rooted into the perception of justice and fairness in the system (Rawls, 1971; Tutui, 2011; Walzer & Dworkin, 1983) and at the same time it is a subject to the ability or genuine choice to converse opportunities into achievements (Arlegi & Nieto, 1998; Sen, 1993). The theoretical framework of my research has therefore been built on both justice based and opportunity based theories, taking the theoretical considerations of the scholars mentioned above into account. The theories that have been incorporated in the theoretical framework of this research have proven to be equal relevant to the roles and functioning of the state through its policies (in case of the distributive justice theory and the theory of justice spheres) as well as the role of individual within the wider group or society (in case of the capability approach and the equality of opportunities theory). Opportunities in this regard can either be seen to have fallen

directly on an individual level or indirectly through the strengthening of the society this individual is living in. In such a context, financial and economic policies can be seen as mechanisms that have been constructed to safeguard the (re)distribution of goods and opportunities that lead to improvements in people's quality of lives.

Equity Dimensions

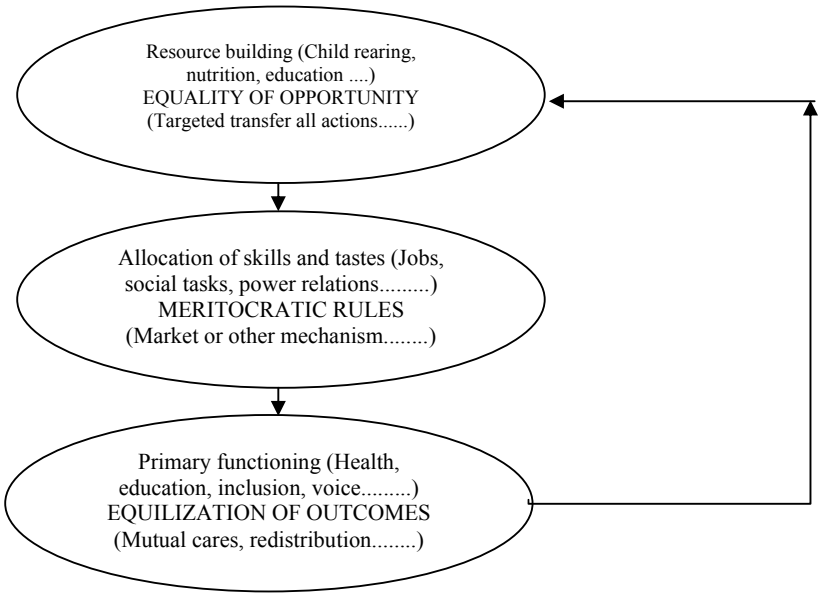
To understand the equity in basic education financing, there is a need to explore the equity dimensions. Exploring equity dimensions helps to analyze the existing financing policies from an equity perspective and design the strategic priorities for addressing equity. As explained above the means needed to achieve equity depend upon the context and contextual factors. Therefore, a review of country context is felt necessary. The context (political, economic and social), where the individual, family and social institutions remain, affects the individual's opportunities and abilities to interact with others. Such circumstances may promote or prohibit the chances of opportunities because access to and interactions with key institutions are shaped by power balances (Jones, 2009). Alternatively, unequal opportunities certainly produce unequal outcomes and reinforce unequal political power that ultimately shapes institutions and policies (The World Bank, 2006). This is a sort of rule of game, therefore the interaction of political, economic and socio-cultural aspects are considered to be the major dimensions of equity.

Likewise, the equality of rights, equality of opportunities and equity in living conditions for all individuals and households are also considered equity domains by the United Nations (2006), in its report of Social Justice in an Open World. The report has summarized three domains of equity and equality by taking reference from the Charter of the United Nations, the Universal Declaration of Human Rights, the

International Covenants on Human Rights, Copenhagen Declaration and Program of Action, and the Millennium Declaration.

Jones (2009) discusses three principles of equity in order of priority; these are equal life chances, equal concerns for people's need and meritocracy. These three principles are taken as central to national development because equity as such is also associated with the concern on how to distribute goods and services across societies and making the state responsible for its influence over how goods and services are distributed in a society.

Similarly, Cogneau (2006) discusses three major dimension of equity in the society that requires a complementary mix of equality of opportunity, of meritocratic efficient allocation, and of equalization of primary functioning or basic achievements (Figure 1). These three principles are inter-related in the following manner.



Cogneau (2006, p. 63)

Figure 1. Dimensions of equity.

Additionally, Klasen (2006, p. 71) develops a matrix to highlight two major dimensions of equity (Table 1). In one side, means and ends are used whereas on the other process and outcomes are taken.

Table 1

Dimensions of Equity

	Process	Outcomes (Consequences)
Means	Opportunities	Income, primary goods
Ends	Procedural liberties, capabilities	Functioning (capabilities)

USAID (2010) used the equity framework to analyze the equity status and improve the access to poor people in health services in Kenya which is also relevant for education. The equity framework includes two major aspects of analysis and actions. The analysis includes (i) E = Engage and empower the poor, (ii) Q = Quantify the level of inequality, (iii) U = Understand the barriers, and actions include (iv) I = Integrate policy goal, (v) T= Target resources and efforts to the poor, (vi) Y = Yield public private partnerships for equity.

From the above discussion, it is found that equity is founded upon the principles of fairness and conscience, associated with the fair distribution of goods and services depending upon the political, economic and social contexts. Individuals are also an important consideration. Likewise, domestic and global contextual aspects are also associated with its dimensions.

Additionally, Berne and Stiefel (1999) identify three different principles of equity that can be used to determine whether a particular distribution of resources is equitable: horizontal equity, vertical equity, and equal opportunity (Berne & Stiefel, 1999). Horizontal equity refers to the equal treatment of equals – the traditional meaning of "equality." Vertical equity recognizes that equal treatment is not always

"fair and just" for pupils experiencing extraordinary conditions such as poverty or physical, psychological and mental disabilities. Equal opportunity is considered as a condition of horizontal equity, the position people favor.

The understanding on equity and its development took place over many years. The development was also a direct result of injustices often caused by a strict application of common law and a discourse on its uses. In this way, equitable principles have also developed step by step and came into existence in a responsive way.

Equity in Education

The priority of every country at present is to improve equity in quality education because it is taken as fundamental for all to have a successful adult life and to participate fully in an adult society (UNESCO, 2010). In a broader sense, as discussed earlier equity is related with the just and fair society that demands children from different social backgrounds have an equal start in adult life. Such aspects of equity certainly affect the education system being run in the country.

Opheim (2004) emphasized both the equity in opportunities and equity in outcomes. The details on the concept and meaning of equity in education are highlighted in the thematic review as follows:

> Educational equity refers to an educational and learning achievement in which individuals can consider options and make choices throughout their lives based on their abilities and talents, not on the basis of stereotypes, biased expectations or discrimination. The achievement of educational equity enables females and males of all races and ethnic backgrounds to develop skills needed to be productive, empowered citizens. It opens

> economic and social opportunities regardless of gender, ethnicity, race or social status. (p. 13)

OECD (2008) also defines equity in education by mentioning two closely linked dimensions: the first is fairness and the second is inclusion. It recommended ten steps which would reduce school failure and dropout rates, make society fairer and avoid the large social costs of marginalized adults with a few basic skills. Son (2011) defines equity with the help of access to opportunities whatever their socio-economic status people have. She further argues:

> The concept of equity assumes that households have access to the same opportunities, whatever their socio-economic status. The level of opportunities can be measured by a variety of indicators and the socio-economic status can be measured along several dimensions. Indicators used for education include; (i) access to education (school enrolments at different cycles of schooling), (ii) education outcomes (school cycle completion), and (iii) the progressivity of out-of-pocket expenditure for different education cycles. (p. 226)

Reimer (2005) also defines inequity to make the meaning of equity more clear and specific in education. Generally, two sources of inequity are evident in the education system: those arising from the education system's structure and practices, and those arising from the student's ethno-cultural and socio-economic context. In 1984, Grisay developed a table that gives an overall vision of the five major principles of equality in terms of education (Table 2) (European Group of Research on Equity of the Education Systems, 2001).

Table 2

Five Principles of Equality in Education

A – No interest in equity: "natural" and "libertarian" positions

Assumed	Admitted	Criticized	Recommended
Birth, strength or belonging to a particular group determine rights. Liberty can only suffer from forced redistribution.	Reproduction and maintenance of the "natural" order and differences based on fair acquisition.	Possibly, inequalities in groups of peers. Interventions contrary to liberty.	A stable order, a sharing of functions (society of castes, orders, etc.) or a system based on liberty of the actors.

B – Equality of access or opportunities

Assumed	Admitted	Criticized	Recommended
The existence of talents, of potential or natural aptitudes. These define the level or threshold that the individual may hope to achieve.	Unequal results, provided that they are proportional to aptitudes at the start. Existence of courses of study of unequal value. Inequality of treatment.	The fact that merit is not the only criterion for access to the most highly-regarded courses. Socio-cultural bias affecting guidance tests. Imperfections in the evaluations responsible for the fact that, although of equal competence, one pupil succeeds and another fails.	Objective and scientific detection of talents, and scientific methods of orientation. Equality of access to long courses of study, for children of equal aptitude from advantaged and disadvantaged backgrounds. A school made to measure, i.e. a varied system of options and courses of education adapted to the ability of students. Aid to gifted pupils from disadvantaged backgrounds (scholarships, etc.).

C – Equality of treatment

Assumed	Admitted	Criticized	Recommended
The capacity of all to undertake basic learning, and therefore benefit from basic education.	The existence of natural talents, potential or aptitudes. Unequal results, on the condition that pupils were able to benefit from learning conditions of equivalent quality.	Unequal quality of teaching, responsible for unequal achievement. Elite schools, ghetto schools, streamed classes, explicit and implicit courses of study that engender unequal quality of education.	The Single-level or Comprehensive school, and particularly, the common core for lower secondary education.

D – Equality of achievement or academic success

Assumed	Admitted	Criticized	Recommended
Potential for extended learning. Individual	Differences in results beyond the	The ideology of talents. Negative discrimination (including streamed	Equality of achievement for the essential skills. Positive discrimination, mastery

characteristics (cognitive or affective) can be modified. Differences in learning styles.	essential skills.	classes, courses, elite schools and ghetto schools), i.e. all the situations where unequal quality of teaching amplifies the inequalities at the outset.	learning, formative assessment, as well as all the support mechanisms aimed at reducing the initial inequalities.

E – Equality of social fulfillment (social output)

Assumed	Admitted	Criticized	Recommended
Different individual, motivational and cultural characteristics, but without any hierarchy existing between them.	Differences in profile of the results.	The existence of a single standard for excellence. An "elite" culture and a "sub-culture".	Individualized instruction.

(Adapted from Grisay, 1984, p. 7 as cited in European Groups of Research on Equity of Education System, 2001, p. 14)

These five major principles of equality present the postulates and the consequences of these various principles of justice. The first concept, not specified by Grisay and marked "A", refers to a "natural", or libertarian concept. Only concepts B to E draw on the principles of equality (European Group of Research on Equity of the Education Systems, 2001; Demeuse, Baye, Straeten, & Nicaise, 2004). The same research report of European Group further mentions that;

> In the first case (B), the wish is that the social background does not influence success at school. But this is subject to criticism by those who claim that this leaves the possibility open to give better educational conditions to those with greater ability, which is traditionally known as the "Matthew effect". (p. 14)

Similarly, the Research Group also expressed about C and D in the following manner;

> In the second case (C), the same educational conditions are given to all, but this is open to criticism from those who think that some people, because they suffer from a handicap of one kind or another, need better educational conditions. In the third case (D), equality of results is desired, at least for a certain level of knowledge. But this comes up against those who claim that by pursuing this objective, the best pupils are deprived of the possibility of progressing as far as possible, which is referred to as the "Robin Hood effect". (p. 14)

Equity in education can be viewed in terms of fairness and effectiveness of education systems (Sherman & Poirier, 2007). Similarly, the rights-based approached to education also relates with equity because it aims to address the concerns of educational inequity. Shields and Rappleye (2008) mentioned that various dimensions of culture and ethnicity including caste, gender, and the urban–rural divide have acted as the primary dimensions of inequality in Nepali education system. However, equity in education in Nepal for this study is viewed in terms of gender, socio-economic and geographical settings (development regions, eco-zones and urban and rural).

Educational inequities are differences in the educational outcomes of people, as a result of the distribution of resources/services, which do not address educational needs of the population across the country or regions. In addition, these are differences in education experience and outcomes between different population groups - according to socio-economic status, geographical area, age, disability, gender, ethnic groups. Therefore, it describes the lack of equal opportunities that people have as a result of disparities in quality education or other factors.

Equity in Education Financing

Broadly speaking, finance is a science which supports to manage funds - how money is collected, budgeted, spent and used. It deals with the concepts of time, money and risk, and their relationships. Education financing is the act of providing funds for running educational activities with a view to achieving the desired goals. In a lucid language, it is a method by which the financial resources are generated for education and then made available to the education system by the State Government (through general taxes and specific taxes), firms, and individuals and families.

Education financing is largely influenced by the decisions (fiscal policy) taken by the Government. Such policy is concerned with the raising and spending of financial resources according to the national objectives and priorities. In addition, financing policies help to allocate the public resources to certain groups, areas and places, and can create disadvantage to others at the same time. Therefore, the situation of social justice and equity is very much dependent on the policies taken by the Government because fiscal policy can act as an instrument to reduce or widen the gaps that are enrooted in the society. Wößmann and Schütz (2006) argued that the goals of education policy are usually two-fold, encompassing both goals of efficient allocation and goals of equitable distribution. Hence the discussion on equity in education financing is inevitable in this study.

In the case of financing education, equity relates to the question of whether all students receive a fair share of the money spent on education. The concept of fairness has been interpreted in different ways in the past. How fair and/or effective are expenditures in relation to addressing the very poor? And how do we achieve greater equity in reaching disadvantaged groups?

Traditionally, equity has been interpreted as equality of spending per pupil regardless of their situation and needs (Berne & Stiefel, 1999). This interpretation has been scrutinized by scholars, such as the school finance community, stating that students are not equal, and equal distribution of financial resources does not establish equal opportunities amongst students. This train of thought states that in order for a funding system to be fair some students must receive more resources than others. For example, it would be unfair to provide the same per pupil expenditure to students with disabilities as to students without disabilities. Similarly, students with limited proficiency in English would deserve access to additional resources if they want to reach the same level as their peers. This rationale explains why categorical funds through targeting and additional student weightings are components of school finance systems. The use of funding categories and specific targeting represent the recognition that some students need greater resources to achieve at appropriate levels.

In the context of education financing, equity refers to a dual funding principle (McGrath, 1993). The former meaning acts as a means of ensuring that as much equality as possible is built into the provision of educational services whereas the later provides meaning of as much fairness as is administratively feasible is applied to sharing the taxation burden for education among the general citizenry.

Financial equalization underlies the concept of equity in education (McGrath, 1993). Equity, adequacy and efficiency are frequently used in the field of education finance. In the social context, equity refers to equality of opportunity, fairness, and social justice. In the context of educational finance, equity is a process of making funds available to achieve the stated goals. Efficiency is often integrated into a more popular term of accountability which measures outputs. There, efficiency is related to

cost-benefits, cost-effectiveness, and cost-utility in terms of both inputs and outputs (McGrath, 1993).

Nowadays, equity in school financing is becoming a sensitive issue in the public policy areas and even in the society at large. The growing awareness and media attention highlights the issues of equitable treatment of individuals and groups. This also has its effects on the institutionalization of equity at the policy level. The Interim Constitution of Nepal 2007, for example, describes that every individual should be accorded equal with fair treatment from the government and receiving basic education is taken as the right of each individual.

Historically, schools in Nepal have been funded by religious leaders or local people or a local community because of the belief that education is a local responsibility (NNEP, 1954). The belief was that schools serve the local community; therefore local community should provide and run their schools. The support to schools was collected from each household corresponding to their willingness or wealth that they possessed. Therefore, schools' conditions were very much influenced by the value of property of the local communities (NNEP, 1954).

Traditional school finance systems in Nepal were entirely run on collection of local grants which allowed the rich community to collect more resources to schools located in their community (NESP, 1971). Poor communities on the other hand did not have the capacity to manage school or show willingness to collect resources to run schools. The role of state in school management and administration was therefore minimal, if not at all, until 1971. After 1971, full state funding has been proposed as a method of strengthening fiscal equity through government support in school financing (NESP, 1971).

In most countries of the world, education is largely financed by the government (OECD, 2002). Nepal is no exception to this. A commonly agreed rationale for public intervention in education is that it fosters important external benefits for societies because it can create the positive benefits in the society (OECD, 2002). However, public provision of educational services in Nepal is always constrained by the availability of public resources. Nepal has relatively weak public resource collection capacity, and hence, resource allocation for education is also affected (MOE, 2011).

Measures of Equity in Education Financing

As mentioned earlier, one of the major aspects of school financing is fiscal equity, which is concerned with the distribution of state resources so that each child has equal access to the resources of the state (Berne & Stiefel, 1999). Fiscal equity also relates to the concept of horizontal equity, vertical equity and equality of opportunity.

Horizontal equity is often defined as "equal treatment of equals" (Berne & Stiefel, 1999). It requires the state to provide the same level of fiscal support to every child in the state regardless of the value of property or wealth of the school district in which the child lives. Similarly, the theory of providing more state assistance to children with special needs in specified programs is vertical equity. Vertical equity thus has been defined as the "unequal treatment of unequal" (Berne & Stiefel, 1999). It recognizes differences among children and addresses the education imperative that some students deserve or need more services than others.

Berne and Stiefel (1984) as cited in Sherman and Poirier (2007) develop a framework of measuring the equity of school finance which includes four guiding questions: for whom, what, how and how much? The first and foremost concern is the

target of equity concerns – children and taxpayers. The second deals with the concepts of objects of equity whereas the third and fourth questions are related with the equity principles and measuring of equity. Until recently, virtually all studies of school finance equity have dealt only with the horizontal and equal opportunity dimensions. Vertical equity has become a critical concept within the adequacy context.

Equity in financing education is concerned with whether the funds are distributed according to the needs of students. The needs of students are investigated through a census of the age cohort, which is adjusted using a sophisticated formula. It is natural that more resources are given to the students who are academically or economically disadvantaged, and of different abilities. Also, it is an issue for the central government to keep equity among the local educational needs. This is especially important in a country in which educational expenses are shared by the central government and the local governments.

A possible weakness of interpreting equity referring to the amount of spending per pupil is that the focus is mainly based on education inputs. Without linking with educational outputs, it seems not possible to know to what extent to recognize the differences among students with different funding levels. Toutkoushian and Michael (2007) talk about the measure of horizontal and vertical equity in the following manner:

> Reductions in dispersion are then interpreted as movements toward horizontal equity. The vertical equity metrics are based on either descriptive statistics of the variations in per-pupil revenues after adjusting for a vertical equity factor, bivariate correlations or regressions between per-pupil revenues and selected vertical equity characteristics of districts, or ratios of per-pupil revenues for two groups. Vertical equity is said to

> improve when there are reductions in adjusted variations in per-pupil revenues or increases in the ratios of per-pupil revenues between groups or the correlations between per-pupil revenues and vertical equity characteristics. (p. 397)

Similarly, Rubenstein, Ballal, Stiefel, and Schwartz (2008) mention the measuring of equity in the following manner:

> Much of the research on school finance equity has focused on the conceptual and methodological underpinnings of equity or on empirical analyses of equity within individual states, comparisons across states or across schools within large districts. While the majority of research on equity has been descriptive, some has aimed at identifying causal relationships. (p. 4)

In this way, equity in education financing typically focuses on inequalities in the distribution of resources across units. While these inequalities are sometimes measured strictly as per-pupil expenditures (horizontal equity), litigation more frequently considers differences in costs of education across school districts and the higher levels of resources required in districts serving large numbers of students from low-income families, students for whom Nepali is not their first language, and students with learning and physical disabilities (vertical equity).

In the past, equity from the perspective of taxpayers who provided financial support to schools was considered important. But at this moment, as attention turned toward the equity of school funding from the perspective of recipients, new measures of equity were needed. The commonly used measures of horizontal equity as identified by Toutkoushian and Michael (2007, p. 401) are as follows:

- Range: Difference between the districts with the highest and lowest revenues per pupil
- Restricted range: Difference in the per-pupil revenues for districts at specific percentiles in the distribution
- Variance or standard deviation: Average squared deviation in per-pupil revenues across school districts
- Mean absolute deviation: Average absolute deviation in per-pupil revenues across school districts
- Coefficient of variation: Standard deviation in per-pupil revenues divided by the mean of per-pupil revenues
- McLoone index: Ratio of the sum of per-pupil revenues for districts below the median to the sum if all districts were at the median in per-pupil revenues
- Gini coefficient: Relationship between the distribution of per-pupil revenues and a uniform distribution of per-pupil revenues

While measuring equity in education financing, the term equity and inequality measures are used synonymously (Toutkoushian & Michael, 2007). Measuring inequality relates to several mathematical concepts, including dispersion, skewness, and variance (Toutkoushian & Michael, 2007). As a result, there are many ways to measure inequality, which itself arises from various social and physical phenomena. In this study, the range ratio, the McLoone Index, the coefficient of variation, and the Gini Coefficient are used to measure the horizontal equity in education financing. Similarly, some other measures of the vertical equity and equality of opportunity are also used. The details of each are given below:

Range Ratio

Range is used to measure the state of spreading of resources in a comprehensive way. It calculates the difference between the highest and lowest value. It has a very limited measure as it uses only two observations from the overall sets. It does not weigh the observations by important underlying characteristics.

The range between the salaries of the highest and lowest paid employees of an organization may not give much information about inequalities. For example, in school A, the range in salaries is 15,000 NPR (the highest salary is NPR 18,000 and the lowest salary is NPR 3,000) while for school B the range is NPR 5,000 (the highest salary is NPR 15,000 and the lowest salary is NPR 10,000). Based on this information alone, it is difficult to say school B has much more equal salary structure than school A because it only provides the information about the difference in two values, not the entire distribution of values.

It can well be that in the above scenario of school A and school B other personnel are working in both schools, whose salaries are in between the highest and the lowest value. In order to find out the range ratio in this case, we need to divide the value at a certain percentile (usually above the median) by the value at a lower percentile (usually below the median). In this way, range ratio directly compares the observations at a certain percentile or elsewhere above the median with the observations at a certain percentile or elsewhere below the median. It only looks at two distinct data points, throwing away the great majority of data.

Sherman and Poirier (2007) used range ratio to explore the state of disparities between/among 16 different countries. They used such ratio to assess the forms of horizontal equity between/among these different countries. They further stated that

such ratio did not take into account how access, resources or results are distributed among the regions between the ends of the distribution.

The Coefficient of Variation

The Coefficient of Variation is used to capture the state of dispersion of access and resources across administrative units within the countries (Sherman & Poirier, 2007). It is simply calculated by dividing the standard deviation of a variable by the mean. It also describes the peakedness of a unimodal frequency distribution. In a data set where data are closely bunched around the mean, the peak will be high, and the coefficient of variation will be smaller. If the data are more dispersed, they will have a shorter peak and the coefficient of variation will be higher. If the value of the Coefficient of Variation is zero, it indicates perfect equity between/among administrative unit and higher value would signify the greater dispersion or inequity between/among administrative units.

McLoone Index

The McLoone Index is another measure used to assess the state of dispersion of expenditures across administrative units (Sherman & Poirier, 2007). It compares one part of distribution to another. The McLoone Index is calculated by taking the sum of expenditure per pupil for each administrative region below the median and dividing this by the sum that would exist if each administrative region below the median had expenditure per pupil equal to the median. The McLoone Index is less complicated than other measures. However, it has also some demerits. First, it does not use all information, throwing away the observations above the median. Certainly there is a substantial difference between a distribution where the higher values lie just above the median and one where some observations lie far beyond the median. The McLoone Index compares reality with a counterfactual model, so the researcher may

be asked to justify the comparison of reality to an alternative where the entire bottom half of the distribution shares the median value.

The Gini Coefficient

The Gini Coefficient is a measure of income inequality (Sherman & Poirier, 2007) which is developed by an Italian Statistician, Corrado Gini. It can be used to measure any form of uneven distribution. The Gini Coefficient is a number ranges from 0 to1. While 0 corresponds with perfect equality (where everyone has the same income), 1 corresponds with perfect inequality (where one person has all the income, and everyone others have zero income). In practice, Gini Index is also being used which is calculated by multiplying the Gini Coefficient by 100.

To understand Gini Coefficient or Gini Index, one should be familiar with the Lorenz Curve, which is used to measure the wealth inequality. Max Otto Lorenz published a paper in 1905 in American Statistical Journal and a measure of Lorenz Curve was developed since then. To plot a Lorenz curve, one should rank the observations from lowest to highest on the variable of interest, and then plot the cumulative proportion of the population on the X-axis and the cumulative proportion of the variable of interest on the Y-axis.

Once one prepares the Lorenz Curve, then it will be easy to calculate the Gini Coefficient and Gini index. Gini Coefficient is the ratio of the area between the Lorenz Curve and the line of absolute equality, and the whole area under the line of absolute equality.

Vertical Equity

Vertical equity is based on the principle that all students are not of the same state or they are different and their starting points will be different which is taken into account during the equity analysis (Sherman & Poirier, 2007). Individual or group

characteristics are considered important, such as race, ethnicity, gender, socio-economic status, household incomes or poverty status.

Differential treatments are required to address the needs of such students having different individual or group characteristics (Sherman & Poirier, 2007). For example, students with disabilities may require greater resources in terms of per pupil expenditure for teachers, teaching aids and support staff which help to ensure the same quality of education as students without disabilities.

Hence, the measures of vertical equity standard cannot be applied in access, progression or results because there should not be differences across units on these types of measures (Sherman & Poirier, 2007). In order to calculate the vertical equity horizontal equity are weighed and interpreted.

Equal Educational Opportunity

In order to calculate the equal educational opportunity, the relationships between regional wealth and enrolment ratios are calculated (Sherman & Poirier, 2007). Similarly, the relationships between the human development index and enrolment ratios are also looked upon. The other indicators used so far are population density and enrolment ratio (primary) by districts, eco-zones, development regions

As mentioned by Sherman and Poirier (2007), a measure of equal educational opportunity estimates the extent to which there are relationships between education access, resources or results and certain characteristics of students, districts or regions. Like correlation coefficients, the slope and elasticity of simple regressions are used (Berne & Stiefel, 1984 as cited in Sherman & Poirier, 2007).

The Correlation coefficients are used to measure the strength and direction of the linear relationship between characteristics of regions (regional wealth, population density etc.) and measures of access and resources. It ranges from -1.00 (a perfect

negative relationship) to +1.00 (a perfect positive relationship) where a value of zero is no relationships. Similarly, the slope from the simple regression is used to measure the magnitude of the relationship of the change in the dependent variable (such as expenditure per pupil) associated with a one-unit change in the independent variable (such as population density).

Understanding Social Change

Human society is a process with complexity which always undergoes constant change. It can be conceived as a complex of three basic, mutually interpenetrating entities (Machonin, 1996), which are (i) human personalities,(ii) their mutual, that is social relationships and (iii) the culture created by them in the course of human history. Factors of change include economy, polity, culture and technology; therefore focus should be to influence these factors (Leat, 2005; Nayar, 2004; Tirtosudarmo, 2010). Changes within the individual and in organization are also the effects of these factors. Social change is a change in nature and composition of social institutions, behaviors of individual, and patterns of relations in a society (Tirtosudarmo, 2010; Nayar, 2004).

Analysis of the factors of social change indicates internal as well as external forces that consistently interplay to bring change in the society. However, Portes (2008) discusses multiple sources of change that are not limited to the social system's internal dialectics only. It may take place as a response to many types of changes that take place in the social and non-social environment (Maclver, 1945). Sometimes, human needs are also considered responsible for bringing the social change. Nayar (2004) further argues that education can initiate social changes by bringing about a change in outlook and attitude of human behavior and needs.

From the above arguments, it appears that social change involves at both the personal and society (structural) level. In one side, changes can be seen as the outcome of the personal development achieved through education and training, access to resources and capability to grasp the opportunities. This view relates to the ideas that social changes can occur once personal development occurs. However, there are contradictory views as well. As per this view, human is bound with the society therefore the changes in the society can affect human behavior. Therefore, the change in the social structure and power structure (political) is considered more important. This also represents the ideas of radical changes in the society.

I believe that social change can be achieved by increasing the capacity and capability of the individuals and societies. Therefore, considerations are required on the aspects of individual and social structure. But change always cannot be smooth and simple. Sometimes, social change is described by relating it with the notion of social transformation, a sort of radical change. Castles (2001) used two approaches to define social transformation. The first one relates to a process where an individual alters the socially ascribed social status of their parents into a socially achieved status for themselves (individual focused). And the second focuses on a large scale social change like cultural reforms or transformations (social system focused). Likewise, Dominic (2011) defines social transformation in a precise manner as follows;

> Social transformation lies at the radical end of conceptions of social change. It implies at the very least some fundamental changes in society's core institutions, the polity and the economy, with major implications for relationship between social groups or classes, and for the means of the creation and distribution of wealth, power and status. (p. 1)

Social transformation is also considered a structural and qualitative change of social relationships (Machonin, 1996; Tirtosudarmo, 2010). In this change process, the social and individual aspects are involved, but connote a particular type of change. In a study of Canadian Adult Education (Scott, 1998 as cited in Miao, 2000, p. 3), a set of criteria is provided to determine if a change is transformative: (i) there must be structural change, either social structural transformation or personal transformation or both; (ii) the aim of the change is to catalyze a fundamental shift in people's beliefs and values and must include a social vision about the future based on a value system that includes the struggle for freedom, democracy or equity, and authenticity; (iii) there is a shift in what counts as knowledge; and (iv) transformation is based on conflict theory which assumes that there are different interests present when humans act to change either personal meaning or social structure. The four criteria for assessing transformation can be applied in both the personal and the social realms.

In an online article of Jurgens and Donaldson (2012) entitled "A review of literature on transformation processes in South African townships", they discussed how people's lives in terms of social, environmental, consumption, and competition have been changed in different time periods. Although this focuses on the different aspects of township, the notion of transformation they used in this article can be related with the process of change in the society through education.

Social change refers to the process of change in values, norms, institutionalized relationships, and stratification hierarchies over time (Chantia, 2006; Patil, 2012). It changes in social relationships (Machonin, 1996). It affects the patterns of interaction and institutional arrangements within a society (Chantia, 2006). Social transformation is a large scale change for an environment where a shift occurs in the consciousness, in attitudes and values of a community or society (whether local, state,

national or global) (Dominic, 2011). But social change can also refer to the process of change in values, norms, institutionalized relationships (Patil, 2012), and stratification hierarchies over time by affecting patterns of interaction and institutional arrangements within a society such as shifts in their social, cultural, ideological and artistic elements (Akman, 2008). Robinson (2000) argued that theories of social transformation suggests a movement, a shifting of things from here to there, where there is imagined. It involves a movement of form or place.

From the discussion above, it appears that social change is a change in individual values, patterns of behavior, social relations, social networks, and social status in terms of education, health, and use of citizenry rights (Patil, 2012). It is therefore a change in the form and the actual essence of the society.

Policies Relating to Social Change

As presented under chapter one, social change can be seen as a change process (Castles, 2001) which results in changes within societies' core institutions, the policy and the economy as well as relationships between social groups through creation and distribution of wealth, power and status (Brennan, King, & Lebeau, 2004; Leat, 2005). Moreover, change can both be moderate and radical and can affect both the individual and societies. Dahal (2010) identifies four factors responsible for changing the Nepalese societies, these are political awakening and participation of citizens, endorsing the basic instruments of human rights, ensuring the social rights of citizens and policy focus of social justice. Brennan, King, and Lebeau (2004) point out the important role of universities in the change of societies. Additionally, to other scholars referred to in chapter one, Dominic (2011) argues that education can act one of the most important drivers to change the society.

In 2002, Government of Nepal had produced Tenth Five Year Development Plan/ Poverty Reduction Strategy Paper which envisioned the roles of education as an engine of human development, social development and poverty reduction (NPC, 2002). The essence of the PRSP was very much aligned with the notion of social development and social change. Then after, Three Year Interim Plan (2007-10) came into practice which took the similar approach in most of the policies relating to social development (NPC, 2007). The Interim Constitution 2007 reemphasized the concepts of social welfare, poverty reduction, inclusion, balanced development and social justice which certainly influence the policy formulation in Nepal, especially in education sector. The Interim Constitution of Nepal 2007 also envisions the accountable and responsive state where human rights are ensured, and that the concept of welfare economy through implementation of equitable measures will be fully implemented to address the concerns of differences.

Other several national and sectoral policy documents, such as acts and regulations, MDGs, EFA NPA, and SSRP highlight the need of equitable policies both at macro and micro levels and interventions for bringing the changes in the societies. Koehler (2011) mentions that the post-conflict interim Government of Nepal introduced a series of improvements in the existing social policy measures to address the concerns of poverty and social exclusion with a view to develop new Nepal. The goals of National Curriculum Framework of 2007 also indicate the stage of change in the individual and society level (Curriculum Development Center [CDC], 2007). All these documents contain the vision of the State (after the changes taken place) and equity as a means to achieve these visions. Patrinos (2011) envisions in this regard equity as a means to achieve the MDGs by addressing the multiple sources of disadvantage. Achieving the goals of these policies, plans and programs

will radically change the structure uplifting the society and the quality of life of individuals within it. The process to achieve the desired stage is a change that leads towards social transformation – a new stage of society where shifts in social, cultural, ideological and artistic elements are observed (Dominic, 2011).

Nepal, being one of the signatories of the international treaties and conventions, fully respects the essence of these instruments while designing national policies, programs and activities (NPC, 2013). And these commitments are reflected in the approach paper of the Thirteen Year Plan 2013-15. The essence of all these documents is embedded in the core concepts of the human rights, rights of children, and quality basic/primary education for all (free and compulsory). In this way, Nepal has developed its policies and plan in line with these documents. Of them one of the fundamental concerns of the country is education for all, which can only be realized through the equitable education system that can generate benefits to individual and society, as a capital that will be helpful to achieve individual and social well-beings (Sherman & Poirier, 2007). Such capital refers to the networks, relations of trusts and collective actions where they act as a powerful engine for the success, bringing desired changes in the society.

Impact of Education on Social Change

As discussed earlier, social change in any society takes place because of economic growth, war or conflict, technology, government policies and social awareness (Brennan, King, & Lebeau, 2004; Castles, 2001). Though education is seen invisible to change the society, it can act as a powerful tool to transform the society (Dominic, 2011). Education empowers people, sensitizes social issues, improves the livelihood of citizens and provides push for the development of society (Dominic, 2011; NPC, 2010; 2013; UNESCO, 2010).

As explained by Nayar (2004), knowledge can play a vital role to change the society from a state of relative stagnation to one of dynamism and progress. Therefore, educational development can be enhanced by improving the achievement levels of education and reducing the inequalities (The World Bank, 2006) thereby enhancing the capability of individuals and accumulation of social assets. The advancement in education and health is the result of accumulation of socials assets (Nayar, 2004), which is also interlinked with the pace and process of social development. Nayar (2004) further stresses that the continuous accumulation of such assets helps to improve the development indicators of society and all these have effect on the potential impact on the quality of life of citizens. Similarly, Burchi (2006) sees an instrumental role of education for the development of human capital in two different ways; the first is economic production and the second is social change.

Attainment of Millennium Development Goals and goals of Education for All requires a strong education input from both civil society and government for citizens (NPC & UNDP, 2013). In every country, rich or poor, education lays the necessary foundations for establishing good governance, democratic participation and human rights (UNESCO, 2010). It provides the means for empowering disadvantaged and marginalized groups and promoting their inclusion in the society (The World Bank, 2006). Thus, education is the passport to participation in the knowledge economy for the individual, and to improving productivity at the local and national level. Stiglitz (2013) also sees the value of education because it is one the keys to success therefore education has been kept in priority.

Based on the above discussion, it is seen that education brings changes within individuals and in the society (Dominic, 2011). It brings changes in the social processes, which helps to move the society from one stage to another and 'from here

to there' (Robinson, 2000). During this process, individual gains knowledge, develop skills and construct critical consciousness (Burchi, 2006). Form the viewpoint of the critical theory, individual understands the society from the power relation perspective in the change process which reactivates the social forces for bringing about changes (Dominic, 2011).

Another case for this is that education is a means to transform society as a whole from one stage of development to another. In a broader sense, education promotes the social development because it can produce several benefits to the society (OECD, 2002). Such development can be measured in terms of literacy status, people's well-being, gender equality, human development index, per capita income and participation in social processes (NPC & UNDP, 2013). Achieving gains in these indicators means moving of the State towards the development stage. Hence, it is believed that relevant and appropriate education certainly brings the desired impact in the society (Figure 2).

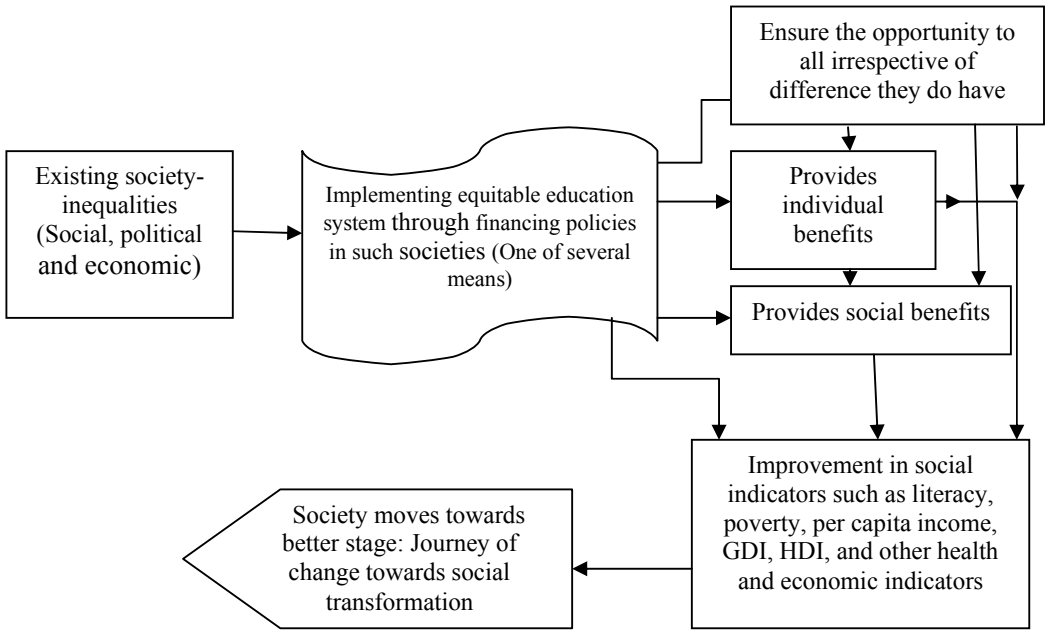


Figure 2. Process of social change.

Thus, education plays an important role not only in the economic development but also in the improvement of social indicators (NPC, 2013). Improved education for all offers opportunity and enhances the overall quality of human resources (UNESCO, 2010). It can play a direct role in poverty reduction by enhancing the measurable skills of the economically disadvantaged and vulnerable groups, and by expanding their ability to take advantage of income generation possibilities and available social services (NPC, 2002). It contributes directly or indirectly to a higher level of socio-cultural and economic development that provides sufficient resources to address inequalities issues. In addition, fair processes provide equitable opportunities and rules for all (The World Bank & DFID, 2006). In the absence of redistributive fiscal transfer, all people across the country may not be benefited (The World Bank, 2006) because unequal access to finance is associated with unequal productive opportunities and reflects unequal influence. Inequalities within and across the countries imply that same groups have consistently inferior opportunities in economic, social and political arena rather than their fellow citizens (The World Bank & DFID, 2006).

Equity has effects on individual and social spheres by equipping individuals through appropriate education and training (The World Bank, 2006). Education can help to empower the individual through self-realization, personal development and attainment of new knowledge (Nayar, 2004; UNESCO, 2010). Such development among individuals helps to acquire a "critical consciousness" on social realities, culture and customs. Critical thinking allows people to see the world not as a static reality, but as a reality in process, in transformation (Dominic, 2011). From this approach it is argued that empowered individuals are better equipped to question and critique societal realities and assumptions. Hence, societal change comes from the collective transformation of the individuals within that society (Dominic, 2011).

Education of the individual and collective changes in the society have interlinked relations because education acts as a tool for both accumulation of assets and accumulation and formation of social capital (Nayar, 2004).

Equity in Education Financing and Social Change

Castles (n.d.) considers social transformation as a framework of understanding, which explains how global changes affect local communities and national societies. At the macro level, depending upon the context, change refers to the modernization and independence (Brennan, King, & Lebeau, 2004). In politics, it refers to the end of dictatorship and entering into democracy. Like political transformation, other forms such as economic, cultural and social also exit with their meanings (Brennan, King, & Lebeau, 2004). Likewise, MDGs are also helpful to change the societies where society moved from under-developed stages in terms of social indicators to the development stages (NPC & UNDP, 2013). Among others, education plays a key role in the changing of society. Tirtosudarmo (2010) discusses social transformation as a matter of rapid social changes which is an outcome of the interaction between citizens, State and market. The ability of citizens certainly depends upon the level of awareness they have (UNESCO, 2010).

An analytical report on equity in education of Hungarian Ministry of Education (2005) mentions that Hungary carried out several changes in the field of regulation and financing to strengthen the equity in education including anti-discriminative regulations and the supplementary subsidizing on integration programs including the special programs for Roma children (one of the disadvantaged group in Hungary), displaying the relationships between the equity and education financing policies. The report further mentioned that education in Hungary plays a significant role in social mobility and in personal development as well. It also leads to extra

earning where one extra year in education results in an eight percent higher total amount of income.

Another analytical report on equity in education from Finland concluded that despite the significant progress in education system, regional and socio-economic variations are key sources of inequality in Finland (Finish Ministry of Education, 2005). The report further mentions that variations in the performance of schools and regions are also found. To address such variations equity has been taken at the heart of the Finish education system as well as in the development plan. The core concept in this regard is educational security. The equity in education aims to focus on ensuring individual careers, the quality of life and prevention of any sort of exclusion through post-compulsory education and training, additional basic education and guidance counseling.

Similarly, equity in education country analytical report of Spain also analyzed the education system through equity perspectives (Calero, 2005; Teese, Aasen, Field, & Pont, 2006). The report mentioned that Spain provided much focus on achieving equitable outcomes and the concept of equity was built on quality. The education system in Spain is equitable, however the report further reiterated that there is need of further improvement to address the compounding influences of social and economic changes in a large and vibrant nation. It also indicates the importance of education for changes in the social and economic aspects.

The country analytical report of Sweden also discussed the need of equity in education for the overall development and strengthening of welfare state concept (Nicaise, Esping-Andersen, Pont, & Tunstall, 2005). In education system Sweden provided special attention to equity, equality of opportunity and equivalence of outcomes. The reforms in education with the concepts of equal opportunity strategy,

equal treatment strategy and equal outcome strategy were carried out to solve the social issues and problems. Hence equity in education is taken as a means for social development, social change and social stability.

In social change process, education can ignite change in the society and accelerate the change process (Brennan, King, & Lebeau, 2004). They explicitly highlight the role of universities in the process of social change and transformation. The drivers of transformation as highlighted by them are globalization, democratization, supra-statism and modeling, knowledge economies, liberalization, and regulation and accountability. A relationship is also found between the quality education and level of financing up to a certain level. In the mean time, equity in education by means of financing policies can be linked with the benefits of education (Demeuse, Baye, Straeten, Matoul, & Nicaise, 2005). Hence, a strong link can be established between equity in education financing and social change and transformation. Two sorts of benefits – in terms of financial and non-market, generated from education have something to do with the social changes and social transformation although it may take time. Likewise, human capital is the outcome of the education system and improvement in human capital contributes to economic growth, better income and less poverty.

The major concern here is whether increased investment in education necessarily enhances the social change and transformation? Green, Preston, and Sabates (2003) argued that there is a relationship between education and production of social capitals, as well as effects of education on social cohesion. They further argued that appropriate policies are required to create a more cohesive society. The effects of public policies for addressing the concerns of poverty and exclusion with a view to make new Nepal are also highlighted by Koehler (2011).

The policies concerning the link between equitable education financing and social change and transformation should focus on three questions; who gets education? (Access), what do they get? (Curriculum) and where does it lead them? (Placement) (Brennan, King, & Lebeau, 2004). Mbilinyi (2003) discusses the role of education to liberate people where the first step is the creation of unified public school system. If these are adequately addressed, the benefits for individual and societies can be maximized where prosperous societies emerge in the future through a process of gradual change. The end results of such change processes, as argued by Brennan, King, and Lebeau (2004), result changes in economy (human capital), the polity, the social structure and the culture. In order to accomplish all these, resources must be channeled to build a strong public education system which ensures quality education for all (Mbilinyi, 2003). This is the only way for achieving social change and transformation through the implementation of equity in education. However, Waks (2006) provided an open debate on the standardized education versus diverse array of educational alternatives where the latter offers more for ethnic and cultural identities of poorly incorporated groups.

Social change and transformation is a structural and qualitative change of social relationships (Machonin, 1996). Within this, educational expansion is considered one of the major elements of bringing social transformation in the Czech Republic.

Theoretical Framework of the Study

All school age children in Nepal have not had the chance to get enrolled in schools, those who get enrolled in school are also at risk in their academic achievement and many of them drop out before completing the basic cycle of education (NPC & UNDP, 2013). This could not only be because of children's or their

families' fault. Some of the most frequently cited individual or family-level risk factors are poverty, race or ethnicity, limited English proficiency, poorly educated parents, and single-parent status (Vesely & Crampton, 2004). They further argued that disabled students are also at greater risk of not graduating from high school than non-disabled peers.

Most of the risk factors are beyond the school's control. And no school program has the power to change a child's economic status, family structure, or the color of his or her skin. Of these, poverty was found to be the most consistent predictor of academic failure, with the concentration of poverty at the school level exacerbating the problem. There are those, who lack the home and community resources to benefit from conventional schooling practices (Vesely & Crampton, 2004). In this way, the term at-risk refers to students who evidence low academic achievement, retention in grade, poor attendance rates, and high dropout rates. Their common background characteristics include single-parent families, low socioeconomic status, minority families, and non-English speaking families.

Not all students have the same educational needs and thus their educational needs are different. Therefore, different strategies of funding are required to address their needs. Hence, all students must have equal, efficient and adequate educational opportunities. But an equal distribution of public resources will not close the outcomes or achievement gaps among ethnic and socio-economic groups. In order to ensure this, an equitable distribution system of allocating public resources is required.

The socio-economic and political context shapes the policy formulation process and its implementation (The World Bank & DFID, 2006). The financing policies and their implementation will have linkage and relation with the political, social and economic situations and inequalities persist in the country (The World

Bank, 2006). In order to analyze the financing policies from an equity perspective, a study framework is developed (Figure 3).

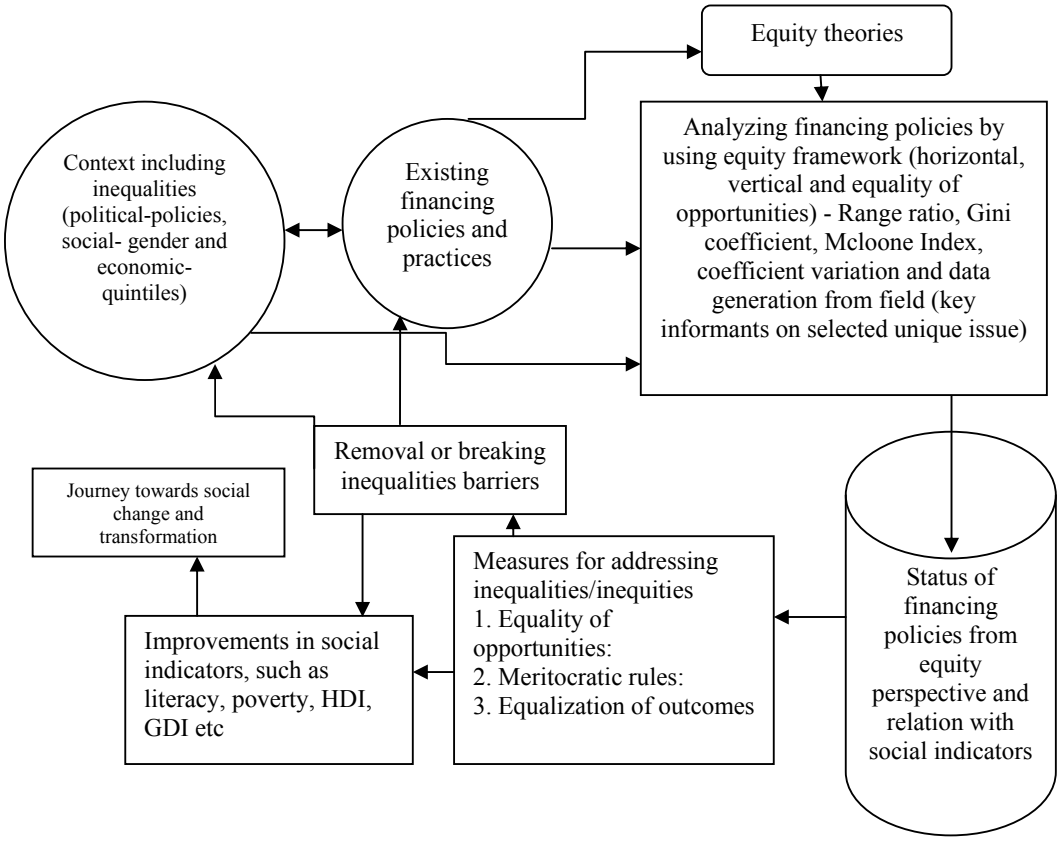


Figure 3. Study framework from theoretical perspective.

Chapter Summary

In this chapter, the equity and its different dimensions have been conceptualized by presenting the notions and theories that exist of it. This chapter conceptualized equity in a way that it clearly differs from equality. Where equality is often input based and focused on processes, equity is outcome based and focuses on the results achieved by this. The first requirement is to ensure equitable access to quality education of a certain level and ensure their participation in the schooling process.

Based on the theories that have an equity foundation and relate to distribution, social justice, capabilities and opportunities, a theoretical framework was formed that

guided the research in this study. Furthermore this chapter also presented the views on how equity has been used in education and education financing in Nepal and other countries. This also included an overview of tools that are used to measure equity in this context. The role and potential of education to emancipate people from barriers and bring about social changes as well as the prerequisites for this were discussed. Equitable education financing policies help to bring desired outcomes and impacts in the society by shaping the flow of public resources in a desired way. The relation between/among equitable policies, appropriate process, achievements of desired results and their impacts on the society are extremely important. At the end, the chapter included the theoretical framework of the study.

In the next chapter, I shall introduce the research methodology and explain how I have used methods in this research. The discussion in this chapter helped me to set my position as disciplinary and theoretical researcher and which in turn guided me to reflect on my research efforts and style.

CHAPTER III

RESEARCH METHODOLOGY

In this chapter, I have presented the methodology through which I have conducted the research. This includes an overview of philosophical positions, research designs, population, sampling techniques, data collection process, and data analysis and their interpretation. Likewise, it also explains the data collection tools, ethical issues, and validity and reliability of the tools and study design.

This study uses both quantitative and qualitative methods but a quantitative approach is predominantly used in this study. It is because basic information required for most research questions are numerical such as allocation of budget and school teachers at input level, and various indices such as HDI, literacy rates, etc. at output level necessitated quantitative approach to this research. More importantly, studies on equity, especially those that use distribution of resource, apply specific statistical tools such as Gini Coefficients, McLoone Indext, and coefficient of variation. All these tools demand numerical data for the analysis. However the study also explores on policy gaps. The use of qualitative data was also felt necessary on a much smaller scale to complement and support analysis of the results obtained through quantitative analyses. Thus, the study has adopted a mixed method research methodology.

Philosophical Stance

Inequality in education is one of the most cited issues in the literature of sociology of education. The focus in this study is therefore given on the causes of inequalities of outcomes and changes overtime and space in the context of Nepal. Such causes of inequalities, their changes and practices are interpreted both

objectively and subjectively as and where appropriate. Indicators have also been developed and explained to measure the status of inequalities that exist. Moreover, objective interpretation is based on the results obtained from the analysis of statistical measures such as range, correlation, McLoone Index, Coefficient of variance and Gini coefficient. Likewise, subjective interpretation includes constructivist approach supporting inquiry into people's perception, knowledge, experiences and practices on equity in education. Therefore, both post-positivism and constructivism are blended together to get an in-depth understanding of this subject.

I have divided my research process in three phases. The first phase includes quantitative analysis (chapters five and six), which is followed by qualitative data analysis (chapter seven). Next, both quantitative and qualitative analyses from the previous chapters are jointly presented and discussed (chapter eight) to comprehend and respond to the research questions. During the quantitative phase, I explained the status of equity in a descriptive manner, then I explored the relationships (bi-variate correlation and coefficient) between and among different variables and have explained such relationships in an objective manner highlighting the possible causes and effects. In the second phase, I collected qualitative data and carried out a qualitative analysis. In this way, the study is guided by both a post-positivism and constructivism perspective to respond to the research questions formulated for this study.

Many authors (Creswell & Plano Clark, 2011; Teddlie & Tashakkori, 2009) argue that the paradigm of a mixed methods based research can be labeled as pragmatic. In simple terms, it is a practical approach to a problem and has a strong association with the mixed methods research (Cameron, 2011). The philosophy of pragmatism is that research should use the approach or mixture of approaches that is

most relevant in a real world situation. As argued by Johnson and Onwuegbuzie (2004), knowledge is viewed as being both constructed and based on the reality of the world we experience and live in (p. 16). "Pragmatism stands on abductive reasoning that moves back and forth between induction and deduction (Morgan, 2007, p. 71). In the quantitative phase of my study, deductive methods are applied to test the theories where induction is practically applicable in the qualitative phase. The phasing of both the post-positivism and constructivism paradigm perspectives also indicates towards the pragmatist paradigm that "keeps interest both in narrative and numeric data and their analysis" (Teddlie & Tashakkori, 2009, p. 4).

As part of this social constructionist perspective, it is also important to recognize the researcher as a subjective element of the research, having personal beliefs and ethics that will in some way influence the choices of methodology, theory and research process. In this regard, I believe that reality exists in both singular and multiple forms that can be observed from a distance as well as from up close (Creswell & Plano Clark, 2011). I used numeric data in the quantitative phase of my study to explain the status of equity in basic education financing and to predict some relations between variables. I believe that knowledge on equity and inequity exists whether we are conscious of it or not. Reality is out there which is absolute and can be observed objectively. However, it is equally difficult to observe such realities in true sense. The knowledge on equity and its status is very much dependent on the context and social phenomena which indicates towards multiple realities. Such multiple realities can only be explored through people's perceptions and experiences. Thus, it demands subjective interpretation of equity, equity in basic education financing and social change where knowledge, experiences and practices are explored. Subjectivism is a theory of knowledge that believes knowledge to be generated from the mind

without reference to the reality (Creswell & Plano Clark, 2011). I have therefore attempted to understand the reality from participants' perspectives. Subjectivism further states that gaining knowledge about the world is done through introspection; as it is a philosophical based theory that is developed on the belief that knowledge is subjective and can never be objective. Thus, my study has been an attempt to combine the strengths of both objective and subjective theories, and thereby it values both the objective and subjective knowledge (Creswell & Plano Clark, 2011).

Leaving room for including both methodologies and approaches that take a quantitative/qualitative as well as an objective/subjective perspective is essential to make sure my research methodology is compatible with my theoretical framework. As the theories included on social justice (Rawls) and capabilities (Sen) focus on perceived quality of life from different angles (social protection versus removing barriers to freedoms). It is therefore important for me to leave room in the methodology on capturing what people's perceptions of equities and inequities are and include relative inequalities as well as more visible ones that can more easily be quantified.

The above philosophical discussion helped me to gain in-depth understanding on the subject matter. Thus the discussion on the philosophical thoughts are highly relevant and useful to address the questions of what exists, what is knowledge and how do we gain knowledge. This has helped me to shape my views on equity - equity in primary education financing and social change. It fundamentally defines how I see this world, how I determine my perspective, and how I develop understanding on things that are connected thereby influencing personal behaviors. Therefore, this philosophical stance point is the investigation of the nature, cause, or principles of

reality, knowledge or values based on logical reasoning with empirical observations on the subject matter (Creswell & Plano Clark, 2011).

Ontology, in my study, deals with the concern of the nature and existence of equity. As a post-positivist, I believe that reality on equity can only be understood imperfectly and probabilistically. Social phenomena on equity exist in objective world but there are some lawful, reasonably stable relationships among them (Teddlie & Tashakkori, 2009). The study on the different understandings and concepts of equity helped to explore the diverse ideas on how it exits and evolves over time. In the same manner, the views of the research participants during the study process on equity and its practices helped me to develop more understanding towards the reality. The knowledge on equity, equity theories and practices through perception and experiences is dealt under the epistemological stance of this study. Both the quantitative and qualitative data from the field, my knowledge and experiences on equity and theoretical understandings are blended together for addressing the epistemological concerns. Likewise, the methodology I used in my study on equity and its usage are taken into account.

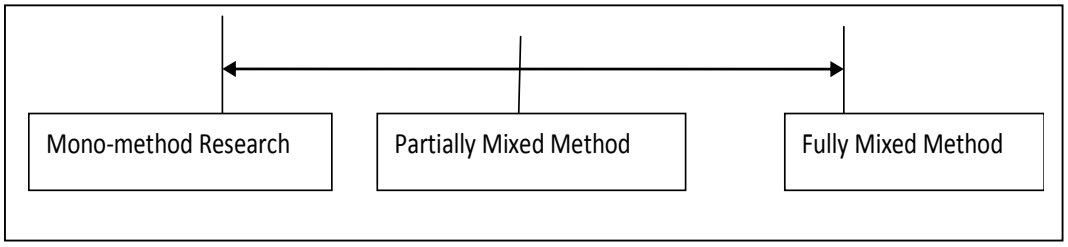
Creswell and Plano Clark (2011) argued that there are primarily two types of theory that can inform mixed methods studies. These are social science theory and emancipation theory. Because of the nature of my research questions, I have used social science perspective where theories of equity, financing and social change have been presented. These perspectives have been explored in depth in chapter two of this study. The theoretical foundation of my study is also to explore how equity in education financing affects the process of social change. I believe addressing equity concerns through financing policies can bring improvement in social indicators.

Study Design

The research design includes the overall plan of my study specifying the methods and procedures for collecting, analyzing and interpreting the data. As stated earlier, I employed a mixed methods research design that is appropriate to address my research questions. It is a method where both the elements of quantitative and qualitative methods are incorporated (Johnson & Onwuegbuzie, 2004). This mixed methods approach has emerged as a third paradigm in the field of research methods. This field was dominated by quantitative methods until early 1900. The change of paradigm and the introduction of qualitative research methods appeared when researchers started questioning the positivist approach. The post modern perception that the world and meaning of things could not be explained in numbers made researchers take qualitative approaches more seriously to gain further understanding and answer the 'why' questions. At the same time, the world became increasingly bigger with more countries and communities that came to know of other cultures and societies. This caused the strengthening of interest and respect for social sciences that were focused on trying to understand the world as we knew it, such as anthropology, which are largely based on qualitative and subjective research. A significant change of focus within the existing social sciences, such as psychology, education, was also seen with the individual no longer just being a recipient but becoming an active part of the process. Qualitative methods gained further support in different fields of research between 1970s-1980s with the development of computer assisted programs for qualitative enquiries on the issues of social sciences. Finally, mixed methods emerged as a third paradigm by inculcating the uniqueness of both quantitative and qualitative methods.

Johnson, Onwuegbuzie, and Turner (2007) discussed the history of mixed methods research. They agreed that there has been an ongoing debate to viewing the world, these are singular or universal approaches versus multiple or relative truths versus balance or mixture of extremes. They further reiterate that "this debate continues to affect how we view knowledge, what we look for, what we expect to find, and how we believe we are to go about finding and justifying knowledge" (p. 113).

Other scholars have also discussed different perspectives on this world. Mixed methods research is placed in between two extremes of quantitative and qualitative because it respects fully the wisdoms of both these view points. It is a combination of qualitative and quantitative approaches in the methodology of a study (Creswell & Plano Clark, 2011). Mixed methods research, a third research paradigm (sometimes it is also referred to as third methodological movement), helps to bridge the division between quantitative and qualitative research (Johnson & Onwuegbuzie, 2004). They further state "mixed methods research is formally defined here as the class of research where the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study" (p. 17).



(Adopted from: Leech & Onwuegbuzie, 2007)

Figure 4. The research continuum.

In such a context, I have used the mixed methods research, a combination of both the quantitative and qualitative approaches. I fully agree myself on seeing research on a continuum of three different methods, these are mono-method, partially-

mixed and fully-mixed research method (Figure 4). Broadly speaking, mixed researches can be categorized into mixed model research and mixed method research.

In mixed model research, quantitative and qualitative approaches are mixed within or across the stages of the research process. By nature of the research processes, mixed model researches are further categorized into two domains (Table 3). The first one is within-stage mixed model research where quantitative and qualitative approaches are mixed within one or more stages of research, such as use of open ended - qualitative, and close ended - quantitative, questions during the data collection. The across stage mixed model researches are those where quantitative and qualitative approaches are mixed across at least two of the stages of the research. In the table below, model 1 and 8 fall under the mono-method design whereas the rest models 2 to 7 belong to the mixed model research design.

Table 3

Mono-method and Mixed Models Research Designs

Objectives of Qualitative research				Objectives of Quantitative research			
Qualitative data (Collection)		Quantitative data (Collection)		Qualitative data (Collection)		Quantitative data (Collection)	
Perform qualitative analysis	Perform quantitative analysis	Perform qualitative analysis	Perform quantitative analysis	Perform qualitative analysis	Perform quantitative analysis	Perform qualitative analysis	Perform quantitative analysis
Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8

(Adopted from: Creswell, 2007; 2012; Creswell & Plano Clark, 2011; Teddlie & Tashakkori, 2009)

In mixed methods researches, both the phases of qualitative and quantitative are included in the overall research study. These are classified according to two major

dimensions; time order (concurrent versus sequential) and paradigm emphasis (equal status versus dominant status), as presented below (Table 4).

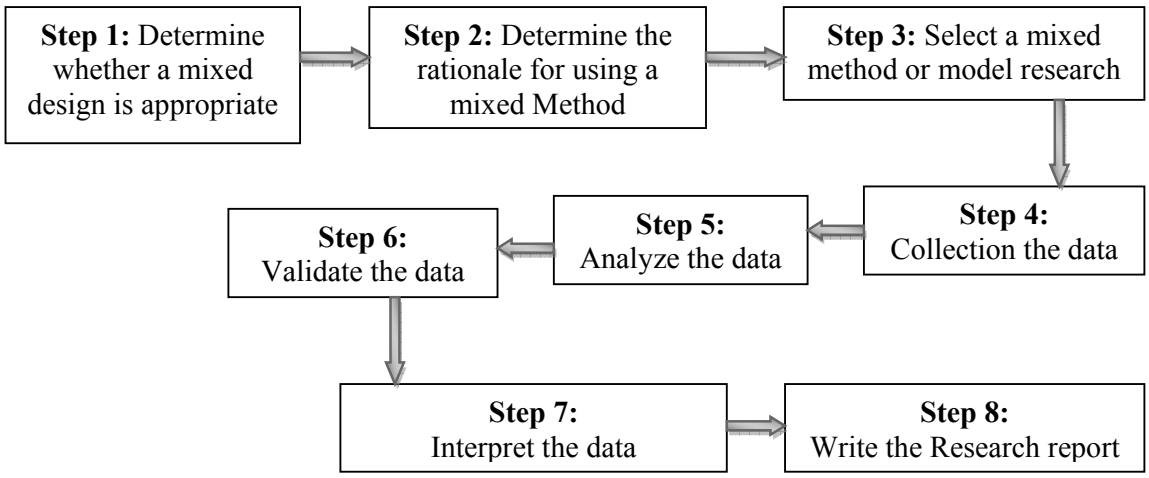
Table 4

The Major Mixed Methods Design Type

Design	Timing	Weight	Nature	Notation
Triangulation	Concurrent (both the quantitative and qualitative at the same time)	Equal (Usually)	Data merging during the interpretation or analysis	QUAN+ QUAL
Embedded	Concurrent or sequential	Unequal	Embed one types of data within a larger design using the other type of data	QUAN (qual) or QUAL (quan)
Explanatory	Sequential (First quantitative, then qualitative)	Quantitative (Usually)	Connect the data between the two phases	QUAN»qual
Exploratory	Sequential (First qualitative the quantitative)	Qualitative (Usually)	Connect the data between the two phases	QUAL»quan

(Adopted from: Creswell, 2007; 2012; Creswell & Plano Clark, 2011; Teddlie & Tashakkori, 2009)

Of these, I have used explanatory research design in my study. This is sequential in time order and has dominant status in paradigm - quantitative is in dominant status and qualitative phase is in supportive role. First, I have emphasized the quantitative data and followed quantitative method to analyze these data. My second phase is connected to the results of the first phase where I have used qualitative information/data to explain the results achieved from quantitative analysis as a follow up. In this way, the quantitative phase has remained as primary whereas the qualitative has a supportive role. Under the explanatory mixed method research design, I followed the standard steps of mixed methods research which are as follows (Figure 5);



(Adopted from: Creswell, 2012)

Figure 5. Stages of mixed methods research process.

The simple reason for a mixed method is that my research questions demand the facts, perceptions and experiences of those who are directly engaged in the everyday practices (Figure 6). In order to produce more comprehensive, internally consistent and valid findings, such research design is considered useful and relevant.

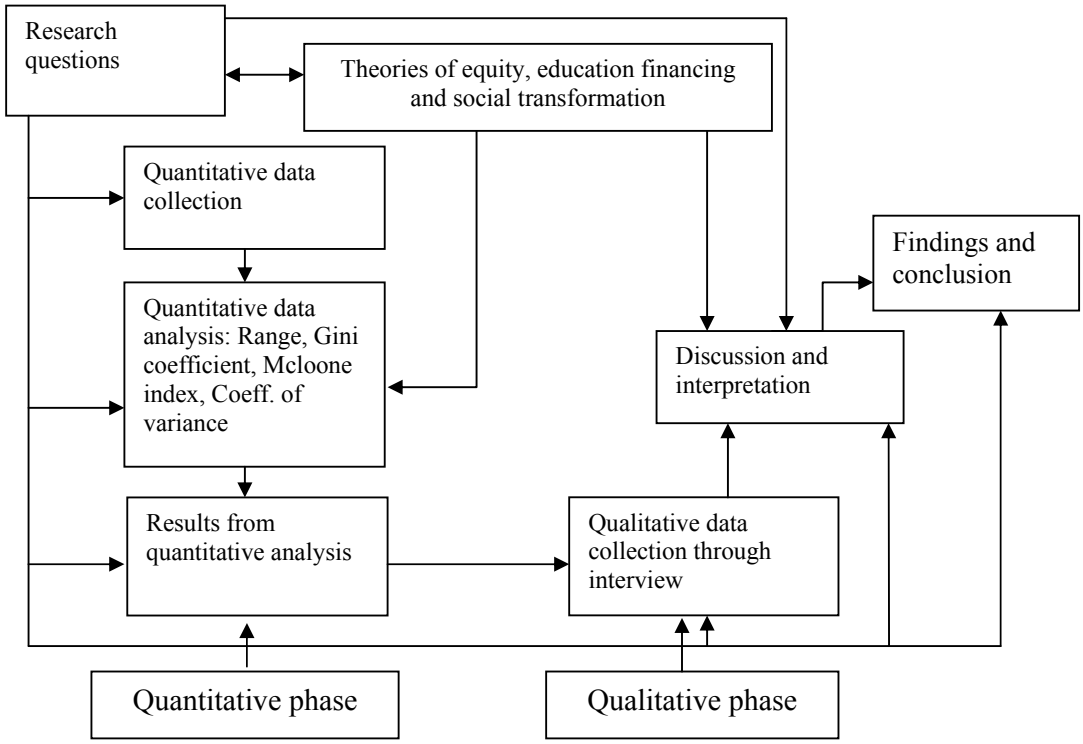


Figure 6. Conceptual schematic design of the study.

It provides more elaborated understanding on the subject matter and greater confidence in conclusion. I believe that it also helps me to handle threats to validity and gain a full and deeper understanding on equity and financing. As such, I have developed and used the above schematic design while conducting my study. This has guided me on the methodological premises, interpretation of results and concluding the research task.

Once I had developed an understanding on the problems that were driving my research topics, I formulated research questions that would allow me to gain a sufficient understanding in order to respond to these problems. I also studied theories relating to equity, education financing and social change. The study on such theories further helped me to refine my research questions as well. During my data collection, I first collected quantitative data from secondary sources to respond my research question. The sources of quantitative data included the reports of Nepal Living Standard Surveys, Red Books, Economic Surveys and Flash Reports. The relevant data from these sources were analyzed by using different analytical tools and looking at the results achieved. Based on the results obtained from quantitative analysis, I then moved into my qualitative data collection. I interviewed with the key informants to uncover the realities of the ground on the subject matter by using interview schedules (Annexure 7). Then I carried out discussions and interpretations based on the theoretical foundations and research questions. After having collected both the qualitative and quantitative data, I analyzed both data types first separately using the appropriate tools and theoretical approaches as per the framework that I designed and presented in chapter two. Next, I combined both analyses and extracted further learning and observations from this. Finally, I drew the findings, conclusion and implications of my study.

Population and Sample

Within my research, the term population refers to the universe of units from which the sample is to be drawn, which can be seen as a general application of the term in a quantitative research approach. Sampling refers to the segment or part of the population that is selected for investigation. It is a process of selecting certain items or groups from the population as per the predetermined plan and criteria. Since quantitative analyses in my study were mostly based on the secondary sources, the question of population didn't arise. For the case of qualitative inquiry, key informants were purposively sampled from the key stakeholders at the policy formation and implementation level.

For Quantitative Phase

The sources in this study used for quantitative analyses include Nepal Living Standard Survey (NLSS) reports, Flash reports, Economic Surveys and Red Books where necessary data were extracted to address my research questions meaningfully. The basic features of my quantitative data sources are as follows;

Nepal Living Standard Survey: Major elements and processes. Nepal Living Standards Survey (NLSS) is a survey collecting comprehensive sets of data on different aspects of household welfare in Nepal. The main organization that conducts the NLSS is the Central Bureau of Statistics. The NLSS follows a methodology developed by researchers at the World Bank called Living Standard Measurement Survey (LSMS). The Living Standards Measurement Study was established by the Development Research Group (DERG) to explore ways of improving the type and quality of household data collected by statistical offices in developing countries. The goal is to foster increased use of household data as a basis for policy decision making. The objectives are:

- Improve the quality of household survey data,
- Increase the capacity of statistical institutes to perform household surveys,
- Improve the ability of statistical institutes to analyze household survey data for policy needs,
- Provide policy makers with data that can be used to understand the determinants of observed social and economic outcomes.

Nowadays the LSMS is conducted in more than 50 developing countries. The key features of NLSS methodology are:

- An integrated household questionnaire covering consumption, incomes, assets, housing, education, labor force, health, fertility, migration etc accompanied by a community questionnaire aimed at collecting information on service provision, prices, and the environment facing the households,
- Innovative data management techniques, including a pre-coded questionnaire, decentralized data entry, field verification, and extensive training and supervision of field workers.

NLSS-I, in 1995/1996, for the first time, provided a measure of extent and dimension of poverty in Nepal. The survey findings became popular among decision makers in the government agencies, the general public and the international agencies as well. It was realized that a second round of the survey was needed to update the results and to assess the impact of policies and programs on poverty and social indicators over the years (since the NLSS-I was conducted). Accordingly, the second round of the survey (NLSS-II) was carried out in 2003/04, eight years after the first survey. The findings of the NLSS-II helped the government to monitor progress in improving national living standards and the survey became a good basis for monitoring the Millennium Development Goals (MDGs) over time. Realizing the

importance of time series data, the Government of Nepal decided to conduct another round of the Nepal Living Standards Survey. Accordingly, the Central Bureau of Statistics for the third time conducted the survey in 2010/11 (NLSS-III). The major characteristics of Nepal Living Standard Survey processes in a comparative form are presented (Table 5) below.

Table 5

Major Elements and Characteristics of NLSSs

Survey	Year	Methodology	Sample Frame	Sample Size	Stratum and number of households	Sample Technique
NLSS I	1995/96	pre-coded questionnaire, decentralized data entry & field verification	Probability Proportional to Size (PPS), based on 1991 Population Census	3388 house-holds	Mountains - 424, Hills (Urban) - 604, Hills (Rural) - 1136, Terai - 1224	**Phase 1**; Wards are regarded as Primary Sampling Units (PSUs) and selected in 73 of the 75 districts were selected through PPS, after which 12 households in each ward (16 in the far west region wards) were interviewed. **Phase 2**; A fixed number of households were chosen with equal probabilities from each selected PSU
NLSS II	2003/04	Living Standards Measurement Survey (LSMS) methodology	PPS, based on 2001 Population Census	3912 house-holds	Mountains - 408, Kathmandu Valley Urban Area - 408, Hills (Urban) - 336, Hills (Rural) - 336, Terai (Urban) - 408, Terai (Rural) - 1224	NLSS II enumerated 3912 households from 326 PSUs and 1160 households from 95 panel PSUs. The NLSS II was cartographic updated in 2002.
NLSS III	2010/11	The sample design	PPS, based on the 2001	7200 house-		**Phase 1**; 800 PSUs were

Survey	Year	Methodology	Sample Frame	Sample Size	Stratum and number of households	Sample Technique
		adopted in NLSS-III was modified sub-sample of the sample adopted in NLFS-II. 16percent of sample size were re interviewed from NLSS I & II	Population Census and the National Labor Force Survey (NLFS) 2008	holds		selected in 6 allocated strata, identical to the 2008 NLFS. **Phase 2**; the 6 strata were further divided in 14 substrata and 500 PSUs were selected with equal probability. **Phase 3**; 12 households were selected within each PSU with equal probability.

(Source: NLSS 1995/96; 2003/04 & 2010/11)

Flash report: Major elements and processes. The Flash Reporting system includes the information from school education on both the beginning (the reference date is Jestha 7, i.e. 21 May) and end of school academic year (the reference data is Chaitra 21, i.e. 5 April). It is a school census covering all levels and types of schools running in the country. Basically, the Flash I includes information relating to the outcome level indicators whereas Flash II solely provides information required to calculate the educational processes.

For Qualitative Phase

In the case of qualitative analysis, the population for this study included all those who have extensive experience in financing related policy formulation, policy implementation and those who were direct beneficiaries or stakeholders. I have, as appropriate, also identified some key informants for the interview. I used criterion sampling where individual or groups who have experiences in the particular field and can provide in-depth descriptions on the respective fields (Creswell, 2007) were chosen. Therefore, I have purposively sampled participants as required. The

respondents in my study were policy makers (mangers), policy implementers (Practitioners) and local actors (school head teachers and SMC members). I have identified at least three respondents from each category. All three schools that were involved in the study were primary/basic schools because my study focuses on this level. I have given adequate attention while selecting/identifying the key informants to maintain balance in terms of gender and locations.

Data Sources and Study Tools

Both the secondary and primary data were combined together in my study. The main sources of quantitative data were NLSS reports, Economic Surveys, Red Books and Flash Reports. Likewise, interviews with the key informants and focus group discussions remained the main sources for qualitative data. I have used different tools to gather data required to answer my research questions. These are retrieving data from NLSS, Economic Surveys, Red Books and Flash Reports, document study, statistical analysis, interviews and focus group discussion.

Data Collection Procedures

Data collection is a process to gather facts, understanding and central themes related to the particular fields. The data can be diverse in nature. For example in the case of qualitative data collection, one could gather the descriptions and reflections of people through interviews in order to produce clear and accurate description of a particular aspect of their experiences (Creswell, 2012).

As per the nature of my study, the data collection procedures included both the quantitative and qualitative approaches. All the quantitative data were gathered from the secondary sources whereas all qualitative data were gathered from in-depth interviews and focus group discussions.

Quantitative Data Collection

The collection of quantitative data involved studying of NLSS Report 1995/96, NLSS Report 2003/04, NLSS Report 2010/11, Flash Report (2001-2011), Economic Survey (2001-2011), and Red Book (2001-2011). To address the concerns of equity relating to my research questions, I developed an analytical frame or matrix. Equity concerns closely related with the facts and figures helped me to provide evidence based explanations on causes and effects. Therefore, I used analytical framework to collect the quantitative data.

Qualitative Data Collection

The above data may provide evidence on equity practices on an average manner. But people's perceptions on the identified realities may be different. So, to address the realities from different angles, I used people's perceptions by using qualitative approach. Thus, qualitative data collection involved the collection of data from primary sources. The findings of the quantitative data analysis and interpretation provided me with some typical themes for qualitative study. To address the concerns on such typical themes, I conducted in-depth interviews with the research participants. I also used the focus group discussion as a complementary technique for gathering qualitative information.

In-depth interviews are considered useful tools which allow the interviewer to deeply explore the respondent’s feelings and perspectives on a subject. These results in developing a deeper understanding that can shape further questions and inform follow up research on the topic. In this context, I interviewed three policy makers (working in financing policy producing institutions), three policy practitioners (working in policy implementation agencies) and educational stakeholders (school head teachers and SMC members of three primary/basic schools located in different

regions/geographical locations) to gather data on my different themes identified from my quantitative analysis. With the SMC members I also used focus group discussion to get the general impression of a group of people in particular issues. The aim of such discussion was to uncover the realities on equity and its practices. Both the homogeneous and heterogeneous focus group discussions were conducted in my study. In homogeneous focus group discussion, I selected participants of similar nature in terms of their tasks whereas heterogeneous groups were also used for discussion.

Data Analysis and Interpretation

The main focus within my data collection and analysis was to assess the equity in education financing policies and to develop indicators to measure it. This focus guided me to explore the concepts and understand the meanings of equity, equity in education financing, different dimension of equity and its application while developing policies.

To analyze the data, I developed a model based on the work of Sherman and Poirier (2007), in which they have used a model on exploring the equity in 16 different countries. In addition to this, my model of data analysis is also influenced by the work of Berne and Stiefel (1984) as cited in Sherman and Poirier (2007).

Based on these scholars' work, I developed an equity framework. During the development of this framework, three aspects were considered important. These were targets of equity concerns, objects of equity concerns, and objects and targets of equity concerns. Moreover, I have applied three principles of equity while carrying out the analysis. These are horizontal equity, vertical equity and equal opportunity, which had been explained in greater detail in chapter two. The horizontal equity is applied to different geographical regions to analyze education access and resources

whereas the vertical equity considers that all students are not equal therefore different treatments are required. Moreover, different treatments to differently situated students may be fair. In order to ensure the equal opportunity, students should have access to resources that put them at a fair starting line (Sherman & Poirier, 2007).

Targets of Equity Concerns

Funding to schools in Nepal is basically based on the number and characteristics of children. However, other variables that have insignificant effect are also taken into account considering the amount and size of budget. In this regard, the concerns of tax payers are also taken seriously while discussing the equity, as they are investors in the state supporting education.

However, I have not taken them as target of equity concerns in my study as they also appear to some extent at the receiving end of my equity focus. Likewise, for the purpose of my study, I have used the sub-national administrative and geographical divisions within the country which was already being practiced during the NLSS as targets of equity concerns. The equity framework is also applied at the group level such as economic status of children's households and ethnicity whenever possible.

Objects of Equity Concern

A major component of the equity framework is the broader categories of indicators. Berne and Stiefel (1984) as cited in Sherman and Poirier (2007) identified them as input, outputs and outcomes. Alternatively, Sherman and Poirier (2007) categorized these indicators as education access and progression, resources and results. The details of these are given in (Table 6) below.

Table 6

Objects of Equity Concern

Access/Progression	Resources	Results
• Enrolment rates • Repetition rates • Literacy rates • Promotion rates	• Expenditure per pupil • Pupil-teacher ratio • Pupil-school ratio • Population school ratio • Distance between home and school • Adequacy of education provisions	• Cycle completion rate (primary) • Achievement tests (Scores) • Survival rate grade to 5

The table below (Table 7) displays the potential combination of targets and objects of equity concerns. Basically, students and regional/sub-national characteristics are considered major targets of equity concerns. Students' characteristics are further categorized into gender, economic status and caste groups.

Table 7

Objects and Targets of Equity

Targets of equity concerns		Objects of equity		
		Access	Resources	Results
Students' characteristics	• Gender • Economic status (wealth) • Others)	• Enrolment rates • Repetition rates • Promotion rates	• Expenditure per pupil • Pupil-teacher ratio • Pupil-school ratio • Population school ratio • Distance between home and school • Adequacy of education provisions	• Achievement tests (Scores) • Survival rate grade to 5
Regional characteristics	• Type (dividing country horizontally into three regions and vertically into five regions-15 sub-national regions)	• Enrolment rates • Repetition rates • Literacy rates • Promotion rates	• Expenditure per pupil • Pupil-teacher ratio • Pupil-school ratio • Population school ratio • Distance between home and school	• Achievement tests (Scores) • Survival rate grade to 5

For the purpose of my study, I have taken regional and eco-zones as regional characteristics. These are eastern development region (ED), central development

region (CD), western development region (WD), mid western development region (MWD), far western development region (FWD), mountain (M), hill (H), and Terai (T).

As per my study design, first I measured equity in terms of different indicators by carrying out a statistical analysis. In order to analyze the quantitative data to measure the horizontal equity, I developed one guiding question: Is there little or no variation in the dispersion of indicators across regions? The indicators used are enrolment ratios including promotion and repetition ratios, expenditure per pupil, pupil-teacher ratio, pupil school ratio, population school ratio and adequacy of educational provisions. The measures used while doing this are: range ratio, coefficient of variation, Gini coefficient, Adjusted McLoone Index and McLoone Index. Some of the measures in particular indicators were not applicable, therefore these were omitted from the analysis.

In this study, I have calculated the range ratio in enrolments, expenditure per pupil, and pupil-teacher ratio. One of the intentions of using these ratios in my study was to capture the state of dispersion in terms of access and resources across administrative units within countries. Hence, it was calculated by dividing the highest value by the lowest value in administrative regions' distribution of enrolment ratios, expenditure per pupil and pupil-teacher ratios. A ratio of 1.0 would indicate perfect equity, whereas increasing values for the ratio would suggest increasing disparity between/among the administrative regions (at the ends of the distribution). The other indicators used to calculate the range ratio were literacy rate, enrolment rate, pupil teacher ratio, population school ratio and school teacher ratio by taking considerations of eco-zones and development regions.

Likewise, I have calculated the Coefficient of Variation in enrolments, per-pupil expenditure and pupil-teacher ratio in primary level and explored the state of equity/inequity between/among administrative regions as calculated by Sherman and Poirier (2007) in their study. As in the range ratio, the other indicators used to calculate the Coefficient of Variation are literacy rate, enrolment rate, pupil ratio, pupil school ratio and population school ratio by taking considerations of eco-zones and development regions.

As mentioned above, I have also calculated Mcloone index to capture the dispersion of per pupil expenditure across administrative units. It shows how much of a resource is concentrated in the bottom half of a distribution to the median amount. This index ranges from 0 to 1, where 1 indicates the perfect equity. In the same manner, I have used Gini coefficient to assess the dispersion of resources (per pupil expenditure and pupil-teacher ratio) across administrative units. The other indicators used so far were teacher school ratio, population school ratio, population teacher ratio, participation of students by different income quintiles, school attendance by different income quintiles and survival rates by different income quintiles.

The second guiding question to measure the vertical equity was in-depth analysis of the information received from horizontal equity measures. Similarly, the guiding question for the equal educational opportunity was like this: Do wealthier groups have better access or greater resources than the poorer groups? The indicators for this question were the population density and wealth, and the combination of the above. The equity measures used in my study were correlation and coefficient. These results were further tested for their statistical significance using analysis of variance (ANOVA), bi-variate analysis and regression analysis.

Based on the findings of these quantitative analyses, I have identified some of the concerns for qualitative analysis. Based on these findings, I have employed interview schedule to gather qualitative data. Once I collected the qualitative data, I developed themes of qualitative analysis. These themes were developed in order to respond the research questions. Then I interpreted qualitative data with the research findings, theories and my reflections. Hence, I deployed two different methods simultaneously to analyze my findings. Therefore, I consider this approach as 'pragmatic methods' where deduction (testing of theories and hypotheses), induction (or discovery of patterns) and abduction (uncovering and relying on the best of a set of explanations for understanding one's results) have been used (Johnson & Onwuegbuzie, 2004).

Validity and Reliability

The principles of validity and reliability are the basic concerns of the scientific method whereas credibility, transferability, conformability and dependability are used in qualitative approach. I used secondary sources for quantitative approach. The reports I have used for my study were nationally representative longitudinal studies which had applied rigorous methods and tools to maximize validity and reliability. They have used well established formats, analysis techniques and indicators to produce the reports. The reports I used for my study were from recognized and well-reputed sources, such as NLSS reports are produced as per the international standards with the support of recognized experts working in this areas. Adequate field level validations were carried out and the data analysis processes were also as per the international standards. Therefore, the sources of data I got for my study adequately responded to the concerns of validity and reliability.

In addition, I studied the data rigorously from the quantitative reports in order to capture the actual essence of them and detect commonalities, discrepancies and linkage that needed further research or data verification. In addition, I also developed a template to compare a cross check of the data from different sources. In order to carry out the policy analysis, I used standard tools and techniques developed by scholars which have already been discussed in chapter two. Only the relevant and useful data and information were selected for my study as used by the scholars given in chapter two.

With regard to the credibility, transferability, conformability and dependability, I paid due attention to the pre-study assessment of the research design, applied a rigorous process of data collection, followed the ethics on the processes and established my authority on the research processes. Prolonged and varied field experience was explored during the data collection procedures. I rigorously studied the data to uncover the patterns and structure of the perceptions and realities.

I frequently visited the study area and had interaction with the research participants both informally and formally for strengthening my understanding. I also initiated wider discussion with the experts and representatives of educational institutions. Furthermore, I interacted with professional peers to confirm and validate the collected data in relation to my research questions. The frequent discussion with my supervisor throughout the whole process has ensured me of a continuous quality control and assurance of the process and applied methodology and strategy. While transcribing the data, I coded and filtered the data by the hand of identified themes that appeared from it, which I reconfirmed with the participants in order to ensure that I truly captured the essence their input.

In order to adequately address the quality concerns during my data collection and analysis, I followed a triple crisis method. This method responds to three types of concerns; crises of representation, crisis of legitimating and crisis of praxis (Denzin & Lincoln, 2011). I provided equal value to the voices of research participants while generating the data.

The problems of legitimation refer to the difficulty in obtaining findings and/or making inferences that are credible, trustworthy, dependable, transferable, and/or confirmable. Praxis is related to methodological and data integration in mixed method research (Cameron, 2011). It is the practical application of growing body of literature about the mixed methods and their movements. I have reviewed several studies related to the mixed methods research to become knowledgeable and familiar with them. I remained fully aware of all of the above concerns while developing my research design, selecting my research methods and data analysis.

Reliability and Validity of the Secondary Data Sources

The Government of Nepal publishes Economic Survey and Red Book annually just before the start of the fiscal year in mid July. These documents describe government's fiscal framework and policies for the year including past year's performance and the status of actual allocation and expenditure by all sectors. The Red Book includes allocation budget by sector and sub-sectors, sources of funds including bilateral, multilateral, grants and loan, and support in cash and kind. These documents are therefore the only authentic sources to make reference when it comes to the information on budgetary allocation by sector and sub-sectors. Allocation of government resource is not considered valid and disbursable until the amount is reflected in the Red Book. The amount reflected in the Red Book is subject to statutory audit and has to follow through fiscal management norms and policies. All

researchers, academia and international communities are relying on the information provided in these documents. Therefore, the information I have used from these two sources are authentic and reliable which cannot be received from any other sources.

Likewise, Ministry of Education/Department of Education publishes flash reports twice a year. These documents are prepared based on the school census carried out twice a year. Government and development partners use these documents to allocate billions of rupees and to monitor the progress of the project interventions. Academia, experts and international community also rely on these reports to retrieve school level information. As with the red book and economic survey, there is no other source to get details of school level information in the country. The reliability and validity of these sources are also described under the delimitations section of chapter one.

Ethical Considerations

Research in the context of my study is undertaken to generate knowledge and contribute to the well being of those people who participate in it. To do so, a careful attention is required because it should not harm those participating in the research process as a result of research being done (Halai, 2006). Researchers have identified some principles and guidelines to ensure the ethics in the research processes. Halai (2006) mentioned five ethical principles which I followed to ensure ethical conduct during my study (Table 8).

I fully internalized these ethical principles and guidelines given in the table below (Table 8). Therefore based on my understanding and intuition, I was confident that my research study would be free from bias, malpractices and breach of ethics. In the research process, I was always open and non judgmental to accommodate any relevant thing possible by utilizing flexible strategy on the plan of action, and

negotiations with the informants. As qualitative research does not demand fixed steps, which allowed me to shift my approach if and when required. In such a situation, I tried to situate myself to a more practicable way in the field.

Table 8

Ethical Considerations

Principles	Processes I followed
Informed and voluntary consent	First I have approved my research proposal from Kathmandu University. Each and every step I took in my research study was done with the consent of my supervisor. In the field, I made a request to my research participants for some information and started to interact only after they agreed upon on my request. I clearly shared with them that those ideas were for my study purpose and those would not be shared with others with research participants' name. Generally informal sharing and discussion helped me to get their approval. I always respected them during the interview and did not present them with judgment on their responses. All information provided to me was done so on a voluntary base.
Confidentiality of information shared and Anonymity of research participants	I interacted with my research participants in a location suggested by them where they felt comfortable and safe. I assured them that the identity would not be disclosed. I was fully committed that I would not disclose the information I received from my research participants, relating to their identity. In order to ensure anonymity, I used pseudonyms in my study.
Beneficence or no harm to participants and Reciprocity	I explained to my research participants about the benefits and risks in participating in my research study. This was in verbal communication because most of my research participants were not encouraged themselves to write in a paper. I went with them in their suitable time and place (venue).

During the field visits, I followed the strategy that a researcher needs to learn about the informants through interaction. Such personal relationship helped me establish rapport with the informants and such rapport helped me develop an understanding about the study area. When observation began in the field, I was

prompted to speak to informants. I did not interrupt them. I was conscious and thus tried to situate myself in the field setting as it would be there.

In the initial stage of the field visits, some people did not interact with me warmly. They were more formal during discussions. I clarified my purpose of visit and encouraged them to speak informally by building rapport with them. In this context, several strategies were required to interact with them by understanding their feelings. During the field visit, I also interacted with them informally either individually or in a group. In the beginning stage, I kept no restriction on the topics during these informal talks. During the discussions, I initiated the approaches of listening to the people's stories, grievances and experiences and thus I encouraged them to narrate their experiences, grievances and stories. While the situation became familiar, I interacted with them in unstructured interview style.

Chapter Summary

This section included the description on how I used different philosophical stances, methodological choices and methods for my study. It also included the details on the study design, data collection tools and techniques and types of data. My study primarily deployed a pragmatism paradigm where multiple realities are allowed to exist through a mixed methods approach. Both primary and secondary data were used to respond the research questions. The procedures used to collect and interpret data were also discussed in this chapter. First descriptive data analysis technique was used then relations were explored among the variables. The analytical matrix I used in my study has also been given in this chapter. The data analysis will be presented in the following chapter.

CHAPTER IV

EQUITY AND PRACTICES OF FINANCING IN EDUCATION IN NEPAL

This chapter discusses the current practices of education financing in Nepal with a special focus on primary education. In the beginning, a short historical development of education financing has been presented and in the latter part of this chapter, education financing policies that are currently in practice has been presented. Although my study is focused on policy analysis, the practices of the policies are also considered during the policy discussion within this chapter. In order to analyze the policies, practices apparently come into the purview. Therefore, analyses of both the policy and practices are explored in this chapter. Although, more focus is given to public financing and related aspects, analysis of impact and outcomes are dealt in the later part of the chapter.

In order to establish the contemporary education system in the country, a number of commissions and forums, such as the National Education Planning Commission was formed in 1954 (NNEP, 1954), were formed. Subsequently, the All Round National Education Committee in 1961, the National Education Advisory Board in 1968, and New Education System Plan in 1971 were formed with a view to reform the education system (NESP, 1971). In this continuum, the New Education System Plan came into effect in 1971 as the first systematic and a futuristic plan which was designed to address individual, as well as societal needs with the aim of national development (Sharma, 2003). Similarly, National Education Commission 1992 and High Level National Education Commission 1998 were also formed to bring timely reform in the education system (HLNEC, 1998).

With the enactment of education Act (1971) and the NESP (1971); schools throughout the country began to receive government support. One of the key features of the NESP was that the government largely accepted its obligation to finance education in the country. Accordingly, the government investment in education was increased substantially. The government provided full salary of all primary teachers and part of the salary of secondary teachers as per the approved teacher-posts (Compendium of Education Policy, n.d.).

The support from the government was based on a cost sharing principle whereby the primary schools received 100 percent support, Lower Secondary schools received 75 percent support and the secondary schools received 50 percent support of the cost of school teacher's salary. Schools were thus compelled to collect funds from the community to run lower secondary and secondary schools. Although the government was relatively successful in achieving access to education in the country through these interventions, quality of education consistently remained low (NPC, 2013).

Several attempts were also made to make primary education free and compulsory, such as declaration of voluntary universal primary education by 1975 and free and compulsory primary education by 1985 (Sharma, 2003). For the first time, primary level education was declared free in 1975 and the government took the responsibility of providing school facilities, teachers, and educational materials. Primary schooling was also declared compulsory on a pilot basis in nine municipalities and one hundred one village panchayats (currently known as Village Development Committees) in 1963 (Sharma, 2003). It was comprised of five years compulsory education, starting at the age of six. Despite these efforts, 4.7 percent of

the school age children remain outside the system and many more repeat and drop out from the system, or are at risk of doing so (DOE, 2013).

Despite government's effort, strengthening of access to and quality of education remains largely unbalanced in favor of some groups, due to their location, (socio economic) background, language and abilities (CBS, 2011). The majority of education institutions, particularly better quality institutions, are found in urban areas (MOE, 2012).

In rural areas where schools were set up, the quality of instruction was inferior, facilities were very poor, and educational materials were either difficult to find or virtually unavailable (MOE, 2009). The vast majority of poorer households could not afford the education of private school because of high fees (FHD & RIDA, 2009). Nevertheless, as a result of different interventions made by the government and the private sector, there is still a gap between male and female literacy rates and is further widening between rural and urban areas (CBS, 2011).

Government Policies on Financing of Education

The Government of Nepal has demonstrated its commitment for ensuring the free primary education by accepting and acknowledging Dakar Framework of Action on Education for All (EFA) in 2000, Millennium Development Goals (MDGs) and other international treaties and conventions (NPC, 2013) . In line with these instruments, several policies, plans and educational programs have been formulated and implemented (Table 9). As a process of this, School Sector Reform Program (SSRP) is currently being implemented, under which basic education has been recognized as one of its prime responsibilities (MOE, 2009).

Table 9

Policy Documents and Policies

Policy Documents	Essence of the Policies
Interim Constitution 2007	Review of Interim Constitution 2007 shows no specific education financing related statement but it declares free education up to secondary level as a fundamental right. This Constitution further stipulates that "every citizen shall have the right to receive free education from the state up to secondary level as provided for in the law" (article 17.2). However, the constitutional provisions open the avenues for ensuing rights of education to its citizens through affirmative action and measures.
Education Act and Regulation	Education Act Seventh Amendment and Regulation (2001) has less explicitly mentioned financial requirement of education sector (MOE, 2001; 2002a). It spell outs the provisions of free education, teachers' positions and support, scholarships and other management support for
Education for All National Plan of Action (EFA NPA)	In 2001, Nepal has prepared and put forward Education for All National Plan of Action that indicated need of almost 17.5percent of public budget to education (MOE, 2002b). It also opens space to move towards a sector-wide approach in education financing.
School Sector Reform Plan (SSRP)	The current ongoing School Sector Reform Plan (2009-2015) has articulated the need of 20percent of government expenditure for education and the need of 85percent of total education expenditure to the comprehensive school education (i.e. pre-primary to grade 12). It further emphasis on sector wide approach on education financing (MOE, 2009).
Medium Term Expenditure Framework (MTEF)	The first Mid Term Expenditure Framework in 2002 recommended to adopt a fiscal framework with the principles of 80percent budget to district, 30percent budget for non-salary component, overhead cost not exceeding 10percent at the central level, 15percent at district level and 50percent of the program cost going to Village Development Committee, District Development Committee, municipality for earmarked activities (Early Childhood Development, non-formal etc.) (NPC, 2002). Then each year MTEF provided fiscal framework for each sector and subsectors.
Periodic Development Plans	Periodic development plans, such Tenth Five Year Development Plan (2002-07), Poverty Reduction Strategy Paper (2002), Three Year Interim Plan (2007-10), Three Year Plan (2010-13) and Approach paper of Thirteen Plan (2013-15) have continuously emphasized on (i) providing free quality education for primary level to all children, (ii) the need to adopt cost sharing approach for secondary level in general and free to targeted groups, and (iii) adopt cost recovery principle in higher education. (NPC, 2013)

From the above discussion, it appears that there are large policy shifts in education financing in Nepal. Policy development arena in Nepal has experienced several changes along with the changes in the political governance system of the country. The government has tried to incorporate ‘multiple diagnoses’ and ‘multiple prescriptions’ from international actors (Basnet & Banskota, 2010) that shifted the

focus of the policy time to time. Basnet and Banskota (2010) explored the realities about the policy and its focus as follows;

> .....Nepal's education policy documents lack a focus as they try to incorporate several issues like modernization and economic growth, to social transformation, social justice, inclusion, equality, social development, human rights etc. This lack of focus has been aggravated by the pathological approach by the international actors through 'multiple diagnoses' and 'multiple prescriptions'. (p.26)

In education sector, gradual shift in the policy has been observed over the years. Since 1990s several measures were introduced and some visible shift is observed from project approach to program support, from basket modality to pool funding and donor specific to Joint Financing Arrangement (JFA). All these shifts resulted government led policy coordination and formulation where common instruments for planning, implementation and monitoring are used. It also developed a single mechanism for donor harmonization and Technical Assistance (TA) mobilization. Now the focus is given for sector wide development.

The shift from project to the Sector Wide Approach (SWAp) has implications on resource alignment and harmonization (Table 10). The policies are being made more inclusive and equitable in line with the international commitments. This shift has had a significant impact on the development of more equitable programs, especially in the primary education sub-sector.

Table 10

Policy Shifts in Primary Education of Nepal

Before 1971	1971 - 1990	1990-2000	2000-2009	2009 onward
Ad hoc mechanism for education development. Community financing, little grant support from State	Nationalization of education, free education (early grades of primary education), more structured public financing, grant aid support to school	Focus on primary education, project approach, free education, incentives to targeted students, education as state responsibility, public financing through subsidies, support to students	Focus on primary education – decentralization, incentives-increases scope and coverage, multiple financing modalities, use of block grants, per capita financing, support to students in general and targeted	Focus on basic education – inclusion and equity, continuation of multiple financing modalities, use of block grants, per capita financing, support to students in general and targeted
Donor support: Project support	Donor support: Project support	Donor support: Basket funding modality	Donor support: Pooled funding mechanism,	Donor support: Moving towards SWAp

From the review on policy shifts presented above, it is seen that government financing in education has substantially increased over the years for enhancing access and quality of education at all levels and subsectors as well as for improving delivery and management efficiency. Besides, growing commitment for free education has also contributed to increase government expenditure in education. However, partnership has also been a key policy objective during this period. Some new and innovative funding tools and mechanisms like sector wide approach, basket funding, joint financing arrangement, medium term expenditure framework, block grant, per capita funding, etc. have also been adopted during this period for the purpose of ensured funding in education and for transparency and accountability in financing procedures with the ultimate objective of improving education quality and efficiency in service delivery.

However, the education policies that were reviewed were found to lack clarity with regard to financing provisions. The proportion of investment to education in terms of Gross Domestic Product (GDP), public budget and per student unit cost is not available. On the basis of the above policies and documents, the Government of Nepal has allocated around 17 per cent of total public budget and about four percent of total Gross Domestic Product (GDP) to education sector over the last years (MOF, 2011a; 2011b). Primary education receives the largest share (more than 60 percent) of education budget. Current financing trend shows that the prime focus unit in financing is teacher instead of student. The government provides teacher salary and operating costs to schools instead of providing unit tuition cost for each student. However, there are other units of funding from central level to the lower levels.

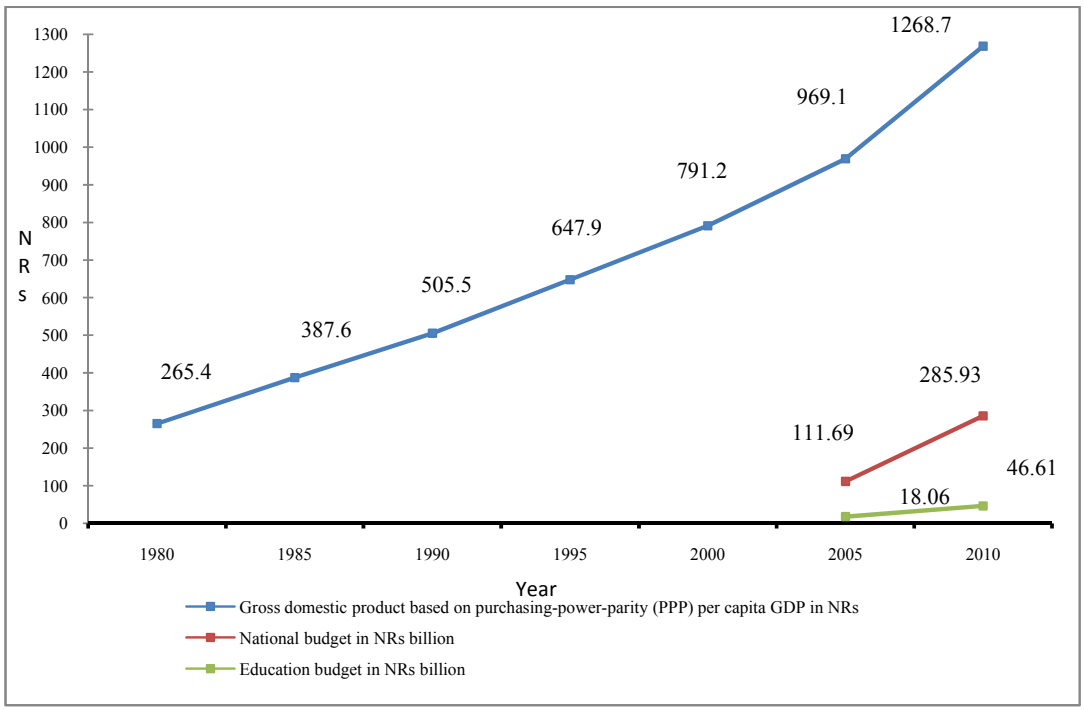
In Nepal, both the public and private sources of financing in education have been practiced. Of them, the State plays a major role in financing in education. Similarly, individuals, households and communities also bear a significant responsibility to afford education which is varied between rich and poor families. Hence, spending disparities have been observed in education depending upon the economic status of individuals, households, communities and pocket areas. Education financing policies in Nepal have not explicitly been defined in one document, which makes it difficult to get the clear picture from a single source. These policies are sparsely reflected in several documents.

Public Financing in Education

In most countries, education is largely financed by the government (OECD, 2002). Nepal is no exception in this case. A commonly agreed rationale for public intervention in education is that it fosters important external benefits (financial as well non-market values) for the society because it can create positive benefits to the

society (Demeuse, Baye, Straeten, Matoul, & Nicaise, 2005). However, public provision of educational services in Nepal is always constrained by the availability of public resources (FHD & RIDA, 2009). Nepal has relatively weak public resource collection capacity (MOF, 2013a), and hence, resource allocation for education is also affected.

Nepal spent about 10 percent of its annual public budget on education from 1975 to 1990 (MOF, 2013a; 2013b) (Figure 7). This budget increased to 13 percent in the Eighth Five Year Plan during 1992 till 1997. This spending ranged between 1.3 percent and 2.0 percent of Gross Domestic Product (GDP) between 1975 and 1990 (MOF, 1985-2004; 2004-2011). After 1990, then government increased the share of education budget to a significant level.



(Adopted from: MOF, 1985-2004; 2011a; 2011b)

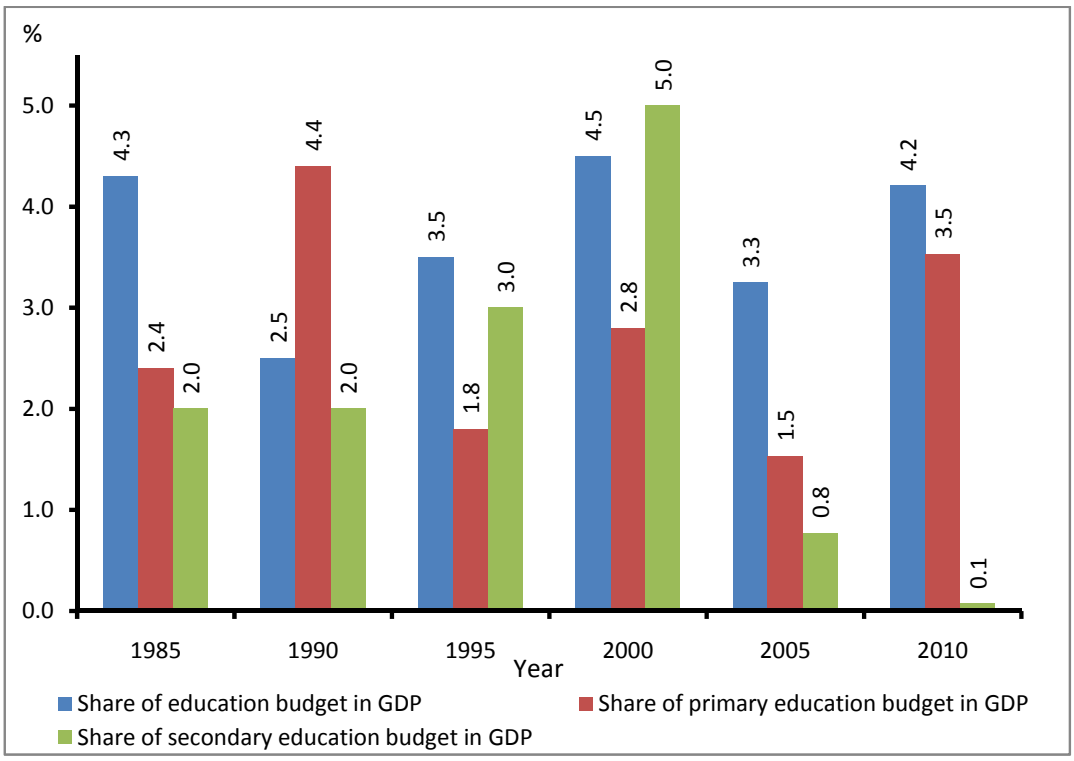
Figure 7. Gross domestic product based on purchasing-power-parity (PPP) per capita GDP (NPR billion).

During the past two decades, Nepal experienced rise and fall in economic growth of around 4 to 5 percent. In 2010, the Gross Domestic Product per capita (GDP per capita) and Purchasing Power Parity (PPP) stand on US$1268.717 and US$ 285.93 respectively (MOF, 2011a; 2012a). As seen in Figure 7 above, the national effort on education (percent share of education in GDP) has slowly been increasing over the years. For example, in 2000, it was 2.5 percent and it was 3.8 percent in 2010. The percentage of the government budget allocated to the education sector has been 15.3 percent on average in the last decade. At present, 16.3 percent of government budget is allocated to the education sector. The growth rate of the educational budget is also constantly increasing over the years with the ten year average (from 2001 to 2012) being 16.81 percent (MOF, 2011b; 2012b). The subsector distribution is dominated by primary education, which is more than 60 percent of the total education budget.

As in most of the developing countries (OECD, 2002), education budget in Nepal is financed by multiple sources ranging from government to individual households (FHD & RIDA, 2009). The government's red book shows only two major sources - the government of Nepal and foreign aid, which is received as grant or loan and is reflected in the national accounting system (MOF, 2008; 2011b; 2012b). The contribution of households, community and other sources is not recorded in the national system which eventually did not appear in a systematic manner (FHD & RIDA, 2009). While the largest part of government expenditure in Nepal is covered by public sources, international aid plays a non-negligible role in Nepal. The development support to Education through external sources in Nepal began from 1951 in the name of Colombo Plan (Sharma, 2003), however the available figures of last

ten years show that it is very difficult to predict whether it is increasing (MOE, 2012a).

Generally, indicators of adequacy, equity and efficiency are used to analyze the education budget (McGrath, 1993; Rao, Naidu & Jani, 2008; The World Bank, 2004). Indicators of adequacy can be assessed by the share of education (and by levels) budget in gross domestic products (GDP) and per pupil expenditure in education budget (OECD, 2002). The following figure (Figure 8) provides the scenario of education budget (and by levels) against the gross domestic products of the country. Except the share of education budget, others are fluctuating. This is because of the assumptions used to define the budget heads of primary and secondary education.

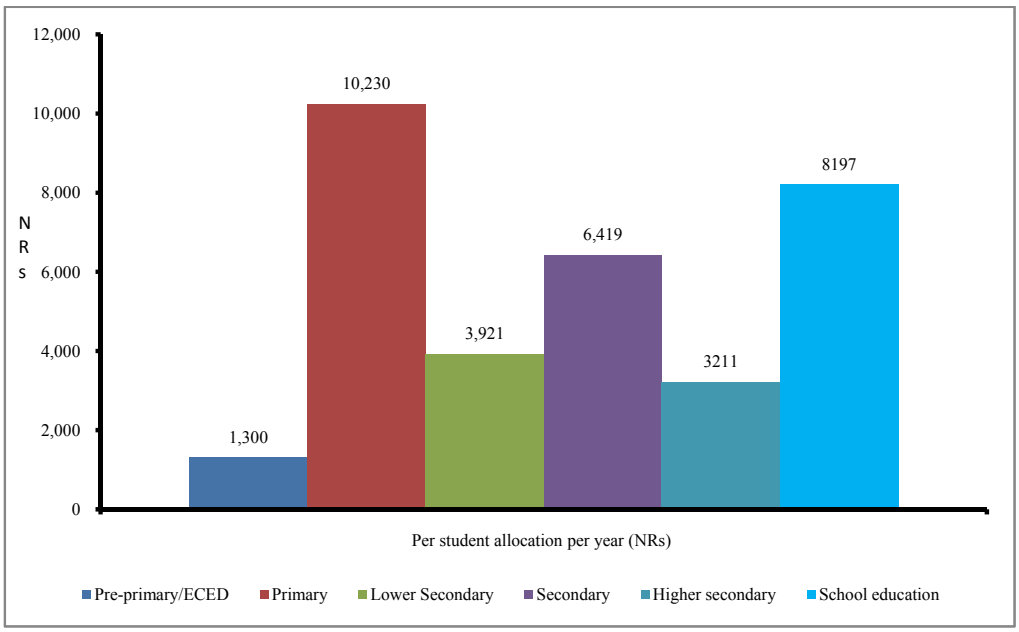


(Adopted from: DOE, 2004-2011; MOF, 1985-200; 2004-2011)

Figure 8. Share of education (including primary and secondary education) budget.

In developed countries, the share of education budget in national income (most cases it is gross national income and some cases it is gross domestic product) has been

ranging between 6 to 8 percent (UNESCO, 2010). Comparing with this, and with the reality that 1 percent of Nepal's GDP is less than 0.03 percent of the global average, the Government of Nepal allocates inadequate budget to the education sector, both in GDP percent and in absolute numbers. Similarly, per pupil allocation of budget also provides the picture about adequacy of budget. The following chart (Figure 9) indicates the status of per pupil allocation in 2011/12 fiscal year (DOE, 2011b). Even though the allocated budget for education is inadequate, primary education receives the largest share of education budget than other sub-sectors of education. This is because of the number of students, number of teachers and number of interventions such as scholarships, free textbooks, mid-day meals for targeted students, and school facilities improvements.



(DOE, 2011b)

Figure 9. Per pupil allocation of budget.

Per student allocation at primary level per year in OECD countries is averaging US$ 6,000 to US$ 9,000 (OECD, 2004; UNESCO, 2009), which illustrates

the different realities with the estimated US$ 200 that is allocated in Nepal for the same purpose (DOE, 2011b).

Allocation of budget to education does however not tell anything about the level of equity within the education sector. To explore the equity in education financing, a thorough analysis of budget allocation in terms of priority activities and targeting (socio-economic conditions or regions) is required. It means who is receiving, how much, and on what basis - are the important aspects while assessing equity in education financing. It also relates with the distribution of schooling facilities, teachers and learning materials from supply side perspectives. Similarly, the numbers on budget in education do not reveal the effectiveness of available resources utilized within the sector. The issue of efficiency demands an analysis on the flow of students including drop out, repetition and cycle completion, years of schooling and entry rate in the job markets. For example, it is seen that only 55.5 percent of the total students appeared in SLC exam passed the SLC exam in 2068 means that there is huge wastage in education system (OCE, 2011). Fluctuations observed in pass percentages across the years have made it difficult to show the trends of whether it is improving or not. The general observation in the past 10 years' SLC results show there is improvement in the overall system that indicates some form of efficiency of the system. However, only observing the SLC result is not adequate to assess the efficiency (both internal and external) of the education system as it is not a standardized testing method thereby making it of limited relevance to predict evaluate trends in education.

Approaches used in Financing in Education in Nepal

Governments spend money on education for many different reasons such as consumption and investment. Broadly speaking, consumption is an expenditure which

is incurred now for the benefits it will provide in the present whereas investment is an expenditure, which is incurred now for the benefits it will provide in the future (OECD, 2002). In simple terms, the resources devoted to consumption are, literally, consumed in the present, but that investment is a way of increasing productive capacity, or wealth, in the future (Woodhall, 1974).

Spending in education is regarded as both consumption and investment (OECD, 2002). As a matter of consumption, people want schools, computers, television sets as well as their children to learn and read. In the mean time, education is also a form of investment which helps to produce human capital in the long run. For both the purposes of consumption and investment, every government needs to spend public budget to education. The decision on allocation of resources depends on whether government chooses to emphasize the consumption or investment aspects of education. If education is taken as a form of investment, one of the first questions to spring-off to our mind is how much it does contribute to the economic growth, compared with other forms of investment. Therefore, government's spending on education is guided by one or more of the following approaches, such as social demand approach, human resources requirement, rate of return, system approach, etc. The approaches of education financing in Nepal are generally guided by the principles of the following thrusts (MOE, 2001; 2009; NPC, 2013).

Free Education

Free education is a concept which came with the justification of taking education as a major route for social mobility and removing fees to receive education. Because fees may possibly exclude poor people and such exclusion is inequitable (Berne & Stiefel, 1999). The concept of free education has been evolved from several international pronouncements (given below) (UNESCO, 2010). The intent of these

efforts was the public education should be free of charge, especially at the level of basic education.

- Article 26 of the 1948 United Nations Declaration of Human Rights stated that "Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages."
- The 1959 Declaration on the Rights of the Child stated that "The child is entitled to receive education, which shall be free and compulsory, at least in the early stages."
- Article 13 of the 1966 International Covenant on Economic, Social and Cultural Rights declared that "Primary education shall be compulsory and available free to all."
- Article 28 of the 1989 Convention on the Rights of the Child mentioned that "Make primary education compulsory and available free to all."

In order to translate the above international commitment as well as national commitment, free education demands greater government resources. However, the resources from other sources are also equally used. The rationale of investing great amount of money in free education is that poor will get more benefits simply because poor families are likely to have larger numbers of children than rich families (Berne & Stiefel, 1999). Likewise, it also relates with the concepts of equity. Similarly, another rationale is gender friendly, which discourage the school non-attendance of girls because of school fees.

Based on the principles given in the Constitution of Nepal (Interim Constitution, 2007), State ensures the provision of cost free education up to grade 8 for students studying in community schools (NPC, 2013). Cost free education includes free admission, tuition free, free textbooks to the students of community

schools and some incentives to students and schools. Both the resources of Government and development partners have been used to make available free basic education. The State is also equally committed to free and compulsory basic education and aims to implement the compulsory basic education in a phased manner with the support from local bodies and communities (NPC, 2013).

Cost Sharing

Cost sharing also relates with the concept of matching resources. It means that the actual costs are borne by the State and individual on the defined share basis. The most obvious form of cost sharing is in school fees paid by the consumers of education services. In the context of Nepal, the concept of cost sharing has defined in a way that both the public and private resources are required to receive secondary education (NPC, 2013). In this case, the State has adopted two sorts of modalities in financing secondary education. The first modality is that secondary education is fee to some targeted groups of students. In this group, the students are from Karnali zone, Dalit and marginalized communities, as well as extremely endangered families who are eligible to receive free secondary education. The second modality is that the students other than the previous group should pay school fees determined by the schools and approved by the government authorities.

Cost Recovery

The concept of cost recovery is being applied in tertiary education. Students need to pay the total costs required to receive the certain level of higher education (NPC, 2013). However, schemes of incentives and scholarships are also made available to students to ensure equitable access to targeted groups. In tertiary education of Nepal, the scheme of cost recovery in education has been applied. Since tertiary education has been shown to provide greater returns to the individual,

governments may assign greater responsibility for funding tertiary and even secondary education to individuals and households to reflect this shift in benefits (OECD, 2002). The argument then is to recover some costs directly from users and to target public support to those who are more economically disadvantaged.

As mentioned above, the cost of educating an individual increases with the level of education. It would be expected that expenditure per student rises along with the level of education. This is because of the economies of scale implied in basic education and the higher costs associated with more specialized staff and additional school resources needed at the higher levels of education.

Targeted Interventions to Targeted Groups

In addition to the above cost free, cost sharing and cost recovery scheme, the State has also been providing additional incentives to the students of targeted groups for continuing their education. These incentives are ranging from scholarships to mid-day meals (NPC, 2013). Hence, incentives to the students of targeted groups became major financing aspects in the context of Nepal The amount of incentive per student increases with the higher level of education, but the supply in the higher grades remains minimal.

Issues and Challenges of Financing in Education

The major concern in education financing is how education funds are allocated and used within the public education system (OECD, 2002; UNESCO, 2009). Equity in allocation, adequacy of allocated funds and efficiency in the use of resources are the main concerns in education financing (Saavedra, 2002). These three aspects are also important and these can be used to analyze the trends and patterns of education financing in a country. Hence, the basic question on education financing is "how can education finance system be designed to assure that all students achieve high level of

learning that education funds are raised and used in the most efficient and effective manner possible?" as argued by Ladd, Chalk, and Hansen (1999). Linking education finance with the school performance and academic achievement is also equally a matter of concern to policy makers.

Education financing system is heavily influenced by the legal, economic and political system (Carr & Fuhrman, 1999). Such system is considered as a product of the legislative process, often it reflects the State's balance of political power and changing it requires a shift in political power relationships. In all developing countries, there is a pressure to the government to increase the resources in education because of advancement in information and communication technology, globalization of economic activity and the trends towards personal autonomy and responsibility (OECD, 2002). The pressure to put more resources to education is increasing day by day. In the mean time, high repetition and drop-out rates in early grades raises the serious questions on the efficient and effective use of scarce resources. Such conditions also put pressure to the government about the use of public resources.

Equitable allocation of public resources within the education sub-sector is another concern (OECD, 2002). Because of scarcity of resources, choices have to be made which certainly involves a trade-off in selecting one thing from several things and giving up something else in exchange (Ladd, Chalk & Hansen, 1999). The efficient and equitable reallocation of public resources on priority areas is also equally important (UNESCO, 2009). Efficiency of education system is a term used to describe the relationship between inputs and outputs, and their relationships (Ladd, Chalk & Hansen, 1999).

In recent years, Nepal has given adequate priority to education sector by increasing public resources to the sector as well as the efficient usage of resources

within the sector (FHD & RIDA, 2009). The ongoing periodic development plan stipulated that the increase in public expenditure on education contributes to the economic growth and poverty alleviation (NPC, 2010). From the equity aspects, public resources in primary education are equally targeted to poor students. However, the concerns on inefficiencies of government spending towards education are also equally raised; which deteriorate the quality of educational attainment (FHD & RIDA, 2009). Moreover, experts argued that public resources are often misallocated in terms of priority setting.

Policy and Practice in Financing Modalities and Funding to School

Education finance systems provide funding to schools with a view to creating an environment where all students can learn (The World Bank, 2004). In Nepal, public schools are categorized as public institutions where they are eligible to receive the grants from government (MOF, 2008). Because of such categories, schools receive earmarked, block and performance grants (MOF, 2008). These grants do not have to be paid back by the schools. The rationale of designing different types of grants is based on the nature of the areas or activities where schools can make a decision to spend the allocated money (MOF, 2008). The guideline further clarifies the nature of grants that links with the autonomy of the schools to reallocate the grants as per their priority. In addition to school, MOF used a combination of two or more variables to fund schools such as student, geography, teacher, etc.

In order to assess the status of equity in educational policies, I reviewed the educational activities undertaken for the implementation of primary education. The annual work plan and budget of fiscal year 2011/12, approach paper of thirteen year plan and economic survey of 2013 were analyzed (DOE, 2011b; MOF, 2013b; NPC,

2013). The analysis revealed that there are policy interventions to address the dimensions of equity; some of the examples are given below (Table 11).

Table 11
Horizontal and Vertical Equity Measures in Primary Education

Horizontal equity measures	Vertical equity measures
• Free education (basic education) for all studying in community schools • Free textbooks to all grade 1-5 students of community schools • Scholarships to all girls and Dalit of grade 1-5 of community schools • reservation quotas for women, Madhesi, Janajati, Dalits, remote areas, disabled in teaching positions of basic education level • Per capita funding for salary and non-salary purposes • Provision of mother tongue education • Teacher training to untrained teachers • Continuous assessment of students	• Different categories of scholarships for disabled students based on their degree of disabilities, such as A, B, C and D • Scholarships for conflict affected students by levels of education • Non-salary and salary grants to schools through per capita funding scheme by eco-zones (Mountains, Hill and Terai/Valley) • Remote allowances for teacher working in selected districts • Differentiated allowances for Early Child Development Centre facilitator (high Mountain and other areas) • Differentiated student teacher ratio by eco-zones • Differentiated norms to open and run schools by eco-zones

(Adopted from: DOE, 2011b; MOF, 2013b; NPC, 2013)

The review of the policies and allocation patterns of the budget indicate in Nepal show that the majority of the public budget is mainly utilized for consumption purposes (FHD & RIDA, 2009). Almost 70 percent of the budget is absorbed by the salaries and benefits components of the expenditure (DOE, 2011b). The remaining 30 percent includes the school facility improvement, incentives and other administration aspects (DOE, 2011b). The present allocation pattern shows that in Mountain, Hill and remote areas, per unit costs of primary education are higher than the national average (DOE, 2011b).

One of the measures to address the concerns of income disparities in society is the adoption of pro-poor policy in funding to school (UNESCO, 2009). It means schools located in poorer segment of the society should receive extra funding as compared to other schools with wealthier societies. From the review, it is seen that the

schools in Nepal are not differentiated or categorized on the basis of the economic status of the community/society they cater, but mostly are accounted for in terms of student numbers while planning the allocation of public resources (DOE, 2011b). Student numbers in any school is the function of population density of the community/society, accessibility, literacy rates and other developmental indicators. It is evident that the increase in the number of private schools plays a significant role in limiting the number of students in public schools.

In order to ensure equity in the schools and classrooms, different tools such as child friendly classrooms, school as a zone of peace, child friendly local governance and learning without fears are being implemented (DOE, 2012). But their effects in the field are limited because of understanding of education managers and teachers, and inadequate resources. Policies are there but the gap exists in their implementation at the place where it is to be.

The review of existing financing policies also tells us that there are several policies that favor gender, poverty and regional diversity mostly focusing the horizontal equity measures, such as providing the same amount of scholarships to all girl and Dalit students of grade 1-8 (DOE, 2012). However, the differentiated scholarships to different categories of disabled students (DOE, 2012) can help to address the concern of vertical equity to some extent. Other examples in this regard include scholarship for conflict affected students, remote allowances for teachers and differentiated amount of salary and non-salary grants to schools by eco-zones.

Although policies in Nepal are formulated in line with the international declaration and treaties, their translation into actions are still questionable (FHD & RIDA, 2009). At present funding to schools in Nepal is largely influenced by the number of students with little variations by eco-zones (DOE, 2012). In addition,

group or categorical targeting for girls, Dalits, disadvantaged communities and disabilities are there with no differentiation on funding among the groups (NPC, 2013).

Every policy document includes statements about providing support packages or schemes to ultra-poor or poorest of the poor (MOE, 2009; NPC, 2013). But these groups are yet to be recognized and identified formally by the government authorities, yet schools currently receive such support from public funding.

The data on participation of different economic groups in different levels of education show a low level of participation from the poorest segment of the society (CBS, 2011). Likewise, the existing policy of school opening relies on the demand of the community (MOE, 2002a). Without supply side interventions all segments of the society hardly receive the access to schooling facilities in an equitable manner.

Disparities are also found in the process level factors of schools because of variations in schools environment, availability of educational materials, number of teachers, qualification and experiences of teachers (DOE, 2013). The number of bi/multi- lingual students and disabled students may vary from one school to another. Uneven inputs and processes are the major causes of producing uneven outputs and outcomes. To address these, no special efforts are put into implementation. Even the education system cares little about the inputs and processes because there is a tendency to give a big focus on outputs and outcomes.

As such, it is seen that the government has been unable to provide sufficiently balanced attention across all categories of horizontal, vertical and equality of opportunities, when planning the distribution of resources through public financing policies. Equity dimensions like gender, geography, caste/ethnicity, disability, language and economic aspects are inadequately addressed. The data show that this is

because of inadequate policy provisions, inadequate funding, weak capacity of implementation, structural inequalities persisted in the society, uneven development patterns between urban and rural areas, use of available public resources, education level of parents and different efforts from public and private sectors.

Chapter Summary

Education financing policies in Nepal attempt to address the issues of equities in terms of horizontal, vertical and equality of opportunities. But these efforts are inadequate that have resulted continued disparities among areas, regions, groups and individuals. There is a gap in policies formulation and their implementation, as policies are often not fully implemented as envisioned at the field level. Despite the improvement in focus on inputs, processes, outputs and outcomes, the education policy and planning system in Nepal is characterized as containing inequitable elements in some of the areas, such as insufficient measures to address the issues of vertical equities and equality of opportunities. In terms of the nature of financing, majority of the expenditure incurred in primary education falls under the category of the consumption rather than investment.

CHAPTER V

EQUITY IN THE EDUCATION SYSTEM

This chapter includes the descriptive analysis of the equity situation in the primary education of Nepal. In order to analyze the situation, the existing information from NLSS reports, Flash reports and other relevant information were utilized. The descriptive analysis reveals the information on where we are and where the gaps are during the years. The purpose of such analysis is to explore the trends and results obtained from the public investment.

Equity is concerned with securing children's rights to, within and through, education so that they can realize their potentials and aspirations (Wilson, 2003). Vellacott and Wolter (2004) discussed educational equity while preparing a paper on equity in Switzerland education system. They mentioned that educational equity refers to an educational and learning environment in which individuals can consider options and make choices throughout their lives based on their abilities and talents, not on the basis of stereotypes, biased expectations or discrimination. The achievement of educational equity enables females and males of all races and ethnic backgrounds to develop skills needed to be productive, empowered citizens. It opens economic and social opportunities regardless of gender, race, ethnicity or social status.

Similarly, Michaud (1989) as cited in McGrath (1993) has further developed the commonly accepted ideas of educational equity in his three separate classifications of the concept- the conservative, the liberal and the social view. The conservative view relates to the provision of universal access to education. In this

case, the concern for equity ends when the educational services are made available. The liberal view holds that education should not only be made available universally, but its quality should be the same in each community. On the other hand, the social view promotes the differences between pupils. Pupils have different needs and should be treated differently and financed independently according to those needs. In this way, the differing versions of the definition of equity vary only in degrees. Two basic themes are commonly acknowledged; namely, equality of access to educational resources and opportunity, and equal sharing of the tax burden to pay the costs of equalized access.

While analyzing the school finance from an equity perspective, both the definition and equity dimensions are equally important. Analyzing school financing policies through an equity perspective equally demands deeper understanding on equity dimensions. The different dimensions of equity were discussed in detail in chapter two while reviewing the equity related literature. However, in this section only the perspectives of gender, socio-economic (consumption quintile), and geography (regional, eco-zones, urban and rural) are taken as a dimension of equity for the analysis purpose. In this study, I have explored the status of women in terms of literacy, enrolment in primary education, and educational attainments by the analytical units of development regions, eco-zones, urban and rural, and socio-economic conditions. Both the time series and individual year data are used to analyze the variables. The fourth dimension of equity also termed as "other indicators" category includes some of the indicators useful to highlights the status and disparities.

Gender Related Equity Aspects

Despite tremendous progress that has been made in the primary education of Nepal, women are still under-represented in various walks of social lives - lower

participation rates in politics, civil services and higher studies (NPC, 2013). Although females are given due recognition on economic and political spectrum in official documents and even in laws, there are shortfall of opportunities for women in these areas (NPC, 2013). As a result of these, the improvement of gender related equity remains a lip service in Nepal. Therefore, gender disparity is taken as a persistent social issue that is difficult to resolve, despite general improvements in economic and social conditions. And there is a saying that no society treats equitably its women as well as its men (UNDP, 1997). This report further states that women and girls lag behind men and boys because of disparities in education, limitations on the rights of women to own and inherit property until the recent past, poor health, especially in the realm of reproductive health, low access to labor markets, employment and productive assets/resources, gender-based violence, and lack of fair representation in decision-making (p. 19).

Literacy Related Indicators

In Nepal, literacy rates are being calculated for two age groups - six years and above, and 15 years and above. It is taken as one of the basic indicators of human development. Being literate does mean that a person can read and write, and it has positive correlation with other social indicators, such as children's education, their retention, children's health, maternal health, etc. Higher literacy rates indicate the higher status of development in terms of human, social and other economic aspects of lives. The available figures show that women are lagging behind men in literacy status which highlights the situation of disparities among them. At present, 72 percent of males aged 6 years and older are literate as opposed to 51 percent of females (CBS, 2011). Disparities are not only in male and female; it exists across the development regions, ecological belts, urban/rural residence and different economic groups. The

figure (Figure 10) below shows the literacy status of six years and above age groups in three living standard surveys. It shows gradual improvements of literacy rates of men and women. The gap between men and women literacy rates is also decreasing over the years. In 1995/96, it was 27.8 which became 24.6 in 2003/04, then finally reached 20.8 in 2010/11.

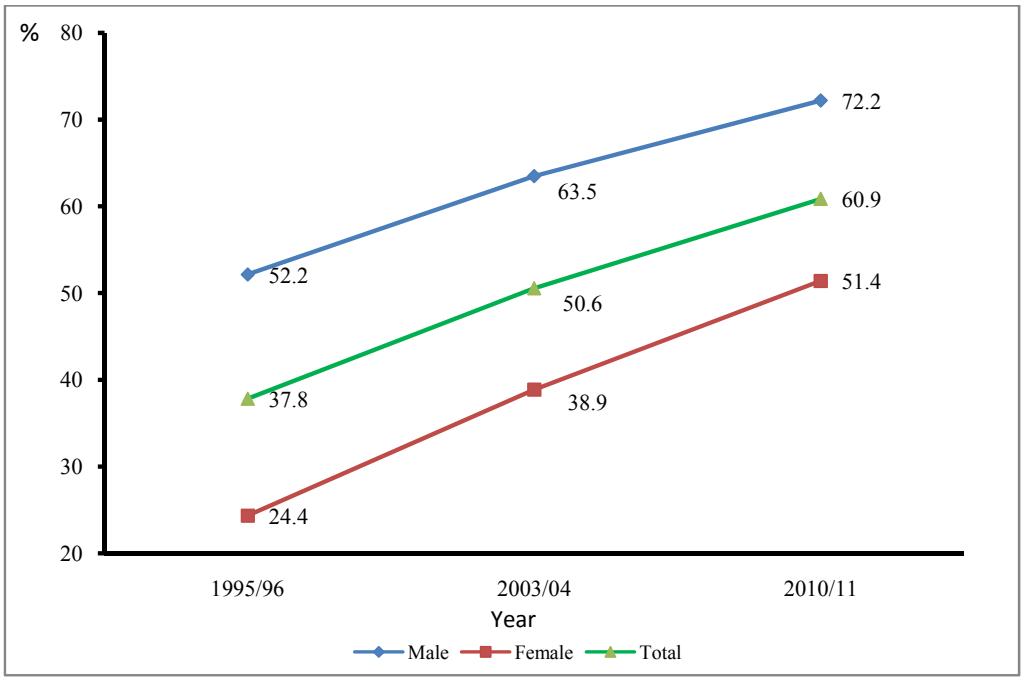


Figure 10. Literacy rates 6+ years and above.

Further disaggregation of literacy rates by different units help to explore the situation of disparities. Such disparities are evident among development regions, eco-regions, urban and rural areas, and different economic groups. The figures (Figures 11-13) below show the gap in the literacy of six year and above age group of men and women by development regions, eco-regions, urban and rural areas, and economic groups (CBS, 2011). A clear message received from the charts is that there is a decrease in literacy gaps in all units in 2010/11 as compared to 1995/96. But the improvement is not common across these units. The general trend indicates that there

are improvements in the differences of male and female literacy rates, i.e. differences are lower in 2010/11 as compared to 1995/96.

The figures below (Figures 11-13) highlight the literacy rates of male and female by urban and rural areas. From the data, it is seen that the literacy rates for both male and female is higher in urban areas as compared to the rural areas. There are improvements in the literacy rates of male and female in both the areas, but alarming concern is that disparities still continue till now. The disparities are becoming narrow as compared to fifteen years before. The decreasing trend is higher in urban areas rather than in rural areas.

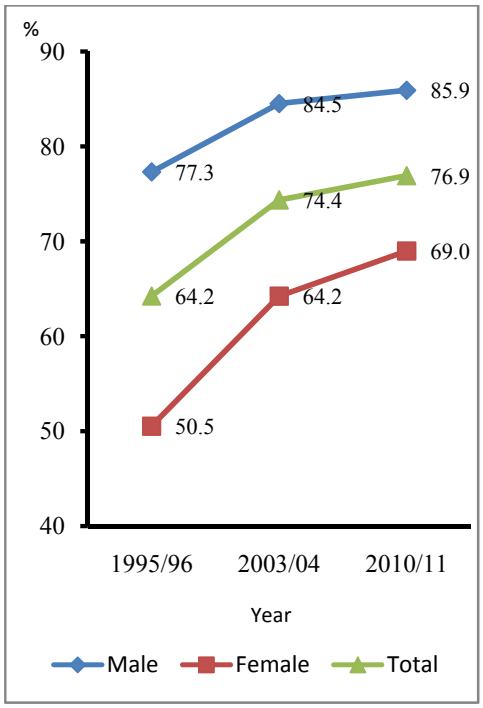


Figure 11. Literacy rates of 6+ years in urban areas.

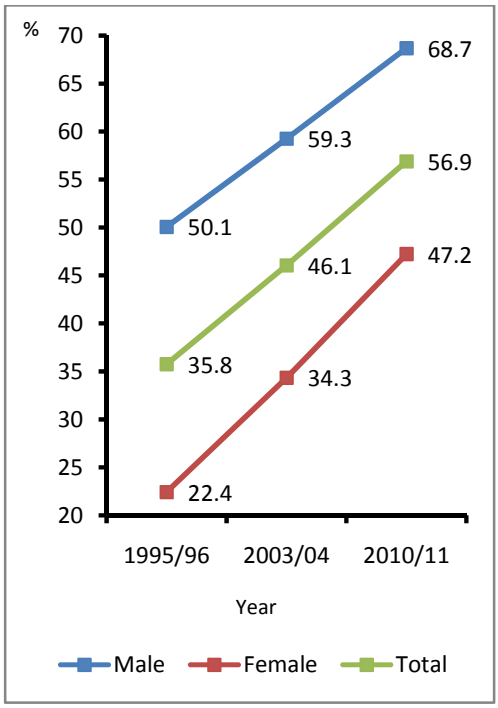


Figure 12. Literacy rates of 6+ years in rural areas.

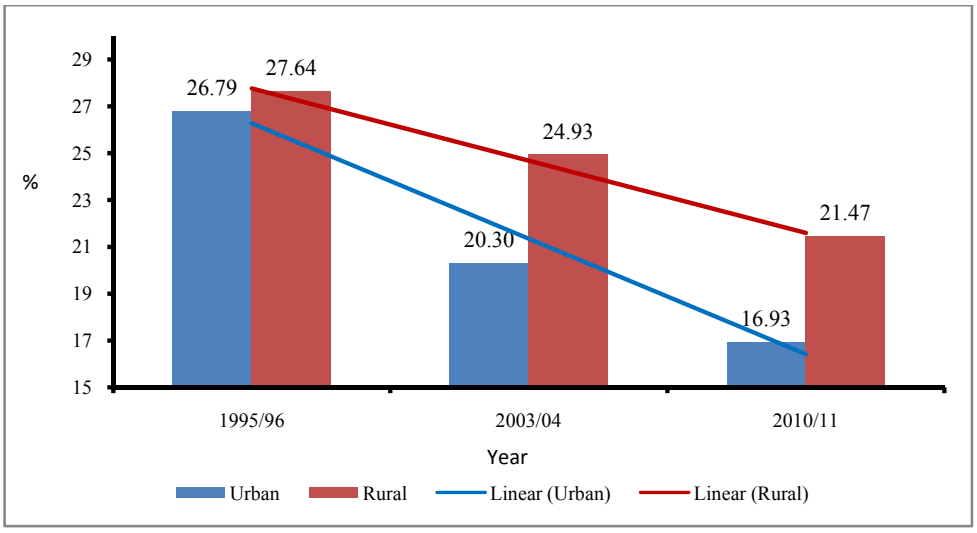


Figure 13. Differences (male and female) in 6+ years literacy rates in percentage points by urban and rural.

The figure below (Figure 14) explains the differences in literacy rates in percentage points between male and female by development regions (CBS, 2011). The comparison of data from three survey reports indicates that there are improvements in the female literacy rates because the differences of male and female literacy rates are decreasing over the years. The difference is high in the far western development region than others in all three reference points of time (1995/96, 2003/04 and 2010/11). The western development region has the lowest difference between male and female literacy rates.

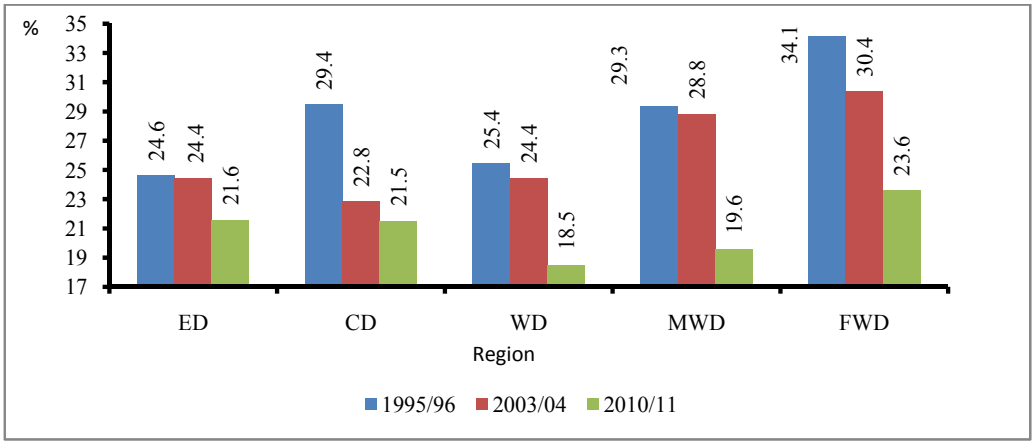


Figure 14. Differences (male and female) in 6+ years literacy rates in percentage points by development region

Likewise, the difference between male and female literacy rates has improved in all three regions (Mountain, Hill and Terai) across the years. Hill area scored the lowest value as compared to the Terai and Mountain regions. The figure below (Figure 15) explains how the difference between male and female literacy rates has developed across the regions over the years (CBS, 2011).

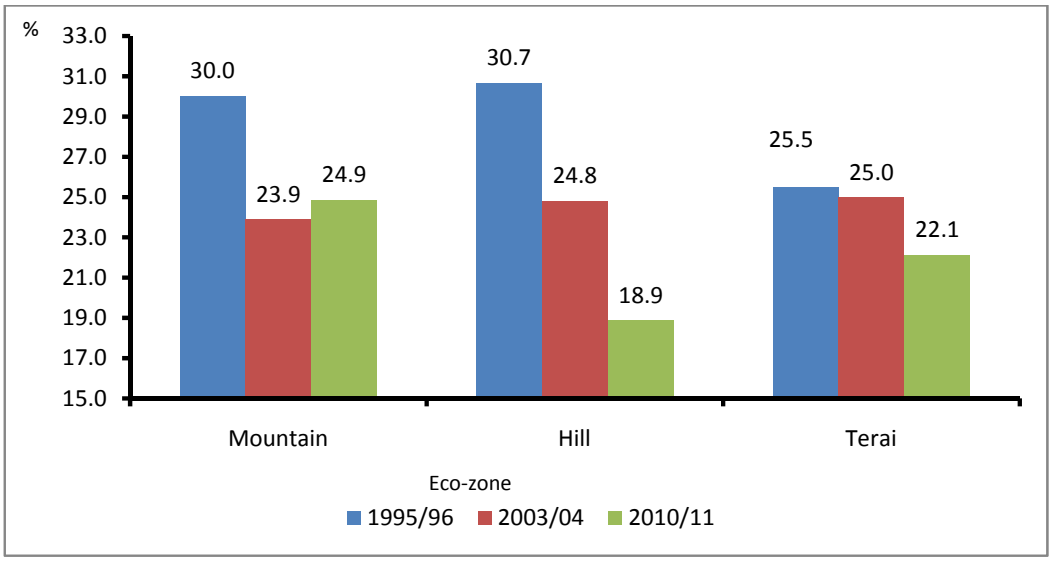


Figure 15. Differences (male and female) in 6+ years literacy rates in percentage points by eco-zone

The figure below (Figure 16) explains the differences on male and female literacy rates by consumption quintiles. It is interesting to note that the differences are lower in the poorest groups as compared to the higher quintile groups. This is simply because of low male literacy rates among the poorer segments of people.

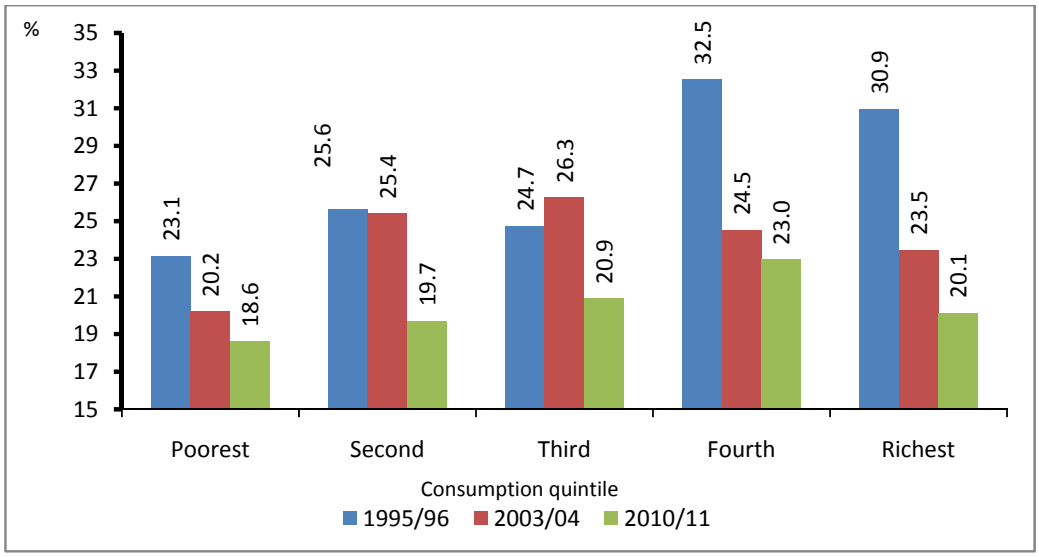


Figure 16. Differences (male and female) in 6+ years literacy rates in percentage points by consumption quintile

From the discussion above, it is evident that women and girls in age six years and above are lagging behind in literacy rate in comparison with men in the same age groups. Remaining illiterate does mean that women are also deprived of the opportunities that are available in the public sphere. However, such gender inequalities in literacy rates directly affect the well-beings of women (The World Bank, 2006).

Again, there is a wide gap between male and female literacy rates of the adult population aged 15 years and over. As per the NLSS III 2010/11, in an overall, 57 percent of the adult populations are literate and the literacy rates of males and females are 72 and 45 percent respectively. The figures below (Figures 17 to 20) show that gender and regional differences in adult literacy (differences in male and female literacy rates) are similar to those seen in literacy rates for population 6 years and above. The figures below (Figures 17 to 20) explain the details on the status of differences among areas and regions including the consumption quintiles (CBS, 2011).

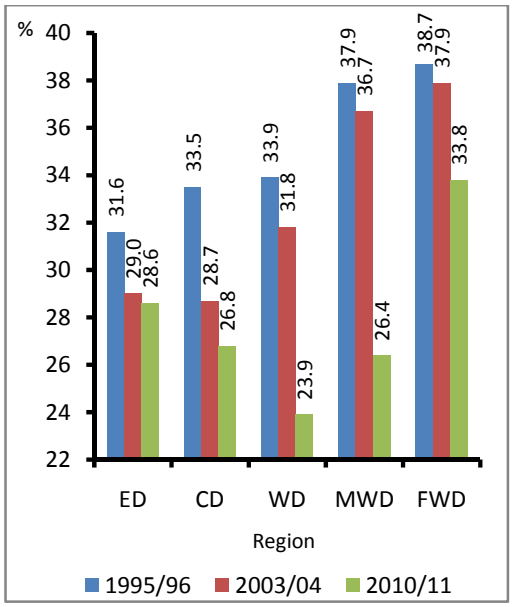


Figure 17. Differences (male and female) in 15 years literacy rates in percentage points by development region

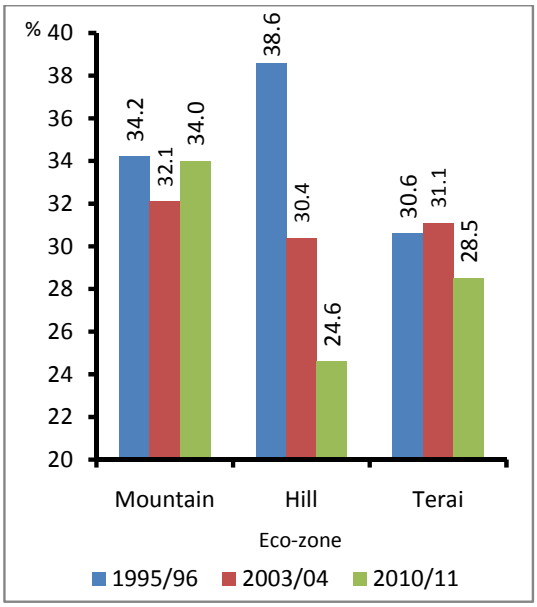


Figure 18. Differences (male and female) in 15 years literacy rates in percentage points by eco-zone

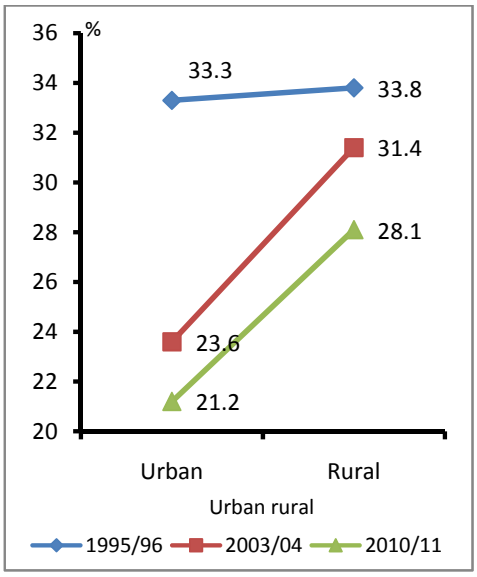


Figure 19. Differences (male and female) in 15 years literacy rates in percentage points by urban and rural.

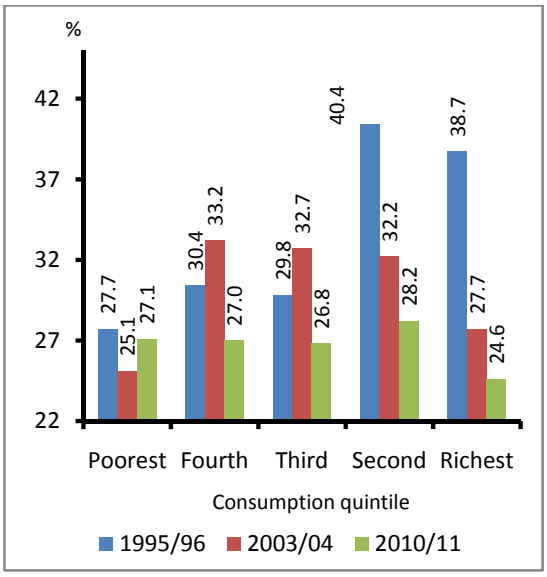


Figure 20. Differences (male and female) in 15 years literacy rates in percentage points by consumption quintile.

The figure below (Figure 21) explains the literacy status of male and female by major castes and ethnic groups. According to Nepal Demographic and Health Survey [NDHS], 2006 there are large disparities between male and female (age 15-49

years) literacy rates (MOHP, 2006). Such disparities are further widening if one explores the literacy status of major caste and ethnic groups (UNDP, 2009, p. 47).

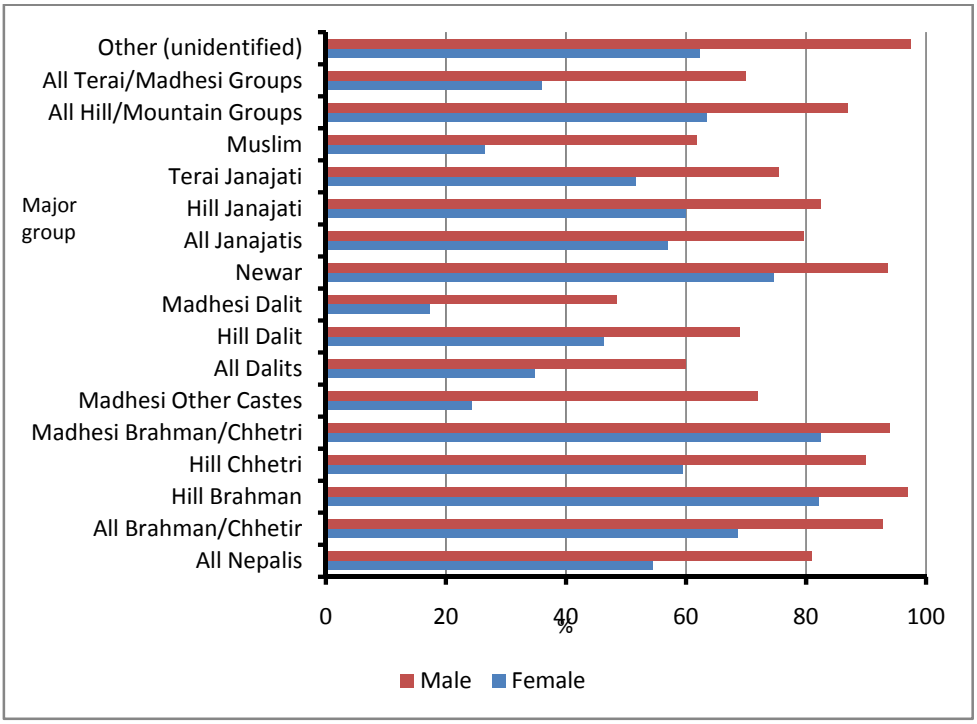


Figure 21. Literacy status by gender, caste and ethnic groups (15-49 years).

It is interesting to note that literacy rates decline with the age increase and the literacy rate is the maximum at the age group 15-19 years and it declines with age for both males and females. Similar pattern can be observed in urban and rural areas. Gender gap is comparatively smaller for the younger age cohorts.

The implications of literacy are many in human lives. Literacy is associated with the foundation level education, i.e. reading, writing and arithmetic (UNESCO, 2010) whereas education is considered foundational to human development and it has proven essential for developing an informed and active citizen that enables individuals to make smarter choices affecting health and household welfare. In this way, education remains the key for unlocking the individual's intellectual and creative potential. Researches show that workers who have gone through more years of schooling earn more means that education raises individual incomes. Every additional

year of schooling has been estimated to increase income per worker by 8.3 percent on average (USAID, 2011). The available data show that there is a significant difference in the literacy rates of men and women. Moreover, these differences differ from place to place. In addition, females in Nepal have secured lower literacy rates as compared to their counterparts in all units. It is a situation where women are more deprived than men.

Enrolment Related Indicators

Girls' enrolment in any level of education against their total age group population indicates the situation of participation. It can also be seen from another dimension of comparing with boys' enrolment in any level of education. The former can be assessed from gross and net enrolment that is considered useful to explore the participation of girls in certain level of education. The latter can be judged by calculating the gender parity index (dividing the girls' gross and net enrolment rates by boys' gross and net enrolment rates). Both the gross and net enrolments tell about the situation of boys' and girls' enrolments. The term gross means the total number of students enrolled in any institution against the specific age group population of certain geographical area. Net enrolment rate (NER) presents the situation of enrolment of school age children in respective level of school education of a particular area. It therefore illustrates the situation on whether specific age group children are enrolled in a specific level of school education or not. But this does not tell about the situation of attendance of students and their achievement levels. However, high enrolment ratio (NER) indicates the better situation of girls in a certain territory. The figure below (Figure 22) shows the trends of NER across years in terms of gender (DOE, 2013; MOE, 2012).

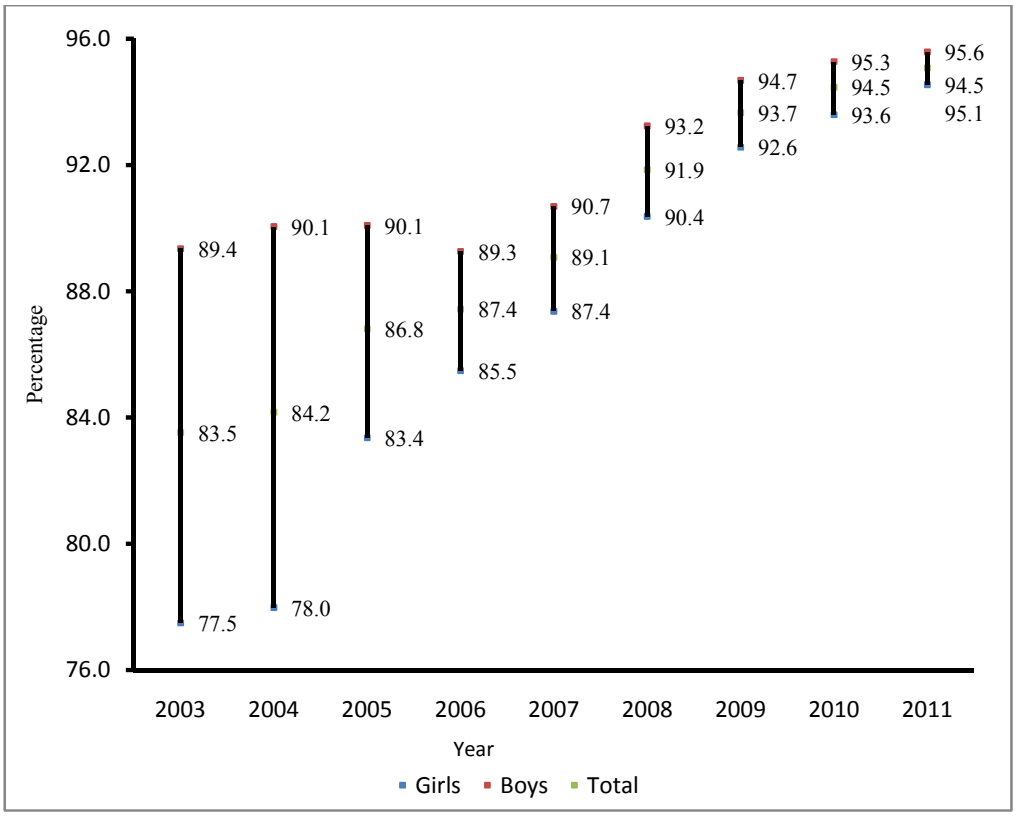


Figure 22. Trend of net enrolment rates by gender over the year.

The figure above (Figure 22) indicates that the net enrolment rates of girls are low as compared to boys across almost a decade. The growth of girls' enrolment is starker then the boys' which indicates positive symptom of policy interventions. However, primary education in Nepal is still characterized by the unequal gender relations that stem from the traditional socio-cultural structures (UNDP, 2009). Such socio-cultural structures define the formal and informal rules for women's participation in relation to opportunity, decision-making, access to resources, and control over them. They also mention about patriarchy society and the culture in which schooling was considered primarily for boys. For example, the oldest forms of education through Gurukul did not allow girls to participate. The same culture was carried out for centuries which categorically denied girls from receiving any education. The modern education in Nepal during its early days can be seen heavily

influenced by the same legacy. As a result, girls' enrollment took a long time to come up to par.

In terms of girls' net enrolment at the primary level, the national level gender parity index shows that they are as equal as boys. Nevertheless, this is not the same in the case of development regions, eco-zones, urban and rural settings and other economic groups.

The figure below (Figure 23) explains the status of GPI (in net enrolment rates) by development regions (CBS, 2011). It shows that there are improvements in GPI over the years but the improvements are not uniform and linear. The value of GPI more than one indicates that girls outnumbered boys.

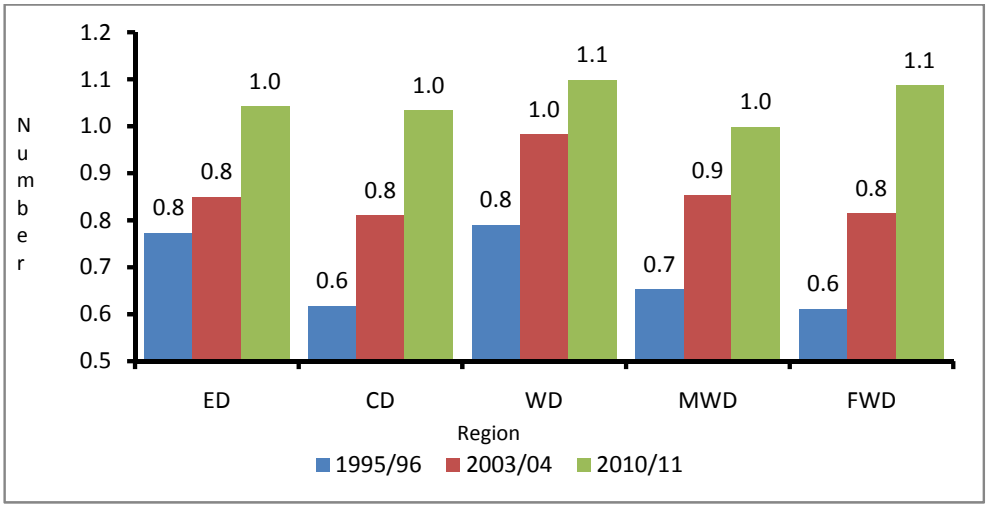


Figure 23. GPI in net enrolment rates by development region.

The figure below (Figure 24) tells us about the status of GPI (in NER) by eco-zones (CBS, 2011). As in development regions (Figure 23), improvements are seen in GPI over the years in all three regions/areas. But the value of GPI in the Mountain region in 2010/11 is still below the value of one means that girls' enrolment is still lower in that region as compared to boys. On the other hand, tremendous increment of GPI is observed in the Terai region.

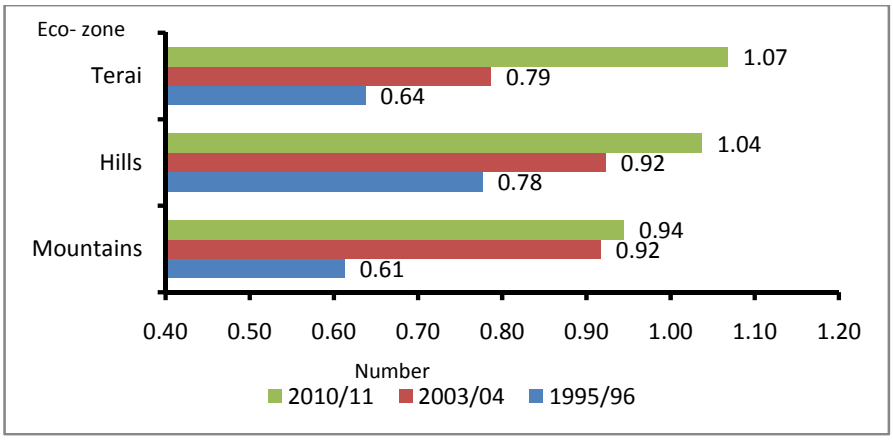


Figure 24. GPI in net enrolment rates by eco-zone.

The figure below (Figure 25) highlights the value of GPI (in NER) by urban and rural areas (CBS, 2011). In 2010/11, the GPI in both the areas (urban and rural) shows that girls outnumbered boys. The improvement is significant in the case of rural areas from 1995/96 to 2010/11 which is almost double.

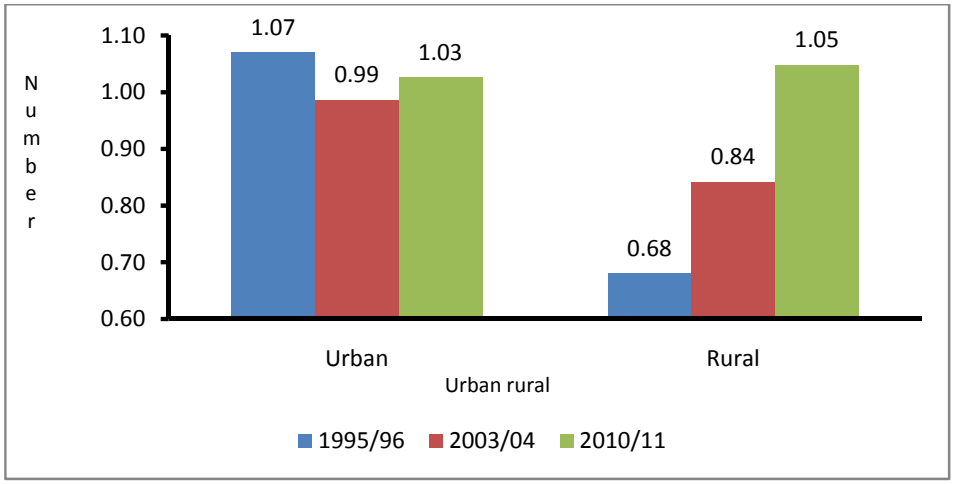


Figure 25. GPI in net enrolment rates by urban and rural.

The figure below (Figure 26) shows the situation of GPI (in NER) by consumption quintiles where improvements are seen in all consumption quintiles during the fifteen years duration (CBS, 2011). The improvements are more visible in the poorest groups than the higher consumption quintile groups. With regard to the progresses on GPI, the 'gender trap' needs to be taken into consideration. By this comes out the assumption that many parents choose their sons over their daughters to

be taken out of public education and enroll them into private education if the economic situation allows this. This is likely to cause an incomplete picture with regard to GPI of the total primary education sub sector.

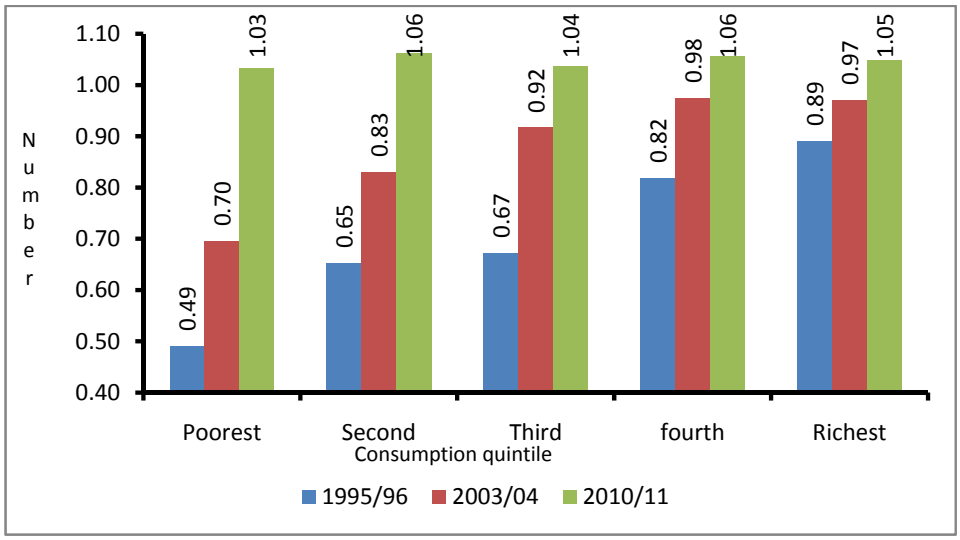


Figure 26. GPI in net enrolment rates by consumption quintile.

From the discussions above, it is seen that significant improvements are seen in girls' enrollment over the years. The GPI (in NER) in some cases is outnumbered means that girls' situation is improving. However, there are disparities in terms of regions, areas and economic groups.

Educational Attainment

Government of Nepal, Department of Education has carried out a national assessment of grade 5 students in 2008. This research study was carried out by Full Bright Consultancy (Pvt. Ltd.), in association with Cooperative Hands in Restoration, Advancement and Growth (CHIRAG) (FBC & CHIRAG, 2008). The study came up with the following findings in terms of gender aspect (Figure 27).

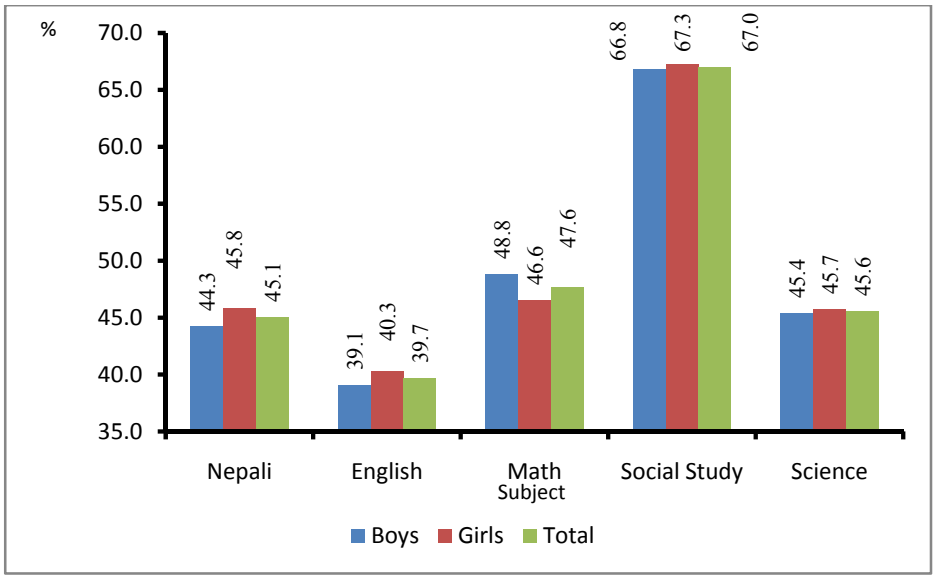


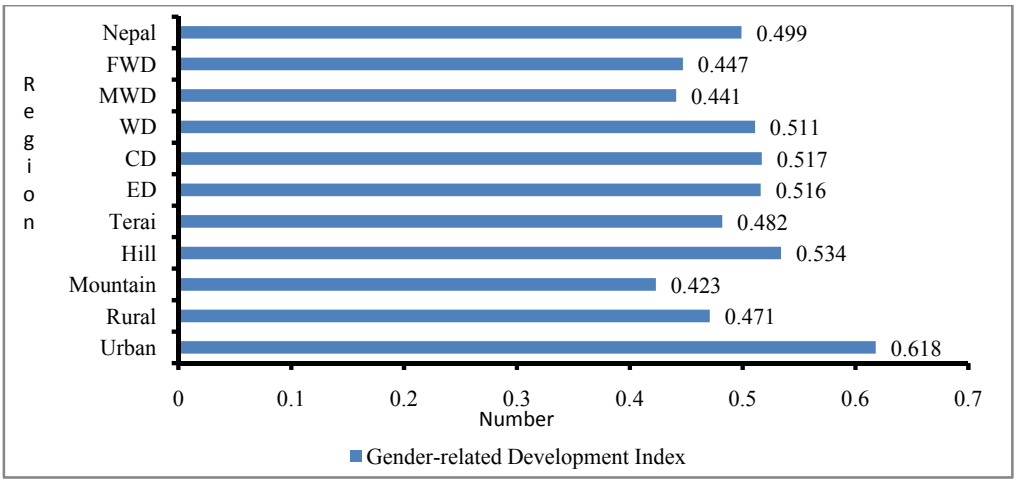
Figure 27. Mean scores of students' achievements on different subject by gender.

The findings from Figure 27 show that the mean scores achieved by students are low because the scores achieved by them are below 50 percent except in Social Studies (FBC & CHIRAG, 2008). However, girls' achievement in terms of mean score is slightly better than boys in Nepali, English and Social Studies. The average scores of boys in Mathematics are higher than the girls' mean scores. The deviation from the means in Nepali, English, Math, Social Studies and Science are 20.58 percent (boys- 20.31 percent and girls- 20.79 percent), 18.74 percent (boys- 18.75 percent and girls- 18.72 percent), 20.77 percent (boys- 20.97 percent and girls- 20.52 percent), 13.13 percent (boys- 13.17 percent and girls- 13.09 percent), and 14.52 percent (boys- 14.53 percent and girls- 14.51 percent) respectively. Such situations indicate that there is not much difference between the boys' and girls' performances. It means it is hard to say there are significant disparities between their performances. However, the poor performance demands many more interventions which may be lacking at this moment.

Other Indicators

Gender related development index (GDI) can be used to express the average achievement that can reflect inequalities between men and women in the same dimensions of HDI (life expectancy index, education index and gross domestic products). The higher the value of GDI means there are higher gender inequalities. The available data reveal that there are disparities on the gender related development index across areas and regions (UNDP, 2009). It is 0.499 at the national level that shows the low capabilities of women. The size of the disparity is large in the case of urban (0.618) and rural areas (0.471) means that gender related development index is weak in the rural areas.

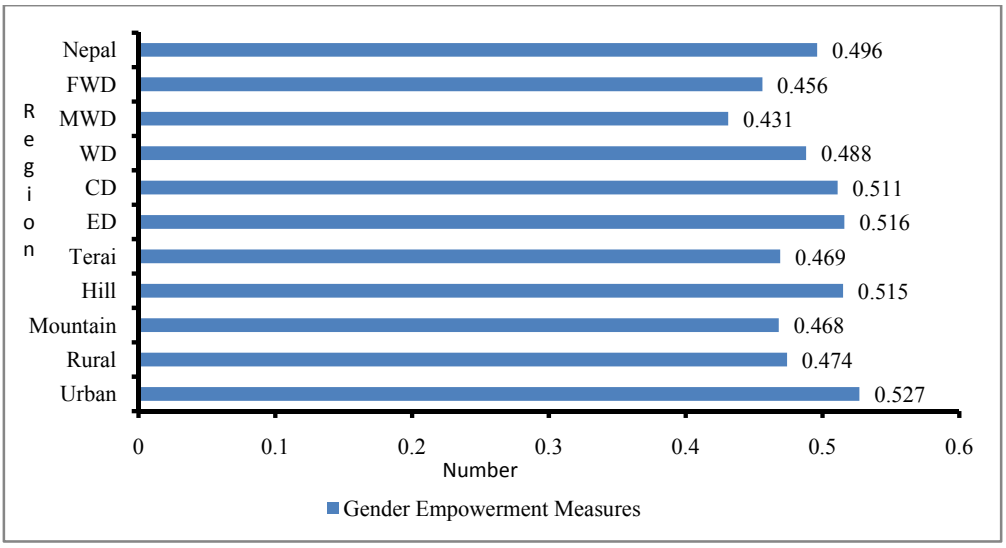
In such an index, Mountain (0.423) and Terai (0.482) regions lag behind as compared to the Hill region (0.534). In the case of development regions, mid western development region has the lowest value (0.441) that is followed by far western (0.447), western (0.511) and eastern development region (0.516) respectively. Central development region has scored the highest value (0.517) which seems above the national average. Although the country experiences low capabilities of women, this is even uneven between/among areas and regions. The following figure (Figure 28) shows the status of gender related development index across areas and regions in reference of 2006 data.



(UNDP, 2009, p. 37)

Figure 28. Gender-related development index across area and region.

Decrease in gender inequality indicates the further improvement of women's status in the areas of capabilities, representation and participation in the public sphere (UNDP, 2009). Improvements in these areas relate with the gender empowerment measures. As in gender related development index, visible disparities are also observed between/among areas and regions in gender empowerment measures (GEM) in Nepal. The gender empowerment measure at the national level is 0.496. Out of 10 analytical domains (Figure 29), only four analytical domains have higher value than the national average. It is obvious that gender empowerment measure is relatively better in urban areas (0.527) as compared to rural areas (0.474). The value of GEM is highest in Hill (0.515) that is followed by Terai (0.469) and Mountain (0.468) respectively. Among the development regions, mid western development region has the lowest value (0.431) and eastern development region has the highest (0.516). The figure below (Figure 29) shows the comparative status of gender empowerment measures among areas and regions.



(UNDP, 2009, p. 40)

Figure 29. Gender empowerment measures across area and region.

From the above discussion, it is seen that rural areas are lagging behind in gender related indicators in comparison to the urban areas. Mountain region appears at the bottom, followed by the Terai. Mid western and far western development regions also score poor in gender related indicators which means the issue of gender is more vulnerable in these regions as compared to other regions. These situations indicate that gender disparities are visible and significant among the areas and regions within the country.

Geography Related Equity Aspects

Generally, eco-zones (Mountain, Hill and Terai), development regions (eastern, central, western, mid-western and far-western) and districts can be taken as the units of analysis to explore the status of disparities and status of equity in Nepal. In order to declare the equity in education system, all regions must provide equal opportunities for learning outcomes, as per the identified indicators. However, this section limits its focus in only considering the status of literacy, enrolment and access to schooling facilities by three analytical units.

Literacy Related Indicators

The figures below (Figures 30 to 32) show the literacy rates by urban and rural areas, by eco-zones and by development regions (CBS, 2011). It highlights the achievements gained for 15 years in 6+ age groups literacy rates. In the mean time it also highlights the disparities among these units. It shows that literacy rate is substantially higher in urban areas as compared to the rural areas in all three surveys. In 1995/96, the difference between urban and rural literacy rates was 28.4 percentage points and this became 28.3 percentage points in 2003/04 and reached to 20 percentage point in 2010/11. From the base year 1995/96, there is 12.7 percentage point increment of urban literacy by 2010/11 but this is 21.1 percentage points in the case of rural literacy in the same period. Despite improvements in the urban and rural literacy rates, almost one fourth of the urban and half of the rural population are illiterate, which means that these peoples denied to achieve any type of educational outcomes.

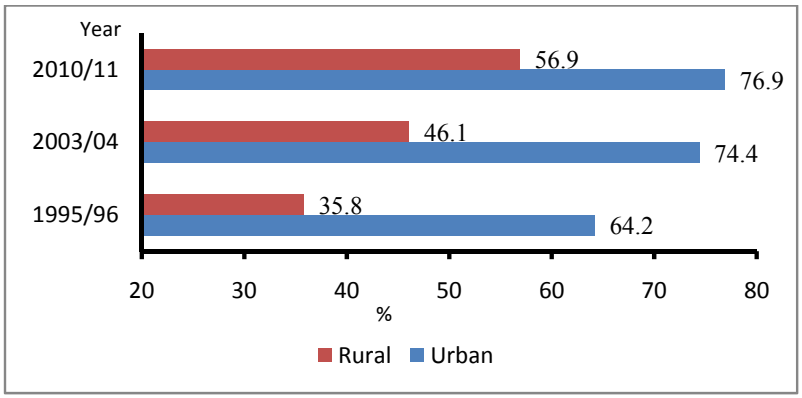


Figure 30. Literacy rates of 6+ year age groups by urban and rural.

In the case of eco-zones (Figure 31), the Mountain region scored the lowest literacy rate (27.7 percent) in 1995/96 which is followed by the Terai region (32.6 percent) and Hill (45.5 percent) respectively. There was an increment of 15.4; 10.9 and 14.0 percentage point in literacy rates respectively until 2003/04 and that became

29.5; 23.0 and 21.8 percentage point from 2003/04 to 2010/11 respectively. All three surveys show that Hill region has the highest literacy rates as compared to others. The Terai region was in second position in 1995/96 and 2003/04, but decreased its outcomes and was thereby ranked third in 2010/11. It means there is an uneven growth of literacy rates among regions.

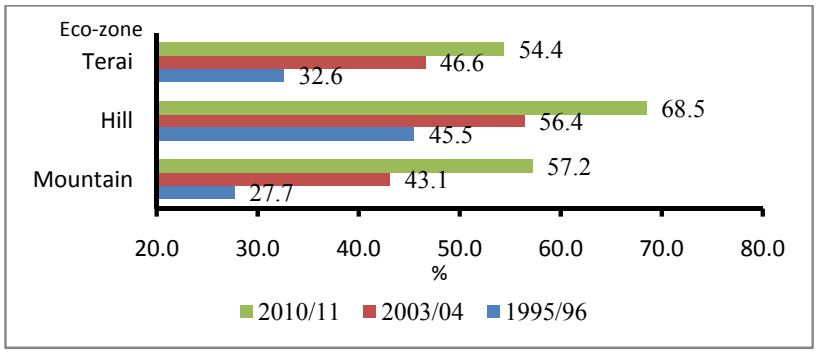


Figure 31. Literacy rates 6+ years by eco-zone.

In the case of literacy rates by development regions, western development region scores higher value than other regions. Among the regions central development region is lagging behind followed by far western development region. One of the remarkable achievements observed from the data is that far western development region has achieved the highest increment since 1995/96 (almost 28 percentage point increment from the base year 1995/96).

In 1995/96, development region of far west and mid west of Nepal remained at the bottom which was followed by central development region, but this is just opposite in 2010/11, central development region at the bottom which is followed by far western, eastern and mid western development regions (Figure 32). The 1995/96 survey shows that there were disparities in the literacy rates among development regions and this still continued up to 2010/11.

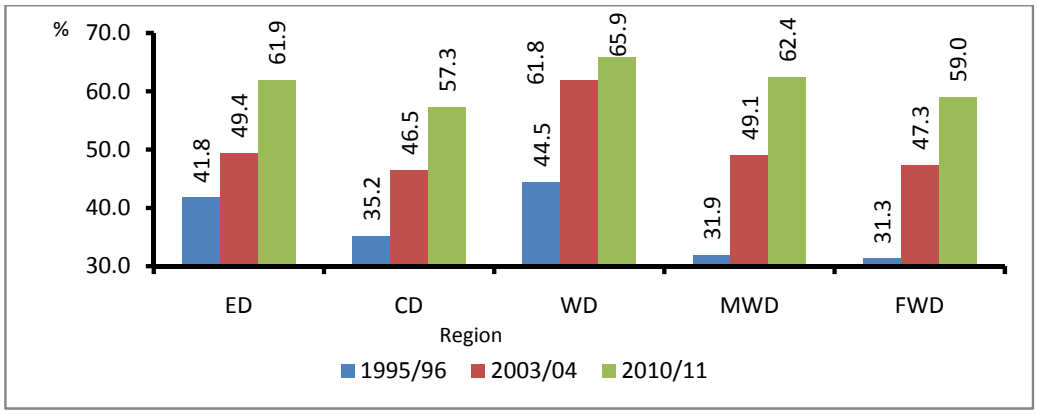


Figure 32. Literacy rates 6+ years by development region.

From the discussion above, it is obvious that there are improvements in the literacy rates over the years. A careful analysis further explored that there are still disparities in the literacy rates in urban and rural areas, eco-zones and development regions. One important consideration is that the disparities are continued in common trends (with more or less plus minus) even in fifteen years duration. It denotes that the inputs or interventions provided from the State for improving the literacy rates are uniform across different units remained in unequal status and strengths. Without taking consideration of disparities among different geographical settings, common or uniform inputs may help to produce unequal results.

Enrolment Related Indicators

The figures below (Figures 33 to 35) explain the status of net enrolment rates in primary level by urban and rural areas, by eco-zones and by development regions (CBS, 2011). In terms of urban rural comparison, the net enrolment rates in rural areas are lagging behind in all three surveys. In 1995/96, the difference between urban and rural areas was 15 percentage, and decreased to 12 percentage in 2003/04 to fall again all the way back to 0.4 percentage in 2010/11. Fluctuation in the data could indicate that there are other influences on these outcome numbers and make it

therefore difficult to predict the trends for the future. However, persistent disparities between urban and rural areas can be drawn from these three survey data.

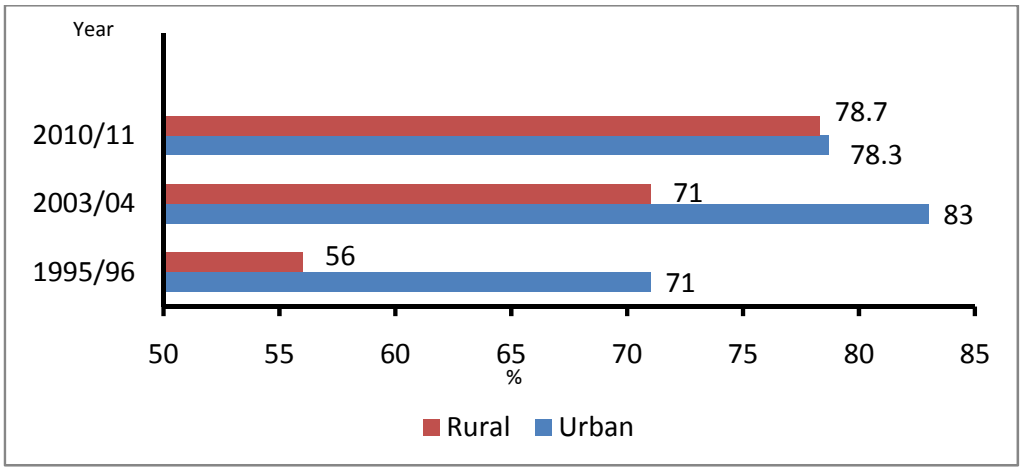


Figure 33. Net enrolment rates by urban rural.

In the case of eco-zones the net enrolment rate of primary education is the highest in Mountain region as compared to other two regions (Figure 34). Almost 88 percent of primary school age group children from Mountain region are in school, this ratio is 85 percent and 72 percent for Hill and Terai respectively. In 1995/96, the net enrolment rate of Mountain region was the lowest and Terai region was in the second position. An increment of almost 41 percent is observed in Mountain region, this is 21 percent in the case of Terai and 23 percent in the case of Hill. One general conclusion is that there are disparities in the net enrolment rates among the regions.

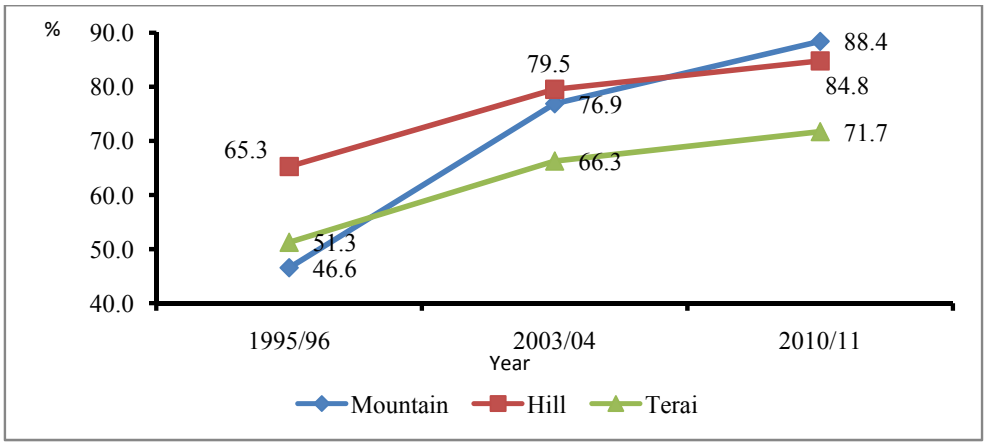


Figure 34. Net enrolment rates by eco-zone.

In the case of development regions, western and far western development regions have the same net enrolment rates (85 percent) whereas central development region scored the lowest value (73 percent). During 15 years of time, far western development region increased its net enrolment rate by 38 percent, this remained 30 percent for mid western development region. It shows that the trend of NER increment is positive but there are still disparities among development regions (Figure 35).

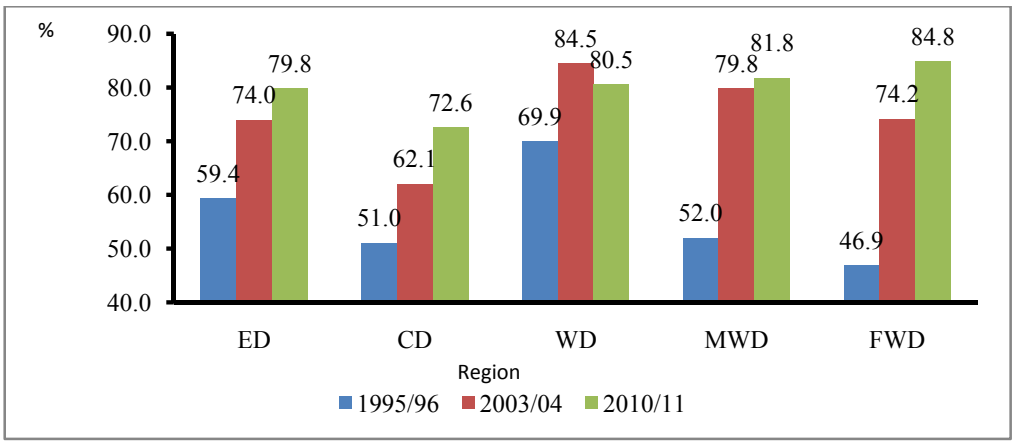


Figure 35. Net enrolment rates by development region.

From the above discussion, it is seen that there are disparities in net enrolment rates among the areas and regions. It indicates that in some regions most of the school age children are already in schools and in other cases less children are in schools.

Having low enrolment rates may provide different meanings to the policy makers. The first concern is that the eligible age group of children may be outside the school premises or they are migrated from their own areas.

Educational Attainment

The figures below (Figures 36 to38) shows the weak performance (below 60 percent) of students in all subjects (Nepali, English, Math and Science) except Social Studies in all eco-regions, i.e. Mountain, Hill, Terai and Valley (FBC & CHIRAG, 2008). In Social Studies, students performed better in all eco-regions as compared to other subjects. English is seen as the difficult subject to students except in Valley. The students from Valley areas performed better than other areas in all subjects.

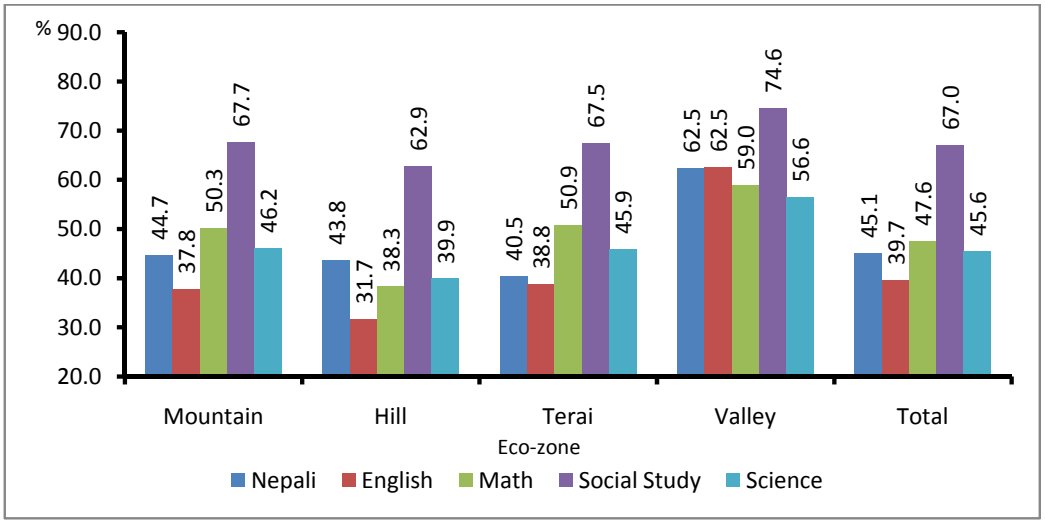


Figure 36. Students' learning achievements by subject and eco-zone.

More or less similar situation is observed in development regions where students performed better in Social Studies and English remained as the low ranking subject (Figure 37). In terms of development regions, students from central and mid western regions performed better than others.

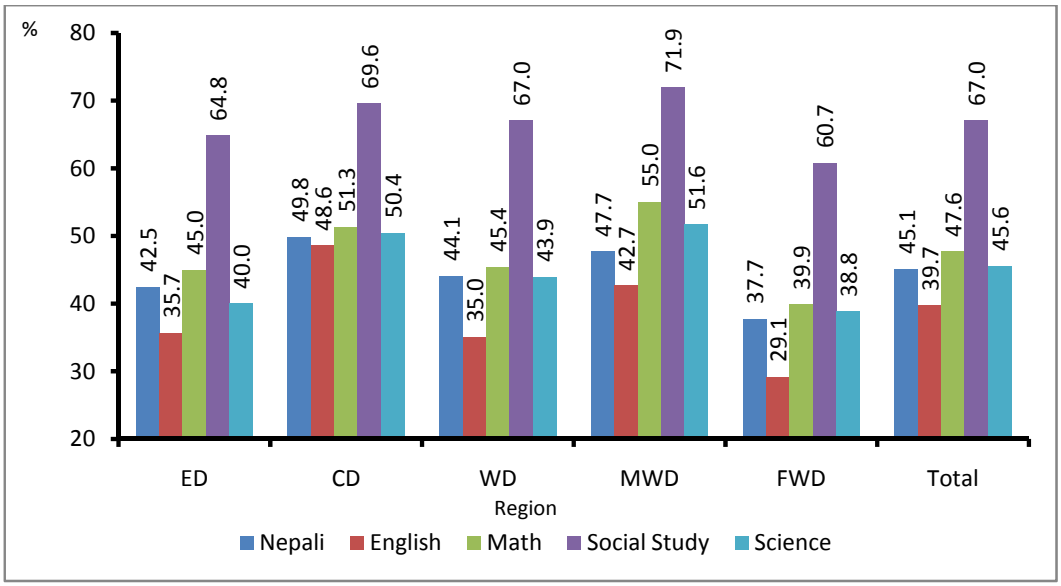


Figure 37. Students' learning achievements by subject and development region.

Slight difference is observed in the performance of urban and rural areas students in all the subjects (Figure 38). Interestingly, the performance of students in English remained low in both the urban and rural areas.

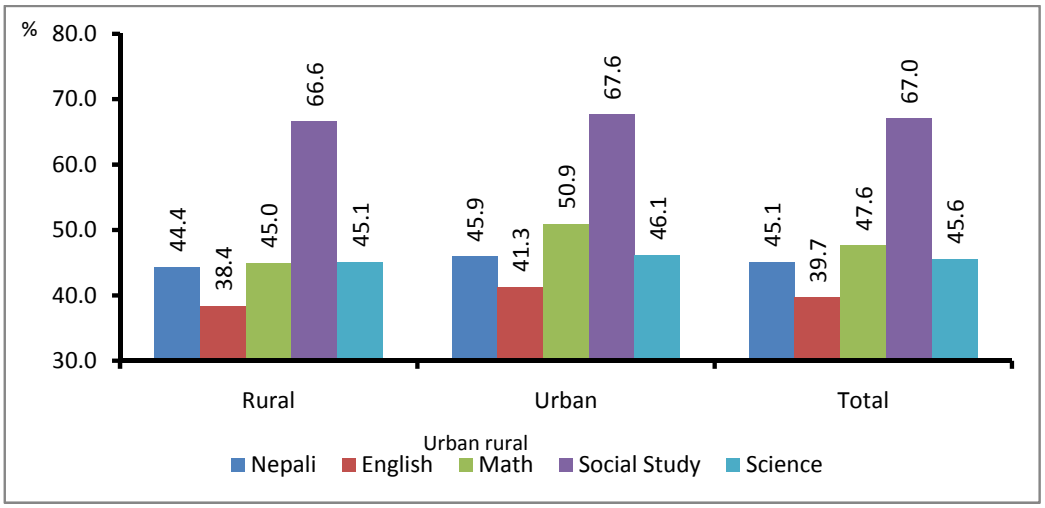


Figure 38. Students' learning achievements by subject and rural urban area.

The data above show that there are disparities in geographical areas, development regions, eco-zones and urban and rural areas.

Other Indicators

Access to schools. Access to school certainly matters. It is a foremost situation to realize the goals of Millennium Development Goals (MDGs) and Education for All (EFA). There is a high chance to enroll children in school if it is located nearby the community. But it is not true that all children of the local school community will come to school. There are other factors that pull students out of schools.

The figure below (Figure 39) explains the status of households' access to primary schools within the reach of 30 minutes walking distance (CBS, 2011). The data show that there are better opportunities in urban areas than in rural areas in terms of access to primary schools. In 2010/11, almost 99 percent households' children have access to primary schools within the reach of 30 minutes walking distance (one way) whereas this is almost 93 percent for rural areas children. Disparities in access to primary schools are still continued over the fifteen years duration. There is a difference of almost 10 percentage between urban and rural areas in all three surveys.

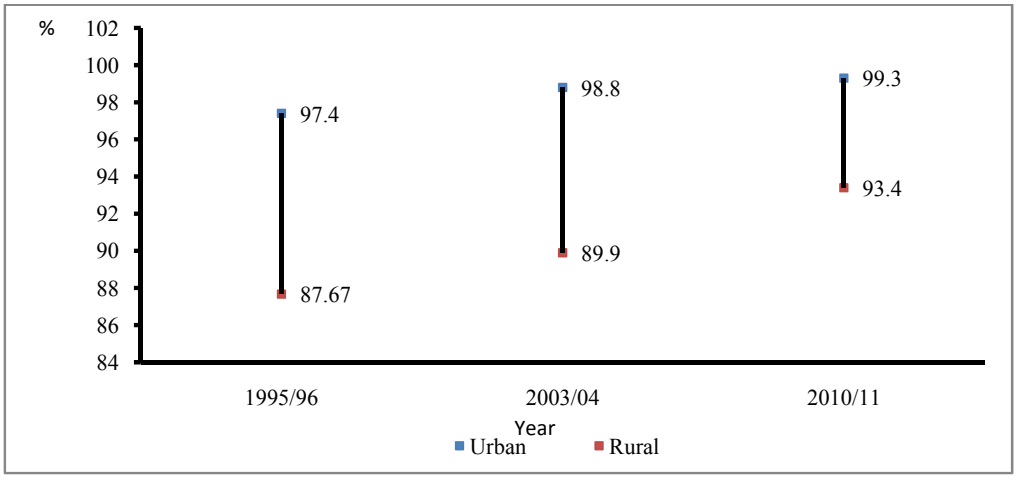


Figure 39. Distribution of households within 30 minutes walking distance by urban and rural area.

In terms of eco-zones, Terai region has the highest access to primary schools over the years (Figure 40) (CBS, 2011). In 1995/96, it was almost 94 percent and

reached to almost 98 percent in 2010/11. In the Hill and Terai regions, gradual increments are observed in access to primary schools. But the data fluctuate in the case of Mountain region. In 2010/11, almost 93 percent of households have access to primary schools within the reach of 30 minutes walking distance. Interestingly in 1995/96 and 2003/04, Mountain region has the lowest score but it went up and Hill region scored the lowest value in 2010/11.

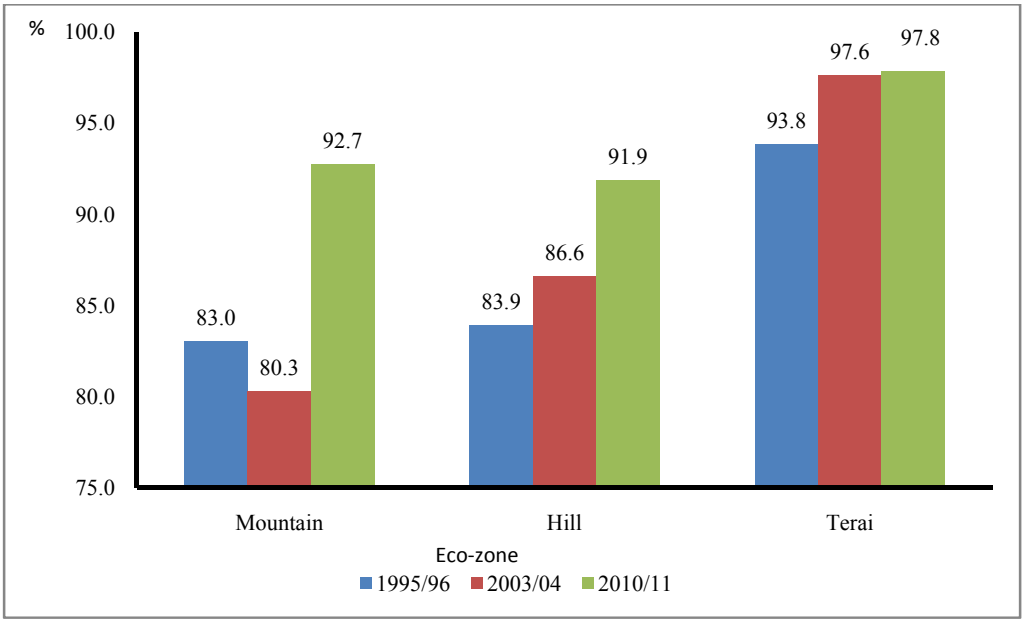


Figure 40. Distribution of households within 30 minutes walking distance by eco-zone.

In 1995/96, no data on the time taken to reach the nearest primary schools by the percentage of household is available (CBS, 2011). Therefore this comparison only includes the data from two surveys 2003/04 and 2010/11. The figure below (Figure 41) shows that there is a gradual improvement in access to primary schools except in mid western development region which recorded almost six percentage points increment from 2003/04. The value of three regions (eastern, central and western) is more than national average (94.65 percent) and other two regions (mid western and far western) are below the national average (Figure 41). Moreover, households' access

to primary schools has increased in eastern, central and mid western development regions with almost three to six percent where such trend is nominal in the case of western and far western development regions. Both the surveys show that households' access to primary schools is better in western development region as compared to other regions.

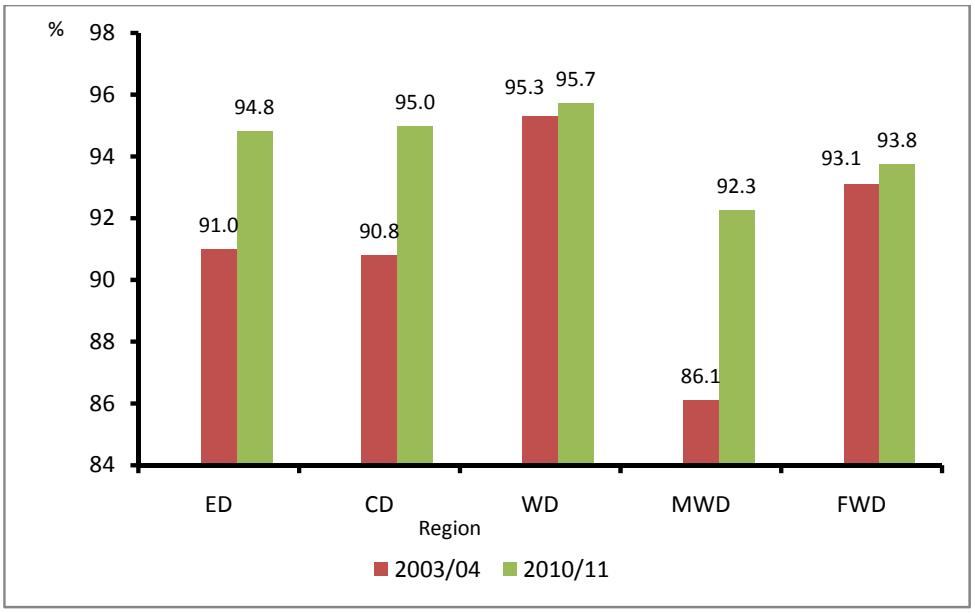
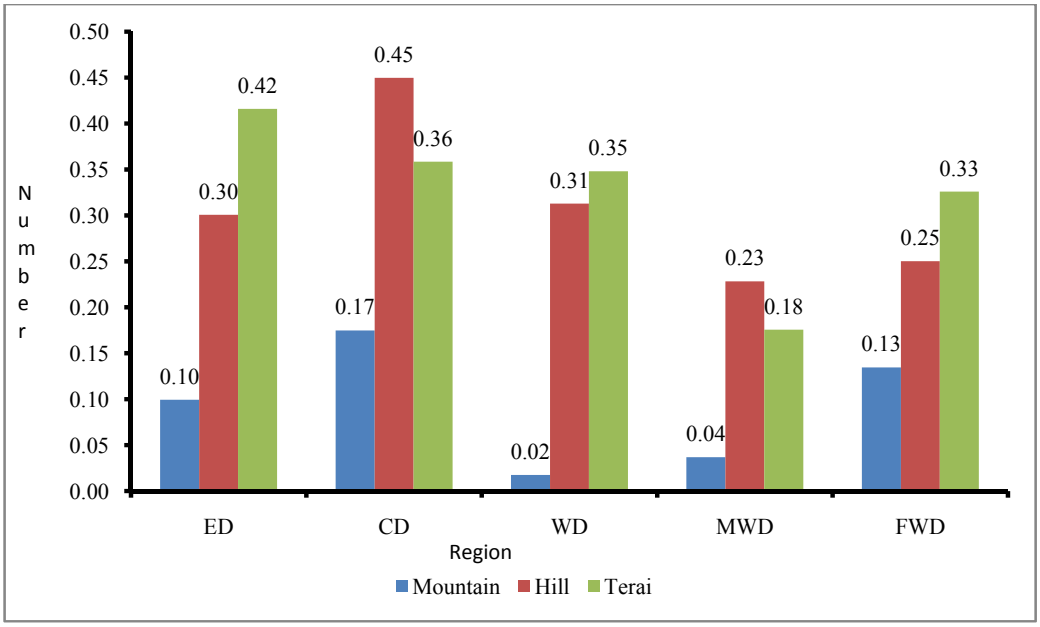


Figure 41. Distribution of households within 30 minutes walking distance by development region.

The above figures (Figures 39 to 41) show that during the period of past 15 years access to schooling has improved. There is still a huge gap in terms of urban and rural setting means that people in the rural areas have to walk a long distance to reach the primary school. Such situation certainly has created other unseen effects that hinder to foster the development among rural people. There is also a significant disparity in the accessibility of people having different consumption quintiles. Poor people have low level of accessibility as compared to other groups. In terms of geographical setting, people living in Terai have greater access to schools.

Geographical areas school ratio. As mentioned earlier, access to school is one of the important indicators that are used to measure the supply side interventions of MDGs and EFA. It means there should be adequate number of schools to accommodate all school age children in schools. The figure below (Figure 42) provides information on how schools are distributed against population size. In order to make it easy for comparison, number of schools per square kilo meter is calculated. In each development region, Mountain region has the lowest number of schools in a square kilometer. There are mixed results in the case of Hill and Terai region.

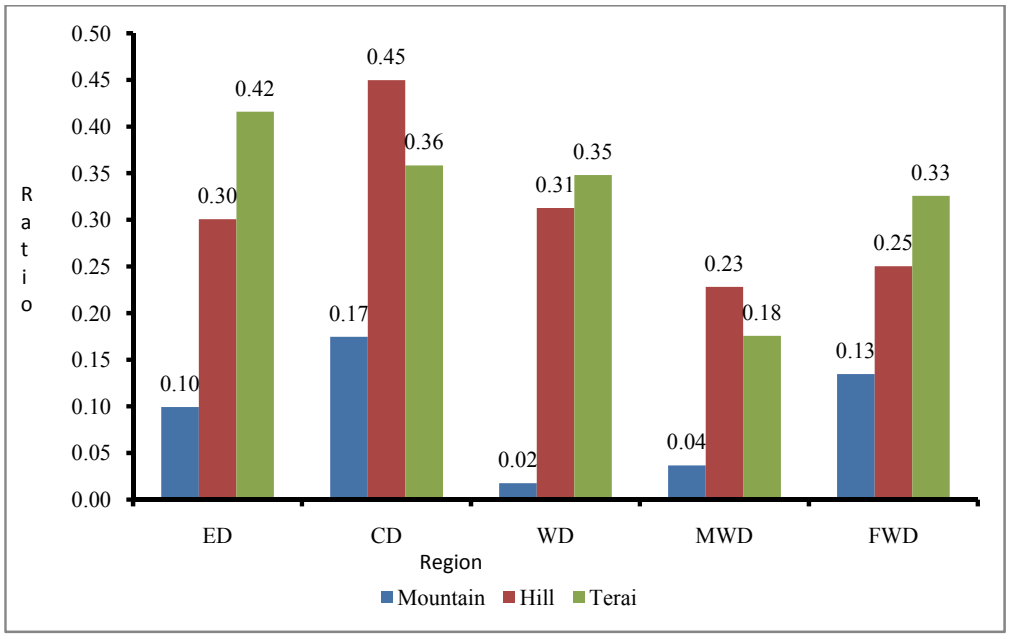


(Source: DOE, 2013; MOE, 2012)

Figure 42. Number of school per square kilometer by development region.

School age group population school ratio: The figure below (Figure 43) explains the status of the ratio of school age group population and school by areas and regions. The distribution of total population shows that Terai has the highest density of population followed by Hill and Mountain respectively (CBS, 2012). It is obvious that the ratio of school age population and school is smallest in the Mountain areas.

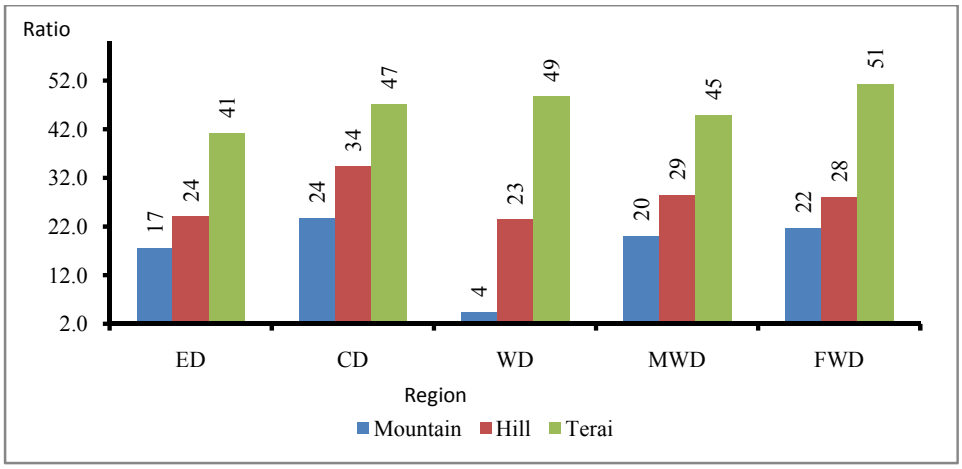
Western Mountain area has the lowest ration among Mountain areas. Similarly, central Terai has the highest value.



(Source: DOE, 2013; MOE, 2012)

Figure 43. The ratio of school age group population and school.

Population teacher ratio: The following figure (Figure 44) provides information on the availability of teachers for school age children by areas and regions. The availability of teachers is also crucial for the learning of students. This is also a supply side intervention. It tells on how much teachers (resources) are made available to the pupils living in different areas of the country.



(Source: DOE, 2013; MOE, 2012)

Figure 44. School age group population teacher ratio.

Providing adequate teachers is also a basic condition for realizing the goals of MDGs and EFA. The population density is higher in Terai areas and very low in the Mountain areas. It simply tells us that one teacher in a Mountain area needs to cater almost four to 22 school age children whereas this ratio is much higher in Terai areas followed by Hill areas.

Socio-Economic Equity Aspects

Socio-economic aspects include the broader characteristics of people ranging from castes to the economic status. In my study, I used the segmentation of the consumption quintiles of Nepal Living Standard Survey to explore the disparities among the different income groups.

Literacy Related Indicators

In order to achieve equitable development, all people irrespective of their economic conditions should be literate. A difference in the literacy rates among different groups certainly indicates disparities among groups in terms of capacities. The figure below (Figure 45) shows the literacy status of six years and more age groups by economic quintiles (CBS, 2011). Two types of important information can

be drawn from the data given in the figure. These are (i) there is improvement in the literacy rates in all quintiles since 1995/96, and (ii) the disparities between/among economic groups are still continued since 1995/96.

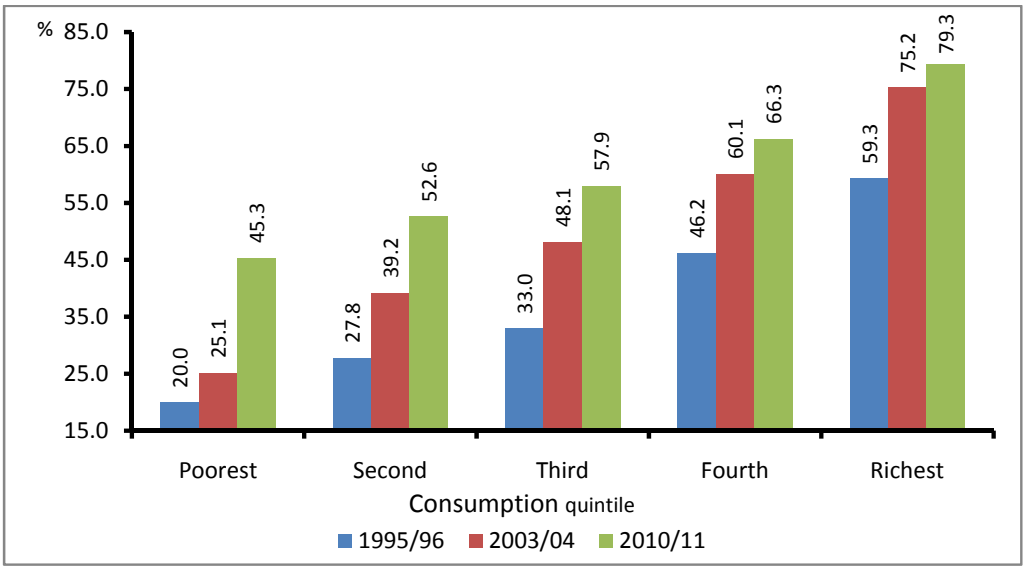


Figure 45. Literacy rates of 6+ years population.

As in Figure 45, the figure below (Figure 46) provides information on the progress and status of literacy rates of fifteen years and above by different economic quintiles (CBS, 2011). But the growth patterns differ from each other.

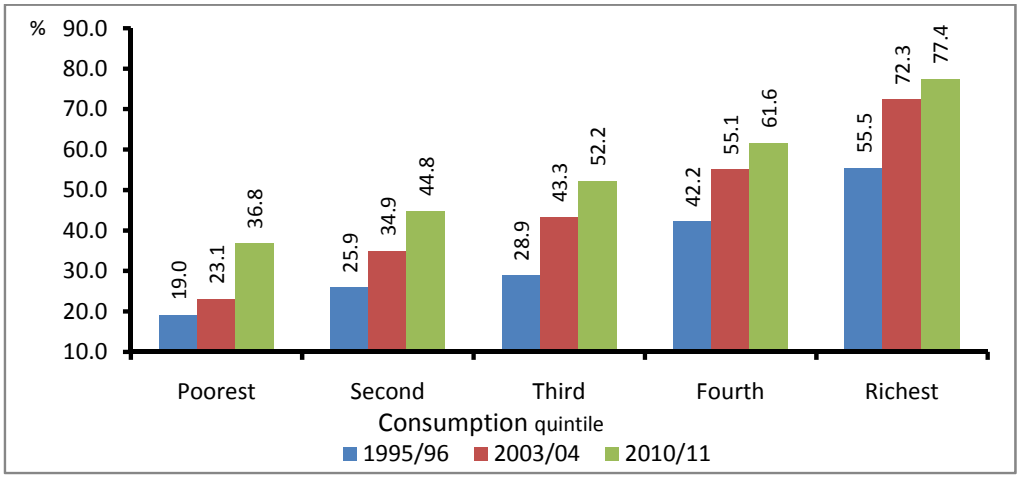


Figure 46. Literacy rates of 15+ years population.

The literacy rates of different economic groups are different. More people are illiterate from the poorer segment indicates that their situation is below the norms,

they are also suffering from high child mortality, high population growth rate and high maternal mortality. And, there is a strong relationship between the literate mothers and schooling of children. Illiterate parents see the low value of educating their children.

Enrolment Related Indicators

The figure below (Figure 47) provides the information on the enrolment of students by consumption quintile (CBS, 2011). The growth of enrolment is sharp in poorest groups as compared to the richest groups.

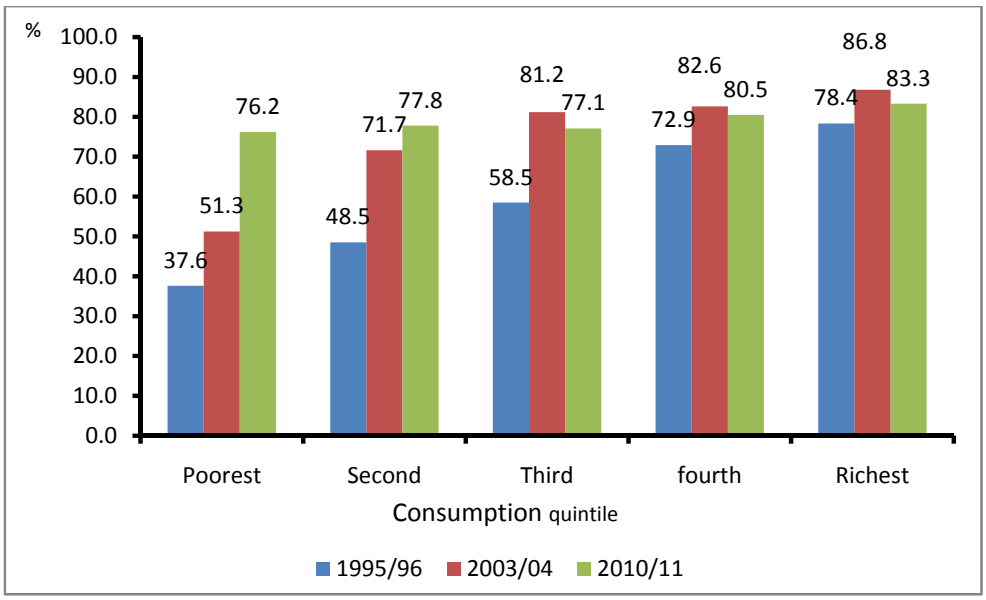


Figure 47. Total enrolment by consumption quintile.

Likewise, the enrolment by girls and boys are given below (Figure 48 and Figure 49) (CBS, 2011). As in total enrolment, the situation of growth and disparities in girls' and boys' enrolments are almost similar.

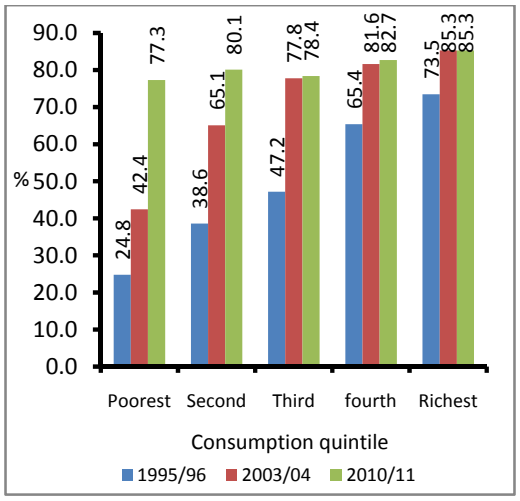


Figure 48. Girls' enrolment by consumption quintile.

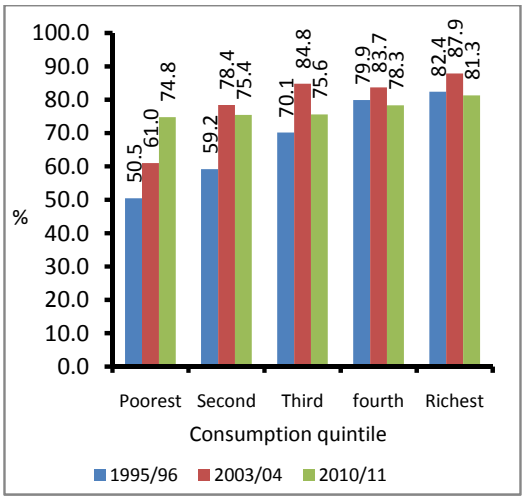


Figure 49. Boys' enrolment by consumption quintile.

The figures (Figures 47 to 49) above indicate that there are disparities among the different income groups although growths are seen in every quintile groups. The growth of enrolment is faster in poorest groups as compared to the richest groups.

Educational Attainments

The figure below (Figure 50) provides information on the performance of students from community and institutional schools which indicates the better performance of institutional schools' students as compared to the community schools' students in all subjects (FBC & CHIRAG, 2008).

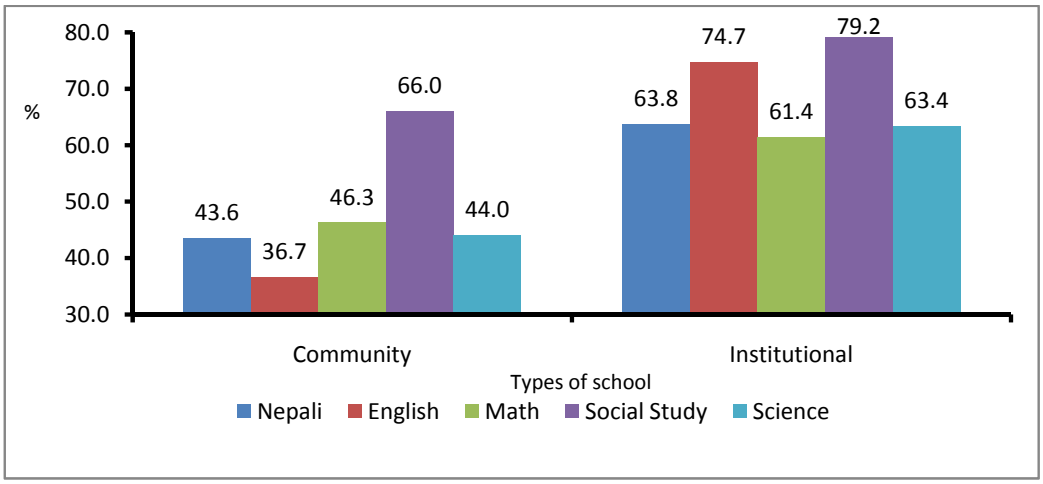


Figure 50. Students' learning achievements by types of school and subject.

From figure 50, it is seen that the gap is common in all subjects, possibly the highest gap in English. As in other, students from both the community and institutional schools performed better in Social Studies.

Other Indicators

Types of schools attended by individuals. Schools in Nepal can broadly be categorized into community schools and institutional/private schools. The available statistics from the Flash Report, published by the Department of Education (DOE, 2013), shows that institutional/private schools are located in urban and urban centered areas. Such schools charge high fees; therefore it is hard for poor people to afford education delivered by them. These schools are sharply creating a line between people having different economic capacities and affordability.

The figures below (Figures 51 and 52) deal with the types of schools attended by the individuals from the different economic groups (CBS, 2011). These figures compare the information from three different surveys. It is clear that poorer groups are sending their children to community schools as compared to the richest groups who are sending their children to private schools. It means people having higher socio-economic status prefer institutional/private schools, and send their children to such schools.

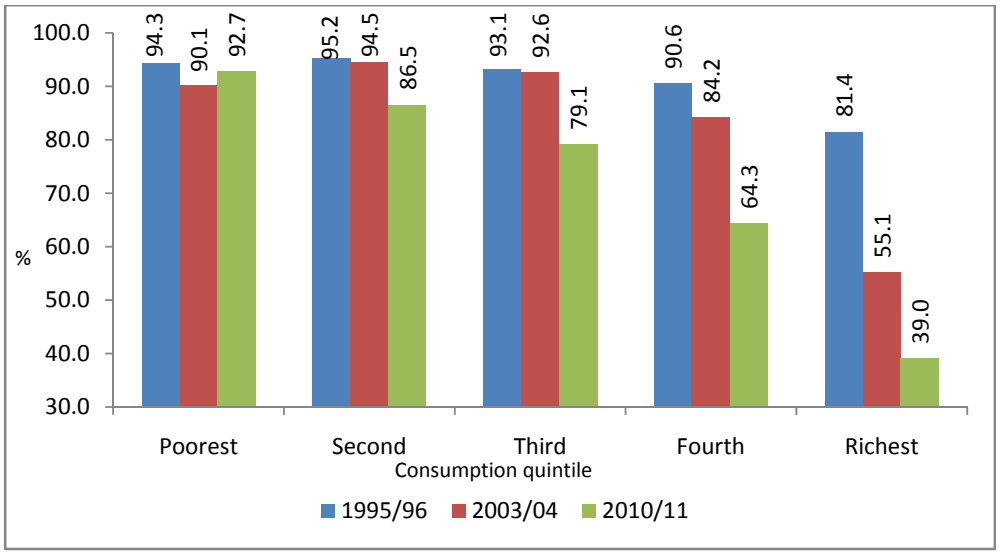


Figure 51. Community schools attended by individual.

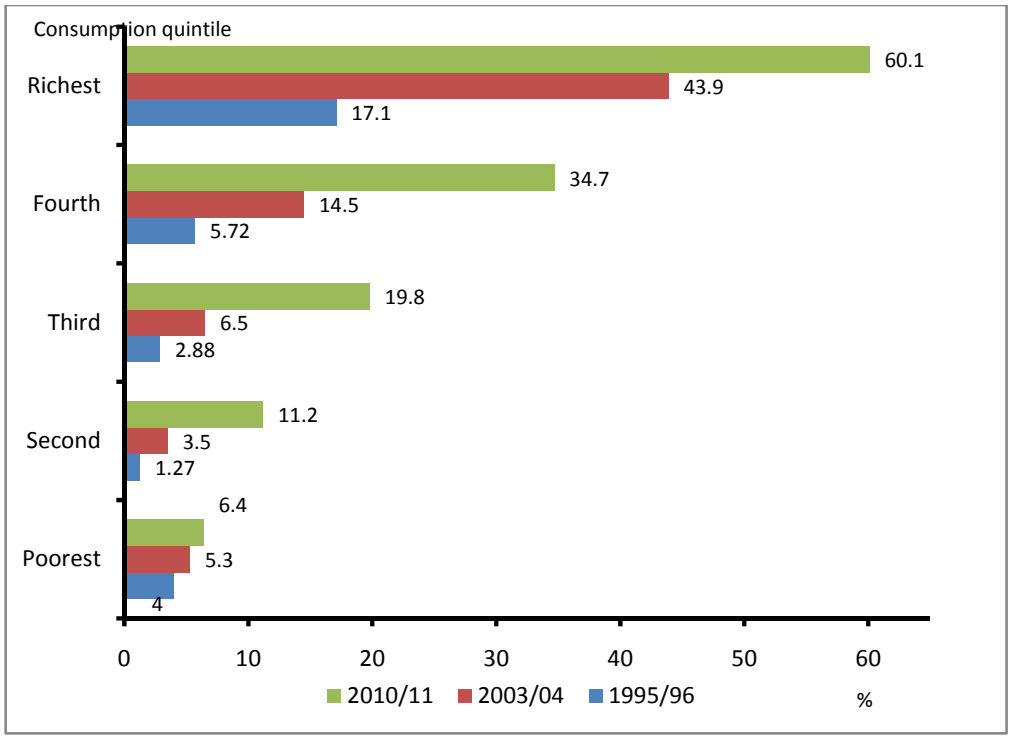


Figure 52. Institutional/private school attended by individual.

From the above discussion, it is seen that there are disparities among areas and regions in human development related indicators, literacy rates, out of school children

and types of schools individuals attended. Disparities are also seen among different castes and ethnic groups.

Human development related aspects. The Human Development Index (HDI) is a measure that provides information on the levels of social and economic development including the status of human development. It comprises four dimensions. The first one is a long and healthy life measured by life expectancy at birth. Similarly, second and third are knowledge, measured by an aggregate of the adult literacy rate (two-thirds) and the combined gross primary, secondary and tertiary enrolment rates (one-third); and mean year of schooling respectively. Likewise, a decent standard of living, measured by gross domestic product (GDP) per capita in purchasing power parity (PPP) US dollars is considered as fourth dimension (UNDP, 2009). The HDI helps to track changes in development levels over time and to compare development levels in different areas and groups.

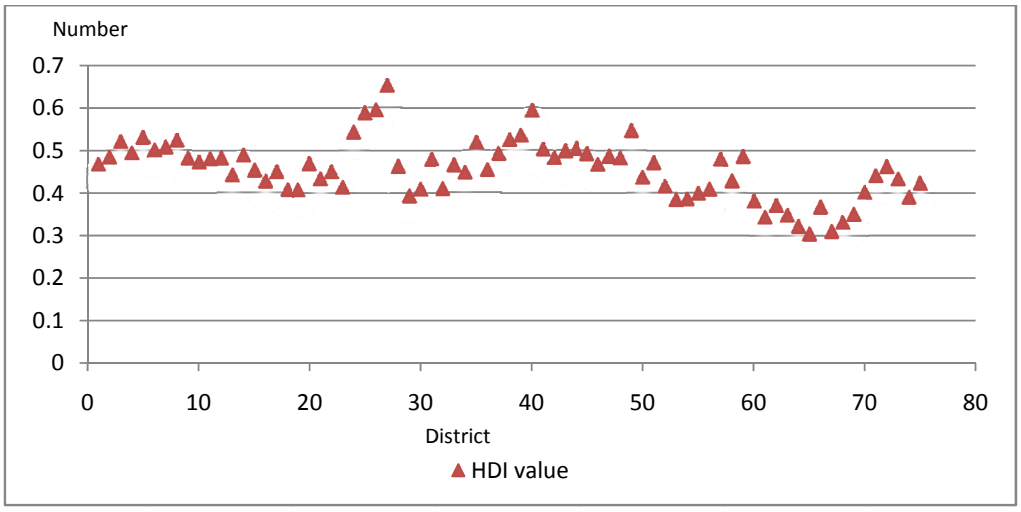
Two schools of thoughts are seen useful while discussing the concept of human development (UNDP, 2009). The first is concerned with the economic growth that is considered an engine of human development. As societies become wealthier they can arrange greater provision for basic social services like education and health which in turn build human capital. But this does not always happen. One careful consideration is required that growth does not automatically trickle down. And increases in income do not automatically lead to improve human lives. Sound policies (pro-poor, pro-women, pro-excluded and pro-environment) are required to build on the four pillars of human development - efficiency and productivity, equity, empowerment and sustainability. This means that efforts to expand the macroeconomic activities towards higher growth (productivity) must go hand in hand with policies that give all citizens access to opportunities (equity), enable people to

make the choices they wish (empowerment), and do both without reducing the options of future generations (sustainability).

In 2004, UNDP published a district level human development index that revealed the status of human development by districts by taking data reference of 2001 Census. According to the UNDP report (2004), HDI is not uniform across the regions and districts. More than half of the districts were below the national average of 0.471.

Among districts in Nepal, Kathmandu secured the highest position in HDI with 0.652 whereas Mugu District had the lowest value of 0.304 in HDI. Altogether 43 districts' HDIs were below the national average whereas 32 districts' were above. Mountain and Terai districts were lagging behind as compared to the Hill districts. In terms of development regions, mid western and far western regions were behind others.

The figure below (Figure 53) includes the HDI values by districts. Y-axis includes the districts from eastern development region to far western development region (for example 1 for Taplejung and 75 for Darchula). Similarly X-axis denotes the HDI values. The codes 1 to 16 are for districts of eastern development regions and 17 to 35 for central development region. Similarly, the codes 36 to 51 are for western, 52 to 66 are for mid-western and 67 to 75 are for far western districts respectively.

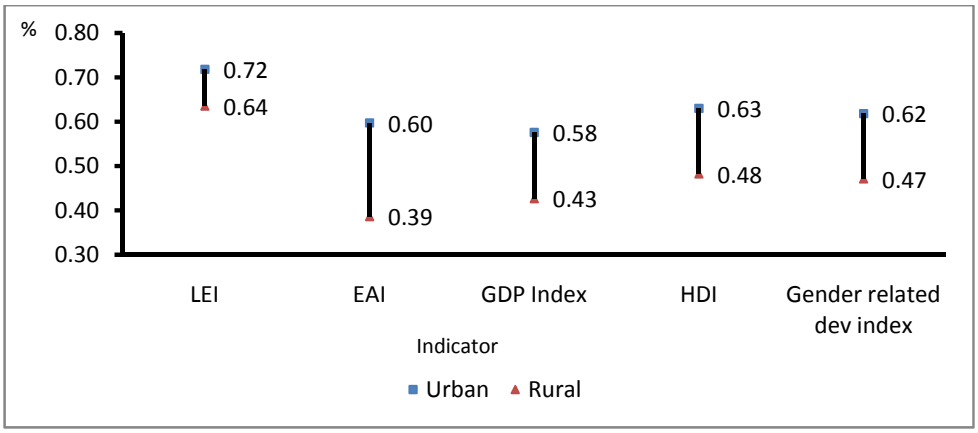


(Source: UNDP, 2004)

Figure 53. HDI values by district.

As mentioned above, the HDI measures average achievement in healthy life (as measured by life expectancy at birth), knowledge (as measured by the adult literacy rate, combined with the school enrolment ratio), and a decent standard of living (as measured by Gross Domestic Product per capita in purchasing power parity in US dollars). The figure (Figure 53) above indicates that there is an unequal human development among districts that the highest HDI does indicate the better situation in people's level of education, health condition and living standards. Having low HDI value does mean that there is low level of access to opportunities, low level of capacity to make a choice and weak sustainability.

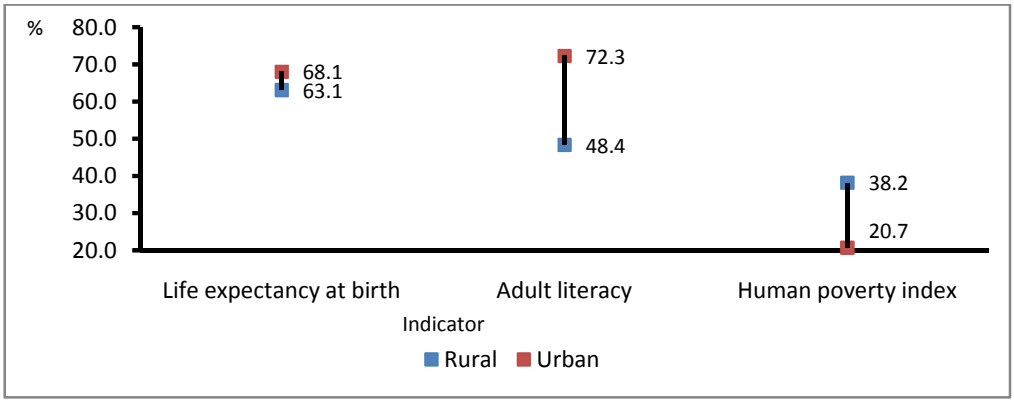
The figure below (Figure 54) provides information on life expectancy index (LEI), educational attainment index (EAI), HDI, gender related development index, and GDP index by urban and rural areas. Visible disparities are seen between urban and rural areas in these indicators. It means the people's conditions in rural areas are severe as compared to the urban areas. The largest disparities are in educational attainment (0.21) then in HDI (0.15), gender-related development index (0.15) and GDP index (0.15).



(Source: UNDP, 2009, pp. 149 -150)

Figure 54. Human development related indices.

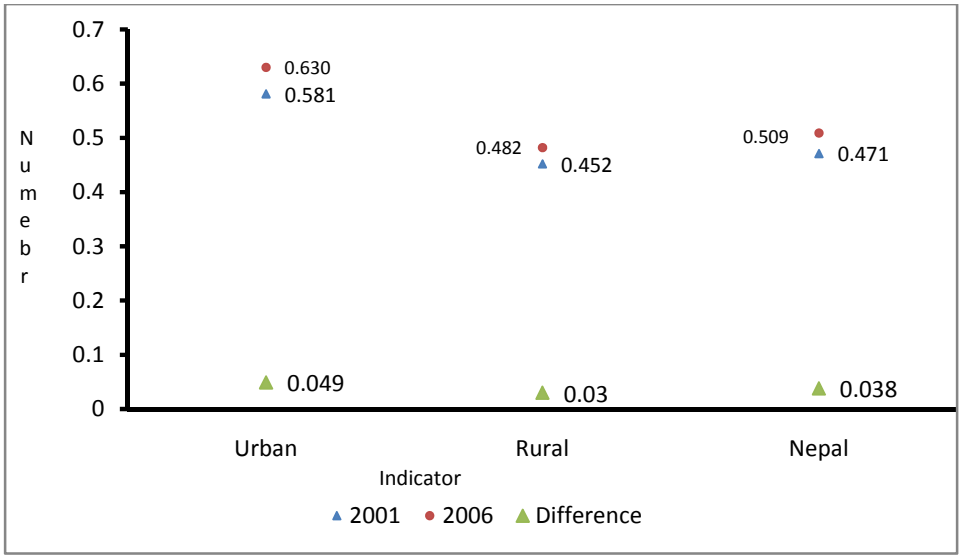
Interesting relations are also seen between/among life expectancy at birth, adult literacy and human poverty index. The figure below (Figure 55) provides information on these three indicators in urban and rural areas. Rural areas scored the low value in life expectancy and adult literacy, whereas human poverty is higher in rural areas than urban areas. It means there are huge differences on the status of these indicators in urban and rural areas. The mean year of schooling of urban areas (5.19) is more than double of the mean year of schooling of rural areas (2.84). It indicates the poor status of schooling of children who live in the rural areas.



(Source: UNDP, 2009, pp. 149 & 152)

Figure 55. Status LEI, adult literacy and mean year of schooling by rural urban.

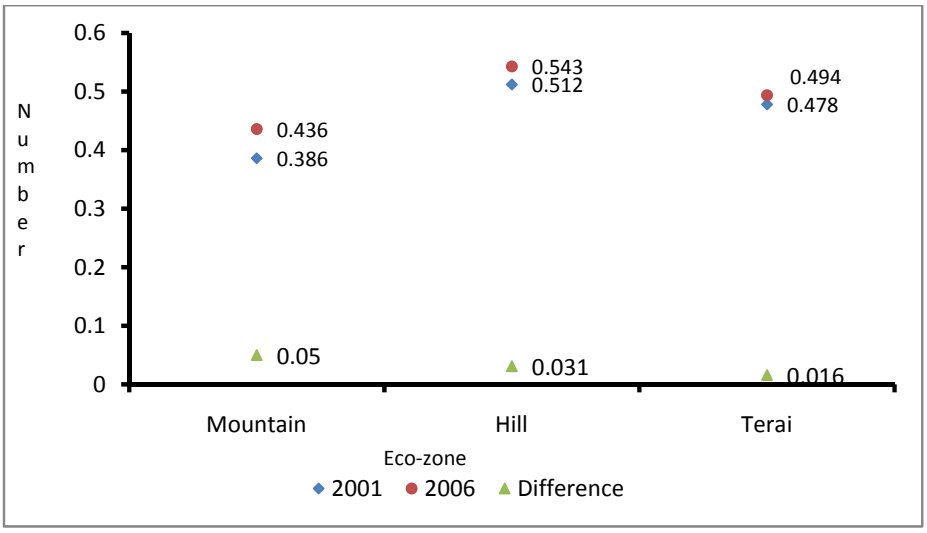
UNDP (2009) also calculated and published the human development index of regions, areas and major caste/ethnicity in 2009 by taking the data reference of 2006. The figure below (Figure 56) provides an overview of progress on human development index by urban (0.049) and rural areas (0.03) from 2001 to 2006. The difference on the progress of HDI between 2001 and 2006 in urban areas is greater than the rural areas. It also explains that there are large disparities between urban and rural areas. The difference between urban and rural areas HDI in 2001 was 0.129 and it became 0.148 in 2006. It indicates that the disparities are increasing.



(Source: UNDP, 2009, p. 34)

Figure 56. Changes in HDI value by urban and rural area.

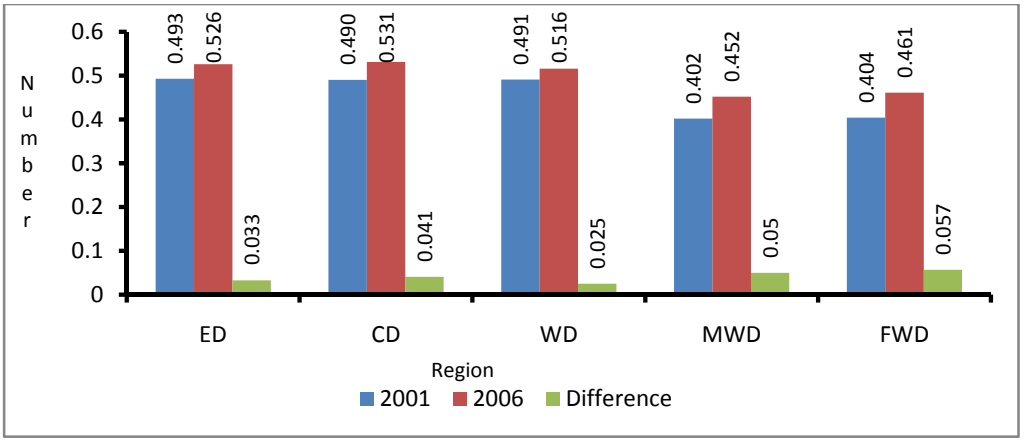
Likewise, the figure below (Figure 57) provides the information on the status of HDI by eco-zones in two different times i.e. 2001 and 2006. It shows that Hill area has the higher HDI value in 2001 and 2006. As usual, Mountain areas have the lowest HDI value and Terai has remained in between Mountain and Hill in 2001 and 2006. However, the Mountain areas have achieved highest increment in HDI value as compared to other areas from 2001 to 2006. From the available data, it is clear that there were disparities among eco-zones in 2001 and this has continued up to 2006.



(Source: UNDP, 2009, p. 34)

Figure 57. Changes in HDI value by eco-zone.

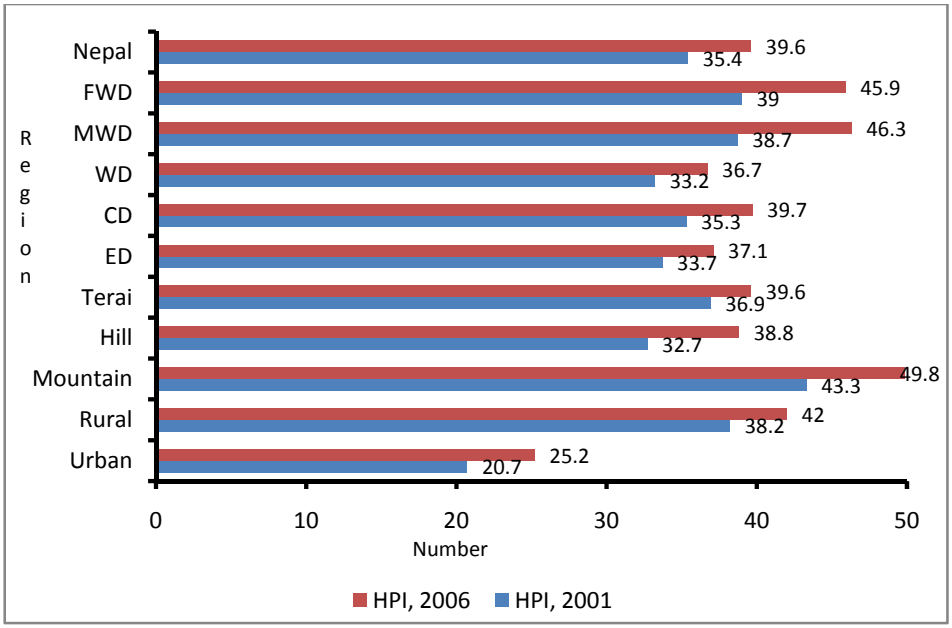
As in eco-zones, the disparities are seen in HDI among development regions. In 2001, mid western and far western development regions scored the lower value as compared to others. This is the same in the year 2006. Among development regions, mid western development scored the lowest HDI value at both points of time, i.e. 2001 and 2006. The achievement gained from 2001 to 2006 is higher in far western development region followed by mid western, central and western development regions respectively (Figure 58).



(Source: UNDP, 2009, p. 34)

Figure 58. Changes in HDI value by development region.

Human Poverty Index (HPI) measures the amount of deprivation people experience in different areas. While HDI measures average achievement, the human poverty index is used to measure the deprivation in the three basic dimensions of human life—a long and healthy life, knowledge, and a decent standard of living. Longevity means the percentage of the population with a life expectancy of less than 60 years and illiteracy means the percentage of the population aged 15 years or over who are unable, with understanding, both to read and write a short, simple statement on their everyday life. Likewise, the standard of living is taken from the percentage of the population living below the poverty line defined as 50 percent of the median disposable personal income. Lowest HPI value does mean that people are living with the lowest standards of living. The figure below (Figure 59) shows the HPI value by development regions and areas in two different points of time 2001 and 2006.

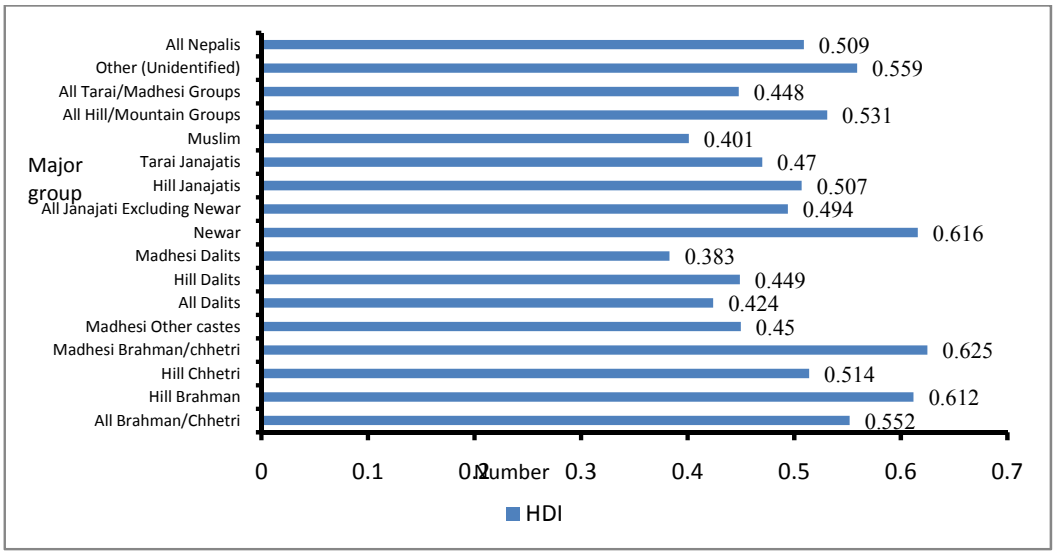


(Source: UNDP, 2009, p. 41)

Figure 59. Human poverty index (HPI) across area and region.

Nepal is not only a mosaic of geographical settings; it is also made up with the diverse social groups and cultures. But all these social groups are not in equal status in

terms of education and other social indicators. There as disparities among different castes and social groups. The figure below (Figure 60) shows the status of HDI by castes/ethnicity in 2006. The available data tells that Dalit and Muslims are at the lowest level. The situation of Madhesi Dalit is more severe with the Dalit community. Similarly, some Janajatis are also lagging behind on the national average.



(Source: UNDP, 2009, p. 44)

Figure 60. Human development index (HDI) by major group.

From the above discussion, it is seen that there are disparities in human development by districts, by urban and rural areas, by development regions and eco-zones and by castes and ethnic groups. On the other hand, improvements are also seen in some aspects but disparities are still continuing. It means people living in different regions and areas have different capacities in terms of education, life expectancy and living conditions. In the same manner, different castes and ethnic groups also have different capacities.

Households' access to primary education. Access to opportunity is considered one of the main indicators of enabling environment for securing the higher level human development. Access to different facilities (such as school, health post, market, road transport etc) helps people to acquire benefits from these facilities.

Although schooling of children does not solely depend upon the availability of facilities, it certainly helps people to get benefits from such facilities. Locating school nearby households means that there is a high chance of sending children to schools by the parents.

Access to schooling facilities, in this context, are measured in terms of time taken for one-way travel to school irrespective of transport mode. The shorter is the time taken by a household to reach a school, the higher is the degree of access. The following section analyzes the status of time taken by households to reach a primary school within 30 minutes in terms of distance, development regions, eco-belts, urban/rural and consumption quintiles.

The figure below (Figure 61) shows the status of households' access to primary education by consumption quintiles over the years (CBS, 2011). It indicates that there are still large disparities in terms of access to primary education although improvements are observed over the years. Only 90 percent of the poorest households' children have access to primary education within the reach of 30 minutes walking distance as compared to the richest group (98.4 percent). Once the consumption quintile moves up, improvements are seen in access to primary school. It means people having higher quintile groups have enjoyed the improved access to primary school. Low level of access to primary schools means that poorer groups could have to walk longer distance than 30 minutes to reach primary schools.

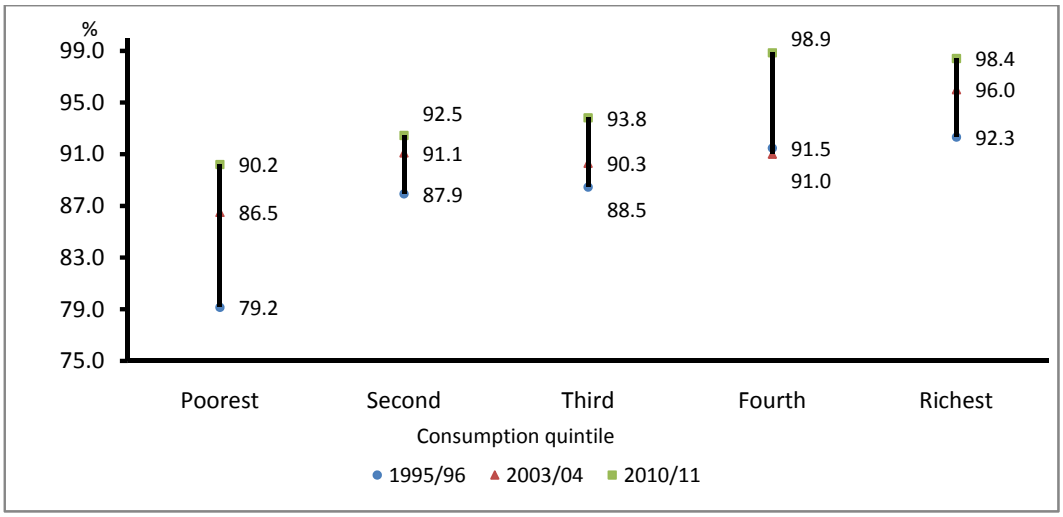


Figure 61. Households' access to primary education within the reach of 30 minutes by consumption quintile.

Access to primary schools represents a way of measuring the extent to which a school system is inclusive of the wider population. Inadequate access to school (primary school) does mean that children have either been deprived of schooling or have to walk a long distance. Poorer segment of people in Nepal have also less access as compared to other groups.

Out of school children. As gross and net enrolment of children in school indicates the capacities of education system as well as participation of people in education system, the size of out of school children population provides more critical information to the policy makers. It shows inequitable access and opportunities to education thereby resulting in low human development status. High number of out of school children in any area or groups simply states that these areas and groups are lagging behind in social indicators and human development index as a whole.

The figure below (Figure 62) shows the percentage of population of six years and above who never attended schools by different economic groups or consumption quintiles (CBS, 2011). In 1995/96, almost 72 percent people of the poorest group never attended schools that decreased and reached 44.2 percent in 2010/11. From this

point of view, it is a significant improvement in reducing the number of out of school children. The data from all three surveys show that there are improvements in results but in the mean time the disparities are also continued in spite of the efforts implemented by the government in the name of Millennium Development Goals (MDGs) and Education for All (EFA).

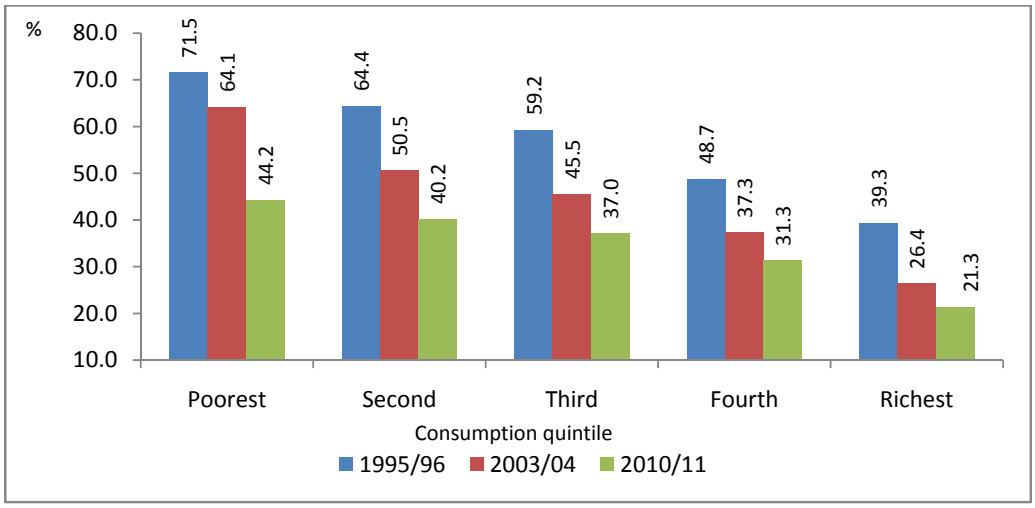


Figure 62. Population of 6+ years never attended school.

It is seen that majority of the people from poorer segment never attended schools as compared to the richer segment. It indicates that human development index of poorer groups is low because education is one of the crucial dimensions of human development. The ratio of people never attended the school decreases over the years but the disparities among different economic groups are still prevalent.

Chapter Summary

The available information revealed that improvements are seen in literacy, enrolment of students, schooling facilities and human development related indicators across the regions and groups. Positive changes are also observed in indicators relating with these areas. In this way, significant changes are observed during the past 15 years. But these improvements are not uniform across these regions and groups. Disparities still persist in the education system of Nepal in terms of gender, socio-

economic situations, geography, as well as rural and urban areas. The continued disparities are challenges of the education system. Such situation raises the questions on the patterns of resource allocation and utilization. How far these disparities are persisting and statistically significant and how people perceive such disparities are the areas of discussion in the coming chapter.

CHAPTER VI

EQUITY IN FINANCING IN EDUCATION AND ITS INTERPRETATION

This chapter presents the analysis of equity in education and education financing using the statistical tools such as range ratio, coefficient of variation, McLoone Index, Gini coefficient, and analysis of variance. I have used bi-variate and regression analysis of some variables to explore the size and effects of the relationships. These tools have been found relevant to assess whether disparities in education financing exist, as well as indicating the degree of dispersion (Sherman & Poirier, 2007) and nature of the identified disparities. The indicators of enrolment rates, availability of facilities (distribution of schools and student school ratio), per pupil expenditures, student teacher ratios, internal efficiency (promotion, repetition and dropout rates), learning achievement, literacy and human development index are used to assess the degree of disparities by development regions and eco-zones. Analysis of variance has also been done in order to confirm the statistical significance of the prevailing disparities.

The information received by the use of the above statistical tools helped to assess the education financing policies through an equity lens. Furthermore, it allowed me to compare the key aspects of education policy and to assess the relative equity of education system based on differences in access to education and provision of educational resources (Sherman & Poirier, 2007).

Firstly, I have used the tools such as range, range ratio and coefficient of variation to explore the disparities among development regions and eco-zones (annex 2). These are used to assess the status of horizontal equity. While assessing the status

of disparities among these units, the values of mean, standard deviation, variance, range, range ratio and coefficient's ranking were used. Once I analyzed the disparities among development regions and eco-zones through these measures, then I explored their ranking by using a composite raking (average of range ratio ranking and coefficient of variation). McLoone Index, Gini coefficient and Analysis of Variance (ANOVA) were also used subject to their relevancy, and bi-variate as well as regression analyses were also used as per the need. All these analyses helped me to judge whether these disparities are statistically significant or not. Similarly, correlation and regression analysis helped me to explore the nature of their relationships.

Enrolment Ratios

Enrollment ratios present a broad picture of student's access to education in specific units. Both the Gross and Net enrolment rates were used to measure the disparity because these indicators are generally recognized as the most accurate way to measure the access to education (Sherman & Poirier, 2007). Among these two indicators, net enrolment rates accurately measure the access to education; however, gross enrolment rates are also used to gain some insights on the capacity of the education system.

Gross enrolment in primary level exceeded 100 per cent because of under- and over – aged children in the education system. But these figures also vary from one region to another region or eco-zones. The GER ranges from 47 percent in Manang to 247 percent in Taplejung which fall under the Mountain regions of western and eastern development regions respectively. The situation is almost similar in the case of boys' and girls' gross enrolment rates. The net enrolment rates range from about 45 percent to almost 99 percent meaning that there are large fluctuations in the

achievements within development regions and eco-zones. The range (difference) is the largest in western development regions (53.4) and Mountain eco-zones (52.5).

Ranking

The analysis of enrollment ratios is done by using rank order as suggested by Sherman and Poirier (2007) as they used it to analyze the status of disparities in 16 different countries. The table below (Table 12) shows the ranking orders in range ratios and coefficient of variation and their average ranking orders in gross enrolment rates. In gross enrolment rates (total), the disparities are larger in eastern, western and far western development regions respectively. Among the eco-zones, Mountain area has the highest disparities than others. This is also more or less the same in girls' and boys' enrolment rates. In the gross enrolment of girls, the range ratio is highest in western development region (2.9) followed by eastern development region (2.6) and the rests have almost an equal status (1.9). This value is 5.1 in Mountain regions against the 2.0 in Hills and 1.7 in Terai region. But these findings contradict with the coefficient variation where eastern region secured 0.24, highest among the development regions, and the lowest value is in central development region (0.14). Similarly, as in the above case, Mountain has the highest value (0.28) of coefficient of variation.

The situation of disparity in total enrolment is almost similar to that of girls' enrolment where ranking order of range ratio follows 3.1 and 2.5 in western and eastern region respectively. The rests scored 1.8 and 1.9 values. In the case of eco-region, the coefficient of variation in total enrolment followed the same pattern as it was in girls' enrolment but there is little fluctuation in the case of development regions.

Table 12

Ranking Orders on Horizontal Equity Measures of Gross Enrolment Rate

Regions	Girls			Boys			Total		
	Rank order of CV	Rank order of RR	Average ranking of measures	Rank order of CV	Rank order of RR	Average ranking of measures	Rank order of CV	Rank order of RR	Average ranking of measures
Eastern	5	4	5	5	4	5	5	4	5
Central	1	1	1	1	1	1	1	1	1
Western	2	5	4	4	5	5	3	5	4
Mid Western	3	2	3	2	3	3	2	3	3
Far Western	4	3	4	3	2	3	4	2	3
Mountain	3	3	3	3	3	3	3	3	3
Hill	2	2	2	2	1	2	2	2	2
Terai	1	1	1	1	2	2	1	1	1

As in gross enrolment rates, the average ranking measures on the net enrolment rates were also calculated (Table 13). In the net enrolment, western development region has the highest range ratio (girls-2.0, boys-2.4 and total-2.2) in five development regions and this is the same in the case of Mountain. The disparities among areas reside around 1.1 to 1.2 except for western and Mountain regions. In western and Mountain regions, the disparities are larger as compared to other. This is because of the net enrolment of Manang and Mustang which is quite low. In the coefficient of variation, the disparities in girls' net enrolment rates are largest in western regions and Mountain areas. The mid and far western development regions scored relatively better than other development regions.

Table 13

Ranking Orders on Horizontal Equity Measures of Net Enrolment Rate

Regions	Girls			Boys			Total		
	Rank order of CV	Rank order of RR	Average ranking of measures	Rank order of CV	Rank order of RR	Average ranking of measures	Rank order of CV	Rank order of RR	Average ranking of measures
Eastern	4	4	4	3	4	4	4	4	4
Central	3	3	3	2	2	2	3	2	3
Western	5	5	5	5	5	5	5	5	5
Mid Western	1	1	1	1	1	1	1	1	1
Far Western	2	2	2	4	3	4	2	3	3
Mountain	3	3	3	3	3	3	3	3	3
Hill	1	1	1	1	2	2	1	1	1
Terai	2	2	2	2	1	2	2	2	2

The table above (Table 13) shows the average raking measures in net enrolment rates. In girls' net enrolment rates, western development region remains at the bottom (5th position) among development regions whereas mid western development region was valued highly (1st position). This is almost similar in the case of total net enrolment rates. In the case of boys' net enrolment, the ranking order in increasing trend is mid western (1st position), central (2nd position), eastern and far western (3rd positions) among the development regions whereas both the Hill and Terai scored equal values (2nd position) in geographic regions and thus leaving the Mountain region to stand in the 1st position.

Gini Coefficients

As used by Sherman and Poirier (2007), I have also used Gini coefficient to capture the dispersion among the analytical units (development regions and eco-zones) where a coefficient of 100 (or 1.0 when measured in terms of ratio) indicates maximum variation whereas 0.00 indicates perfect equity. The table below (Table 14) shows the Gini coefficient measures in gross enrolment and net enrolment ratios in

primary education. The figures indicate that eastern development region has the highest disparities in gross enrollment whereas western development region has the highest disparity in net enrolment rates. In eco-zones, Mountain area has higher value means the large disparities among three eco-zones. This pattern is almost similar in the case of girls' and boys' enrolments.

Table 14

Gini Coefficient in Enrolment Rates by Areas

Regions	GER			NER		
	Girls	Boys	Total	Girls	Boys	Total
Eastern	11.42	10.42	10.84	1.84	1.16	1.16
Central	7.35	8.07	7.94	1.89	1.06	1.06
Western	7.43	9.92	8.4	4.67	5.29	5.29
Mid Western	9.54	10.34	9.9	0.89	0.6	0.6
Far Western	9.77	10.47	10.01	1.11	1.33	1.33
Mountain	15.24	14.07	14.59	4.67	4.48	4.48
Hill	10.07	10.57	10.25	0.76	1.06	1.06
Terai	7.34	10.28	8.71	2.34	1.54	1.54

From the analysis of enrolment (gross and net), it is seen that there are disparities among development regions and eco-zones. The disparities are larger in western development regions and Mountain zone as compared to other areas. However, it is very difficult to predict the trend.

Availability of Schools

Availability of schools, teachers and learning materials are also important indicators of access to education. If schools are available nearby the community, there will be high chances of enrolling the children in schools provided that other socio-economic conditions are favorable.

Ranking

The table (Table 15) below provides the information on the status of the distribution of schools and student school ratio by regions (development and eco) with the help of the ranking order and average ranking orders. The disparities in the

availability schools are larger in the central development region (coefficient of variation – 2.37) followed by western (2.09) and mid-western development (1.49) regions among the development regions. But in range ratio western development region (21.6) has the largest disparities followed by central development region (11.5). On the other hand, disparities in coefficient of variation and range ratio are larger in the Mountain regions among the eco-regions. But in the student school ratio, the disparities are seen larger in western development and central development regions. Mountain has the common value as it was in the case of school.

Table 15

Average Ranking of Coefficient of Variation and Range Ratio in Availability of Schools by Areas

Regions	School, 2011			Student School Ratio, 2011		
	Rank order of CV	Rank order of RR	Average ranking	Rank order of CV	Rank order of RR	Average ranking
Eastern	2	2	2	3	2	3
Central	5	4	5	4	4	4
Western	3	5	4	5	5	5
Mid Western	4	3	4	2	3	3
Far Western	1	1	1	1	1	1
Mountain	3	3	3	3	3	3
Hill	2	2	2	1	2	2
Terai	1	1	1	2	1	2

The average ranking orders of the availability of schools and student school ration show that the central and western development regions have the largest disparities among the development regions. This is equally true in the case of Mountain zone. In these two indicators, the lowest disparities are seen in the far western development region.

Gini Coefficients

The gini coefficient of the availability of schools shows the highest value is in the mid western development region (22.92 percent), followed by western (21.48

percent), central (20.72 percent), eastern (16.05 percent) and far western (15.26 percent) regions respectively. Among the eco-zones, Mountain has the largest disparities whose value is 33.01 percent followed by Hill 16.43 percent and Terai 13.02 percent respectively.

Availability of Teachers

Availability of teachers is also crucial for ensuring the access to education. Teachers matter for equity because they are at the front line delivering units of the national policies and they have a significant impact on students' achievement and school quality (Wood, Levinson, Postlethwaite, & Black, 2011). Two important aspects are associated with the teacher component, the first one is availability of teachers (teacher supply) and the latter one is teachers' competencies.

At present in Nepal, many types are teachers are working in the primary level, such as teachers working in government approved positions, teachers working in *rahat* positions, teachers working in a position created and funded by the local bodies and teachers working in a position created and funded by the school/community. The range ratio is the highest in western development region (10.5) and Mountain (8.7) in student teacher ratio. In the coefficient of variation, the orders of disparities are different from the range ratio. Central development region has the greatest disparities (0.64) and Terai (0.43) is in higher order in eco-zones. This is similar in the case of student teacher ratio in public (community) schools.

The table below (Table 16) provides the information on the student teacher ratio in total, community schools and in approved positions provided by the government. In student teacher ratio, high disparities are seen in western and central development regions. In the case of eco-zones, Mountain region has the highest disparities followed by Hill and Terai respectively.

Table 16

Average Ranking of Coefficient of Variation and Range Ratio in Student Teacher Ratio by Areas

Regions	STR, 2011			STR in Community schools, 2011			STR based on the approved teacher positions, 2011		
	Rank order of CV	Rank order of RR	Average ranking	Rank order of CV	Rank order of RR	Average ranking	Rank order of CV	Rank order of RR	Average ranking
Eastern	3	2	3	3	2	3	3	2	3
Central	5	4	5	5	4	5	4	4	4
Western	4	5	5	4	5	5	5	5	5
Mid Western	2	3	3	2	3	3	2	3	3
Far Western	1	1	1	1	1	1	1	1	1
Mountain	1	3	2	1	3	2	3	3	3
Hill	2	2	2	3	2	3	2	2	2
Terai	3	1	2	2	1	2	1	1	1

Gini Coefficients

Table 17 below shows the Gini coefficient measures in the distribution of schools, students and teachers. In school, mid western development has the largest figure (22.92 percent) whereas far western development has the lowest (15.26 percent). Similarly, the Mountain zone (33.01 percent) has the largest disparities. In other two indicators student school ratio and student community school ratio, central and western development regions are poor because the disparities are larger in these two regions than other regions. The information is fluctuating as compared to the number of schools in the case student school ratios. In student teacher ratio, central development has the largest figure (33.08 percent) which indicates the largest disparities, which is equally true in the case of Terai (23.68 percent).

Table 17

Gini Coefficient in Schools, Students and Teacher Ratios by Areas

Regions	School, 2011	Student School Ratio, 2011	Student Community School Ration, 2011	STR, 2011
Eastern	16.05	20.98	22.76	20.82
Central	20.72	27.59	30.79	33.08
Western	21.48	28.4	31.12	23.9
Mid Western	22.92	16.91	17.31	17.52
Far Western	15.26	12.65	15.65	8.19
Mountain	33.01	23.52	24.33	19.54
Hill	16.43	13.16	15.68	20.86
Terai	13.02	14	14.23	23.68

Expenditure per Pupil in Primary Education

As used by Sherman and Poirier (2007), I have also used expenditure per pupil to assess the equity situation among different units (development regions and eco-zones). Chiefly, three indicators are used to analyze the equity situation, these are total expenditure, expenditure in teacher salary, and expenditure in major items of primary education by districts by year. The major items were identified with the assumptions of the budget that goes to the school level. Moreover, per pupil expenditure was calculated by dividing the total expenditure of a fiscal year by the number of students of the primary level.

Ranking

In per pupil expenditure, the range ratio is highest in western development region (20.1) and Mountain zone (15.0). In these areas, the coefficient of variation is also higher as compared to other areas of development regions and eco-zones. The range ratios and coefficient of variations are the smallest in the eastern development and Terai areas respectively. In teacher salary items, the range ratio and coefficient of variation are the highest in the western development region and Hill area whereas far western development region and Mountain zone have the lowest values. The average

ranking on these indicators are given below (Figure 63 and Figure 64) where higher values indicate the higher level of disparities.

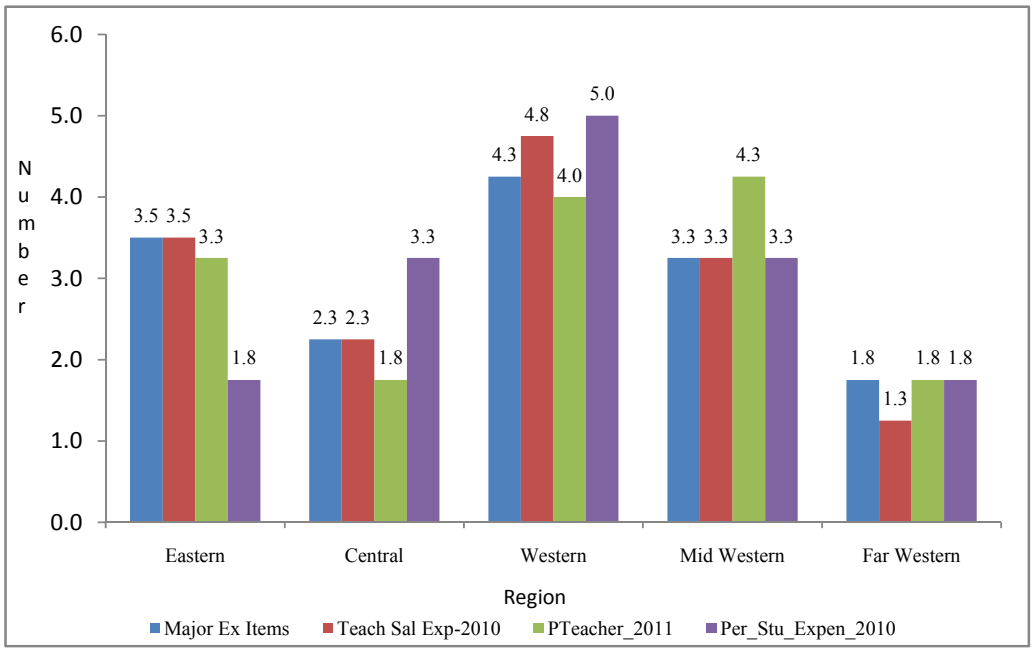


Figure 63. Average rankings on horizontal equity measures of expenditure per pupil by development region.

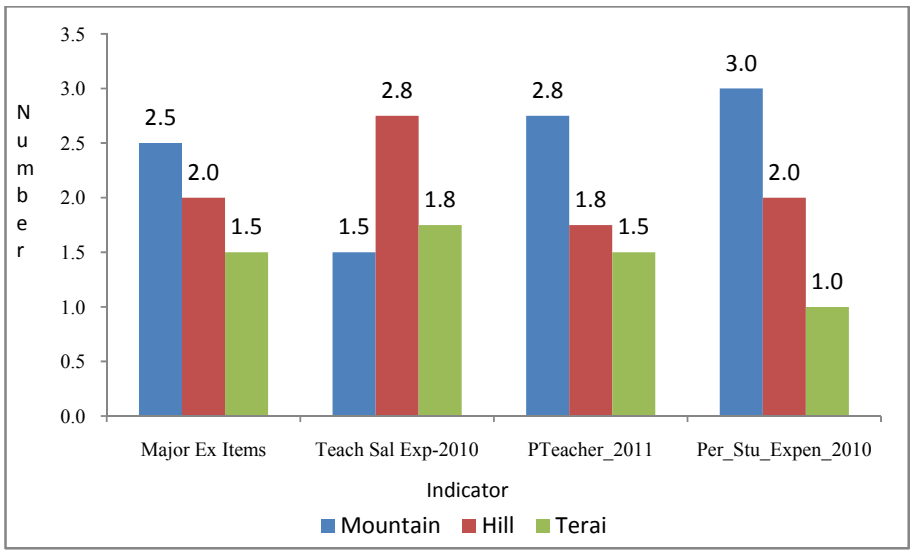


Figure 64. Average rankings on horizontal equity measures of expenditure per pupil by eco-zone.

McLoone Index

McLoone Index is the ratio of the sum of the values of all observations below the 50th percentile (or median) to the sum of all observations if they all had the value of the median. Thus it measures the difference in distribution of resources within the lowest quintile in a distribution.

The McLoone index of per pupil expenditure was calculated with the aim of capturing the dispersion of expenditure across development and eco-zone units. It considers the sum of expenditure per pupil for each region below the median and dividing this by the sum that would exist if each region below the median had expenditure per pupil equal to the median. The McLoone index value of per pupil expenditure in major cost items, per pupil expenditure in primary education, per pupil expenditure in teacher salary, and student teacher ratio are given in Table 18 below.

Table 18

McLoone Index in Different Expenditure Items

Region	Per pupil expenditure in major expenditure items	Per pupil expenditure in teacher salary items	Per pupil expenditure in primary education	STR
Mountain	0.86	0.75	0.85	0.75
Hill	0.66	0.99	0.97	0.81
Terai	0.89	0.74	0.79	0.87
Eastern	0.96	0.95	0.86	0.90
Central	0.79	0.78	0.61	0.77
Western	0.85	0.84	0.90	0.82
Mid West	0.82	0.83	0.90	0.87
Far West	0.86	0.81	0.83	0.80

The McLoone Index value of 1 indicates the perfect equity while higher index values suggest greater deviation from equity. The national index of major expenditure item is 0.75 which is lower than the value of all eco- and development- regions. In this category, among the eco-zones, Terai (0.89) has the highest value followed by

Hill (0.86) and Mountain (0.66) respectively. And in terms of the development region, eastern development region has the highest value of all regions in Nepal.

With regard to teacher salaries, the national index is 0.66 whereas this value is 0.74 in Terai and 0.78 in the central development region. These values are the lowest in eco-regions and development regions. The situation is almost similar in per pupil expenditure in the case of expenditure per pupil with the national value of 0.79. The values in teacher salary and student teacher ratios are also given in the table above (Table 18).

Gini Coefficient

The Gini coefficient in per student expenditure in primary education, primary teachers, students, teacher salary and per student expenditure in major items is given below in Table 19. From the table, it is seen that western development region and Mountain have the larger disparities as compared to other regions.

Table 19

Gini Coefficients of Different Expenditure Items

Regions	Per student expenditure in primary education	Primary teachers	Students	Teacher salary	Per student expenditure in major activities
Eastern	15.57	18.44	28.26	17.95	18.24
Central	39.09	14.37	28.69	14.5	16.6
Western	47.63	20.03	33.59	19.88	19.01
Mid Western	25.56	24.4	27.31	17.99	19.42
Far Western	15.78	15.09	25.04	13.92	14.83
Mountain	46.59	32.2	37.33	14.19	29.13
Hill	25.94	15.87	18.87	24.43	16.29
Terai	13.57	10.91	12.49	15.41	10.05

Internal Efficiency

The internal efficiency such as promotion, repetition and drop out in any education system indicates the health of the system. The higher the promotion rates

the system is considered better than others. These are also considered the outputs/outcomes of the education system.

Ranking

The disparities are also visible in promotion, repetition and dropout rates in grade 1, grade 5 and grad 1-5 of primary education level. The tables below (Tables 20 to 22) provide the information on average ranking measures of range ratio and coefficient of variation by development regions and eco-zones in promotion, repetition and dropout rates by gender.

In promotion rates, Terai and eastern development regions have the lowest disparities among eco-zones and development regions respectively. Hill areas as well as far western development and mid western development regions have the highest disparities among the respective units. But in the case of repetition rates, far western and central development regions have the highest disparities. Hill areas remain the same as it was in promotion rates. The scenarios of dropout rates are almost similar for far western and mid western development regions which scored the highest disparities among the development regions. The details are also annexed (Annex 2).

Table 20

Average Ranking Orders of Coefficient of Variation and Range Ratio in Promotion Rates of Grade 1, Grade 5 and Grades 1-5

Regions	Grade 1			Grade 5			Grade 1-5		
	Girls	Boys	Total	Girls	Boys	Total	Girls	Boys	Total
Eastern	2	1	1	2	2	2	1	1	1
Central	4	4	4	3	3	2	4	3	3
Western	2	4	2	4	4	4	2	5	4
Mid western	4	3	4	5	5	5	5	4	4
Far western	5	4	4	4	2	2	4	3	4
Mountain	2	2	2	2	3	3	2	3	2
Hill	3	3	3	3	3	2	3	3	3
Terai	1	1	1	1	1	1	1	1	1

Table 21

Average Ranking Orders of Coefficient of Variation and Range Ratio in Repetition Rates of Grade 1, Grade 5 and Grades 1-5

Regions	Grade 1			Grade 5			Grade 1-5		
	Girls	Boys	Total	Girls	Boys	Total	Girls	Boys	Total
Eastern	2	2	2	1	1	1	1	1	1
Central	5	4	4	5	5	5	5	5	5
Western	3	3	3	3	3	3	3	3	3
Mid western	1	1	1	2	2	3	2	2	2
Far western	5	5	5	5	5	5	5	5	5
Mountain	1	1	1	1	3	3	1	1	1
Hill	3	3	3	3	3	3	3	3	3
Terai	3	3	3	3	1	1	2	2	2

Table 22

Average Ranking Orders of Coefficient of Variation and Range Ratio in Dropout Rates of Grade 1, Grade 5 and Grades 1-5

Regions	Grade 1			Grade 5			Grade 1-5		
	Girls	Boys	Total	Girls	Boys	Total	Girls	Boys	Total
Eastern	2	3	4	3	2	3	2	1	1
Central	4	1	4	3	4	3	3	3	3
Western	2	3	1	3	4	4	4	5	5
Mid western	4	4	3	5	5	5	5	4	4
Far western	5	4	4	4	2	2	1	3	3
Mountain	2	3	1	3	3	3	3	3	3
Hill	3	2	2	2	2	3	2	2	2
Terai	2	2	2	2	1	1	2	2	2

Learning Achievements

Learning achievements of students are other strong indicators with regard to the outcomes of the education system and the distribution of these outcomes. The more the scores students achieve, the education system is considered more effective than others. I have calculated the range and ranking orders of students' achievements by development regions and eco-zones to assess the status of disparities among these units.

Ranking

Range ratios of the learning achievement of Grade 5 students in Nepali, English, Mathematics, Social Studies and Science by regions also indicate that there

are disparities among areas (Tables 23 and 24). In learning achievements, there are high disparities in all five subjects. In terms of development regions, mid western and eastern regions are better than others whereas Hill is far better than other areas of eco-zones. The data of social studies by development regions are unavailable.

Table 23

Range Ratios of Learning Achievements in Different Subjects by Areas

Regions	Nepali	English	Math	Social Studies	Science
Eastern	17.8	9.7	6.9	Na	9.4
Central	20.0	19.0	19.4	Na	5.8
Western	13.5	15.3	13.9	Na	11.7
Mid-western	9.8	11.3	19.4	Na	9.8
Far-western	15.4	9.7	9.0	Na	17.6
Mountain	10.5	15.3	10.8	4.4	11.0
Hill	17.8	17.4	17.4	6.9	9.4
Terai	17.6	15.0	9.7	5.0	16.4

The average ranking measures show that eastern development region is better than others whereas Mountain shows better performance in eco-regions.

Table 24

Ranking Orders on Horizontal Equity Measures of Learning Achievements of Grade 5 by Areas

Regions	Nep	English	Math	S Std	Science	Average
Eastern	4	1	1	Na	2	2
Central	5	5	4	Na	1	3.75
Western	2	4	3	Na	4	3.25
Mid-western	1	3	4	Na	3	2.75
Far-western	3	1	2	Na	5	2.75
Mountain	1	2	2	1	2	1.6
Hill	3	3	3	3	1	2.6
Terai	2	1	1	2	3	1.8

Literacy

Literacy is also taken as one of the important indicators to assess the living status of people in a country or area. Higher literacy rate means the living conditions of people are better as compared to other areas.

Ranking

The disparities in literacy are lesser in eastern and western regions in total than others. The disparities are larger in central development region followed by mid western and far western development regions. On the other hand, Hill areas are better than others. The situation of women in Mountain areas is worse than others. The table below (Table 25) provides the ranking orders of coefficient of variation and range ratio by gender.

Table 25

Ranking Orders on Horizontal Equity Measures in Literacy Rates by Areas

Regions	Total			Male			Female		
	Rank order of CV	Rank order of RR	Average ranking of measures	Rank order of CV	Rank order of RR	Average ranking of measures	Rank order of CV	Rank order of RR	Average ranking of measures
Eastern	2	1	2	1	1	1	2	2	2
Central	5	5	5	5	5	5	4	3	4
Western	1	2	2	2	3	3	1	1	1
Mid Western	4	4	4	4	4	4	5	5	5
Far Western	3	3	3	3	2	3	3	4	4
Mountain	3	2	3	2	1	2	3	3	3
Hill	1	3	2	1	2	2	1	2	2
Terai	2	1	2	3	3	3	2	1	2

Human Development Index

Human development index is used to measure the conditions of human lives. The higher the figure towards the value of 1.0, it indicates the better situation. Its

status by development regions and eco-zones provides information on the condition of human aspects in these areas.

Ranking

The range ratios by development and eco-regions indicate that large disparities are seen in central development region (1.65) and Hill areas (1.90) as compared to others. Higher values of range ratio indicate the large disparities among districts of respective regions or areas. The values closer to 1.0 indicate the more equity among areas as compared to the higher values. Similarly, the coefficient of variation is higher in central development region (0.15) followed by mid western (0.13) and far western (0.13) development regions which indicate the status of disparities within these units. In the eco-region, Mountain region (0.16) has higher value as compared to others.

In terms of ranking of the range ratio and coefficient of variation on HDI measures, the disparities are larger in central development regions followed by the mid western development region whereas Hills and Mountain have higher disparities as compared to the Terai belt (Figure 65).

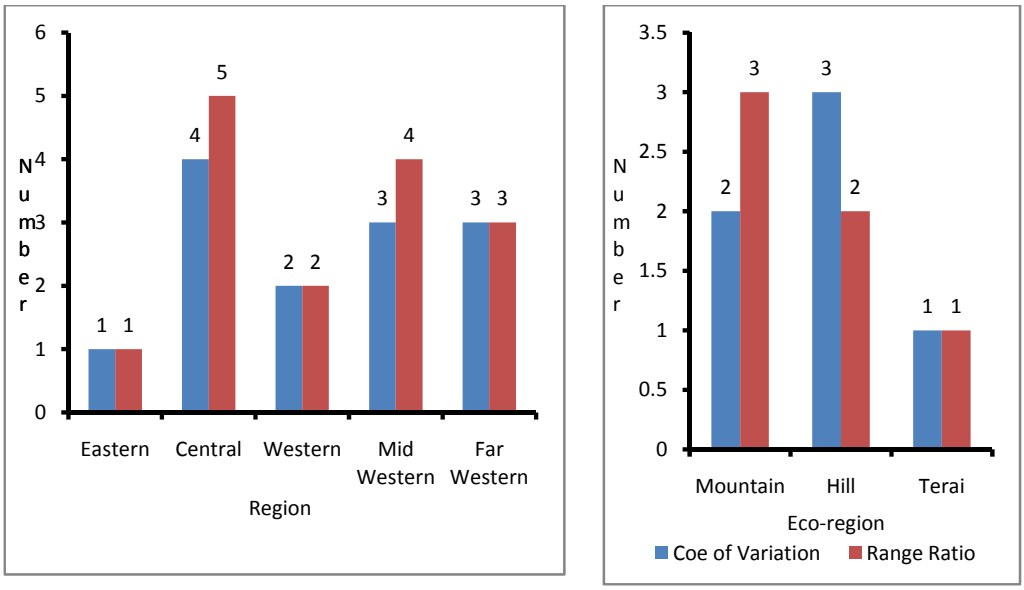


Figure 65. HDI ranking orders on horizontal measures

Analysis of Variance

I also conducted an analysis of variance (ANOVA) to confirm whether the disparities seen using various measures such as the range, standard deviation, and so forth discussed in earlier paragraphs in this chapter are statistically significant or not. The ANOVA is a standard tool to measure whether the differences seen in various groups are statistically significant. In the case of this study, I have examined the differences across geographic and development regions using various indicators such as student enrollment, availability of school and teachers, expenditure, and so forth. While differences under each indicator have been already discussed, in this analysis it has been confirmed that most of the differences discussed earlier are statistically significant.

The ANOVA tables (Annexure 4) provide the results of the ANOVA on each of the indicators used earlier in this chapter. In a few cases the differences measured are found statically not significant and those are (a) boys' net enrollment and teacher's salary across geographic region, and (b) number of schools, distribution of net

enrollment, per student expenditure and student's distribution across the development regions. All these analyses display a higher p value, i.e. greater than 0.05. This result indicates that except in a few cases, most of the differences discussed above are statistically significant.

Bi-variate and Regression Analyses

In order to assess the relationships between the input and output variables, bi-variate correlations and regression analyses are conducted (annex 5). The input variables (educational resources) in this analysis are number of schools, number of teachers and major expenditures. Likewise, output variables are net enrolment, literacy, dropout, repetition rates and HDI. Out of all these analyses, schools, teachers, and the major expenditure have significant correlations with output variables such as net enrolment, literacy, dropout and repetition rates, and the HDI. But their significance levels vary from 0.05 to 0.01 levels. The relationships between these variables are explained below.

Bi-variate Correlations

The bi-variate analysis between the schools with other effect variables (the net enrolment rates, literacy rates, repetition rates, dropout rates and human development index) shows that there is a positive relationship between the number of schools and the net enrolment rates (total: r= 0.294 and girls: r= 0.299), literacy rates (total: r= 0.457 and female: r= 0.450) and human development index (r=0.444) which all are statistically significant at (α) 0.01 level, expect net enrolment rate (total) which is at (α) 0.05 level. However, schools as input variable are found to have inverse relationships with dropout rates (total: r=-0.587, and girls: r= -0.492) and repetition rates (total: r=-0.360, and girls: r= -0.374). These correlations are statistically significant at (α) 0.01 level. All these suggest that increase in the number of schools

increases participation of children to schools. And eventually dropout and repetition tend to decrease.

A correlation analysis between primary school teacher with the net enrolment rates, literacy rates, dropout rates, repetition rates and HDI show that there are relationships between these independent and dependent variables. These relationships are also statistically significance. A positive correlation is found between primary school teacher and net enrolment (total: r=0.267, girls: r=0.272), literacy (total: r=0.465, female: r=0.483) and HDI (r=0.438). However, inverse relations are seen between number of teachers and dropout (total: r=-0.605, girls: r=-0.535) and repetition (total: r=-0.338, girls: r=-0.356) rates. This suggests that teachers are valuable resources for increasing the participation of children in school, improving the literacy and reducing the educational wastages (repetition and dropout rates).

Similarly, a correlation analysis between major expenditure items in primary education with the net enrolment rates, literacy rates, dropout rates, repetition rates and HDI shows that there are relationship between these independent and dependent variables. A positive correlation is found between expenditures in major items of primary education and net enrolment (total: r=0.304, girls: r=0.310), literacy (total: r=0.391, female: r=0.391) and HDI (r=0.401). However, inverse relations are seen between expenditure in major items and dropout (total: r=-0.551, girls: r=-0.480) and repetition (total: r=-0.442, girls: r=-0.450) rates. This suggests that expenditure in primary education in major cost items are valuable resources for increasing the participation of children in school, improving the literacy and reducing the educational wastages (repetition and dropout rates).

All these analyses show that there are strong correlations between the inputs and output variables that I have used in my study. It means that improvement in the

input variables help to produce the desired outputs. All these relations discussed above are statistically significant. It means these variables are valuable education resources which should be considered while designing education policies (financing).

Regression Analysis

From the bi-variate analysis, significant correlations are seen between input and output variables. However, the bi-variate analysis does not predict the effect size and the relationship as predictor variable(s). Therefore, a liner regression analysis is conducted to determine the predictability of independent (predictors or input) variables on dependent (output) variables (see annex 5). The results of the regression analysis are discussed below.

Primary level repetition rate (total). In this analysis, primary level repetition rate (dependent variable) is measured against three predictor variables, such as number of schools, number of teachers and major expenditures items. The model summary reveals that there is a positive correlation (r= 0.461). The model predicts 21.3% of the variation in primary level repetition rate which is statistically significant at (α) 0.001 level. The coefficient (beta values), however, indicates that the impact of individual predictors is marginal on the output.

Primary level repetition rate (girls). In this analysis, primary level girls' repetition rate (dependent variable) is measured against three predictor variables, such as number of schools, number of teachers and major expenditures items. The model summary reveals that there is a positive correlation (r= 0.462). The model predicts 21.4% of the variation in primary level girls' repetition rate which is statistically significant at (α) 0.001 level. The coefficient (beta value) suggests that there is some association between primary level repetition rate and the predictor variables. However, the predicted impact of individual variables on the output is only marginal.

Primary level net enrolment rate (total). In this analysis, primary level net enrolment rate (total) (dependent variable) is measured against three predictor variables, such as number of schools, number of teachers and major expenditures. The model summary reveals that there is a positive correlation (r= 0.309). The model predicts 9% of the variation in primary level net enrolment rate (total). However the results are statistically not significant. Thus there appears to be some other causes than the predictor itself to have significant change in the net enrolment rate.

Primary level net enrolment rate (girls). In this analysis, primary level net enrolment rate (girls) (dependent variable) is measured against three predictor variables, such as number of schools, number of teachers and major expenditures. The model summary reveals that there is a positive correlation (r= 0.314). The model predicts 9% of the variation in primary level net enrolment rate (girls). As with the net enrolment rate (total), the results for girl's net enrolment rate is also statistically not significant

Primary level dropout rate (total). In this analysis, primary level dropout rate (total) (dependent variable) is measured against three predictor variables, such as number of schools, number of teachers and major expenditures. The model summary reveals that there is a positive correlation (r= 0.625). The model predicts 39.1% of the variation in primary level net enrolment rate (total) which is statistically significant at (α) 0.001 level. The coefficient (beta value) suggests that the association between primary level dropout rate (total) and the predictor variables at individual level is marginal.

Primary level dropout rate (girls). In this analysis, primary level dropout rate (girls) (dependent variable) is measured against three predictor variables, such as number of schools, number of teachers and major expenditures. The model summary

reveals that there is a positive correlation (r= 0.542). The model predicts 29.4% of the variation in primary level dropout rate (girls) which is statistically significant at (α) 0.001 level. The coefficient (beta value) suggests that the association between primary level dropout rate (girls) and the predictors at individual level is marginal.

Literacy (total). In this analysis, literacy (total) (dependent variable) is measured against three predictor variables, such as number of schools, number of teachers and major expenditures. The model summary reveals that there is a positive correlation (r= 0.502). The model predicts 25.2% of the variation in literacy rate (total) which is statistically significant at (α) 0.001 level. The coefficient (beta value) suggests that there is an association between literacy (total) and the predictors.

Literacy (female). In this analysis, literacy (female) (dependent variable) is measured against three predictor variables, such as number of schools, number of teachers and major expenditures. The model summary reveals that there is a positive correlation (r= 0.514). The model predicts 26.4% of the variation in literacy (female) which is statistically significant at (α) 0.001 level. The coefficient (beta value) suggests that there is an association between literacy (female) and the predictors but the impact of the individual predictors is very small.

Human development index. In this analysis, human development index (dependent variable) is measured against three predictor variables, such as number of schools, number of teachers and major expenditures. The model summary reveals that there is a positive correlation (r= 0.465). The model predicts 21.6% of the variation in human development index which is statistically significant at (α) 0.001 level. The coefficient (beta value) suggests that there is an association between human development index and the predictors but the impact of individual predictors is very small.

Gender parity index. Similarly, further analyses between the predictors, such as student teacher ratio (STR) in all schools, student teacher ratio (STR) in community schools, percentage of female teachers, percent of Dalit teachers and percent of Janajati teachers and their effects on gender parity index (GPI) in gross enrolment rate (GER) and net enrolment rate (NER) is carried out. The results of the analyses are given in annex (annex 6).

The result of the analysis shows that the relationship on GPI (in GER) is highly uneven and unpredictable, whereas the results are much more explainable on GPI (in NER). The predictors have positive correlation and these variables predict variability on GPI (in NER). It shows that the effects of STR on GPI (in NER) are visible but the effects of STR in community schools, percentage of female teachers, and percentage of Dalit teachers are almost invisible. Similarly, the combined effects of all these predictors to the GPI (in NER) is higher ($r= 0.522$) and 27.2% predictability which is statistically significant at (α) 0.001 level.

It is interesting to note that the share of female teaches to predict variability in the GPI (in GER) is much higher (almost 10 percent higher) than the rest of the predictors. In the contrary Dalit teachers have almost no effect on the variability of GPI (in NER). Similarly, among five different predictors, Janajati teacher appears to have highest share in the variability in GPI (in NER) with almost 10 percent higher than the rest of the variables. However and unlike in the GER, predictors like, STR in community school and Female teachers have least impact on the variability in GPI (in NER).

From the bi-variate and regression analyses, it is revealed that educational resources are the means to produce the desired outputs. However, the regression analysis suggests that these predictor variables do not have significant effect on the

outputs at the individual level, but have higher and significant effects on the output when combined together. Therefore, the analysis concludes that there's a need to think holistically as well as comprehensively when it comes to provide educational inputs. One input at a time is likely to produce no desired output. Thus, there's a need to develop a package of resource inputs in education rather than individual and a piecemeal approach to produce the desired result.

Chapter Summary

This chapter discussed the analyses of equity by using range, range ratio, coefficient of variation, average ranking orders of range ratio and coefficient of variation, McLoone Index, Gini Coefficient of different indicators of primary education. Other analytical tools include ANOVA, bi-variate and regression analyses. These analyses confirmed that there are disparities among development regions and eco-zones. Analyses also show the relationships among the analytical variables I have used in my study. Some of these disparities are statistically significant and important means that the prevailing disparities are systemic by nature, rather than by default. The descriptive analysis carried out in chapter five and equity analysis in chapter six confirm that there are continued disparities in primary education since the past though there are increased commitments from the government with the increased resource allocation. The next chapter focuses on the aspects of why such disparities are continued and how policy makers and practitioners perceive these disparities.

CHAPTER VII

PERSPECTIVES ON EQUITY IN FINANCING IN EDUCATION AND ITS IMPLICATIONS ON SOCIAL CHANGES

This chapter focuses on the qualitative discussion. As discussed in chapter three, I have used a mixed method explanatory research design for capturing the perspectives from the key informants and stakeholders. This chapter presents the use of the so called 'QUAN→qual' model. Because of the nature of this study, I have used both statistical tools as well as perceptions of the key informants to respond my research questions on the equity in education financing and its roles in social change.

In the previous chapters (chapter five and chapter six), I used different statistical tools to assess the situation of equity as used by Sherman and Poirier (2007). From these measures, it has been found that there are disparities among groups and people living in different locations in terms of both access to educational opportunities and in achieving learning outcomes. The findings gathered through the statistical tools have been further examined through the use of qualitative methods, based on the work of Driscoll, Appiah-Yeboah, Salib, & Rupert (2007). I have thus used qualitative data (opinions and perceptions of policy makers, academia, policy implementers, head teachers and SMC members). In doing so, I gained an in depth understanding on how equity in education financing is observed and experienced and what implications this would have on social change. My prime focus during the data collection was on exploring reasons causing disparities to continue to manifest themselves within the education sector. At the same time, I want to compare these against the ongoing

efforts of the Government to address these disparities and to what extent the presence or absence of equitable financing policies contributed to the social changes.

I deployed my primary data collection through the conduction of key informant interviews to acquire a strong understanding on the presence and perception of equity, inequity and disparities, as well as the relations between financing policies and their effects on social development and social change. Along this line, the reasons of continued inequity and disparities from respondents' viewpoints have been explored. All responses of the research participants were recorded in hard copies, after which, the raw data were transcribed. After the data had been transcribed and coded to find common themes, I performed a thematic analysis, developing specific themes and analytical correlations. While developing these, I ensured they were related to the research questions that were the foundations of the data collection. As a result, the data displayed the following themes.

Respondents' Perceptions and Awareness on Disparities

The discussion in the previous chapters (chapter five and chapter six) revealed that despite the significant achievements (in terms of measured results, processes and outcomes), disparities remain to exist across different groups/areas, such as gender, economic quintile and geographical areas. These groups display structural differences in literacy rates, enrolment rates, distribution of schools and teachers, etc. Responses of the participants also indicate inequitable access to opportunities and resources. Based on this, the data collection and analysis focused further on how the different stakeholders within the education system perceive the persisting disparities. Furthermore it provides valuable insights on what the participants observe to be the underlying reasons and root causes behind these disparities, what gaps are observed between policies and practices with regard to ensuring equity in education, and what

the experienced impact is and has been of policies that have a focus on reducing disparities in the education sector.

Having a grip on these themes, a secondary focus of the primary data collection was to explore their perceptions and views on the relations between equity in education and social development, measures to address the observed issues and possible measures for the future. In order to ensure a common understanding of the notion of equity amongst the respondents, I have used the term disparity when referring to inequities, although there are differences between the two terms. How these terms have been used in regards to education and education financing in the context of this study has been discussed in chapter two. The collected responses of the respondents have enabled me to uncover the realities of the equity status in the policies, especially in financing policies.

As discussed in chapter two, the meaning of disparity is understood to be a condition or a situation of being perceived unequal or experiencing unequal treatment or the difference in access to opportunities. This can be observed in inputs, processes and outcomes. Disparities can be explored by using several dimensions, such as gender, regions, language, religion, disability, socio-economic status, etc. During the interaction with the respondents, I have asked how they perceive the existing disparities in education in terms of gender, geographical areas and socio-economic status (economic quintiles).

During the discussion with the policy makers, it was found that they are well aware about the disparities prevailing in the education system. In discussion, most of them used the terms like social justice, fairness, equity and equality of opportunity for clarifying the meanings of disparities. One of the policy makers provided some examples from Nepal Living Standard Survey to highlight the disparities in terms of

gender, economic quintiles and geographical regions. He stated that, *"Absence of distributive justice lead towards disparities" (Field note: 18 April, 2013).*

Policy implementers also realized the meaning of disparities as policy makers. One of the participants involved in policy making explained the current situation in such a way that he was aware about his role but unable to perform it accordingly. He mentioned that he is familiar with the prevailing disparities in the society and their reflection in school. He added, "*There are uneven inputs from the government even though there are disparities among students" (Field note: 28 April, 2013)*.

One of the education stakeholders (head teachers) involved in educational management mentioned the existing differences among students with their achievements, displaying his understanding about the disparities. He described the situation in the following manner;

> *Students in my school are from different families. These families have different income level, language they spoke at home, education level and cultural practices. Most of my students did not receive academic support from their parents. They are in school even though they have several problems in their house including the problems of food (Field note: 29 April, 2013).*

Likewise, two other educational stakeholders (head teacher and school management committee member) at management level realized the disparities in the distribution of wealth and opportunities, along with the effects of this in education. They mentioned that there are people in the society, of which children could not continue their education due to poverty. They further claimed; *"Children of both the rich and poor family receive the same sort of benefits; no additional benefits are given to the poor family children" (Field note: 09 April, 2013)*.

The concept of awareness and understanding, as argued by Jones, Datta, and Jones (2009) will certainly help people to develop their ability on judging the priorities, making rational decisions and developing sensitivity on valuing money and using it in the best possible way. However, people's understanding alone may not be enough to formulate the optimum and most appropriate policies, but it certainly makes them active participants, influential to lobby for the strengthening of these policies. If there is good understanding on the relationships between policies and their impacts on social outcomes, more attention will certainly be given to the financing policies. As a corollary, such policies not only help to allocate or reallocate public resources to certain areas or groups, they will equally create more opportunities and benefits to the targeted people thereby empowering these groups in terms of education, health and social aspects (UNDP, 2009).

With reference to the concepts on awareness presented in the conceptual framework of this study, the level of understanding affects the decision making, therefore, it is considered important to develop this understanding among persons. It can also play a crucial role while analyzing the existing policies on efficiency and formulating new ones. Understanding is therefore the first step for active involvement in the policy improvement. This is why qualitative methods have been deployed to ensure an in depth understanding of people’s level of awareness and perception. During the primary data collection, it appeared that there are mixed understandings among policy makers, experts and practitioners about the disparities. This indicates that the context within which people are working shapes the understanding; the responses were therefore treated context specific during the analysis. All the respondents agreed on the persistent disparities being eminent in the education system, although they defined it differently.

Understanding the different dimensions of disparities and embedding measures into the policies to address them are two important aspects of ensuring equity in education. The former denotes the theoretical understanding while the latter indicates the practical aspect. It validates the perception of continued disparities within the education system. In order to be able to also validate the reasons why these disparities remain present, it is needed to look into the composure and architecture of these disparities.

Architecture of Disparities

Different dimensions of gender, race, ethnicity, language, location, marginalization, disability, culture, poverty, etc. can be used to examine the disparities in education. These aspects are associated with the person and remain either in stand-alone form or in combination of two or more. For example, a child who does not go to school could be barred from doing so due to poverty, socially marginalization, geographically isolation and remoteness, or disability or poor health status. In my study, however, I have only focused my attention on four dimensions of equity as discussed in chapter five and chapter six.

Social Structure

Disparities are the results that appeared because of inadequate interventions for addressing the differences. Reimer (2005) discussed two sources of inequity in education; these are from education system's structure and practices, and students' ethno-cultural and socio-economic context. Views of one of the academia having 20 years of teaching experience in the University (Education discipline) are similar with Reimer's (2005) view. She further reiterated, "*Inequities in society are created because of social structure, individual differences, family backgrounds and*

capacities. These will have major roles to shape and expand the opportunities. State interventions will be helpful to improve the situation" (Field note: 15 April, 2013).

The World Bank (2006) mentioned how wealth distribution patterns in the society expand or shape the opportunities of a person. Children from families of different socio economic statuses therefore do not have equal opportunities for education (The World Bank, 2006). The same report further mentioned that such opportunities are strongly correlated with other dimensions (caste, parents' income and education, urban or rural location and gender), where a child is born or lives. Individuals only have control over such circumstances to a certain extent, which can cause inequitable situations to continue. Statistically, it is seen that children from low-income communities and regions face challenges for access to and completion of primary education (CBS, 2011). Reimer (2005) also stressed that on the roles of students' background on their achievements where economic and social realities will create inequalities in life-time income; therefore, school alone cannot produce economic equity in the society. How the socio-economic background plays a role in achievement of a group is evident in the findings of Nepal Youth and Adolescent Survey 2011. One of the findings of the survey report highlights the positive correlation between school dropout and socio-economic status of students where dropout rates are higher for Dalit and religious minority groups as compared to others (MOHP, 2011a). An academia (having more than 20 years of teaching experience in University) believed "*Disparities are common in the Nepalese Education System because of the system - we people" (Field note: 25 April, 2013)*. He further reiterated,

> *People's income and education level as well as accessibility to education facilities are uneven, therefore there are inequities in the societies, and we have also been providing almost uniform input and processes to schools and*

students, thereby ultimately resulting uneven outcomes in the education system (Field note: 25 April, 2013).

A joint secretary working in a policy making institution (NPC) also agreed with the prevailing disparities in education system in terms of inputs, processes and outcomes. These are mostly because of social structures and partly because of resource management and implementation. He further elaborated;

Uneven distribution of wealth in the society means that children's family background is also uneven. But schools have been receiving almost uniform support which is based on number of children, in most cases. Inputs to schools are almost uniform or blanket irrespective of disparities among children (Field note: 17 April, 2013).

Disparities are common in Nepalese societies because of socio-economic structures and hierarchies (The World Bank & DFID, 2006). Hence, such structures play a prominent role in continuing the existing disparities in terms of gender, geographical areas and economic quintile groups.

(Mis)Management of the Existing Resources

From the review of educational policies and programs in chapter four, I have found that most of the existing programs of primary education address the concerns through a scope of horizontal equity. To address the concerns of gender, geographical location and poverty, some measures have already been introduced. The concern my respondents raised is that realignment of the existing resources could produce more results than what is currently happening. One of the policy implementers (working for the National Planning Commission) highlighted the reason responsible for creating disparities in the education as the mismanagement of resources. Academia also agreed

with this notion. They strongly cited about the *"mismanagement of public resources"* for continuing the disparities *(Field note: 28 April, 2013).*

Questions on Policy in Terms of Relevancy and Appropriateness

Policies are formulated for improving the situations through transparent and objective actions of authorities (Sapru, 2000). It means benefits and reciprocal effects of the proposed policies should be analyzed before finalizing them. Of course, there could be adverse effects of any policy but it should be decided on the assumptions that the benefits are higher than the costs of adverse effects. One of the experts provided an example of scholarships in the following manner:

> *In the beginning only 50 percent of the primary education enrolled girls received the scholarships. Later on Government declared scholarships to all girls studying in community primary schools but the amounts given to them remained the same. A small amount to all would add little value to receivers and such policy does not address the concerns of vertical equity. There are seventeen different types of scholarships to students studying in public schools (Field note: 23 April, 2013).*

Policy makers also agreed with this situation of expanding scholarships without further analysis of the situation and further interaction on it. They further indicated that every government has added new programs rather than analyzing the existing one because such *"analysis may be lengthy and sometimes risky too" (Policy Implementer's view, Field note: 02 April, 2013)*. As argued by Perry, Amadeo, Fletcher, and Walker (2010), the frequent changes of policies could be because of changes in the political arena and the growth of the intermediary bodies. In the mean time, they also highlighted the gaps between evidence and policy making, causing many of the changes in policy not to be backed by evidence.

From the above situation, it is difficult to conclude that the government is serious and sensitive to evaluate the impact of the previous policies before formulating new ones. In addition, some respondents' concern was policy itself reproduces disparities in education. Policies are to ensure better outcomes for the poor (Jones, Datta, & Jones, 2009) but it may widen the gaps between poor and rich because of inappropriate incentives structure and mechanisms to implement actions. On the other hand, they mentioned that the program design and budget allocations will have major impacts on the poor and the marginalized. School mapping exercise and funding schools based on the number of students were one of the frequently cited examples by most of the respondents. One of the academia argued *"There are differences between women of different part of the country (such as mountain, Terai and hill) and different groups, but State always allocated same amount of resources mean that State did not recognize the differences they do have" (Field note: 15 April, 2013).*

Policy makers also agreed with the ideas raised by the academia. They recognized that there are differences among gender, areas and economic groups but the existing policies are seen less able to address their concerns. Schools located in remote areas have fewer students so as to receive few teachers and small grants from government as compared to the larger schools located in urban and urban centered areas.

Therefore, existing policies, in some cases, do not seem supportive for reducing the disparities in education. This was acknowledged by one of the policy implementers working in the Department of Education. In the question of issues of equity in education, one of the policy makers also agreed on the different reasons, mentioned above, for creating disparities in the education system. Absence of adequate funding to targeted groups and remedial support for such children's learning

increased the disparity regarding their learning outcomes. A joint secretary further added;

> *Disparities in the societies and education system are often widened because of inadequate interventions to the needy and disadvantaged groups. The lump sum efforts or blanket approach do not create benefits to the poor. One aspect could be amount of budget made available to education whereas the second could be management of available budget (Field note: 18 April, 2013).*

When presented to the academia (teaching experience of more than 20 years in university), the question about the focus of the policies with regard to responding to contemporary equity concerns was heavily criticized. His views on the policy making process in Nepal were in line with the concept raised by Osman (n.d.) in Asian Affairs and Perry, Amadeo, Fletcher, and Walker (2010), which is highly centralized with inadequate analysis of the situation. The existing scholarship remained as one of the frequently cited examples from all respondents. It followed the group targeted method rather than poverty targeting method. He blamed the government for neither bringing the special measures by making comprehensive analysis of the situation for the children of the poorest of the poor and children with disability, nor discussing on it. He further reiterated, "*There are insufficient measures to address the issues of horizontal equity. It looks like Government is not thinking about the vertical equity and equality of opportunity" (Field note: 15 March, 2013)*.

During the discussion, it was found that policy makers agreed on the inadequacy of interaction to design the policies and interventions to address the concerns of equity. Everybody pointed out towards the system - not being able to bring all stakeholders in the discussion. One of the policy makers told that weak

implementation because of different understanding on policies prevent the translation of actual intents of the existing policies into practice. In the mean time, he also highlighted the gradual improvements in the system to bring the stakeholders into this process. One of the policy implementers raised the issues of low level of interaction while designing policies and program development. He said, *"Still there are issues - this is mostly because of understanding and partly because of structural problems - interventions are designed group targeting model rather than poverty or socio-economic conditions of households" (Field note: 10 April, 2013)*.

The interaction with the school level personnel (head teacher and SMC) showed that they are hardly consulted during new policy formulation. Most of them denied their *"involvement in the policy formulation process" (Head Teacher's view, Field Note: 09 April, 2013)*. The power to make a decision on resources allocation and reallocation determines the actors and place of policy formulation (Jones, Datta, & Jones, 2009). Though school management committee has the authority in school management affairs they have little authority to reallocate the grants given by the government. Although schools are acting as a street level bureaucracy (Sutton, 1999), they have little influence on the policy making process and evaluation of the previous policies. They exercise a considerable flexibility in implementing the instructions. Being the front line service providers, their experience would be valuable while formulating new policies (Perry, Amadeo, Fletcher, & Walker, 2010) but *"this hardly happens" (Head Teacher's view, Field note: 09 April, 2013)*. Schools have interpreted the policies from their own perceptions and seen the effects in their own ways.

During the discussion school level personnel raised that they are hardly consulted while formulating the new policies. Particularly, school head teachers and members of School Management Committee raised the issues of almost nil

participation in the policy process. Of course, practically, each and every school cannot be involved in the consultation process. However, some mechanism can be developed to ensure the representative participation in a systematic manner. It is evident that field level experience not only adds value to developing new policies it equally supports in making the policies more contextual and relevant. On the other hand, senior level policy makers argued that sometimes policies are formulated with little field consultation, as they claimed *'we people are from the field*' (Field note: 18 April, 2013). This raises the question whether an appropriate bottom up approach ensuring stakeholder consultation and participation is lacking during policy formulation. Of course, this discourse is opposed by theories of policy formulation which follow a top down approach, especially supply driven perspectives (Sapru, 2000).

In developing countries like Nepal, not involving schools in the policy formulation process is common and not exceptional. This is also evident from the argument of the practitioners. As argued by one of the officials having experience on budget formulation at the Department of Education, *'some of the policies appeared in the Government's budget speech because the statements of budget speech are considered highly secret*' *(Field note: 10 April, 2013).* It looks interesting that education policies have appeared from the budget speech without the knowhow of the practitioners (government officials working on the budget).

Whose values are heard while formulating the policies? The answer could be those voices are heard who are in power (The World Bank, 2006; UNDP, 2009) and their values will play dominant roles. Values and ideologies are playing major roles for shaping the policies (Perry, Amadeo, Fletcher, & Walker, 2010). Both the learning and pressure can come from macro level institutions including international forces

while formulating the policies. In this way, those who are not in power are less influential and they do not have chances for meaningful participation in the policy formulation process. One expert argued in this regard as follows,

> *The policy formulation in Nepal is taken as the decisions of a person or group of people who are in power. Such decisions are highly influenced by the short-term benefits for the ruling party rather than the long term benefits for the country and sustainability. They hardly consult with others. Without a thorough analysis of the existing situation and impacts of previous policies, new policies are being formulated. So there are several examples of inconsistencies among the policies (Field note: 20 March, 2013).*

Head teachers and SMC members are at the bottom of the education institution hierarchies therefore they do have little chances to participate in this process. This means that their values are hardly reflected in the policies. In the name of representative consultation, they may be invited in this process to fulfill the populist slogan of participation and bottom up process. This is also supported by evidence from the discussion with one of the SMC members,

> *Sometimes we are invited in the discussion. This is like to share the decisions of the higher authorities. Nobody would like to talk on our actual needs. They ask whatever they need and we are supposed there to respond them. If we asked something they would not be in a position either to reply or accept (Field note: 11 April, 2013).*

One school of thought follows the authoritarian developmentalism for development (Hyden, 2008). It believes State as the principle institutional mechanism for brining change and development. Such idea strengthened the need of strong State for bringing changes through policies. The ideas of centrally declared policies are

under this school of thoughts. Knowingly or unknowingly some of the policies are formulated through this principle in Nepal.

Of course, each approach of policy formulation has its own merits and demerits. Practically one cannot follow or apply all the approaches. Decisions makers prefer to use or follow the short and quick method because they want to show the results in a short period of time. In other words, they want to see the results of their values imposed through policies. But people prefer to be involved in the process because they perceive that their problems will be heard and solved if they are involved in the process. One of the examples raised by the SMC members uncovered the whole situation. He argued,

> *In the past, we did not know the value of education. In a way, we were outside the education system. Gradually we realized the need and importance of education and decided to educate our children even though we are poor and we have several problems. For this we need school nearby our locality. We want to upgrade our school. But District Education Office did not accept our request. We need teachers, we need buildings and furniture but government is teaching us about new policy of not opening new schools. Then how can we teach our children? (Field note: 11 April, 2013).*

From the discussion, it is seen that in spite of varied approaches to policy formulation, top down approach has been used with little consultation with the concerned personnel. Hierarchies played dominant role while formulating the policies means technical analyses are rarely done. Policies are formulated without analyzing financial implications with the purpose of gaining short term benefits and populist slogans. This raised the concerns of inconsistencies among policies and frequent changes of policies. It is seen that the Center plays major roles as compared to the

local level, such as school. Schools are the receivers of the instructions from the centre. Schools voices are hardly heard. Power shapes the roles for some groups and expands them to others. This is common to the poor people as well because they are at the bottom position of the social structure. Without making schools ready to implement the policies, desired results cannot be achieved.

Gaps in Policies and Practices (Poor Implementation)

Although policy documents have endorsed (as mentioned in chapter two and chapter four) education as fundamental rights and financing policies are formulated in line with the international treaties, covenants and declarations to address the equity concerns, they are still inadequate and insufficient (UNDP, 2009). Three Year Plan (NPC, 2010) claims that programs and activities are being designed to support the disadvantaged groups as provisioned in these international agreements, particularly Education for All and Millennium Development Goals. As a response of the commitment made by the country in international forum, Government of Nepal has formulated and revised policies. From the discussion it was clarified who sets the agendas. Academia cited,

> *The prime concern was how these policies are designed and formulated. Who sets the agendas and how the meaningful participation of different stakeholders was ensured in policy formulation and implementation (Field note: 23 April 2013).*

Another frequently cited reason of the disparities in primary education was poor implementation of the existing programs and activities. There are some measures to address the equity concerns in the existing programs but these are seen unable to provide benefits to the poor. Academia further claimed *"poor implementation of the services provisioned in the annual work plan and budget" (Field note: 25 April, 2013)*

indicates the services targeted for poor people are not delivered effectively and efficiently.

As mentioned earlier, small amounts of "scholarships to all" match with the concept of horizontal equity but this amount is nominal and far beyond the concept of vertical equity. One of the head teachers working in a secondary school (grade 1-12) pointed out the weak implementation mechanism of the government system that is perpetuating inequities in the long run. The examples he gave were:*"Inadequate amount of scholarships, small amount of scholarships to needy children, shortage of teachers (in some cases excess number of teachers) and no extra support for children from poorer groups". (Field note: 14 April, 2013).*

One of the policy makers highlighted the situation of policy implementation by taking an example from School Sector Reform Plan (2009/10-15/16). He put forward, *"several policies of SSRP such as restructuring of school education, formation of National Examination Board, and restructuring of teacher management system in Nepal did not happen because of the absence of Act and Regulation" (Field note: 10 April, 2013).*

For education process, multiple interest groups are involved. These act as power centers with different interest. They all lobby to fulfill their interest. Resistance from any group in the implementation of policies may affect negatively. One of the policy implementers provided an example of Community Managed School despite its importance and relevancy. The resistance from teacher community worked as a major barrier for its implementation.

Capacity in terms of individual, institution and system is important for the smooth implementation of the programs. Without it, the resources cannot produce the desired results. The discussion above shows that some of the policies are formulated

without adequate discourse on impacts and analysis of the capacities. Academia raised the concerns of free education, teacher management and head teacher management in terms of capacities. On the other hand, Education Act provides ample authorities to School Management Committee; it was done with the notion of devolution of authorities. One of the policy implementers told "*SMCs are unable to recognize their power because of their capacities; therefore, questions are raised on the results of the resources allocated to schools*" *(Field note: 13 April 2013)*.

One of the policy makers raised the concern of relevancy and context specific policies. If policies are not specific and contextual, these cannot be implemented. He provided an example of teacher management. In some cases, policies are not consistent, such as rahat teachers, Per Capita Funding (PCF) teachers, and teachers from local sources. Academia raised the concern of inadequate preparation of government in the policy making and implementing process in the following way;

> *Poor coordination within and across government agencies, inadequate budgets, absence of integrated approach, poor monitoring and weak capacity of the system are some of the characteristics of governance, these are also challenges. Populist policies are declared without adequate considerations on legal and institutional frameworks. All these are enabling environment for the policy making and implementation, without ensuring them policies will not be implemented. (Field note: 28 March, 2013).*

When I asked questions of how far policies are rigid? Can a school develop local policies relevant to them? School head teacher explained it in different ways. This could be either because of their understanding or having a sufficient amount of support at the local level. One of the visited school provided scholarships to all primary students in spite of the scholarships to targeted groups such as Dalit and girls.

He claimed, '*how can I resist the pressure from different people if there are more poor people than the Dalit children*?' *(Field note: 09 April, 2013)*. But he forgot that he has to implement the policies as approved by the Government of Nepal. He preferred to use pleasing culture rather than being strict on policy implementation. The situation of scholarship distribution is more or less similar in other schools where I visited. Head teachers did not follow the criteria for scholarship distribution as prescribed by the Department of Education, on the contrary, they blamed Government for scholarship policy which followed group targeting approach instead of poverty targeting approach *(Field note: 09 April, 2013).* As in Alford's theory of structural interests in health care (Osman, n.d.), existing socio-political institutions provide the source of power to institutions, schools in this case. Multiple sources of informal power centers have also been playing important roles to weaken the State institutions for monitoring and support. In this regard, weak state capacity means informal power centers becoming stronger. In this way, State institutions can be taken as weak in Nepal.

The question whether local people have authority to redefine the policies as per their local context and situation was raised by one of the head teachers with regard to the distribution process of scholarship. He further added *"We received scholarship for Dalit children, but there were other poorer children than Dalit children. Therefore we provided scholarships to these poorer children as well. Scholarship should be provided to poor children rather than groups" (Field note: 29 April, 2013).*

As a nature of the unitary governance structure, decision making in Nepal is highly centralized. State's role is a key in policy formulation. They offer something to others and others have to accept and follow it. It is also assumed that school should follow the criteria given by the centre. From the existing structure, schools have little control over the resources they received from the government. They receive most of

the grants under earmarked budget heading with defined unit costs and processes. As a result, their autonomy in resource mobilization is limited.

The discussion above raised the issue of insufficient preparation or efforts to implement the policies. Without careful attention on creating enabling environment, policy statement cannot be implemented and this will not produce the desire results even though policies are effective and relevant. To produce the desire results, both formulating good policies and designing appropriate enabling environment are necessary. Otherwise, policies can raise people's expectation only. The rent seeking behavior of the authorities, weak implementation mechanism, resistance to change from inside and outside the system and commitments of the leadership are the by-products of the social system which can act as major barriers for preventing smooth implementation of policies. The discussion explores the different forces of enabling conditions, without considerations on them policy implementation would not be effective and efficient.

Influence of Pressure Groups

Nepalese society is pluralistic in nature. Social institutions are weak and are yet to be evolved into professional institutions taking responsibility and being accountable for developmental works. These institutions have weak capacity and ability to influence people and State machineries. Because of weak institutions, interest groups can get a chance to play important roles to formulate the policies through pressures in favor of them. Imbalances in the presence of different groups may affect the benefits of the public policies. SMC and head teachers are also interest groups but they do not have their networks; as a result they look unable to put pressure on the government during the policy formulation. Community managed school network is there but it is not functioning as expected. One of the SMC

members stated that *"Nobody listens to us because we are unable to put pressure to the government. The level of consultation will depend upon how much strengths you have. Teacher union can create pressure to the Government for their benefits" (Field note: 24 April, 2013).*

Although decentralized political structure helps to create multiple power centers and to organize people in different institutions, it lacks proper networks in Nepal. And authority without capacity does not work. Several cases of misuse of funds are recorded in the audit reports.

In the society, different power centers exist. All these will have a complex interrelationship among them. Generally, dominant groups exercise the power in the society (Osman, n.d.; The World Bank, 2006). This is also common in the socio-political structure. In the mega social structure, dominant groups act as a player because they offer something to others, while second group has the options of either to accept or reject (The World Bank, 2006). Acceptance leads to implementation even though it may provide fewer benefits to the receivers. But rejection may lead to further disadvantage such as zero pay off. Experts argued that power shapes the decision making authority which is common in Nepal as well. They try to capture the State mechanism and formulate policies in such a way to serve their purposes. Their interests will highly be influential while formulating the policies (Osman, n.d.). On the other hand, policies are only the means to change the power relations in the society (The World Bank, 2006). Policies can offer incentives to poorer or disadvantaged groups in the mean time they can impose certain taxing structure to the rich people.

These insights provided further direction on the base that there are different understandings on equity and its associated aspects. Different understandings often

create confusion among the implementers. This will have negative implications on the smooth implementation of the policies. In the central level, the term equity, its relation in financing policies and contribution to social indicators are adequately defined but these messages are yet to be delivered at the school level, which is the front line service delivery unit. It seems that schools are implementing different activities without clearly internalizing the intents of the policies and programs.

Social norms and values maintain discipline in the society and assign certain roles to certain groups or peoples, provide different power and status to different person, and policies are influenced by the values of the society. This can be seen as the 'rule of the game' (Hyden, 2008). Values and beliefs will play major roles in the choices made during policy formation (Perry, Amadeo, Fletcher, & Walker, 2010). With regard to the persistence of unequal opportunities prevalent in the society, the data have shown that they are shaped and influenced by several aspects of these societies. Furthermore, they are also interrelated with each other; altering one may lead to the improvement or degradation in others. The breaking of the vicious circle of growing inequities can only be made possible when an enabling environment is created through the formulation of equitable public policies.

A person is an element or a part of a social structure. The values, norms and discipline of the social system also affect the individual's access to opportunities. These structural aspects could be beneficial to some, and at the same time a barrier for others (The World Bank, 2006). Education is a sub-system of a mega social structure. These social structures either directly or indirectly guide the public policies as well as set the benefit structures for people. One of the policy implementers working in the Department of Education explained how structural aspects limit individual's future. He said "*Social norms, discipline and values are unseen elements but they have*

powerful roles to play in public policies"(Field note: 15 March, 2013). In the mean time, formal and informal institutions also shape the policies (Hyden, 2008). In such a context, the major concern is who sets the agenda because policies are influenced by their values. These values will be supporting for some and make them easy to grasp the opportunities.

From the discussion, it appeared that different actors influence the policy process through their inherent power, values and beliefs. But the dominant groups have been more influential than others. Similarly, the formal and informal institutions also appeared in the policy process. The discussion in the earlier chapter shows that disparities are higher in remote and rural areas because they have less influence on the policy process.

From the discussion with the respondents, I noticed a weak level of accountability. The existing resources may add more value when being utilized if proper accountability mechanisms are in place. Another observation was that due to the absence of adequate ownership a blaming culture was seen visible. One of the policy makers clearly mentioned *"We know the relations but, of course, policy formulation falls under the jurisdiction of political leaders and our role is to provide technical support in the process" (Field note: 29 March, 2013)*. Likewise, policy implementers do not like to take the responsibility of policy formulation at present, but they further strongly criticized "*the existing policy formulation process in Nepal because nobody would like to break the ongoing structure, all are more or less the same*" *(Field note: 26 March, 2013).* The discussions with them show that they know the relations but it is unclear whether they are unable to change or not willing to make a change. The policy formulation mechanism and understandings among the key

actors are there but things are not happening as expected. There is a mismatch between knowing and doing things.

Less Participation Leading Towards Weak Ownership

Public policy formulation is considered an interactive process, rather than only technical function (Osman, n.d.). This process is highly influenced by the socio-political and environmental forces (Jones, Datta & Jones, 2009). They further mentioned that multiple actors and interest groups try to influence policy through different means. Hence, different approaches are seen useful to formulate the policies (Osman, n.d.). Of them political system model can bring views of all actors into one platforms. Hence, interactions or discourses among different actors and forces are considered inevitable while formulating the policies. Discourse is a way of thinking and outlook, a system of values and priorities, and dialogue, language and conversation (Sutton, 1999). It is a situation where a group of experts who have access to information, share and discuss ideas if they do not have access to this information, they will be excluded.

The discussion with the practitioners revealed the realities of top secret approach of policy formulation. However, one of the middle level managers working for the Ministry of Finance defended it and provided '*the examples of stock taking from the concerned ministries then high level team within the Ministry of Finance will only finalize the financing policies in some cases' (Field note: 28 April, 2013)*. He agreed on the 'top down approach of policy formulation' (Hyden, 2008) in exceptional cases. It is obvious that the political agendas of ruling political parties have been appearing as public policy, from a supply driven perspectives with top secret approach. Respondents provided examples of policies in some of the scholarships,

grants to schools (entrusted under public trust) and stopping the permission to open new schools that appeared from such processes.

Scholars explain certain procedures or protocol for policy formulation (Sapru, 2000). The review of the policy formulation practices in Nepal shows *"the use of piecemeal or fragmented approaches rather than integrated model" (Policy Implementer's view, Field note: 02 April, 2013)*. Experts also agreed that principally, it is agreed that children remain at the core of equity target but are usually missed out when it come to the practice. Till now *"no discourse is held on equity issue in an integrated manner" (Expert's view, Field note: 15 April, 2013; and Policy Implementer's view, Field note: 02 April 2013)* that limits the face to face interaction among policy makers, experts, practitioners and implementers. The end result of this process is different understanding about the policies in terms of equities.

The major concern in the field of policy process is who designs policies or who holds power, and how these policies are designed. Policies are the results or outcomes of the interactions of the dominant political structure and dominant groups of the society (The World Bank, 2006). As mentioned earlier, dominant groups try to impose their values through public policies. The capacities of the poor and disadvantaged groups to engage in the public policy process also determine the degree of opportunities for them from policies. The capacity of the sub-ordinate groups is highly influenced by their economic capital (their education and economic resources), their capacity to aspire and the closely associated capacity to organize.

Policies are aimed to bring reform in the education system. Implementation of policies refer to putting actions into practice, these actions can act as interventions in the specific areas. Interventions also help to develop confidence and assertiveness helps the disadvantaged groups (The World Bank, 2006). This makes them able to

work against the internalization of ‘disadvantagedness’. They gradually gain power in the social realm and move towards the powerful groups in the society. And society would acknowledge them as empowered groups in economic, social and political realms. Therefore, policies will have influential roles to play for empowering the disadvantaged groups if they are properly designed, implemented and monitored.

From the discussion with the respondents, I have found that socio-economic structure, inequitable policies, management of public resources, poor implementation of the existing provisions, weak accountability practices, and frequent changes of policies remained as major reasons of continued disparities in education. In most of the discussions, socio-economic structure was highlighted as a major factor contributing to the existing disparities. After having explored the reasons of the continued disparities in the primary education in terms of gender, economic groups and geographical areas, I focused on effects of policies on educational and social outcomes.

Effects of Policies

Different scholars have defined development differently ranging from infrastructure development to positive change in people's well being (Willis, 2005). Of course, it can be defined from both quantitative and qualitative manners. But it could not happen in a linear stage as argued by Rostow's growth model (Willis, 2005). Scholars have also showed the relations between education and development. Theoretically, education provides benefits to individual and society (UNESCO, 2009). And such benefits create changes in the society through social goods such as education, literacy, child mortality rate, and people's health (CBS, 2011). All these changes (positive direction) are termed as development. In this study, some selected social indicators are used as a proxy measure of the development of society to show

the relationships among the level of education, benefits to individual and society, and changes in people's well being. The quality and quantity of education is largely influenced by the financing policies employed by a country.

Public policies are the sources of changes (The World Bank, 2006) which require time, resources and efforts. To bring about the desire changes in the society including education, the first requirement is the formulation of appropriate policies. In Education, as a major component of government spending, policies are for ensuring the greater opportunity for individuals (Perry, Amadeo, Fletcher, & Walker, 2010). Policies are the foundations to design relevant interventions and incentive structures. During the discussion, I have found that policy makers and implementers agreed with these ideas. But it is hard to say how much public policies have contributed to positive changes in the society. Policy implementers claimed that changes in education indicators such as net enrolment rates, participation rates, cycle completion rates depend on the availability of budget. But one of the academia did not agree with this. She further added, *"It is difficult to say exactly how much contribution has been played by the financing policies to improve the social indicators" (Field note: 15 April, 2013)*.

Of different respondents, experts clearly saw the impact of policies on social indicators. They highlighted the need of a thorough analysis of the existing situation through equity lenses with patience and time for understanding their relations. One of the experts argued "*series of consultation on intents and possible effects (positive and negative) of proposed policies/policies with the beneficiaries enrich the relevancy and their implementation. But this hardly happened in Nepal*" *(Field note: 15 March, 2013)*. Such analysis will only be possible if we have strong information base, institutional mechanism and capacity (Sapru, 2000). All these help to develop

understanding on the past trends and possible forecast, as well as cause and effect relationships. Sometimes such analysis may provide information against the proposed policies. Thus, the policy formulation process is an equally hard and challenging task, but "*policy formulations in Nepal are taking place as a quick fix manner with little analysis of the situation" (Expert's view, Field note: 15 March, 2013)*.

The discussions with the academia help to dig out the positive roles of education in the society. One of the experts argued *'there is correlation between increased allocation to education and improved access to and quality of education along with the management aspects' (Field note: 05 April, 2013)*. She further explained "*Financing policies provide more benefits and create opportunities to the targeted groups. As a result, people will be empowered which is the product of education, health, income and voice."*

At the school level, it would also be high to expect that they can explain the relations between policies and impacts on the society. But they nicely explained that if we increase the incentives to the poor there is a high chance of retaining their children in schools. One of the school head teachers provided evidence on it by picking up one example from his student studying in the primary level. But he also blamed the government about the *"weak mechanism to formulate policies and their relations for the improvements in situation" (Field note: 29 April, 2013)*.

Of course, there are positive roles of education in the social development and such development can be measured through different social indicators. These indicators can be used as proxy indicators of development. Theoretically, financing policies can shape the education system and education can create changes in the society.

Chapter Summary

Quantitative analyses done in chapter five and chapter six revealed that progress with regard to strengthening equity in primary education in Nepal is visible at the national level. Such progress can be equated with the presence and enforcement of equitable policies to some extent. However, there are structural disparities among groups and regions. This statement coincides with the views of the key respondents. An equitable education system is producing the positive changes in the society through direct contribution and spillover effects. Policies are broad statements that include future goals and aspirations; their translation into implementation is not straight forward and has been revealed to be context specific. Once policies are formulated they both act and demand certain enabling environment, such as legal framework, institutional system, programs with budget, and a political and social environment to implement the actions. Therefore, ability to design the appropriate and relevant actions is equally important for the effective implementation of policies. For creating synergy, integrated approach is preferable for policies formulation and implementation. In order to implement the actual intention of the policy more precisely, enabling environment is a must.

Meaningful participation and engagement of concerned stakeholders is the key condition while developing the policy and its implementation (Sapru, 2000). Before ensuring this, cooperation and coordination within and across government agencies are obligatory. Another enabling condition is the management of legal infrastructure to legitimize the implementation process (Sapru, 2000). Other key enablers are linkage between policies and budgets, effective governance, capacity to functions and monitoring mechanism. Partnership with the non governmental agencies and civil

society organizations is also necessary to bring synergy and utilize resources more effectively.

In this way, this chapter explored the views, perceptions and understandings of the key respondents on equity in education financing policies, their implementation and their relations with the social change. The data revealed that there are mixed understandings of stakeholders on disparities in education.

The next chapter (chapter eight) will blend the findings of both the analyses (quantitative analysis of chapters five and six, and qualitative analysis of chapter seven) with theoretical perspectives.

CHAPTER VIII

EQUITY IN EDUCATION FINANCING POLICIES AND ITS CONTRIBUTION TO SOCIAL CHANGE

Every person has a right to access his or her basic human rights. In order to ensure such environment, unequal access to opportunities tends to create classes of people with different capacities in the society and thus some could achieve the desired quality of life whereas the others could never attain it. Such differences in opportunities relate with the notion of equity, as explored in this paper, which UNDP (2013) considers an essential part of human development. Although education is regarded as a universal human right in several international and national policy documents, the enjoyment with such rights is heavily conditioned by the lottery of birth and inherited circumstances (UNESCO, 2009), meaning that the number and level of opportunities people have access to widely depends on their gender, place of birth, socio economic status of the household they are born in, ability, ethnicity, etc. The discussion and analysis carried out in previous chapters (Chapters five, six and seven) explored the disparities in access to resources and unequal opportunities for education, and perceptions of stakeholders on disparities. In addition, chapter seven also uncovered the reasons of continued disparities and the effects of (financing) policies in achieving equity in education and social development.

As defined in earlier chapters, equity in education in the context of Nepal relates with the concept of ensuring that all children have an opportunity to complete primary education with their full potential, without any discrimination and bias. For this, fairness and inclusive environment in the personal and social circumstances are

required. UNESCO (2010) highlights the need of the fair and inclusive education system to ensure quality education for all. It is also equally true that inappropriate designs of policies and practices in education system reproduce educational inequalities and disparities; they act as so called ‘inequality traps’ (The World Bank, 2006a). UNDP (2013) mentions that rise in income inequality in some of the countries reflect a failure of national fiscal system, particularly taxation systems. It also indicates the role of education in human development (UNSECO, 2005). Hence, quality education for all supported by equitable financing policies can act as an enabling environment for the poor people at large (UNESCO, 2010), then society probably moves ahead with higher productivity and economic growth (UNESCO, 2005).

On the other hand, equity in the education system largely depends upon the different value judgments about how to determine fairness in education financing, which is the ultimate goal of financing systems. Many discussions of equity in education financing policies make use of the concepts of horizontal and vertical equity (Berne & Stiefel, 1999; Sherman & Piorier, 2007). The ultimate aim of such policies is to ensure equal educational opportunities for all. The access and opportunities to education for all should not depend on where one is born, what gender one is, someone's family name, as well as other factors where children have no control such as parental income and gender (UNESCO, 2009). Literatures highlights the relations between inequitable policies (financing) and 'negative impact on individuals' access to education and opportunities (OECD, 2012). Levin (2003) notes in this regard the importance of equity in closing the gaps between groups in the following way;

> Equity is important not only out of a duty of fairness to all members of a society, but also because countries as a whole are better off when the benefits of learning are widely shared and the gaps are minimized between the most and least advantaged. (p. 3)

Previous reviews and analyses show that equitable (financing) policies in Nepal have produced strong progress outcome indicators, such as enrolment, participation, transition to higher grades of education (DOE, 2013; NPC & UNDP, 2013). Implementation of free and compulsory education is a good example of this, promoting the strengthening of equity in terms of access (Sherman & Poirier, 2007; Wößmann & Schütz, 2006). However, national commitment of compulsory primary education by 2015 is unlikely to be achieved (NPC & UNDP, 2013), which means that the education system in Nepal, along with many other countries, will remain to lack equitable provisions. The analyses in the previous chapters also confirmed that there are persistent disparities among groups, locations and economic groups, having a number of causes being responsible for producing such disparities in the primary education of Nepal. With regard to the second part of my research as to why such disparities continue to manifest themselves and how equity in financing policies can contribute to bring about equity in education and social development, the analysis of the findings is presented below.

Discussion on Findings based on the Theoretical Framework

As argued by Rawls (1971), justice is fairness where it is assuring the protection of equal access to rights and opportunities. It also relates with whether justice systems allocate a fair share of benefits to the least advantaged members of the society. This concept is highly valuable in public policies because public policies are the only instruments to share the benefits and burden to people on an equitable base.

The concept of distributive justice relates with the ideas of fair and just (re)distribution of public resources through public policies. Public policies help to (re)distribute the goods and opportunities. It is necessary to examine whether there is a certain hierarchy in these goods and opportunities. In other words, are these goods equally significant when looked through an equity scope? This theory thereby adds contextual relativity to the theoretical framework of this study, distancing itself from the 'one size fits all' approach and allowing for the complexity and diversity of reality to be acknowledged.

Both the theories allow examining the concepts of fairness and justice developed within societies (Cohen, 1986), and encompassing concepts of social choice and justice within them. However, this would provide an incomplete framework for addressing my research questions as it thereby does not consider individuals that somehow have only limited or no access to participate in these societies. In addition, they have needs that have not been identified and addressed in adequate ways through these communitarian processes. It is therefore, both the capability approach and the theory on equality of opportunities have been added to the theoretical framework as well. Robeyns (2006) mentioned that the adaption of this approach is based on the concept of social justice, originated from the work of Rawls. It enables me to look beyond the scope of welfare economics and input and resource based theories when addressing the notion of equity in financial policies. It also attempts to broaden the scope of determining peoples' needs and wants beyond the economic dimension, through also including consideration of how people benefit from decision making processes on moral concepts and utilities (Rowley, 2008; Sen, 1993). The adoption of the capability approach within the theoretical framework of my study allows for a broader concept of well being which was introduced to analyze

and evaluate choices and decisions that affect collectives (Sen, 1993). It also aims to establish an ideal scenario in which everyone is entitled with minimal access to the choice of fulfilling their capabilities strengthens the right based approach within the focus on equity in financial policies. Such capabilities need to be guaranteed by the governing bodies to a minimum level unless people make the choice not to achieve these capabilities. The extent to which people will be helped by the state in having access to these capabilities should be democratically decided and enforced by a national and international legislative framework. However, this does not mean that national interpretations of these capabilities will be the same across the globe. The practical implications of enforcing these capabilities can differ, thereby recognizing cultural diversity (Robeyns, 2006).

Public financial policies also play a major role within the equality of opportunities framework. Wößmann and Schütz (2006) explored the equality of opportunities. They identified that this should only include the opportunities that are within one's control (efforts). As per the ideas of equality of opportunity, a person's expected educational outcome should be a function only of her/his effort, but not of her/his circumstances. Such outcomes can only be possible if State adequately invests in education to address these differences. It also raises the question of alternative use of the available money in the most equitable way. Hence the concept of equity relates with the equality of opportunity that would call for an equal access to education independent of students' circumstances. In addition, it advocates for an equal treatment of all students independent of their circumstances (Wößmann & Schütz, 2006).

The findings from analyzing the qualitative and quantitative data in the previous chapters shows that there has been an overall increase in educational

outcomes for people in Nepal, as well as overall quality of life outcomes. The improvements have however not been equally distributed. Moreover, data relating to terms of socio economic, geographic and gender related indicators display that traditional disparities persist. Taking the theoretical framework that has been provided in chapter two into account, it appears that equitable (financing) policies relate with the notion of justice and fairness as presented by the scholars in this paper. The insights from the theoretical discussion provide a framework of policies that will have effects on individual and socio-economic structure (Wößmann & Schütz, 2006). In the education system, it can be argued that such policies (financing) can focus on inputs, processes and outcome levels. From both the quantitative and qualitative data presented in this paper, it shows that currently financial policies have taken equity increasingly into account. This can also be seen in terms of the increased proportion of the national budget being reserved for education.

In developed countries, the debates of equity in education system focus on outcomes, for example in students' achievements (Reimer, 2005). But the situation in developing and under-developed countries is different. There is a tendency to prioritize inputs and processes. In the case of Nepal, the efforts are concentrated on inputs and processes, such as ensuring the minimum basic facilities in schools, supply of trained and competent teachers, supply of quality curricular materials and enabling home environments (NPC, 2013). In addition to educating children, all these interventions will also have additional effects on the local community, such as formation of human capitals, creation of capitals, increase of infrastructure, and awareness rising on health, participation and civic rights which ultimately pay back to the local community as a whole (Bauer & Vorell, 2010). All these have positive effects on the accumulation of capitals at the local level, which are seen at the local

level of Nepal (NPC, 2013). However, existing policies and practices are inadequate to ensure the basic requirements in schools from supply domains meaning that there are inequities in the inputs and processes (NPC & UNDP, 2013), then it certainly perpetuates the inequalities in the outcomes (The World Bank, 2006). Both the qualitative and quantitative research findings of this study confirm that although peoples' life outcomes have improved in disproportional ways, the overall disparity has continued. The hill areas have remained to have a high HDI, whereas the mountain areas have remained to have the lowest HDI. However, the Mountain areas have achieved highest increment in HDI value as compared to other areas from 2001 to 2006.

As argued earlier, it is believed that an equitable education system - characterized as fair and inclusive (OECD, 2012; UNESCO, 2010) can support all children to acquire certain levels of competencies irrespective of differences they do have by offering treatments as per their needs. In the mean time, it also respects the socio-economic and cultural circumstances though it is difficult to quantify. Hence, an equitable education system can address the effects of individual differences (UNESCO, 2005) and the effects of broader social and economic inequalities. The existing policies and practices are helpful to address the needs of children from poorest of the poor and highly marginalized communities (NPC & UNDP, 2013).

Both the concepts of horizontal and vertical equity are equally important for ensuring the equitable benefits to all which are essential for public policies to be claimed equitable. Besides Berne and Stiefel (1999), the importance of these aspects is also highlighted by King, Swanson, and Sweetland (2005) in the following manner:

> .....equal distribution of resources will not close the achievement (or outcomes) gaps among ethnic and socio-economic groups. This is

> particularly true if the amount of resources distributed equitably is not sufficient to provide the instructional resources required to eliminate those gaps. (p. 2)

Considerations of these equity measures during policy formulation will certainly produce better results with regard to a more in-depth adoption of equity within the rules, regulations and provision. Free primary education to all relates with horizontal equity measures that also demonstrated better results in enrolment and participation in the education processes (CBS, 2011); however, this is still far from the concept of vertical equity measures because the existing provisions of free education hardly cover the indirect and opportunity costs of education. Equity in education financing therefore would need to have the child as a prime unit target of equity, rather than the group (Berne & Stiefel, 1999). However, in the case of Nepal, strategies are applied, focusing on children in groups and regions (locations). The availability of resources and the way they are spent certainly impact student's learning opportunities (OECD, 2012). Absence of vertical equity measures promotes a one size fits all approach, which will not provide benefits to those who are at the bottom of the society in terms of socio-economic status and other forms of marginalization (OECD, 2012), such as physical remoteness. Rebell and Wolff (2006) also argued that inequitable state education finance systems continue to deprive many poor and minority children of the tools necessary to meet minimum learning quality enabling standards.

The analysis of the data show confirms this in terms of more people are illiterate from the poorer segment indicates that their situation is below the norms, they are also suffering from high child mortality, high population growth rate and

high maternal mortality. And, there is a strong relationship between the literate mothers and schooling of children.

Evidences show that there are strong positive relationships between equitable financing policies and equity in education system. Equitable financing policies pay due attention to the horizontal and vertical aspects of equity as well as the individual and social circumstances. Thus, equity remains a primary goal of public policy. But shift may be required in the object of analyses from inputs to processes and finally outcomes. Equitable policies promote a fair education system that treats all pupils equitably and encourages a fair society where essential assets are distributed in accordance with the rules of justice.

Equity in Education Financing and Social Change

Although education is considered a main vehicle for the development of a country, development largely depends upon some macro-level policies such as, inclusive governance system, economic policies, redistribution of benefits, social security and distribution of political power in the society (UNESCO, 2009). These policies will have severe impacts on people, especially poor people depending on the respective policy choice (Chipeta & Schade, 2007). Pro-poor policies, such as free education, micro-credit and community based development scheme can provide large benefits to the poor and vulnerable groups. Moreover, policies will have large impact on the education processes and education affects the process of acquiring knowledge on civil rights, develop skills on health related aspects, and develop their capacity to perform their social and economic activities more effectively (UNESCO, 2009).

Like pro-poor policies, social institutions also play important roles for empowering the capabilities of the poor people (Sen, 1993). Every society creates institutions but one institution differs from another because of power structure existed

in the society (The World Bank, 2006). Such institutions are captured by the elite group and such institutions will play major roles while formulating the public policies. These policies will not allow most of the people to enter profitable line of business. In this situation, the concept of equality for all before the law will be favorable for elite groups rather than for most of the people in the society. For strengthening the social institutions of the poorer groups, equitable public policies (financing) are necessary which can generate opportunities to the poorer people, increase access to assets and lands and employment as well as wage earning. There is a close link between economic and political inequality (The World Bank, 2006). Large inequalities in income and assets further perpetuate the inequalities in the society (UNESCO, 2009). Powerful groups tend to establish control over resources by acquiring the benefits from public spheres. An unequal distribution of power in the society weakens the social institutions of poor and disadvantaged people because they suffer from unbalanced distributions. Hence, income inequality among the groups, unequal distribution of power in the society and becoming the institutions weak are the products of the public policies.

Government can enforce the reward and punishment to certain segment of the society through public policies. In this line, Rebell and Wolff (2006) also discussed the roles of state to incentivize as well. The market can be kept in order and the size of the benefits can be expanded and provided to the poor people by collecting from others through taxes. In this way, economic and fiscal policies have great effects on the distribution and redistribution of assets. Therefore, macro-policies are not only necessary, but are pre-requisites for creating a just, fair and inclusive society. These policies can help to formulate the enabling environment through offering the benefits

to the poor people. Such benefits can be tied up with the motivation towards education.

Every government wants to rise the people's well being and improve social cohesion. For this they focus on attaining social outcomes as identified in national documents, such as development plan and national curriculum. Of them, education and skill can play major roles in attaining these outcomes (OECD, 2012). It is difficult to say exactly how much education can contribute to attain these outcomes. However, there are relationships between educational attainments and social well-beings. Success in achieving outcomes demands more equitable education system together with other policies of health, housing, welfare, local development, justice and social development (UNESCO, 2009). The GMR 2009 includes one of the quotes of late Nelson Mandela, "Education is the most powerful weapons which you can use to change the world", which highlights the importance of education in the social development.

There are studies on how fostering equity in education can contribute to improving economic and social outcomes (UNESCO, 2009). These will also have implications on the social cohesion and mobility, and social development (UNESCO, 2013). OECD (2012) report mentioned that educational failure also imposes high costs (direct and indirect) on individuals and society. It is fair to say that poorly educated people will have low economic capacity to produce, grow and innovate, and all these will impose additional costs on public budgets to deal with the consequences of health, social security and support to establish harmony (OECD, 2013). On the other hand, through education societies inculcate their values and ideas and equip their citizens with necessary skills (UNESCO, 2009). The report (OECD, 2012) further mentions;

> The costs of inequity and school failure are high for individuals and societies, and are expensive and difficult to remedy later, investing in equity in education and in reducing dropout pays off. (p. 23)

Therefore, low performing or out of school children are likely to face low initial and lifetime earnings (The World Bank, 2006) because individuals with lower education levels typically have higher unemployment risks and less stable jobs, thereby becoming more vulnerable in terms of establishing secure livelihoods. They will face more difficulties in adapting themselves to rapidly changing knowledge-based economies, which results higher risks of unemployment (OECD, 2012). They will be less able to participate in the civic and democratic aspects of modern societies (UNESCO, 2009). Individual with skills increase their employability and productivity (UNESCO, 2013). Cognitive skills are also associated with the entrepreneurship and social mobility.

For all these reasons, improving equity in education and reducing barriers to learning outcomes were taken as high priorities in all OECD education policy agendas. The consideration was that education makes a difference in the society and nation as a whole. It is crucial to give people capabilities such as literacy, confidence and attitude (Sen, 1993) which is possible through education. Sen further argues that providing education to poor and marginalized children and young people often means they are more likely to participate in meetings of local political bodies managing resources such as education, health and water. Education can help people participate in democracy in a variety of ways (UNESCO, 2009), including providing them with literacy and other skills to enable them to take part in political discussions and access political information through the media. Studies show that improved education is associated with lower levels of child and maternal mortality rates (UNESCO, 2009).

The following table (Table 26) provides information on the achievement in social indicators across the years. Improvements in these indicators can be equated with the introduction of new policies in line with the notion of equity.

Table 26

Trends in Social Indicators Across Years

S.N.	Indicators	1990	2000	2005	2010
1	Proportion of population below national poverty line	42	38	31	25.4
2	Poverty gap index	-	11.75	7.55	6.1
3	Prevalence of underweight children aged 6-59 months	57	53	43	38.6
4	Net enrolment rate (NER)	64	81	86.8	93.7
5	Survival rate to grade 5	38	63	79.1	77.9
6	Literacy rates of 15-24 years age (total)	49.6	70.1	79.4	86.5
7	GPI in primary level	0.56	0.79	0.90	1.00
8	GPI in secondary	0.43	0.70	0.84	0.93
9	Infant mortality rate	108	64	48	41
10	Under- 5 mortality rate	162	91	61	50
11	Proportion of 1-year old children immunized against miseries	42	71	85	85.6
12	Maternal mortality rate	850	415	281	229
13	Percentage of births attended by skilled birth attendant	7	11	18.7	28.8
14	Contraceptive prevalence rate	24	39	44.2	45
15	Proportion of population using an improved sanitation facility	6	30	39	43

(Adopted from: CBS, 2011; NPC, 2010)

As a result of equitable financing policies to some extent, improvements are seen in the social indicators (NPC, 2013) such as; enrolment, participation and literacy rates. The inter-relationships between public policy, improvements in the educational outcomes and positive changes in the social indicators are clearly visible at the macro-level (Table 26). As claimed by NPC and UNDP (2013), achievements in MDGs have uplifted the development status of country with visible change in the social indicators. Positive changes in the social indicators are the symptoms of the society moving towards its transformation. Hence, the inter-relationship between financing policies, development of primary education and changes in the social

outcomes is visible (given below) as argued by Garff (1999) in the paper which talks about the chain of causation like education→ individual modernity →income.

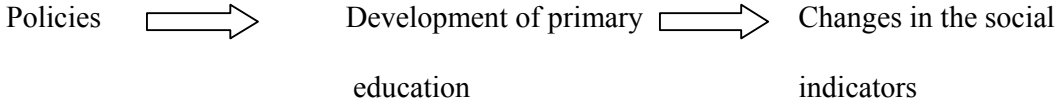


Figure 66. Chain of causation.

The changes (positive direction) in social indicators show that society is moving ahead in the path of development. When it moves ahead and reached to new stage of development, then the social change and transformation occurs (Mukamurenzi, 2011). The table above (Table 26) indicates development trends in the selected social indicators in the last twenty years. Although the changes in these indicators are not consistent, Nepalese society is moving ahead in terms of overall quality of life outcomes, such as child mortality rate has dropped, literacy rate has increased; gender parity has been reached in education, and the steady decline in population below the poverty line.

OECD (2012) also mentions that education is an important predictor of life expectancy by increasing people's awareness on better health, child health and maternal health. The strong relationships between education and health are also sought in UNDP (2013) report. In the mean time, UNESCO (2009) mentions about the positive effects on earning and participation in democratic process such as voting because education can equip people with the skills to access and process information. As discussed by Burchi (2006), a well educated population as a social asset will have a positive effect on the economic and social development of the country.

In addition to the macro effects of public policies, significant changes can also be seen at the individual as well as in the society level, especially at the micro-level (Green & Little, 2007). Such effect will be higher in low income groups because the

return of education is higher among low income countries where each additional year of education increases earning by 10 percent (UNESCO, 2009). This is also evident in the progresses of literacy and enrolment rates which were discussed in chapter five. Equitable policies for quality education are the only means to bring changes in the society in terms of education, health and other political processes (UNDP, 2013; UNESCO, 2005). That can address the existing disparities in terms of gender, locations and economic groups and more forms.

In order to achieve equity in education, the policies must meet the criteria of equity (horizontal equity and vertical equity) considering both the individual and society. Greater equity in education can help fuel a virtuous cycle of increased growth and accelerated poverty reduction along with the benefits for the poor and for society as a whole (UNESCO, 2009). The changes in the society are because of the State interventions through policies, distribution and redistribution of opportunities and benefits (The World Bank, 2006; UNDP, 2013). This ultimately leads towards social change and transformation.

Chapter Summary

In this chapter, the root causes of why disparities in gender, locations and economic groups are further explored. Disparity in primary education of Nepal appears to remain due to several reasons, such as social structure, inadequate policy interventions, poor implementation and weak accountability. Some social and political contexts are also equally responsible for this. Experiences suggest that there are strong relationships between equity in education financing and achieving equity in education. To ensure equity in education financing, concerns of horizontal equity and vertical equity need to be embedded in (financing) policies. In-depth understanding of

these equity concepts is required for both the social aspects and individual circumstances while designing such policies.

A strong correlation is seen between improved education outcomes and changes in the social indicators (CBS, 2011; MOHP, 2011b), such as enrolment, participation, child mortality, mothers' health, poverty, GDP per capita, access to services, etc. Education can produce positive changes in the society but such education should be equitable to produce these changes for all people. Hence, equity in financing policies is the basic foundations for achieving equitable education and desired social changes. Based on the presented data and analyses in the previous chapters, I will draw conclusions and present implications in the next chapter.

CHAPTER IX

CONCLUSIONS AND IMPLICATIONS

In this chapter, conclusions are drawn based on the findings, analysis and interpretations presented in the previous chapters. In the summary section, the status of equity situation in primary education financing, practices and shortcomings are also included. The relations between financing policies and social change are also concluded in this chapter. At the end of this chapter, implications are presented for future reference.

Conclusions

A strong relation exists between structural inequalities and opportunities to education. Structural inequalities include differences in prevailing culture and value orientation that limit access to resources and other opportunities which ultimately affect the access to quality education. Social structures are institutionalized structures that represent political orientation, socio-economic status and living standards of people in which specific values and relationships are embedded. Every society creates institutions but one institution differs from another because of the inherent difference in power that exists in the society (The World Bank, 2006). Access and completion of primary education in Nepal are the impacts of social, economic and political structure. Therefore, children belonging to Dalit and poor families are mostly out of school, most of them repeat in the primary grades and most of them are in the community schools. Socio-economic status of families also affects the participation of children in school education and the types of schools they attend. In this way, the participation of children in education and types of education they receive depend upon the wealth

inequality deeply rooted in the society. In addition, the social, political and economic powers of the community and family also affect the availability of schooling facilities, quality of home environment, quality of teaching and learning environment, and readiness to education. Hence, disparities in the processes and outcomes of school education system are the by-product effects of the structural disparities rooted in the society and within the system. The continuation of such disparities is because of inequitable policies and programs of the government although they are considered the means to break the vicious circle of the causes (structural) of the disparities. Moreover, the existing policies have less power to overcome the causes of the disparities.

The distribution of public services in Nepal is unequal. The unequal distribution results in more public facilities (education and health services) in terms of their availability and conditions in urban areas then rural areas. Most of the public funding to schools is tied up with the number of students and teachers that make disadvantage to the rural area schools because they have a few numbers of students and teachers. On the other hand, large sized schools of urban areas receive more resources. Uniform criteria of school funding are unjustifiable. Because of it, schools in remote areas are poorly funded that also make them unable to manage the quality learning materials as compared to the large sized schools of the urban areas. Thus, this kind of finance policy actually further strengthens the ongoing inequitable situation within the education sector.

Status of Equity in Education in Nepal

In this study, one of my research questions was to explore the status of equity in education system of Nepal, in general and in the primary education in particular. Overall improvements in literacy, enrolment, participation and access to opportunities

over the years in terms of gender, location, and economic status are because of the effects of good policies. Free primary education, incentives to targeted groups and literacy activities have positive impacts on children's education and society at large. In the mean time, inconsistent improvements among groups, regions and socio-economic status are also because of the shortfalls in the policies. Knowingly or unknowingly policies favor more to some groups and less to others. As a result of such situation, disparities are continued. Disparities are not by chance, they are continued because of the system.

The inequalities in the value of the Human Development Index by districts, eco-zones and caste groups, and inequities in terms of inputs (access to schooling facilities, access to qualified and trained teachers, and access to resources), processes (student teacher ratio, school student ration, per child allocation) and outcomes (enrolment, participation and learning achievements) are because of inadequate interventions and policies. Inadequate effort to integrate the existing interventions is also responsible for creating such a situation.

The unit of allocation is not clear as it is mixed with different variables and processes. This is also true in the case of the targets of equity concerns. The horizontal measure is necessary to address the equity concern but this is not sufficient. The provision of indirect and opportunity costs to the poorer groups are equally important which can be addressed through vertical equity measures.

Practices of Equity Dimension in Education Financing

At present, no long term vision of education financing policies exist in the education system, except Education for All National Plan of Action (EFA NPA) and Millennium Development Goals. Resources are allocated on an ad hoc basis. The concern of how much budget will be allocated to education and other sub-sectors of

education is not agreed among State machineries and documented at the national level. An integrated national financing policy and principles do not exit. As a result, the resource allocation and its distribution tend to vary from time to time as the authorities follow incremental approach and their own judgment.

Because of the absence of integrated framework or system of equity in education financing, the interventions are fragmented. Most of the interventions fall under the category of group targeting that hardly addresses the concerns of the poor. The discussion on how a poor can benefit from State interventions is hardly guided by an integrated framework at the national level. It is also clear that Education Authority alone cannot design such interventions and produce the desired results. There is a role of National Planning Commission to liaison between/among ministries but the existing mechanism prevents them from reengineering the resource allocation practices.

There is currently no such document available which explains the overall financing policies of education in Nepal. Financing policies need to be gathered from different sources and documents. In terms of three dimensions of equity – horizontal, vertical and equality of opportunities, the country hardly used the latter two concepts in allocating the resources. Of them, most frequently used dimension is the horizontal equity where everyone from a group is treated with the same manner. Scholarships to Girls, Dalit, and grants to schools differentiated on the basis of the ecological regions (three) are some of the examples of horizontal equity.

The efforts currently putting into practice are insufficient to address the concerns of equity. This is mostly because of the structure, and partly because of the poor implementation and State intentions. Without developing a framework of equity,

no efforts can produce any visible results. Only rich and people residing in urban areas will continue to benefit from the existing patterns of resource allocation.

Implications of Financing Policies in Achieving Equity

State has a major role to play in the distribution and redistribution of the benefits to its citizens. The size of the benefits and eligibility criteria are determined through the State interventions. These interventions are based on the Government's priorities. These priorities are termed as public policies which are translated into actions by relevant authorities such as the line ministries and their departments. Public policies are thus the major instruments to ensure the services or benefits to the targeted groups. The declaration of free education, incentives to targeted groups, additional allowances for teacher working in remote areas are some examples of policies that have created a huge impact in increasing access to and participation in primary education. Similarly, literacy efforts for disadvantaged communities have also created positive impact on their lives.

Government actions (derived through policies) are only the means to break the vicious circles of poverty and deprivation. Such actions provide unequal treatment to the unequal. In this way, embedding elements of equity in the financing policies can help to create a just and fair society. Therefore, equity becomes an integral component of public policies, especially financing policies for moving towards equitable societies. Financing policies are meant to provide guidance to public authorities to allocate or reallocate resources to the targeted groups. These policies tend to limit or expand the opportunities to some groups.

Equity is a situation where everybody experiences equitable situations in accessing resources, opportunities and goods. From this perspective, equity is a means to achieve the desired results. Equity itself cannot go in implementation. Only actions

will go into the implementation, therefore, considering the equity aspects in designing interventions is necessary. Therefore, equitable financing policies have major roles to create an equitable situation for all to succeed. Free primary education, scholarships to targeted groups, opening and running ECD services in remote and disadvantaged communities are some of the examples of policies (equitable) in education financing.

Contribution of Financing Policies in Social Change

Development can be seen from many different angles and many approaches are used to achieve it. It covers the areas from infrastructural developments to the social developments for human wellbeing. Scholars foresee the relation between development theory and social science. The ideas of development moved from structural perspectives focusing on macro structure that led to agency-oriented views and homogenizing to diversity and differentiation (Pieterse Nederveen, 2001). Then new terminologies that came into picture are human development, people friendly growth, pro-poor growth, green development, etc.

In the change process within the country or society, structural changes and appropriate macro-policies obviously matter and the orientation towards actors, agency and institutions are equally crucial. Likewise, the important consideration is the unit of development which has changed over time. Once we agree on the individual as a unit of development, then education can perform as per its potential as an inevitable ingredient in the development process. In the case of approaches of the development, gradual shift is also being observed, such as State-led, market-led and society-led. To develop a society, health and education again becomes inseparable components.

In this way, education is considered one of the basic ingredients of the development components. It is the basic need of human beings like food, shelter and

clothing. Making people literate can help people become more sensitive and responsive to their health status, child birthing, child care services, civic rights and obligations, and so forth. Education also helps to form institutions through networking and collaboration to fulfill the national educational objectives. There are arguments that there is no guarantee that institutions will always do right things but at least they can facilitate people to start the process of acquiring the knowledge and skills to fulfill their aspirations and demands.

Increased awareness leads to the search for better income, better utilization of available resources and better care about children's education. All these will create immediate benefits to the individuals and they will bring benefit to the societies in the long run. Thus, education can bring positive changes in people's lives and eventually reduce poverty level among individuals and families.

Most of the societies undergo through gradual changes. Such changes happen because of internal and external forces. Gradual changes are because of the awareness level of people and some technological advancement whereas radical changes can be achieved through externally induced interventions.

Measures of Enabling Social Change

There are many ways in which the social changes are measured and such changes occur in many different ways. The simplest form of change is achieved through gradual changes (positive). Such changes in the society are reflected in areas of education, health, infrastructural development and in individual's habit and attitudes. Of them, quality education is one of the most important elements that bring about the desired changes. Improved education status leads to the enhancement of 'functioning and capabilities' (Sen, 1993) which ultimately leads towards the improvement in their earning and living standards.

In Nepal, the pace of social change is slow because the policies are less able to break the vicious cycle of socio-structural settings. Without breaking such layer that prevents benefits to the poor and disadvantaged groups, the current pace of transformations cannot change the society. Macro-policies together with the reform (package) in education are essential for social change because reform package can produce synergy in the processes. The more equitable policies are in place, there will be higher chances of achieving changes in a shorter period.

Implications for Social Change

Based on the deliberations made in the previous chapters including analysis and conclusion, some gainful insights can be drawn to further analyze and evaluate the existing policies, and to formulate the new ones. One of the purposes of providing implications is to sensitize the policy makers and practitioners with regard to the policy processes and policy environment. In the least developed countries, the policies and policy processes are less valued because of the little understanding on it and due to a weak accountability mechanism. This can lead to the following implications for the future:

1. Demand of a shift in the focus on policy making process – social aspects in financing.

   Policies are powerful instruments to guide the overall actions of the government. These remain as statements of the authorities which are used to facilitate the process of distribution and redistribution of benefits to the poor. By considering the importance of the policies there is an urgent need to carry out the discourse on how State can and should formulate equitable policies in general and financing of education in particular, and how policies influence social changes and development. Such discourses not only help to improve the policy analysis

environment, but also equally ensure actors' ownership of the policy process. Discourses also contribute to developing the common understandings about the essence of the policies.

2. Need to compile the financing policies in a single document.

   At present, no single document includes all the policies of education financing in Nepal. This indicates that there are no systematic efforts in policy analysis – formulation, implementation and evaluation. To follow the standard process of policy analysis, the foremost requirement is to compile all the policies in a single document. Then identification of strengths and weaknesses is required along with the expert judgments and stakeholder consultation. Once these will be done, then standard procedures should be formulated and declared for ensuring the transparency and accountability of policy formulation in the future.

3. Emphasis on the coordination among the various agencies of the government.

   Because of the centralized characteristics of the State, Government of Nepal has the prime responsibility for ensuring the services and benefits to its citizens. Such benefits and services are offered through different ministries and enterprises. These services and benefits have little effects on poor and needy people because of either they are poorly designed or these are insufficient to address their needs. To produce the synergistic effects of the scarce resources, an integrated equity framework is required that helps to ensure the coordination among government agencies. This framework will also define the equity in the context of Nepal, target of equity concerns along with the sizes of the benefits required to them, modes of delivery of the benefits and accountability structure.

4. Call for a thorough discourse on equity in policies at the national level.

Although the government has the mandate to formulate policies, it does not mean that it should do it on a quick fix manner. Detailed analysis of the context is required to get the answers to why earlier policies did not work, what were the barriers, what were the strengths and how people perceive it. Therefore environment scanning is necessary to make the policies relevant and useful. The lessons from the international context could also be useful but before adopting them a careful analysis of the context is a must.

5. Need for emphasizing the policy process along with the evaluation.

   Policy formulation, implementation and evaluation are an ongoing process. It is not a one-time task. Continuous engagements of the experts and actors are necessary for developing the systematic capacity where it leads to the effective policy design, implementation and evaluation. Resources are also required for this. Therefore, separate unit is required in the ministry for formulating, overseeing the implementation and evaluating policies. The commitment of the institution and individual also matters in this regard. To accomplish these, visionary leadership, adequate logistics and human resources, institutional back up are the major ingredients. The inter-relationships among policies, plan, programs, institutional arrangement, budget, and monitoring and evaluation mechanism should be set while declaring the new policies.

Policies have a positive impact on the society at large and in the education system at a specific level. However, only equitable policies can have the positive and desired impact on the individual and society. Hence quality education is the basic tool to empower the poor people. Quality education for all will only be possible if policies are equitable and relevant. For ensuring the quality education, basic levels of resources are required. In order to ensure the basic level of

resources at the institution and individual level, reengineering of existing resource allocation patterns and mechanism is necessary. Then only the concern of vertical equity and equality of opportunities will be addressed.

6. Call for a design integrated policies with a view to achieve structural aspects together with education.

   Current understandings of equity and equitable education system illustrate the need for an integrated approach to address a range of interrelated dimensions of equity. It demands the development of an integrated framework that will be applicable to all actors and setting of partnership arrangements between government, civil society organizations and social institutions.

   It is also important to learn from others as well as from past interventions on what worked/works and what did/does not work. A system of continuously learning from these aspects and feeding the learning into the new policy process is necessary. Such process should be taken as both a means of development and strengthening institutions.

   People's empowerment requires their gaining access to and control over resources, not only natural resources but it equally demands the political resources and policy making processes. People's meaningful participation is either neglected or undermined while carrying out the policy-making processes. Their roles are limited during the process because of time constraints or resources and they do not get the chance of expressing their interests. The capacity of people to organize them and represent their own interests during the policy process must be addressed.

7. Call to follow a basic route for achieving equity in education and social change.

   The suggested route for achieving sustainable change could be as follows;

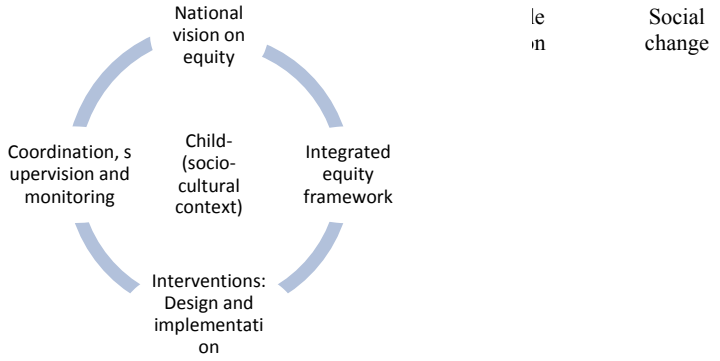


Figure 67. Suggested route for achieving sustainable change.

8. Advocacy of the relationships between education financing, equity in education and social transformation is required to improve equity in financing policies. Government mechanism often lacks in clearly specifying roles and responsibilities of different actors. Proper mechanisms of accountability structure are required to make the governance process more client centric, citizen centric and responsive. Under this mechanism, the answers to who is doing what, what procedures are followed to achieve the results and for what purpose these things are doing, should be included.

Developing an equitable education system requires a long term perspective with a strong desire and motivation. Continuous efforts are required, this is like building a block of reforms in a sequential manner, otherwise the changes we acquire from the interventions will not sustain. Success of any policy intervention will depend upon the consistency in the approach we use, ownership of the actors, building on existing system rather than creating new, the way we prioritize the interventions, the way we coordinate the efforts of different actors, and the way we value a paisa. Careful considerations are required in all these aspects.

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ANNEXURES

Annexure 1: Status of Different Indicators, 2011

Reg	Reg	Code	Districts	HDI, 2004	Sch_ 2011	GERG _ 2011	GERB_ 2011	GERT _2011	NERG _ 2011	NERB_ 2011	NERT _2011	Stu_Sch_ Ratio, 2011
m	e	1	Taplejung	0.467	338	264.6	231.5	247.5	95.7	96.7	96.2	146.7
h	e	2	Panchthar	0.484	433	155.2	136.7	145.6	95.4	95.2	95.3	104.6
h	e	3	Ilam	0.521	490	102.0	97.8	99.9	97.9	96.6	97.3	81.8
t	e	4	Jhapa	0.494	663	122.4	116.6	119.4	97.6	97.3	97.4	159.7
t	e	5	Morang	0.531	689	114.2	99.1	106.4	96.8	97.3	97.1	177.6
t	e	6	Sunsari	0.500	727	137.0	134.1	135.5	95.3	96.0	95.7	172.3
h	e	7	Dhankuta	0.507	340	121.1	113.6	117.2	96.8	97.3	97.1	78.0
h	e	8	Tehrathum	0.523	252	179.1	158.0	168.2	96.8	97.2	97.0	106.1
m	e	9	Sankhuwasabha	0.481	411	148.7	137.7	143.0	93.2	94.4	93.8	80.3
h	e	10	Bhojpur	0.472	398	136.6	124.5	130.3	96.9	96.8	96.8	91.9
m	e	11	Solukhumbu	0.479	287	169.1	150.5	159.5	91.0	95.9	93.5	86.9
h	e	12	Okhaldhunga	0.481	365	142.0	122.7	131.9	96.6	96.4	96.5	86.8
h	e	13	Khotang	0.442	482	153.0	131.1	141.6	96.8	96.3	96.6	103.4
h	e	14	Udayapur	0.488	471	134.9	125.6	130.2	95.5	97.0	96.2	130.4
t	e	15	Saptari	0.453	481	141.5	128.1	134.6	81.6	87.0	84.4	224.9
t	e	16	Siraha	0.427	464	137.6	121.9	129.5	91.4	92.3	91.9	235.9
t	c	17	Dhanusha	0.449	386	125.8	114.9	120.2	87.6	90.5	89.1	306.1
t	c	18	Mahottari	0.407	411	156.9	151.6	154.2	89.0	93.7	91.4	307.4
t	c	19	Sarlahi	0.408	741	158.7	162.4	160.6	90.4	94.7	92.6	210.5
h	c	20	Sindhuli	0.469	580	173.6	162.9	168.2	97.5	96.5	97.0	134.9
h	c	21	Ramechhap	0.434	491	137.0	121.7	129.0	96.6	93.0	94.7	87.0
m	c	22	Dolakha	0.45	429	137.9	122.2	130.0	97.3	97.8	97.5	90.6
m	c	23	Sindhupalchok	0.414	554	131.3	122.3	126.8	92.7	94.1	93.4	102.8
h	c	24	Kavrepalanchok	0.543	690	126.8	115.6	121.0	96.4	97.6	97.0	99.5
h	c	25	Lalitpur	0.588	459	101.4	104.9	103.2	98.0	97.6	97.8	127.5
h	c	26	Bhaktapur	0.595	323	123.0	120.9	121.9	98.1	97.3	97.7	100.3
h	c	27	Kathmandu	0.652	1298	138.9	147.7	143.3	97.3	97.1	97.2	140.3
h	c	28	Nuwakot	0.463	520	127.3	119.5	123.4	96.6	97.5	97.1	100.3
m	c	29	Rasuwa	0.394	113	134.6	137.4	136.0	97.9	96.2	97.1	76.7
h	c	30	Dhading	0.41	634	134.7	121.8	128.1	96.7	97.9	97.4	105.6
h	c	31	Makawanpur	0.479	593	131.2	132.4	131.8	94.9	97.3	96.1	137.3
t	c	32	Rautahat	0.409	484	181.4	197.4	189.6	89.7	95.4	92.6	322.9
t	c	33	Bara	0.465	416	152.0	152.8	152.4	94.7	97.1	95.9	322.3
t	c	34	Parsa	0.448	384	141.6	128.6	134.9	91.8	95.5	93.7	270.7
t	c	35	Chitwan	0.518	521	116.2	115.8	116.0	96.6	96.0	96.3	150.7
h	w	36	Gorkha	0.454	552	127.3	108.6	117.5	96.5	97.7	97.2	89.8

Reg	Reg	Code	Districts	HDI, 2004	Sch_ 2011	GERG _ 2011	GERB_ 2011	GERT _2011	NERG _ 2011	NERB_ 2011	NERT _2011	Stu_Sch_ Ratio, 2011
h	w	37	Lamjung	0.492	422	137.8	120.0	128.3	98.6	95.9	97.1	75.4
h	w	38	Tanahun	0.524	638	123.3	108.0	115.2	95.5	97.3	96.5	85.9
h	w	39	Syangja	0.535	627	109.3	91.5	99.6	97.7	87.6	92.2	76.0
h	w	40	Kaski	0.593	627	123.3	120.7	121.9	98.3	98.6	98.4	100.1
m	w	41	Manang	0.502	32	51.7	44.2	47.9	48.7	41.4	45.0	16.1
m	w	42	Mustang	0.482	70	121.7	132.3	126.6	81.4	87.1	84.1	25.5
h	w	43	Myagdi	0.498	272	121.8	106.2	113.6	96.7	98.2	97.5	71.4
h	w	44	Parbat	0.504	367	112.8	93.1	102.2	97.5	88.1	92.5	65.4
h	w	45	Baglung	0.492	591	138.4	119.5	128.4	97.1	97.9	97.5	92.0
h	w	46	Gulmi	0.467	610	126.0	105.6	115.0	95.9	98.2	97.1	90.9
h	w	47	Palpa	0.486	493	120.7	104.7	112.0	97.7	97.2	97.4	96.2
t	w	48	Nawalparasi	0.482	690	136.5	124.0	130.0	96.0	96.3	96.2	164.7
t	w	49	Rupandehi	0.546	587	121.8	115.3	118.4	91.2	94.0	92.6	221.4
t	w	50	Kapilvastu	0.437	509	147.9	149.3	148.6	91.1	95.9	93.6	218.3
h	w	51	Arghakhanchi	0.471	443	126.6	107.8	116.5	96.9	95.8	96.3	90.3
h	mw	52	Pyuthan	0.416	371	143.9	123.0	132.7	95.3	93.1	94.2	134.2
h	mw	53	Rolpa	0.384	422	170.6	154.7	162.4	92.5	95.6	94.1	132.9
h	mw	54	Rukum	0.386	383	197.5	185.0	191.2	94.9	96.5	95.7	179.6
h	mw	55	Salyan	0.399	452	165.2	150.4	157.8	94.1	96.5	95.3	126.9
t	mw	56	Dang	0.409	505	120.6	104.1	112.1	97.3	96.2	96.7	169.1
t	mw	57	Banke	0.479	431	153.1	146.8	149.9	96.8	96.6	96.7	211.9
t	mw	58	Bardiya	0.429	349	123.3	115.1	119.1	97.1	97.7	97.4	207.9
h	mw	59	Surkhet	0.486	573	168.9	162.1	165.4	96.9	97.2	97.1	138.6
h	mw	60	Dailekh	0.381	504	173.3	157.0	164.9	96.0	98.7	97.4	127.4
h	mw	61	Jajarkot	0.343	423	199.3	193.2	196.3	94.6	96.1	95.4	149.9
m	mw	62	Dolpa	0.371	118	174.9	160.8	168.0	97.5	96.7	97.1	61.6
m	mw	63	Jumla	0.348	155	186.1	165.5	175.7	95.7	97.9	96.8	161.9
m	mw	64	Kalikot	0.322	286	216.5	210.5	213.6	96.6	96.7	96.6	122.9
m	mw	65	Mugu	0.304	151	157.7	142.9	150.4	92.9	96.7	94.8	67.1
m	mw	66	Humla	0.367	129	223.5	196.1	209.2	94.9	96.7	95.8	97.3
m	fw	67	Bajura	0.31	259	183.7	158.1	170.6	94.9	97.1	96.0	136.9
m	fw	68	Bajhang	0.331	454	183.7	168.7	176.1	94.9	97.3	96.2	121.9
h	fw	69	Achham	0.35	500	199.2	174.4	186.2	95.6	96.4	96.0	145.0
h	fw	70	Doti	0.402	380	156.3	142.7	149.4	94.1	96.5	95.3	129.7
t	fw	71	Kailali	0.442	599	126.7	106.1	116.1	93.6	95.0	94.3	205.0
t	fw	72	Kanchanpur	0.463	423	107.3	92.2	99.6	91.4	88.6	90.0	152.4
h	fw	73	Dadeldhura	0.434	261	147.6	126.4	136.5	98.9	98.7	98.8	110.3
h	fw	74	Baitadi	0.391	551	184.2	160.2	171.7	96.3	95.9	96.1	116.3
m	fw	75	Darchula	0.424	354	166.0	145.0	155.2	96.2	97.6	96.9	83.7

Annexure 1: Status of Different Indicators, 2011 (Contd.)

Reg	Reg	D_C	Districts	Stu_Sch_Ratio (Com), 2011	STR, 2011	STR_Com_Sch, 2011	STR_App_Teac, 2011	G1_G_Pro	G1_B_Pro	G1_T_Pro	G5_Gi_Pro	G5_B_Pro	G5_T_Pro
m	e	1	Taplejung	148.2	30.1	31.2	43.1	74.78	74.9	74.8	83.77	83.8	83.8
h	e	2	Panchthar	104.9	20.0	19.3	32.0	60.17	61.2	60.7	89.89	84.4	87.3
h	e	3	Ilam	82.0	16.8	17.0	22.0	72.66	69.9	71.3	85.95	83.9	84.9
t	e	4	Jhapa	171.4	17.7	26.4	28.7	80.55	81	80.8	91.32	91.6	91.5
t	e	5	Morang	214.2	34.2	38.9	40.9	74.96	71.4	73.2	90.75	89	89.9
t	e	6	Sunsari	194.1	38.2	40.5	53.5	72.92	76.5	74.7	90.34	89.1	89.7
h	e	7	Dhankuta	75.8	18.3	18.7	22.4	75.38	71.2	73.3	88.9	85.7	87.3
h	e	8	Tehrathum	105.0	23.4	24.5	29.5	68.06	69.3	68.7	85.41	85.3	85.4
m	e	9	Sankhuwasabha	79.3	19.0	19.5	25.9	67.04	67	67	86.37	82.3	84.4
h	e	10	Bhojpur	91.7	21.2	21.9	28.0	67.51	65.3	66.4	87.83	86.1	87
m	e	11	Solukhumbu	87.8	21.5	22.2	28.0	69.18	66.8	68	76.47	77.6	77
h	e	12	Okhaldhunga	87.9	20.6	21.8	28.4	66.28	65.2	65.7	86.81	83.4	85.2
h	e	13	Khotang	103.6	25.6	28.5	34.0	62.16	61.8	62	88.03	87.5	87.8
h	e	14	Udayapur	133.2	28.3	30.6	42.0	72.73	71.1	71.9	90.45	90.3	90.4
t	e	15	Saptari	228.9	53.4	55.0	59.9	65.09	66	65.5	85.33	83	84.2
t	e	16	Siraha	244.3	51.1	53.3	61.8	77.76	71.8	74.8	90.06	90.9	90.5
t	c	17	Dhanusha	319.1	62.3	59.2	60.8	78.3	70.8	74.5	88.47	88.3	88.4
t	c	18	Mahottari	330.8	67.2	78.3	86.3	72.57	72.6	72.6	91.1	90.5	90.8
t	c	19	Sarlahi	211.7	73.1	72.8	92.7	65.16	65.9	65.5	88.08	92.9	90.6
h	c	20	Sindhuli	134.0	29.8	33.1	45.9	68.14	64.9	66.5	90.8	88.7	89.8
h	c	21	Ramechhap	86.7	21.3	22.7	32.6	67.67	65.6	66.6	89.77	89.1	89.5
m	c	22	Dolakha	89.3	18.4	18.8	28.8	65.61	67.3	66.4	89.2	90.2	89.7
m	c	23	Sindhupalchok	103.1	23.5	24.0	32.4	66.02	67.5	66.7	85.46	86.5	85.9
h	c	24	Kavrepalanchok	95.1	15.9	19.9	26.5	72.49	68.9	70.7	88.81	88.1	88.4
h	c	25	Lalitpur	96.0	17.9	16.8	17.3	82.12	85.7	83.9	89.51	92.9	91.2
h	c	26	Bhaktapur	66.0	11.8	8.0	9.2	90.07	94.5	92.3	93.21	89.4	91.2
h	c	27	Kathmandu	145.8	21.4	19.6	19.6	88.17	91.2	89.7	96.7	96.9	96.8
h	c	28	Nuwakot	101.5	27.6	28.9	33.7	69.87	66.7	68.3	88.11	87.4	87.8
m	c	29	Rasuwa	74.6	17.5	17.7	20.4	66.9	66.6	66.7	77.37	80.4	78.9
h	c	30	Dhading	103.3	21.0	21.1	34.1	68.1	65.2	66.7	88.12	87.1	87.6
h	c	31	Makawanpur	134.9	23.7	27.8	37.3	72.31	72.2	72.3	90.17	86.3	88.3
t	c	32	Rautahat	328.2	84.8	92.9	95.4	70.8	66	68.2	86.96	82.8	84.7
t	c	33	Bara	327.8	58.9	61.3	78.7	68.39	66.8	67.6	85.17	90.6	88
t	c	34	Parsa	331.7	49.6	54.4	67.6	66.35	67.1	66.7	82.16	92.3	87.2
t	c	35	Chitwan	125.5	20.1	21.3	25.5	86.29	82	84	90.55	89.4	90
h	w	36	Gorkha	87.4	20.0	20.9	25.4	68.48	66.2	67.3	81.2	82.4	81.8
h	w	37	Lamjung	67.0	13.9	13.6	18.5	65.27	68	66.6	84.31	82.5	83.4
h	w	38	Tanahun	77.5	17.9	20.3	20.3	73.26	75.7	74.5	88.62	90.9	89.7
h	w	39	Syangja	66.8	13.7	14.1	18.2	78.71	77.3	78	89.13	86.2	87.7

Reg	Reg	D_C	Districts	Stu_Sch_Ratio (Com), 2011	STR, 2011	STR_Com_Sch, 2011	STR_App_Teac, 2011	G1_G_Pro	G1_B_Pro	G1_T_Pro	G5_Gi_Pro	G5_B_Pro	G5_T_Pro
h	w	40	Kaski	62.4	14.2	11.7	15.4	87.68	90.2	88.9	92.75	94	93.4
m	w	41	Manang	15.5	3.6	3.5	3.5	77.53	52.7	64.8	76.92	80.8	78.5
m	w	42	Mustang	21.7	5.0	4.9	5.4	71.85	67.4	69.5	70.94	79.1	75.4
h	w	43	Myagdi	65.8	17.5	15.7	19.3	72.66	70.2	71.5	89.96	90.1	90.1
h	w	44	Parbat	62.1	13.0	13.0	16.0	72.64	72.9	72.8	78.81	80.2	79.5
h	w	45	Baglung	92.0	18.4	20.1	28.0	71.71	67.9	69.8	86.52	86.4	86.5
h	w	46	Gulmi	88.5	18.4	18.8	27.5	70.17	72.5	71.3	87.54	81.7	84.7
h	w	47	Palpa	91.2	15.5	16.4	22.7	68.34	67.9	68.1	85.97	86.3	86.1
t	w	48	Nawalparasi	159.3	27.8	30.5	42.2	70.92	71.9	71.4	90.25	90	90.1
t	w	49	Rupandehi	224.9	24.9	27.8	45.9	73.11	74.3	73.7	90.18	91.8	91
t	w	50	Kapilvastu	220.6	37.7	49.4	72.1	76.65	75.7	76.2	86.77	88	87.4
h	w	51	Arghakhanchi	89.6	21.3	21.9	26.3	65.6	64.5	65.1	86.77	83	84.9
h	mw	52	Pyuthan	137.0	28.0	29.6	43.1	69.09	64.2	66.6	77.35	77.2	77.3
h	mw	53	Rolpa	138.6	33.4	35.7	54.3	64.11	62.3	63.2	90.3	86.8	88.5
h	mw	54	Rukum	183.3	60.9	61.2	63.7	67.68	63.2	65.5	83.54	81.5	82.5
h	mw	55	Salyan	126.9	38.8	42.8	45.7	75.39	66.9	71.2	88.24	86.1	87.3
t	mw	56	Dang	164.8	26.6	28.8	37.2	76.17	73.7	75	91.18	90.3	90.8
t	mw	57	Banke	218.6	35.6	40.0	55.9	79.37	77	78.2	88.55	89.4	89
t	mw	58	Bardiya	219.1	32.6	36.1	47.0	83.51	79.5	81.5	89.33	87.6	88.5
h	mw	59	Surkhet	142.5	34.1	38.5	46.2	66.77	70.9	68.8	88.71	89	88.9
h	mw	60	Dailekh	128.7	35.9	41.8	48.6	71.28	72.2	71.7	85.25	83.5	84.4
h	mw	61	Jajarkot	150.6	50.1	56.9	67.6	60.17	60.8	60.5	84.54	83.9	84.2
m	mw	62	Dolpa	63.8	14.9	15.2	18.1	65.9	76	70.4	76.42	92.6	84.5
m	mw	63	Jumla	168.5	31.3	31.5	49.2	63.15	57.7	60.6	75.36	81.5	78.5
m	mw	64	Kalikot	122.7	24.2	26.1	50.5	68.75	64.2	66.5	85.82	87	86.4
m	mw	65	Mugu	68.0	20.0	21.3	26.9	77.96	75.5	76.8	81.42	83.5	82.5
m	mw	66	Humla	97.7	28.0	28.7	34.5	57.77	54.6	56.2	62.81	74.1	68.9
m	fw	67	Bajura	141.9	22.3	22.5	49.0	62.89	56.5	59.7	81.89	88.9	85.5
m	fw	68	Bajhang	123.2	24.1	27.1	43.9	65.38	58.4	61.9	79.51	80.9	80.3
h	fw	69	Achham	146.4	29.7	30.7	55.2	66.52	67	66.7	79.5	81.3	80.4
h	fw	70	Doti	130.8	27.6	32.7	45.4	62.23	55.3	58.8	82.39	84.4	83.5
t	fw	71	Kailali	221.6	31.9	54.8	59.5	79.83	75.6	77.8	94.85	93.6	94.2
t	fw	72	Kanchanpur	202.4	30.0	33.4	44.8	84.8	79.7	82.3	90.16	89.8	90
h	fw	73	Dadeldhura	111.8	21.1	21.9	32.9	69.92	66.9	68.4	83.61	88.1	85.8
h	fw	74	Baitadi	117.4	29.8	35.3	47.2	61.28	59.8	60.6	92.99	93.5	93.2
m	fw	75	Darchula	83.7	22.0	23.9	30.1	59.81	58.6	59.2	85.66	88.4	87

Annexure 1: Status of Different Indicators, 2011 (Contd.)

Reg	Reg	Dc ode	Districts	G5_T _Pro	G1-5_ G_ Pro	G1-5_ B_ Pro	G1- 5_T _Pro	Lit_ 2001_ T	Lit_ 2001_ M	Lit_ 2001_ F	D_ar ea (SqK m)
m	e	1	Taplejung	83.8	84.337	83.31	83.84	52.21	62.53	42.34	3646
h	e	2	Panchthar	87.3	79.866	78.34	79.12	55.31	65.62	45.51	1241
h	e	3	Ilam	84.9	83.484	81.55	82.53	66.23	74.10	58.23	1703
t	e	4	Jhapa	91.5	88.782	89.17	88.98	66.93	75.35	58.65	1606
t	e	5	Morang	89.9	85.53	84.03	84.8	56.74	66.84	46.61	1855
t	e	6	Sunsari	89.7	84.749	85.31	85.02	60.38	70.64	50.00	1257
h	e	7	Dhankuta	87.3	84.812	82.37	83.6	63.98	74.19	54.13	891
h	e	8	Tehrathum	85.4	80.092	80.01	80.05	59.02	71.05	47.85	679
m	e	9	Sankhuwasabha	84.4	79.302	76.92	78.11	53.76	63.36	44.66	3480
h	e	10	Bhojpur	87	79.99	78.95	79.47	54.52	65.84	44.15	1507
m	e	11	Solukhumbu	77	77.036	77.17	77.1	45.81	56.63	35.41	3312
h	e	12	Okhaldhunga	85.2	81.841	79.5	80.7	49.12	63.43	36.12	1074
h	e	13	Khotang	87.8	77.126	77.63	77.37	49.87	62.11	38.44	1591
h	e	14	Udayapur	90.4	84.969	84.08	84.53	53.31	64.52	42.16	2063
t	e	15	Saptari	84.2	77.116	77.58	77.34	49.28	62.76	35.18	1363
t	e	16	Siraha	90.5	87.07	84.04	85.58	40.31	53.04	26.80	1188
t	c	17	Dhanusha	88.4	86.549	83.51	85.04	48.37	59.61	36.07	1180
t	c	18	Mahottari	90.8	85.441	85.91	85.68	34.36	45.33	22.30	1002
t	c	19	Sarlahi	90.6	81.654	82.35	82.01	36.17	46.39	25.13	1259
h	c	20	Sindhuli	89.8	84.075	81.69	82.89	50.13	62.30	38.11	2491
h	c	21	Ramechhap	89.5	82.47	81.47	81.98	39.05	53.37	26.37	1546
m	c	22	Dolakha	89.7	81.357	81.09	81.23	50.64	63.54	38.32	2191
m	c	23	Sindhupalchok	85.9	78.514	78.78	78.64	40.19	51.37	29.12	2542
h	c	24	Kavrepalanchok	88.4	84.871	83.36	84.13	63.75	75.54	52.53	1396
h	c	25	Lalitpur	91.2	90.046	91.88	90.97	70.77	80.84	60.26	385
h	c	26	Bhaktapur	91.2	93.123	93.1	93.11	70.30	80.86	59.38	119
h	c	27	Kathmandu	96.8	95	95.93	95.48	77.07	86.35	66.44	395
h	c	28	Nuwakot	87.8	79.777	78.4	79.11	51.15	62.14	40.41	1121
m	c	29	Rasuwa	78.9	75.541	75.93	75.73	33.96	42.49	24.53	1544
h	c	30	Dhading	87.6	81.195	79.84	80.53	43.48	53.69	33.81	1926
h	c	31	Makawanpur	88.3	82.385	81.03	81.7	63.18	72.40	53.71	2426
t	c	32	Rautahat	84.7	81.739	79.86	80.73	32.50	42.56	21.60	1126
t	c	33	Bara	88	81.315	80.84	81.06	42.35	54.72	28.98	1190
t	c	34	Parsa	87.2	78.71	80.64	79.65	42.40	55.28	28.05	1353
t	c	35	Chitwan	90	88.787	87.68	88.22	70.76	78.82	62.84	2218
h	w	36	Gorkha	81.8	78.46	77.04	77.77	53.85	63.98	45.18	3610
h	w	37	Lamjung	83.4	79.308	79.46	79.38	56.61	68.80	46.04	1692
h	w	38	Tanahun	89.7	83.505	84.57	84.04	61.68	72.29	52.68	1546
h	w	39	Syangja	87.7	86.428	85.37	85.91	66.32	77.64	57.31	1164
h	w	40	Kaski	93.4	91.08	92.92	92.01	71.90	83.03	61.52	2017

Reg	Reg	Dc ode	Districts	G5_T _Pro	G1-5_ G_ Pro	G1-5_ B_ Pro	G1- 5_T _Pro	Lit_ 2001_ T	Lit_ 2001_ M	Lit_ 2001_ F	D_ar ea (SqK m)
m	w	41	Manang	78.5	75.517	64.52	70.45	59.91	66.87	52.11	2246
m	w	42	Mustang	75.4	75.558	74.42	74.97	51.75	60.91	40.70	3573
h	w	43	Myagdi	90.1	84.299	81.75	83.05	55.74	67.78	45.60	2297
h	w	44	Parbat	79.5	82.774	83.3	83.03	56.82	68.05	47.52	494
h	w	45	Baglung	86.5	83.049	80.78	81.93	61.40	72.84	52.02	1784
h	w	46	Gulmi	84.7	81.646	80.86	81.26	57.48	69.81	47.78	1149
h	w	47	Palpa	86.1	81.296	81.15	81.22	65.96	75.94	57.55	1373
t	w	48	Nawalparasi	90.1	85.106	85.21	85.16	52.99	65.74	40.68	2162
t	w	49	Rupandehi	91	85.608	85.86	85.73	65.95	75.84	55.71	1360
t	w	50	Kapilvastu	87.4	84.047	84.22	84.14	41.46	52.89	29.27	1738
h	w	51	Arghakhanchi	84.9	78.729	77.42	78.08	55.90	67.01	46.72	1193
h	mw	52	Pyuthan	77.3	77.047	74.95	76	46.57	62.15	33.71	1309
h	mw	53	Rolpa	88.5	77.734	75.42	76.58	37.25	52.84	22.88	1879
h	mw	54	Rukum	82.5	79.344	77.6	78.49	39.75	50.45	28.60	2877
h	mw	55	Salyan	87.3	85.094	80.67	82.96	48.15	59.80	35.98	1462
t	mw	56	Dang	90.8	86.168	84.93	85.57	57.70	68.98	46.72	2955
t	mw	57	Banke	89	86.345	86.85	86.6	57.36	65.30	48.94	2337
t	mw	58	Bardiya	88.5	87.098	85.72	86.42	45.41	55.05	35.64	2025
h	mw	59	Surkhet	88.9	80.856	82.46	81.64	62.48	73.74	51.49	2451
h	mw	60	Dailekh	84.4	81.784	81.19	81.49	47.44	63.98	31.82	1502
h	mw	61	Jajarkot	84.2	76.161	77.36	76.73	39.36	49.19	28.93	2230
m	mw	62	Dolpa	84.5	74.65	81.35	77.82	34.66	49.21	19.61	7889
m	mw	63	Jumla	78.5	72.658	71.17	71.95	32.41	46.90	16.70	2531
m	mw	64	Kalikot	86.4	79.225	77.33	78.33	37.51	53.75	16.98	1741
m	mw	65	Mugu	82.5	83.224	83.73	83.47	27.79	45.13	9.19	3535
m	mw	66	Humla	68.9	68.223	68.52	68.37	26.62	40.66	11.52	5655
m	fw	67	Bajura	85.5	74.931	72.12	73.57	33.73	50.67	17.07	2188
m	fw	68	Bajhang	80.3	76.615	74.96	75.79	35.26	57.34	15.08	3422
h	fw	69	Achham	80.4	77.065	77.78	77.42	33.36	53.61	15.80	1680
h	fw	70	Doti	83.5	73.413	71.22	72.31	42.56	60.06	25.18	2025
t	fw	71	Kailali	94.2	90.677	88.32	89.56	52.06	63.21	40.71	3235
t	fw	72	Kanchanpur	90	89.4	87.02	88.26	59.65	72.07	46.91	1610
h	fw	73	Dadeldhura	85.8	78.339	80.08	79.18	51.62	71.93	33.06	1538
h	fw	74	Baitadi	93.2	80.418	80.3	80.36	51.55	71.22	33.43	1519
m	fw	75	Darchula	87	78.021	77.7	77.87	49.39	67.38	32.38	2322

Annexure 1: Status of Different Indicators, 2011 (Contd.)

Reg	Reg	Dcode	Districts	Per_stu_Exp, 2010 (NRs)	Pri_Teacher_2011 (Number)	Stu_2009	Teach Sal Exp-2010 (NRs)	Expenditure in Major activities_2010 (NRs)
m	e	1	Taplejung	6911.13	1138	48688	192842943	362903681
h	e	2	Panchthar	7472.34	1278	46234	218176660	342547089
h	e	3	Ilam	12116.98	1599	44263	269428096.9	479650596
t	e	4	Jhapa	8290.45	2476	80147	427669801	655136020
t	e	5	Morang	5424.49	2788	141482	204402788	752664003
t	e	6	Sunsari	5319.20	1712	92495	143632917	537696244
h	e	7	Dhankuta	9994.22	1060	29537	206680961	278758813
h	e	8	Tehrathum	9504.23	855	26299	172995640.1	258401034
m	e	9	Sankhuwasabha	10564.46	1180	34756	283455929.2	365857965
h	e	10	Bhojpur	8304.08	1263	40753	444463711.1	320770157
m	e	11	Solukhumbu	8725.19	891	27600	153378443	230144220
h	e	12	Okhaldhunga	9488.80	1081	34391	243241539	332032088
h	e	13	Khotang	8571.50	1466	60517	221963775	390997395
h	e	14	Udayapur	6201.48	1377	59827	178307374	391028259
t	e	15	Saptari	5009.09	1751	86616	289681600	309351099
t	e	16	Siraha	4222.08	1713	101701	258982029.3	480096797
t	c	17	Dhanusha	5039.38	1774	109931	301989720	579296373
t	c	18	Mahottari	4736.67	1465	98498	256193770	530455157
t	c	19	Sarlahi	4596.10	1660	124097	245428900	574829527
h	c	20	Sindhuli	6434.48	1633	87204	263383097	546718755
h	c	21	Ramechhap	8554.74	1261	51217	206493942	427959269
m	c	22	Dolakha	9918.50	1230	41651	208838210	406559126
m	c	23	Sindhupalchok	9065.69	1705	42416	283668657.2	568853794
h	c	24	Kavrepalanchok	10377.31	2105	65535	64664730	654050820
h	c	25	Lalitpur	13908.53	1150	26729	300087042.4	339229005
h	c	26	Bhaktapur	50299.06	932	11108	245448490	487649427
h	c	27	Kathmandu	19748.23	2214	48269	383923420	1012788068
h	c	28	Nuwakot	8175.89	1491	56080	195832088	402008683
m	c	29	Rasuwa	16233.04	380	8453	161724900	129815648
h	c	30	Dhading	9019.50	1810	67736	351041380.9	618277506
h	c	31	Makawanpur	6345.23	1890	82420	311560299	499883431
t	c	32	Rautahat	3220.39	1592	81992	267606661.5	450861197
t	c	33	Bara	3869.91	1675	131330	282464975.9	578486400
t	c	34	Parsa	4168.35	1512	93346	256798740	433729833
t	c	35	Chitwan	9191.06	1900	56416	321559025	490719746
h	w	36	Gorkha	11316.69	1785	51597	332624878	543585663
h	w	37	Lamjung	12857.89	1389	32044	323291841.6	392898652
h	w	38	Tanahun	12931.02	2034	46676	219144670.1	578689128
h	w	39	Syangja	13741.07	1994	45165	226058520	581549740
h	w	40	Kaski	14908.58	1729	37453	302817858.5	514271429

Reg	Reg	Dcode	Districts	Per_stu_Exp, 2010 (NRs)	Pri_Teacher_2011 (Number)	Stu_2009	Teach Sal Exp-2010 (NRs)	Expenditure in Major activities_2010 (NRs)
m	w	41	Manang	103848.81	139	529	296777534	51197465
m	w	42	Mustang	61782.33	244	1450	341264940	86557041
h	w	43	Myagdi	13612.64	836	19084	340936522.1	248267324
h	w	44	Parbat	13838.59	1317	28821	306006236.5	378360884
h	w	45	Baglung	9575.97	1726	58763	34848965.16	525567665
h	w	46	Gulmi	9410.59	1782	62061	233148961	555008251
h	w	47	Palpa	10388.62	1806	53192	294002057	519576675
t	w	48	Nawalparasi	6143.85	1984	98113	226747724.4	575193537
t	w	49	Rupandehi	5635.99	1927	97619	285219010.2	554846078
t	w	50	Kapilvastu	5156.68	1423	94036	136645381	535206424
h	w	51	Arghakhanchi	10115.45	1385	42383	52894312	406064545
h	mw	52	Pyuthan	7975.83	1113	49476	90583659	378197882
h	mw	53	Rolpa	5603.19	1010	55271	105902499	326027437
h	mw	54	Rukum	4849.83	1065	58825	97713295	318425111
h	mw	55	Salyan	6359.51	1239	59099	115346670.2	337747214
t	mw	56	Dang	6592.59	1695	79544	149793656	532404732
t	mw	57	Banke	5221.99	1287	75804	173166771	418605070
t	mw	58	Bardiya	7258.59	1352	74424	164876353	514945938
h	mw	59	Surkhet	7524.67	1621	70973	182446816	533393874
h	mw	60	Dailekh	5490.85	1291	74023	284609410	380598120
h	mw	61	Jajarkot	5842.11	938	55203	198781848	364202968
m	mw	62	Dolpa	22991.38	402	6717	205907759.2	165216090
m	mw	63	Jumla	9269.01	511	26110	217399447.9	222762029
m	mw	64	Kalikot	9760.04	682	36836	256485468	343455982
m	mw	65	Mugu	14957.38	359	11432	153165341	173864562
m	mw	66	Humla	13118.66	360	11654	207027410.2	171867555
m	fw	67	Bajura	8492.38	1243	33070	311571599.8	289912744
m	fw	68	Bajhang	9003.46	1292	59817	173529037.4	494686372
h	fw	69	Achham	5515.13	1070	44215	212342564	431470661
h	fw	70	Doti	6932.74	704	52509	153779407.1	362138691
t	fw	71	Kailali	5441.98	1892	122546	277598241.7	682957412
t	fw	72	Kanchanpur	5783.61	1229	67735	216866430	424979882
h	fw	73	Dadeldhura	9343.36	818	29319	217578090.2	268406820
h	fw	74	Baitadi	5604.82	1335	63568	132308730.2	380903816
m	fw	75	Darchula	12351.43	953	29120	203950122	365565364

Annexure 2: Calculation of Rankings

	Reg e	Reg c	Reg w	Reg mw	Reg fw	Reg m	Reg h	Reg t
HDI 2004								
Mean	*0.48*	*0.47*	*0.50*	*0.39*	*0.39*	*0.40*	*0.47*	*0.46*
Std Dev	*0.03*	*0.07*	*0.04*	*0.05*	*0.05*	*0.07*	*0.07*	*0.04*
Max	*0.53*	*0.65*	*0.59*	*0.49*	*0.46*	*0.50*	*0.65*	*0.55*
Min	*0.43*	*0.39*	*0.44*	*0.30*	*0.31*	*0.30*	*0.34*	*0.41*
Variance	*0.00*	*0.01*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Coe of Var	*0.06*	*0.15*	*0.07*	*0.13*	*0.13*	*0.16*	*0.14*	*0.09*
Range	*0.1*	*0.3*	*0.2*	*0.2*	*0.2*	*0.2*	*0.3*	*0.1*
Range Ratio	*1.2*	*1.7*	*1.4*	*1.6*	*1.5*	*1.7*	*1.9*	*1.3*
School, 2011								
Mean	*455.69*	*527.74*	*470.63*	*350.13*	*420.11*	*258.75*	*494.38*	*523.00*
Std Dev	*137.86*	*233.66*	*197.87*	*149.01*	*119.33*	*155.28*	*172.99*	*124.01*
Max	*727.00*	*1298.00*	*690.00*	*573.00*	*599.00*	*554.00*	*1298.00*	*741.00*
Min	*252.00*	*113.00*	*32.00*	*118.00*	*259.00*	*32.00*	*252.00*	*349.00*
Variance	*17817.46*	*51721.88*	*36706.86*	*20724.38*	*12658.32*	*22603.69*	*29159.31*	*14608.50*
Coe of Var	*0.29*	*0.43*	*0.41*	*0.41*	*0.27*	*0.58*	*0.35*	*0.23*
Range	*475.0*	*1185.0*	*658.0*	*455.0*	*340.0*	*522.0*	*1046.0*	*392.0*
Range Ratio	*2.9*	*11.5*	*21.6*	*4.9*	*2.3*	*17.3*	*5.2*	*2.1*
GER_Girls, 2011								
Mean	*147.44*	*138.44*	*121.67*	*171.63*	*161.63*	*165.73*	*143.36*	*136.12*
Std Dev	*36.80*	*19.28*	*21.06*	*30.06*	*30.24*	*48.34*	*26.31*	*18.40*
Max	*264.57*	*181.40*	*147.87*	*223.47*	*199.18*	*264.57*	*199.30*	*181.40*
Min	*102.05*	*101.38*	*51.69*	*120.64*	*107.30*	*51.69*	*101.38*	*107.30*
Variance	*1269.43*	*351.97*	*415.89*	*843.16*	*812.65*	*2191.15*	*674.70*	*321.64*
Coe of Var	*0.24*	*0.14*	*0.17*	*0.17*	*0.18*	*0.28*	*0.18*	*0.13*
Range	*162.5*	*80.0*	*96.2*	*102.8*	*91.9*	*212.9*	*97.9*	*74.1*
Range Ratio	*2.6*	*1.8*	*2.9*	*1.9*	*1.9*	*5.1*	*2.0*	*1.7*
GER_Boys, 2011								
Mean	*133.08*	*134.35*	*109.43*	*157.81*	*141.54*	*151.60*	*130.05*	*128.80*
Std Dev	*30.65*	*22.85*	*22.50*	*30.05*	*28.25*	*42.10*	*25.18*	*25.14*
Max	*231.47*	*197.41*	*149.29*	*210.47*	*174.42*	*231.47*	*193.17*	*197.41*
Min	*97.78*	*104.86*	*44.20*	*104.06*	*92.15*	*44.20*	*91.54*	*92.15*
Variance	*880.50*	*494.67*	*474.58*	*843.07*	*709.24*	*1661.75*	*617.75*	*600.62*
Coe of Var	*0.22*	*0.17*	*0.20*	*0.18*	*0.19*	*0.27*	*0.19*	*0.19*
Range	133.69	92.55	105.09	106.41	82.27	187.28	101.63	105.26
Range Ratio	2.37	1.88	3.38	2.02	1.89	5.24	2.11	2.14
GER_Tot, 2011								
Mean	*140.02*	*136.34*	*115.12*	*164.58*	*151.26*	*158.50*	*136.40*	*132.36*
Std Dev	*33.53*	*20.71*	*21.33*	*29.95*	*29.10*	*44.92*	*25.53*	*21.67*
Max	*247.51*	*189.55*	*148.59*	*213.62*	*186.23*	*247.51*	*196.28*	*189.55*

	Reg e	Reg c	Reg w	Reg mw	Reg fw	Reg m	Reg h	Reg t
Min	*99.90*	*103.16*	*47.91*	*112.09*	*99.56*	*47.91*	*99.64*	*99.56*
Variance	*1054.28*	*406.39*	*426.57*	*836.97*	*752.63*	*1891.74*	*635.08*	*446.29*
Coe of Var	*0.23*	*0.15*	*0.18*	*0.18*	*0.18*	*0.27*	*0.18*	*0.16*
Range	*147.6*	*86.4*	*100.7*	*101.5*	*86.7*	*199.6*	*96.6*	*90.0*
Range Ratio	*2.5*	*1.8*	*3.1*	*1.9*	*1.9*	*5.2*	*2.0*	*1.9*
NER_Girls, 2011								
Mean	*94.70*	*94.74*	*92.30*	*95.56*	*95.09*	*91.35*	*96.48*	*92.84*
Std Dev	*4.06*	*3.43*	*12.39*	*1.56*	*2.06*	*12.03*	*1.35*	*4.12*
Max	*97.95*	*98.12*	*98.55*	*97.54*	*98.85*	*97.91*	*98.85*	*97.58*
Min	*81.56*	*87.57*	*48.69*	*92.50*	*91.39*	*48.69*	*92.50*	*81.56*
Variance	*15.44*	*11.12*	*144.00*	*2.27*	*3.78*	*135.70*	*1.78*	*16.09*
Coe of Var	*0.04*	*0.04*	*0.13*	*0.02*	*0.02*	*0.13*	*0.01*	*0.04*
Range	*16.4*	*10.6*	*49.9*	*5.0*	*7.5*	*49.2*	*6.4*	*16.0*
Range Ratio	*1.2*	*1.1*	*2.0*	*1.1*	*1.1*	*2.0*	*1.1*	*1.2*
NER_Boys, 2011								
Mean	*95.62*	*95.93*	*91.71*	*96.59*	*95.90*	*92.52*	*96.37*	*94.66*
Std Dev	*2.65*	*1.98*	*13.96*	*1.22*	*2.93*	*13.86*	*2.34*	*2.93*
Max	*97.33*	*97.93*	*98.56*	*98.66*	*98.71*	*97.86*	*98.71*	*97.66*
Min	*86.99*	*90.55*	*41.44*	*93.14*	*88.62*	*41.44*	*87.63*	*86.99*
Variance	*6.58*	*3.70*	*182.72*	*1.38*	*7.63*	*180.17*	*5.35*	*8.17*
Coe of Var	*0.03*	*0.02*	*0.15*	*0.01*	*0.03*	*0.15*	*0.02*	*0.03*
Range	*10.3*	*7.4*	*57.1*	*5.5*	*10.1*	*56.4*	*11.1*	*10.7*
Range Ratio	*1.1*	*1.1*	*2.4*	*1.1*	*1.1*	*2.4*	*1.1*	*1.1*
NER_Tot, 2011								
Mean	*95.17*	*95.35*	*91.95*	*96.07*	*95.51*	*91.93*	*96.41*	*93.77*
Std Dev	*3.28*	*2.51*	*13.01*	*1.12*	*2.40*	*12.91*	*1.41*	*3.35*
Max	*97.44*	*97.80*	*98.44*	*97.39*	*98.78*	*97.55*	*98.78*	*97.44*
Min	*84.35*	*89.09*	*45.03*	*94.09*	*89.97*	*45.03*	*92.23*	*84.35*
Variance	*10.11*	*5.98*	*158.69*	*1.17*	*5.12*	*156.34*	*1.94*	*10.67*
Coe of Var	*0.03*	*0.03*	*0.14*	*0.01*	*0.02*	*0.14*	*0.01*	*0.03*
Range	*13.1*	*8.7*	*53.4*	*3.3*	*8.8*	*52.5*	*6.5*	*13.1*
Range Ratio	*1.2*	*1.1*	*2.2*	*1.0*	*1.1*	*2.2*	*1.1*	*1.2*
School, 2011								
Mean	*455.69*	*527.74*	*470.63*	*350.13*	*420.11*	*258.75*	*494.38*	*523.00*
Std Dev	*137.86*	*233.66*	*197.87*	*149.01*	*119.33*	*155.28*	*172.99*	*124.01*
Max	*727.00*	*1298.00*	*690.00*	*573.00*	*599.00*	*554.00*	*1298.00*	*741.00*
Min	*252.00*	*113.00*	*32.00*	*118.00*	*259.00*	*32.00*	*252.00*	*349.00*
Variance	*17817.46*	*51721.88*	*36706.86*	*20724.38*	*12658.32*	*22603.69*	*29159.31*	*14608.50*
Coe of Var	*1.40*	*2.37*	*2.09*	*1.49*	*1.17*	*0.58*	*0.35*	*0.23*
Range	*475.0*	*1185.0*	*658.0*	*455.0*	*340.0*	*522.0*	*1046.0*	*392.0*
Range Ratio	*2.9*	*11.5*	*21.6*	*4.9*	*2.3*	*17.3*	*5.2*	*2.1*
Stu_Sch_Ratio, 2011								

	Reg e	Reg c	Reg w	Reg mw	Reg fw	Reg m	Reg h	Reg t
Mean	*129.20*	*168.08*	*98.70*	*139.28*	*133.47*	*92.44*	*108.71*	*220.59*
Std Dev	*51.67*	*90.16*	*57.28*	*43.72*	*33.68*	*40.07*	*25.84*	*57.23*
Max	*235.95*	*322.92*	*221.37*	*211.88*	*205.03*	*161.94*	*179.64*	*322.92*
Min	*77.96*	*76.70*	*16.13*	*61.60*	*83.70*	*16.13*	*65.40*	*150.70*
Variance	*2502.95*	*7700.72*	*3076.25*	*1784.32*	*1008.56*	*1504.91*	*650.43*	*3111.74*
Coe of Var	*0.39*	*0.52*	*0.56*	*0.30*	*0.24*	*0.42*	*0.23*	*0.25*
Range	*158.0*	*246.2*	*205.2*	*150.3*	*121.3*	*145.8*	*114.2*	*172.2*
Range Ratio	*3.0*	*4.2*	*13.7*	*3.4*	*2.4*	*10.0*	*2.7*	*2.1*
Stu_Com_Sch_Ratio, 2011								
Mean	*134.52*	*168.67*	*93.26*	*142.05*	*142.13*	*93.05*	*105.42*	*232.95*
Std Dev	*58.05*	*102.49*	*59.71*	*45.67*	*43.87*	*41.85*	*29.71*	*62.56*
Max	*244.32*	*331.75*	*224.91*	*219.11*	*221.56*	*168.46*	*183.35*	*331.75*
Min	*75.79*	*65.95*	*15.48*	*63.76*	*83.69*	*15.48*	*62.08*	*125.48*
Variance	*3159.59*	*9950.85*	*3342.67*	*1946.45*	*1711.08*	*1642.27*	*860.11*	*3718.15*
Coe of Var	*0.42*	*0.59*	*0.62*	*0.31*	*0.29*	*0.44*	*0.28*	*0.26*
Range	*168.5*	*265.8*	*209.4*	*155.3*	*137.9*	*153.0*	*121.3*	*206.3*
Range Ratio	*3.2*	*5.0*	*14.5*	*3.4*	*2.6*	*10.9*	*3.0*	*2.6*
STR, 2011								
Mean	*27.47*	*35.03*	*17.67*	*32.97*	*26.49*	*20.33*	*24.04*	*42.89*
Std Dev	*11.44*	*22.88*	*8.18*	*11.30*	*4.14*	*7.66*	*10.03*	*18.73*
Max	*53.40*	*84.85*	*37.70*	*60.89*	*31.92*	*31.26*	*60.89*	*84.85*
Min	*16.81*	*11.78*	*3.58*	*14.93*	*21.08*	*3.58*	*11.78*	*17.73*
Variance	*122.73*	*495.88*	*62.76*	*119.24*	*15.21*	*55.07*	*98.12*	*333.18*
Coe of Var	*0.40*	*0.64*	*0.45*	*0.33*	*0.15*	*0.37*	*0.41*	*0.43*
Range	*36.6*	*73.1*	*34.1*	*46.0*	*10.8*	*27.7*	*49.1*	*67.1*
Range Ratio	*3.2*	*7.2*	*10.5*	*4.1*	*1.5*	*8.7*	*5.2*	*4.8*
STR Com, 2011								
Mean	*29.32*	*36.77*	*18.91*	*35.60*	*31.38*	*21.13*	*25.48*	*47.75*
Std Dev	*11.87*	*24.82*	*10.79*	*12.20*	*10.08*	*8.07*	*11.47*	*18.98*
Max	*54.97*	*92.93*	*49.38*	*61.17*	*54.80*	*31.53*	*61.17*	*92.93*
Min	*16.97*	*8.01*	*3.45*	*15.18*	*21.93*	*3.45*	*8.01*	*21.26*
Variance	*132.12*	*583.56*	*109.23*	*138.99*	*90.26*	*61.01*	*128.29*	*342.24*
Coe of Var	*0.39*	*0.66*	*0.55*	*0.33*	*0.30*	*0.37*	*0.44*	*0.39*
Range	*38.0*	*84.9*	*45.9*	*46.0*	*32.9*	*28.1*	*53.2*	*71.7*
Range Ratio	*3.2*	*11.6*	*14.3*	*4.0*	*2.5*	*9.1*	*7.6*	*4.4*
STR_approved_teacher, 2011								
Mean	*36.25*	*44.46*	*25.41*	*45.90*	*45.33*	*30.61*	*32.87*	*57.81*
Std Dev	*12.74*	*27.19*	*16.60*	*12.95*	*9.37*	*14.40*	*13.91*	*19.88*
Max	*61.79*	*95.44*	*72.10*	*67.61*	*59.49*	*50.55*	*67.61*	*95.44*
Min	*22.04*	*9.21*	*3.45*	*18.08*	*30.12*	*3.45*	*9.21*	*25.49*
Variance	*152.14*	*700.63*	*258.34*	*156.58*	*78.01*	*194.44*	*188.60*	*375.37*
Coe of Var	*0.42*	*0.72*	*0.85*	*0.35*	*0.28*	*0.46*	*0.42*	*0.34*

	Reg	Reg	Reg	Reg	Reg	Reg	Reg	Reg
	e	c	w	mw	fw	m	h	t
Range	*39.8*	*86.2*	*68.6*	*49.5*	*29.4*	*47.1*	*58.4*	*69.9*
Range Ratio	*2.8*	*10.4*	*20.9*	*3.7*	*2.0*	*14.6*	*7.3*	*3.7*
G1_Girls_Pro								
Mean	*70.45*	*72.91*	*72.79*	*69.80*	*68.07*	*67.53*	*70.59*	*75.17*
Std Dev	*5.68*	*8.06*	*5.50*	*7.39*	*8.71*	*5.74*	*7.08*	*6.30*
Max	*80.55*	*90.07*	*87.68*	*83.51*	*84.80*	*77.96*	*90.07*	*86.29*
Min	*60.17*	*65.16*	*65.27*	*57.77*	*59.81*	*57.77*	*60.17*	*65.09*
Variance	*30.19*	*61.50*	*28.36*	*50.98*	*67.40*	*30.86*	*48.88*	*37.65*
Coe of Var	*0.08*	*0.11*	*0.07*	*0.10*	*0.12*	*0.08*	*0.10*	*0.08*
Range	*20.4*	*24.9*	*22.4*	*25.7*	*25.0*	*20.2*	*29.9*	*21.2*
Range Ratio	*1.3*	*1.4*	*1.3*	*1.4*	*1.4*	*1.3*	*1.5*	*1.3*
G1_Boys_Pro								
Mean	*69.40*	*71.96*	*70.97*	*67.92*	*64.20*	*64.49*	*69.56*	*73.26*
Std Dev	*5.26*	*9.23*	*7.79*	*7.63*	*8.72*	*7.41*	*8.44*	*5.17*
Max	*81.00*	*94.49*	*90.16*	*79.52*	*79.68*	*76.04*	*94.49*	*81.97*
Min	*61.21*	*64.85*	*52.69*	*54.63*	*55.27*	*52.69*	*55.27*	*65.89*
Variance	*25.93*	*80.79*	*56.85*	*54.33*	*67.64*	*51.46*	*69.43*	*25.42*
Coe of Var	*0.07*	*0.12*	*0.11*	*0.11*	*0.13*	*0.11*	*0.12*	*0.07*
Range	*19.8*	*29.6*	*37.5*	*24.9*	*24.4*	*23.4*	*39.2*	*16.1*
Range Ratio	*1.3*	*1.5*	*1.7*	*1.5*	*1.4*	*1.4*	*1.7*	*1.2*
G1_Tot_Pro								
Mean	*69.93*	*72.42*	*71.85*	*68.84*	*66.16*	*65.97*	*70.07*	*74.21*
Std Dev	*5.34*	*8.52*	*5.92*	*7.14*	*8.63*	*5.54*	*7.65*	*5.58*
Max	*80.78*	*92.26*	*88.93*	*81.50*	*82.31*	*76.80*	*92.26*	*84.04*
Min	*60.69*	*65.53*	*64.84*	*56.24*	*58.77*	*56.24*	*58.77*	*65.52*
Variance	*26.72*	*68.81*	*32.89*	*47.61*	*66.22*	*28.79*	*57.03*	*29.59*
Coe of Var	*0.07*	*0.11*	*0.08*	*0.10*	*0.12*	*0.08*	*0.11*	*0.07*
Range	*20.1*	*26.7*	*24.1*	*25.3*	*23.5*	*20.6*	*33.5*	*18.5*
Range Ratio	*1.3*	*1.4*	*1.4*	*1.4*	*1.4*	*1.4*	*1.6*	*1.3*
Literacy, 2001_Tot								
Mean	*54.80*	*50.56*	*58.48*	*42.70*	*45.46*	*41.60*	*54.97*	*50.66*
Std Dev	*7.32*	*14.42*	*7.22*	*10.80*	*9.57*	*10.28*	*10.43*	*11.21*
Max	*66.93*	*77.07*	*71.90*	*62.48*	*59.65*	*59.91*	*77.07*	*70.76*
Min	*40.31*	*32.50*	*41.46*	*26.62*	*33.36*	*26.62*	*33.36*	*32.50*
Variance	*50.19*	*197.00*	*48.89*	*108.89*	*81.33*	*99.11*	*105.90*	*119.31*
Coe of Var	*0.13*	*0.28*	*0.12*	*0.24*	*0.20*	*0.24*	*0.19*	*0.22*
Range	*26.6*	*44.6*	*30.4*	*35.9*	*26.3*	*33.3*	*43.7*	*38.3*
arnge Ratio	*1.7*	*2.4*	*1.7*	*2.3*	*1.8*	*2.3*	*2.3*	*2.2*
Literacy, 2001_Male								
Mean	*65.75*	*61.45*	*69.34*	*55.81*	*63.05*	*54.92*	*67.29*	*61.52*
Std Dev	*6.20*	*13.97*	*7.13*	*9.49*	*8.14*	*8.67*	*9.11*	*10.61*
Max	*75.35*	*86.35*	*83.03*	*73.74*	*72.07*	*67.38*	*86.35*	*78.82*

	Reg e	Reg c	Reg w	Reg mw	Reg fw	Reg m	Reg h	Reg t
Min	*53.04*	*42.49*	*52.89*	*40.66*	*50.67*	*40.66*	*49.19*	*42.56*
Variance	*36.01*	*184.99*	*47.65*	*84.05*	*58.86*	*70.54*	*80.90*	*106.90*
Coe of Var	*0.09*	*0.22*	*0.10*	*0.16*	*0.12*	*0.15*	*0.13*	*0.17*
Range	*22.3*	*43.9*	*30.1*	*33.1*	*21.4*	*26.7*	*37.2*	*36.3*
Range Ratio	*1.4*	*2.0*	*1.6*	*1.8*	*1.4*	*1.7*	*1.8*	*1.9*
Literacy, 2001_Female								
Mean	*44.14*	*39.37*	*48.65*	*29.25*	*28.85*	*27.86*	*43.55*	*39.34*
Std Dev	*8.66*	*15.06*	*7.94*	*13.25*	*11.35*	*13.29*	*12.10*	*12.37*
Max	*58.65*	*66.44*	*61.52*	*51.49*	*46.91*	*52.11*	*66.44*	*62.84*
Min	*26.80*	*21.60*	*29.27*	*9.19*	*15.08*	*9.19*	*15.80*	*21.60*
Variance	*70.38*	*214.98*	*59.09*	*163.92*	*114.45*	*165.69*	*142.56*	*145.44*
Coe of Var	*0.19*	*0.37*	*0.16*	*0.44*	*0.37*	*0.46*	*0.27*	*0.31*
Range	*31.8*	*44.8*	*32.2*	*42.3*	*31.8*	*42.9*	*50.6*	*41.2*
Range Ratio	*2.2*	*3.1*	*2.1*	*5.6*	*3.1*	*5.7*	*4.2*	*2.9*
Dist_area								
Mean	*1778.50*	*1442.63*	*1837.38*	*2825.20*	*2171.00*	*3238.56*	*1572.95*	*1700.95*
Std Dev	*914.35*	*716.21*	*831.86*	*1764.97*	*717.90*	*1592.80*	*700.73*	*620.54*
Max	*3646.00*	*2542.00*	*3610.00*	*7889.00*	*3422.00*	*7889.00*	*3610.00*	*3235.00*
Min	*679.00*	*119.00*	*494.00*	*1309.00*	*1519.00*	*1544.00*	*119.00*	*1002.00*
Variance	*783780*	*485961*	*648745*	*2907434*	*458122*	*2378451*	*478437*	*365822*
Coe of Var	*0.50*	*0.48*	*0.44*	*0.60*	*0.31*	*0.48*	*0.44*	*0.36*
Range	*2967.0*	*2423.0*	*3116.0*	*6580.0*	*1903.0*	*6345.0*	*3491.0*	*2233.0*
Range Ratio	*5.4*	*21.4*	*7.3*	*6.0*	*2.3*	*5.1*	*30.3*	*3.2*
Per_Stu_Exp, 2010								
Mean	*7882.48*	*10679.06*	*19704.05*	*8854.38*	*7607.66*	*20437.06*	*10468.10*	*5516.12*
Std Dev	*2229.01*	*10534.58*	*25980.43*	*4876.27*	*2374.60*	*25832.51*	*7309.64*	*1442.86*
Max	*12116.98*	*50299.06*	*103848.81*	*22991.38*	*12351.43*	*103848.81*	*50299.06*	*9191.06*
Min	*4222.08*	*3220.39*	*5156.68*	*4849.83*	*5441.98*	*6911.13*	*4849.83*	*3220.39*
Variance	*4657966*	*105136559*	*632796502*	*22192822*	*5012213*	*625610951*	*52060816*	*1977756*
Coe of Var	*0.27*	*0.96*	*1.28*	*0.53*	*0.29*	*1.22*	*0.69*	*0.25*
Range	*7894.9*	*47078.7*	*98692.1*	*18141.6*	*6909.5*	*96937.7*	*45449.2*	*5970.7*
Range Ratio	*2.9*	*15.6*	*20.1*	*4.7*	*2.3*	*15.0*	*10.4*	*2.9*
Pri_Teacher_2011								
Mean	*1476.75*	*1546.26*	*1468.75*	*995.00*	*1170.67*	*794.31*	*1396.21*	*1740.35*
Std Dev	*533.99*	*426.47*	*590.13*	*443.66*	*348.27*	*468.93*	*392.69*	*374.55*
Max	*2788.00*	*2214.00*	*2034.00*	*1695.00*	*1892.00*	*1705.00*	*2214.00*	*2788.00*
Min	*855.00*	*380.00*	*139.00*	*359.00*	*704.00*	*139.00*	*704.00*	*1229.00*
Variance	*267327.19*	*172306.83*	*326485.69*	*183708.93*	*107816.44*	*206152.59*	*150253.09*	*133276.13*
Coe of Var	*0.35*	*0.27*	*0.39*	*0.43*	*0.28*	*0.57*	*0.28*	*0.21*
Range	*1933.0*	*1834.0*	*1895.0*	*1336.0*	*1188.0*	*1566.0*	*1510.0*	*1559.0*
Range Ratio	*3.3*	*5.8*	*14.6*	*4.7*	*2.7*	*12.3*	*3.1*	*2.3*

	Reg e	Reg c	Reg w	Reg mw	Reg fw	Reg m	Reg h	Reg t
Stu_2009								
Mean	*59706.63*	*67601.47*	*48061.63*	*49692.73*	*55766.56*	*26268.69*	*49431.77*	*95393.60*
Std Dev	*32547.00*	*34996.72*	*29975.10*	*25272.70*	*29044.58*	*17846.08*	*16806.90*	*21899.64*
Max	*141482.00*	*131330.00*	*98113.00*	*79544.00*	*122546.00*	*59817.00*	*87204.00*	*141482.00*
Min	*26299.00*	*8453.00*	*529.00*	*6717.00*	*29120.00*	*529.00*	*11108.00*	*56416.00*
Variance	*993100275*	*1160308486*	*842350069*	*596128685*	*749855817*	*298577276*	*275229026*	*455614550*
Coe of Var	*0.53*	*0.50*	*0.60*	*0.49*	*0.49*	*0.66*	*0.34*	*0.22*
Range	*115183.0*	*122877.0*	*97584.0*	*72827.0*	*93426.0*	*59288.0*	*76096.0*	*85066.0*
Range Ratio	*5.4*	*15.5*	*185.5*	*11.8*	*4.2*	*113.1*	*7.9*	*2.5*
Teach *Sal* Exp-2010								
Mean	*244331512.97*	*258353055.21*	*247026838.22*	*173547093.56*	*211058246.94*	*228186733.86*	*223970770.69*	*244366224.75*
Std Dev	*86720560.03*	*71649956.73*	*96708066.96*	*57116752.72*	*56512959.47*	*59597923.33*	*94189647.51*	*70693451.52*
Max	*444463711.05*	*383923420.00*	*341264940.00*	*284609410.00*	*311571599.79*	*341264940.00*	*444463711.05*	*427669801.00*
Min	*143632917.00*	*64664730.00*	*34848965.16*	*90583659.00*	*132308730.20*	*153165341.00*	*34848965.16*	*136645381.00*
Variance	*7050427060911470*	*4863520704367900*	*8767922076223300*	*3044835212242880*	*2838857411963010*	*3329917936483670*	*8644210474990110*	*4747685883050500*
Coe of Var	*0.34*	*0.27*	*0.38*	*0.32*	*0.25*	*0.25*	*0.42*	*0.28*
Range	*300830794.1*	*319258690.0*	*306415974.8*	*194025751.0*	*179262869.6*	*188099599.0*	*409614745.9*	*291024420.0*
Range Ratio	*3.1*	*5.9*	*9.8*	*3.1*	*2.4*	*2.2*	*12.8*	*3.1*
Expenditure_Major activities_2010								
Mean	*405502216.23*	*512219566.55*	*440427531.36*	*345447637.52*	*411224640.19*	*276826227.37*	*438669306.25*	*530623073.44*
Std Dev	*143624734.65*	*169506872.86*	*171842359.75*	*124008903.67*	*123455824.99*	*147262661.19*	*141492726.52*	*100022137.14*
Max	*752664003.08*	*1012788067.68*	*581549740.00*	*533393873.56*	*682957411.61*	*568853794.20*	*1012788067.68*	*752664003.08*
Min	*230144219.50*	*129815648.00*	*51197465.26*	*165216090.00*	*268406820.37*	*51197465.26*	*248267323.60*	*309351099.00*
Variance	*19338810377808800*	*27220338897708200*	*27684184316013800*	*14352994309208700*	*13547858420656400*	*20330898168407100*	*19506853411437800*	*9504206522519060*
Coe of Var	*0.34*	*0.32*	*0.38*	*0.35*	*0.28*	*0.52*	*0.32*	*0.18*
Range	*522519783.6*	*882972419.7*	*530352274.7*	*368177783.6*	*414550591.2*	*517656328.9*	*764520744.1*	*443312904.1*
Range Ratio	*3.3*	*7.8*	*11.4*	*3.2*	*2.5*	*11.1*	*4.1*	*2.4*
G5_Girls_Pro								
Mean	*87.36*	*88.41*	*85.41*	*83.25*	*85.62*	*79.71*	*87.35*	*89.08*
Std Dev	*3.70*	*4.07*	*5.77*	*7.61*	*5.74*	*6.74*	*4.02*	*2.78*
Max	*91.32*	*96.70*	*92.75*	*91.18*	*94.85*	*89.20*	*96.70*	*94.85*
Min	*76.47*	*77.37*	*70.94*	*62.81*	*79.50*	*62.81*	*77.35*	*82.16*
Variance	*12.81*	*15.72*	*31.16*	*53.99*	*29.25*	*42.54*	*15.76*	*7.34*
Coe of Var	*0.04*	*0.04*	*0.07*	*0.09*	*0.06*	*0.08*	*0.05*	*0.03*
Range	*14.8*	*19.3*	*21.8*	*28.4*	*15.4*	*26.4*	*19.3*	*12.7*
Range Ratio	*1.2*	*1.2*	*1.3*	*1.5*	*1.2*	*1.4*	*1.3*	*1.2*
G5_Boys_Pro								
Mean	*85.86*	*88.94*	*85.85*	*84.94*	*87.65*	*83.60*	*86.45*	*89.55*
Std Dev	*3.71*	*3.67*	*4.63*	*4.97*	*4.63*	*4.97*	*4.06*	*2.77*
Max	*91.63*	*96.91*	*94.02*	*92.56*	*93.56*	*92.56*	*96.91*	*93.56*

	Reg e	Reg c	Reg w	Reg mw	Reg fw	Reg m	Reg h	Reg t
Min	*77.64*	*80.41*	*79.14*	*74.13*	*80.95*	*74.13*	*77.16*	*82.83*
Variance	*12.91*	*12.79*	*20.11*	*23.07*	*19.09*	*23.20*	*16.08*	*7.29*
Coe of Var	*0.04*	*0.04*	*0.05*	*0.06*	*0.05*	*0.06*	*0.05*	*0.03*
Range	*14.0*	*16.5*	*14.9*	*18.4*	*12.6*	*18.4*	*19.7*	*10.7*
Range Ratio	*1.2*	*1.2*	*1.2*	*1.2*	*1.2*	*1.2*	*1.3*	*1.1*
G5_Tot_Pro								
Mean	*86.63*	*88.67*	*85.64*	*84.14*	*86.66*	*81.70*	*86.91*	*89.32*
Std Dev	*3.58*	*3.47*	*4.96*	*5.74*	*5.04*	*5.31*	*3.87*	*2.30*
Max	*91.47*	*96.81*	*93.39*	*90.77*	*94.23*	*89.68*	*96.81*	*94.23*
Min	*77.04*	*78.86*	*75.39*	*68.89*	*80.30*	*68.89*	*77.26*	*84.15*
Variance	*12.05*	*11.37*	*23.11*	*30.71*	*22.60*	*26.47*	*14.61*	*5.01*
Coe of Var	*0.04*	*0.04*	*0.06*	*0.07*	*0.05*	*0.06*	*0.04*	*0.03*
Range	*14.4*	*17.9*	*18.0*	*21.9*	*13.9*	*20.8*	*19.5*	*10.1*
Range Ratio	*1.2*	*1.2*	*1.2*	*1.3*	*1.2*	*1.3*	*1.3*	*1.1*
G1-5_Girls_Pro								
Mean	*82.26*	*83.82*	*82.28*	*79.71*	*79.88*	*77.17*	*82.13*	*85.09*
Std Dev	*3.71*	*5.04*	*4.10*	*5.47*	*6.11*	*3.97*	*4.53*	*3.50*
Max	*88.78*	*95.00*	*91.08*	*87.10*	*90.68*	*84.34*	*95.00*	*90.68*
Min	*77.04*	*75.54*	*75.52*	*68.22*	*73.41*	*68.22*	*73.41*	*77.12*
Variance	*12.93*	*24.08*	*15.72*	*27.90*	*33.14*	*14.81*	*20.04*	*11.66*
Coe of Var	*0.04*	*0.06*	*0.05*	*0.07*	*0.07*	*0.05*	*0.05*	*0.04*
Range	*11.7*	*19.5*	*15.6*	*18.9*	*17.3*	*16.1*	*21.6*	*13.6*
Range Ratio	*1.2*	*1.3*	*1.2*	*1.3*	*1.2*	*1.2*	*1.3*	*1.2*
G1-5_Boys_Pro								
Mean	*81.25*	*83.33*	*81.18*	*79.28*	*78.83*	*76.19*	*81.35*	*84.45*
Std Dev	*3.55*	*5.31*	*6.20*	*5.32*	*5.93*	*5.24*	*4.99*	*2.98*
Max	*89.17*	*95.93*	*92.92*	*86.85*	*88.32*	*83.73*	*95.93*	*89.17*
Min	*76.92*	*75.93*	*64.52*	*68.52*	*71.22*	*64.52*	*71.22*	*77.58*
Variance	*11.79*	*26.72*	*36.05*	*26.40*	*31.22*	*25.72*	*24.29*	*8.44*
Coe of Var	*0.04*	*0.06*	*0.07*	*0.06*	*0.07*	*0.07*	*0.06*	*0.03*
Range	*12.3*	*20.0*	*28.4*	*18.3*	*17.1*	*19.2*	*24.7*	*11.6*
Range Ratio	*1.2*	*1.3*	*1.4*	*1.3*	*1.2*	*1.3*	*1.3*	*1.1*
G1-5_Tot_Pro								
Mean	*81.76*	*83.57*	*81.76*	*79.49*	*79.37*	*76.70*	*81.75*	*84.78*
Std Dev	*3.58*	*5.14*	*4.99*	*5.25*	*5.98*	*4.27*	*4.72*	*3.19*
Max	*88.98*	*95.48*	*92.01*	*86.60*	*89.56*	*83.84*	*95.48*	*89.56*
Min	*77.10*	*75.73*	*70.45*	*68.37*	*72.31*	*68.37*	*72.31*	*77.34*
Variance	*12.04*	*25.01*	*23.34*	*25.74*	*31.79*	*17.13*	*21.68*	*9.67*
Coe of Var	*0.04*	*0.06*	*0.06*	*0.06*	*0.07*	*0.05*	*0.06*	*0.04*
Range	*11.9*	*19.7*	*21.6*	*18.2*	*17.2*	*15.5*	*23.2*	*12.2*
Range Ratio	*1.2*	*1.3*	*1.3*	*1.3*	*1.2*	*1.2*	*1.3*	*1.2*

Annexure 3: Ranking Order

Regions	HDI 2004		School, 2011		GERG, 2011		GERB, 2011		GERT, 2011	
	Coe of Variation	Range Ratio	Coe of Variation	Range Ratio	Coe of Variation	Range Ratio	Coe of Variation	Range Ratio	Coe of Variation	Range Ratio
Eastern	0.06	1.24	0.29	2.88	0.24	2.59	0.22	2.37	0.23	2.48
Central	0.15	1.65	0.43	11.49	0.14	1.79	0.17	1.88	0.15	1.84
Western	0.07	1.36	0.41	21.56	0.17	2.86	0.20	3.38	0.18	3.10
Mid Western	0.13	1.60	0.41	4.86	0.17	1.85	0.18	2.02	0.18	1.91
Far Western	0.13	1.49	0.27	2.31	0.18	1.86	0.19	1.89	0.18	1.87
Mountain	0.16	1.65	0.58	17.31	0.28	5.12	0.27	5.24	0.27	5.17
Hill	0.14	1.90	0.35	5.15	0.18	1.97	0.19	2.11	0.18	1.97
Terai	0.09	1.34	0.23	2.12	0.13	1.69	0.19	2.14	0.16	1.90

Regions	NERG, 2011		NERB, 2011		NERT, 2011		StuSchR, 2011		StuComScR, 2011	
	Coe of Variation	Range Ratio	Coe of Variation	Range Ratio	Coe of Variation	Range Ratio	Coe of Variation	Range Ratio	Coe of Variation	Range Ratio
Eastern	0.04	1.20	0.03	1.12	0.03	1.16	0.39	3.03	0.42	3.22
Central	0.04	1.12	0.02	1.08	0.03	1.10	0.52	4.21	0.59	5.03
Western	0.13	2.02	0.15	2.38	0.14	2.19	0.56	13.73	0.62	14.53
Mid Western	0.02	1.05	0.01	1.06	0.01	1.03	0.30	3.44	0.31	3.44
Far Western	0.02	1.08	0.03	1.11	0.02	1.10	0.24	2.45	0.29	2.65
Mountain	0.13	2.01	0.15	2.36	0.14	2.17	0.42	10.04	0.44	10.88
Hill	0.01	1.07	0.02	1.13	0.01	1.07	0.23	2.75	0.28	2.95
Terai	0.04	1.20	0.03	1.12	0.03	1.16	0.25	2.14	0.26	2.64

Regions	STR, 2011		STR Com, 2011		STRappT, 2011		G1GP		G1BP	
	Coe of Variation	Range Ratio	Coe of Variation	Range Ratio	Coe of Variation	Range Ratio	Coe of Variation	Range Ratio	Coe of Variation	Range Ratio
Eastern	0.40	3.18	0.39	3.24	0.42	2.80	0.08	1.34	0.07	1.32
Central	0.64	7.20	0.66	11.61	0.72	10.36	0.11	1.38	0.12	1.46
Western	0.45	10.52	0.55	14.30	0.85	20.88	0.07	1.34	0.11	1.71
Mid Western	0.33	4.08	0.33	4.03	0.35	3.74	0.10	1.45	0.11	1.46
Far Western	0.15	1.51	0.30	2.50	0.28	1.97	0.12	1.42	0.13	1.44
Mountain	0.37	8.72	0.37	9.13	0.46	14.64	0.08	1.35	0.11	1.44
Hill	0.41	5.17	0.44	7.64	0.42	7.34	0.10	1.50	0.12	1.71
Terai	0.43	4.79	0.39	4.37	0.34	3.74	0.08	1.33	0.07	1.24

Regions	G1TP		Literacy, 2001T		Literacy, 2001M		Literacy, 2001F		D_area	
	Coe of Variation	Range Ratio	Coe of Variation	arnge Ratio	Coe of Variation	Range Ratio	Coe of Variation	Range Ratio	Coe of Variation	Range Ratio
Eastern	0.07	1.33	0.13	1.66	0.09	1.42	0.19	2.19	0.50	5.37
Central	0.11	1.41	0.28	2.37	0.22	2.03	0.37	3.08	0.48	21.36
Western	0.08	1.37	0.12	1.73	0.10	1.57	0.16	2.10	0.44	7.31
Mid Western	0.10	1.45	0.24	2.35	0.16	1.81	0.44	5.60	0.60	6.03
Far Western	0.12	1.40	0.20	1.79	0.12	1.42	0.37	3.11	0.31	2.25
Mountain	0.08	1.37	0.24	2.25	0.15	1.66	0.46	5.67	0.48	5.11
Hill	0.11	1.57	0.19	2.31	0.13	1.76	0.27	4.21	0.44	30.34
Terai	0.07	1.28	0.22	2.18	0.17	1.85	0.31	2.91	0.36	3.23

Regions	Per_stuExp, 2011		PTeacher_2011		Stu_2011		Teach Sal Exp-2011		Expenditure in Major activities_2011	
	Coe of Variation	Range Ratio	Coe of Variation	Range Ratio	Coe of Variation	Range Ratio	Coe of Variation	Range Ratio	Coe of Variation	Range Ratio
Eastern	0.27	2.87	0.35	3.26	0.53	5.38	0.34	3.09	0.34	3.27
Central	0.96	15.62	0.27	5.83	0.50	15.54	0.27	5.94	0.32	7.80
Western	1.28	20.14	0.39	14.63	0.60	185.47	0.38	9.79	0.38	11.36
Mid Western	0.53	4.74	0.43	4.72	0.49	11.84	0.32	3.14	0.35	3.23
Far Western	0.29	2.27	0.28	2.69	0.49	4.21	0.25	2.35	0.28	2.54
Mountain	1.22	15.03	0.57	12.27	0.66	113.08	0.25	2.23	0.52	11.11
Hill	0.69	10.37	0.28	3.14	0.34	7.85	0.42	12.75	0.32	4.08
Terai	0.25	2.85	0.21	2.27	0.22	2.51	0.28	3.13	0.18	2.43

Regions	G5GP		G5BP		G5TP		G15GP		G15BP		G15TP	
	Coe of Variation	Range Ratio	Coe of Variation	Range Ratio	Coe of Variation	Range Ratio	Coe of Variation	Range Ratio	Coe of Variation	Range Ratio	Coe of Variation	Range Ratio
Eastern	0.04	1.19	0.04	1.18	0.04	1.19	0.04	1.15	0.04	1.16	0.04	1.15
Central	0.04	1.25	0.04	1.21	0.04	1.23	0.06	1.26	0.06	1.26	0.06	1.26
Western	0.07	1.31	0.05	1.19	0.06	1.24	0.05	1.21	0.07	1.44	0.06	1.31
Mid Western	0.09	1.45	0.06	1.25	0.07	1.32	0.07	1.28	0.06	1.27	0.06	1.27
Far Western	0.06	1.19	0.05	1.16	0.05	1.17	0.07	1.24	0.07	1.24	0.07	1.24
Mountain	0.08	1.42	0.06	1.25	0.06	1.30	0.05	1.24	0.07	1.30	0.05	1.23
Hill	0.05	1.25	0.05	1.26	0.04	1.25	0.05	1.29	0.06	1.35	0.06	1.32
Terai	0.03	1.15	0.03	1.13	0.03	1.12	0.04	1.18	0.03	1.15	0.04	1.16

Annexure 4: ANOVA Tables

Geographic Regions

By Geographic Region		Sum of Squares	Df	Mean Square	F	Sig
Number of Schools * Geographic Region	Between Groups	768405.956	2	384203	15.445	0
	Within Groups	1791042.231	72	24875.59		
	Total	2559448.187	74			
Net Enrollment - Girls * Geographic Region	Between Groups	366.664	2	183.332	5.151	0.008
	Within Groups	2562.344	72	35.588		
	Total	2929.008	74			
Net Enrollment- Boys * Geographic Region	Between Groups	173.835	2	86.918	1.923	0.154
	Within Groups	3254.653	72	45.204		
	Total	3428.489	74			
Net Enrollment Total * Geographic Region	Between Groups	253.453	2	126.726	3.27	0.044
	Within Groups	2790.652	72	38.759		
	Total	3044.105	74			
Student School Ratio * Geographic Region	Between Groups	202453.365	2	101226.7	65.261	0
	Within Groups	111679.985	72	1551.111		
	Total	314133.35	74			
Student School Ration in Community Schools * Geographic Region	Between Groups	253904.332	2	126952.2	68.12	0
	Within Groups	134183.466	72	1863.659		
	Total	388087.798	74			
Student Teacher Ratio * Geographic Region	Between Groups	5980.953	2	2990.476	18.935	0
	Within Groups	11371.438	72	157.937		
	Total	17352.39	74			
Student Teacher Ratio in Community School * Geographic Region	Between Groups	8337.707	2	4168.854	23.405	0
	Within Groups	12824.242	72	178.114		
	Total	21161.95	74			
Student Teacher Ration in Approved Positions * Geographic Region	Between Groups	9672.081	2	4836.041	19.372	0
	Within Groups	17973.944	72	249.638		
	Total	27646.025	74			

By Geographic Region		Sum of Squares	Df	Mean Square	F	Sig
Literacy Rate - Total * Geographic Region	Between Groups	2032.097	2	1016.049	9.029	0
	Within Groups	8101.997	72	112.528		
	Total	10134.095	74			
Literacy Rate - Male * Geographic Region	Between Groups	1805.918	2	902.959	10.124	0
	Within Groups	6421.979	72	89.194		
	Total	8227.897	74			
Literacy Rate - Female * Geographic Region	Between Groups	2794.739	2	1397.37	9.048	0
	Within Groups	11119.668	72	154.44		
	Total	13914.407	74			
DArea * Geographic Region	Between Groups	33340000	2	16670000	18.745	0
	Within Groups	64030000	72	889315.1		
	Total	97370000	74			
Per Student Expenditure * Geographic Region	Between Groups	2032000000	2	1.02E+09	6.055	0.004
	Within Groups	12080000000	72	1.68E+08		
	Total	14110000000	74			
Primary School Teachers * Geographic Region	Between Groups	8064468	2	4032234	24.554	0
	Within Groups	11820000	72	164219.9		
	Total	19890000	74			
Students * Geographic Region	Between Groups	46820000000	2	2.34E+10	68.453	0
	Within Groups	24620000000	72	3.42E+08		
	Total	71440000000	74			
Teachers Salary * Geographic Region	Between Groups	5.591E+15	2	2.8E+15	0.415	0.662
	Within Groups	4.854E+17	72	6.74E+15		
	Total	4.909E+17	74			
Major Expenditures * Geographic Region	Between Groups	5.807E+17	2	2.9E+17	16.381	0
	Within Groups	1.276E+18	72	1.77E+16		
	Total	1.857E+18	74			

Development Regions

By Development Region		Sum of Squares	Df	Mean Square	F	Sig
Number of Schools * Development Region	Between Groups	279552.693	4	69888.17	2.146	0.084
	Within Groups	2279895.494	70	32569.94		
	Total	2559448.187	74			
Net Enrollment - Girls * Development Region	Between Groups	98.66	4	24.665	0.61	0.657
	Within Groups	2830.347	70	40.434		
	Total	2929.008	74			
Net Enrollment- Boys * Development Region	Between Groups	240.073	4	60.018	1.318	0.272
	Within Groups	3188.415	70	45.549		
	Total	3428.489	74			
Net Enrollment Total * Development Region	Between Groups	166.094	4	41.523	1.01	0.408
	Within Groups	2878.011	70	41.114		
	Total	3044.105	74			
Student School Ratio * Development Region	Between Groups	42710.47	4	10677.62	2.754	0.035
	Within Groups	271422.88	70	3877.47		
	Total	314133.35	74			
Student School Ration in Community Schools * Development Region	Between Groups	50389.052	4	12597.26	2.611	0.043
	Within Groups	337698.746	70	4824.268		
	Total	388087.798	74			
Student Teacher Ratio * Development Region	Between Groups	3037.46	4	759.365	3.713	0.008
	Within Groups	14314.93	70	204.499		
	Total	17352.39	74			
Student Teacher Ratio in Community School * Development Region	Between Groups	3315.608	4	828.902	3.251	0.017
	Within Groups	17846.342	70	254.948		
	Total	21161.95	74			
Student Teacher Ration in Approved Positions * Development Region	Between Groups	4715.668	4	1178.917	3.599	0.01
	Within Groups	22930.358	70	327.577		
	Total	27646.025	74			
Literacy Rate - Total * Development Region	Between Groups	2440.49	4	610.122	5.551	0.001
	Within	7693.605	70	109.909		

By Development Region		Sum of Squares	Df	Mean Square	F	Sig
	Groups					
	Total	10134.095	74			
Literacy Rate - Male * Development Region	Between Groups	1584.036	4	396.009	4.172	0.004
	Within Groups	6643.861	70	94.912		
	Total	8227.897	74			
Literacy Rate - Female * Development Region	Between Groups	4269.374	4	1067.343	7.746	0
	Within Groups	9645.033	70	137.786		
	Total	13914.407	74			
DArea * Development Region	Between Groups	17480000	4	4370554	3.83	0.007
	Within Groups	79890000	70	1141261		
	Total	97370000	74			
Per Student Expenditure * Development Region	Between Groups	1537000000	4	3.84E+08	2.138	0.085
	Within Groups	12570000000	70	1.8E+08		
	Total	14110000000	74			
Primary School Teachers * Development Region	Between Groups	3387484.662	4	846871.2	3.593	0.01
	Within Groups	16500000	70	235726		
	Total	19890000	74			
Students * Development Region	Between Groups	4341000000	4	1.09E+09	1.132	0.349
	Within Groups	67100000000	70	9.59E+08		
	Total	71440000000	74			
Teachers Salary * Development Region	Between Groups	7.422E+16	4	1.86E+16	3.117	0.02
	Within Groups	4.167E+17	70	5.95E+15		
	Total	4.909E+17	74			
Major Expenditures * Development Region	Between Groups	2.501E+17	4	6.25E+16	2.723	0.036
	Within Groups	1.607E+18	70	2.3E+16		
	Total	1.857E+18	74			

Annexure 5: Bi-Variate and Regression Analysis

Bi-variate Analysis

Bi-variate Correlations

		NER - Girls	NER Total	Literacy - Total	Literacy - Female	Dropout - Girls	Dropout - Total	Repetition - Girls	Repetition - Total	HDI
Number of Schools	Pearson Correlation	.299**	.294*	.457**	.450**	-.492**	-.587**	-.374**	-.360**	.444**
	Sig. (2-tailed)	0.009	0.01	0	0	0	0	0.001	0.002	0
	N	75	75	75	75	75	75	75	75	75
Primary School Teachers	Pearson Correlation	.272*	.267*	.465**	.483**	-.535**	-.605**	-.356**	-.338**	.438**
	Sig. (2-tailed)	0.018	0.021	0	0	0	0	0.002	0.003	0
	N	75	75	75	75	75	75	75	75	75
Major Expenditures	Pearson Correlation	.310**	.304**	.391**	.391**	-.480**	-.551**	-.450**	-.442**	.401**
	Sig. (2-tailed)	0.007	0.008	0.001	0.001	0	0	0	0	0
	N	75	75	75	75	75	75	75	75	75

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Regression Analysis

Table 1) Primary Level Repetition Rate (Total)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.461[a]	.213	.179	4.01628

a. Predictors: (Constant), Major Expenditures, Primary School Teachers, Number of Schools

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	309.344	3	103.115	6.393	.001[a]
	Residual	1145.263	71	16.130		
	Total	1454.607	74			

a. Predictors: (Constant), Major Expenditures, Primary School Teachers, Number of Schools

b. Dependent Variable: Primary Level Repetition – Total

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	17.533	1.366		12.840	.000
	Number of Schools	.003	.006	.130	.530	.597
	Primary School Teachers	.002	.002	.225	.958	.341
	Major Expenditures	-2.121E-8	.000	-.758	-2.668	.009

a. Dependent Variable: Primary Level Repetition - Total

Table 2) Primary Level Repetition Rate (Girls)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.462[a]	.214	.180	4.09838

a. Predictors: (Constant), Major Expenditures, Primary School Teachers, Number of Schools

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	323.955	3	107.985	6.429	.001[a]
	Residual	1192.564	71	16.797		
	Total	1516.519	74			

a. Predictors: (Constant), Major Expenditures, Primary School Teachers, Number of Schools

b. Dependent Variable: Primary Level Repetition - Girls

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	17.747	1.393		12.736	.000
	Number of Schools	.003	.006	.108	.444	.659
	Primary School Teachers	.002	.002	.177	.756	.452
	Major Expenditures	-2.013E-8	.000	-.704	-2.482	.015

a. Dependent Variable: Primary Level Repetition - Girls

Table 3) Primary Level Net Enrollment Rate (Total)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.309[a]	.095	.057	6.228

a. Predictors: (Constant), Major Expenditures, Primary School Teachers, Number of Schools

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	290.029	3	96.676	2.492	.067[a]
	Residual	2754.076	71	38.790		
	Total	3044.105	74			

a. Predictors: (Constant), Major Expenditures, Primary School Teachers, Number of Schools

b. Dependent Variable: Net Enrollment Total

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	89.521	2.118		42.275	.000
	Number of Schools	.004	.009	.117	.448	.656
	Primary School Teachers	.000	.003	-.040	-.158	.875
	Major Expenditures	9.491E-9	.000	.234	.770	.444

a. Dependent Variable: Net Enrollment Total

Table 4) Primary Level Net Enrollment Rate (Girls)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.314[a]	.098	.060	6.09865

a. Predictors: (Constant), Major Expenditures, Primary School Teachers, Number of Schools

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	288.268	3	96.089	2.583	.060[a]
	Residual	2640.740	71	37.194		
	Total	2929.008	74			

a. Predictors: (Constant), Major Expenditures, Primary School Teachers, Number of Schools

b. Dependent Variable: Net Enrollment – Girls

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	89.199	2.074		43.017	.000
	Number of Schools	.004	.009	.118	.451	.653
	Primary School Teachers	.000	.003	-.040	-.158	.875
	Major Expenditures	9.491E-9	.000	.239	.786	.434

a. Dependent Variable: Net Enrollment – Girls

Table 5) Primary Level Dropout Rate (Total)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.625[a]	.391	.365	1.82641

a. Predictors: (Constant), Major Expenditures, Primary School Teachers, Number of Schools

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	151.866	3	50.622	15.175	.000[a]
	Residual	236.840	71	3.336		
	Total	388.706	74			

a. Predictors: (Constant), Major Expenditures, Primary School Teachers, Number of Schools

b. Dependent Variable: Primary Level Dropout - Total

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	9.734	.621		15.675	.000
	Number of Schools	-.004	.003	-.361	-1.679	.098
	Primary School Teachers	-.002	.001	-.461	-2.238	.028
	Major Expenditures	2.629E-9	.000	.182	.727	.469

a. Dependent Variable: Primary Level Dropout - Total

Table 6) Primary Level Dropout Rate (Girls)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.542[a]	.294	.264	1.92832

a. Predictors: (Constant), Major Expenditures, Primary School Teachers, Number of Schools

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	109.911	3	36.637	9.853	.000[a]
	Residual	264.009	71	3.718		
	Total	373.919	74			

a. Predictors: (Constant), Major Expenditures, Primary School Teachers, Number of Schools

b. Dependent Variable: Primary Level Dropout Rate - Girls

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	8.887	.656		13.555	.000
	Number of Schools	-.002	.003	-.200	-.864	.391
	Primary School Teachers	-.002	.001	-.466	-2.101	.039
	Major Expenditures	1.594E-9	.000	.112	.418	.677

a. Dependent Variable: Primary Level Dropout Rate - Girls

Table 7) Literacy Rate (Total)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.502[a]	.252	.221	10.330

a. Predictors: (Constant), Major Expenditures, Primary School Teachers, Number of Schools

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2558.097	3	852.699	7.991	.000[a]
	Residual	7575.998	71	106.704		
	Total	10134.095	74			

a. Predictors: (Constant), Major Expenditures, Primary School Teachers, Number of Schools

b. Dependent Variable: Literacy Rate - Total

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	37.377	3.512		10.642	.000
	Number of Schools	.027	.015	.431	1.809	.075
	Primary School Teachers	.010	.005	.453	1.983	.051
	Major Expenditures	-2.928E-8	.000	-.396	-1.432	.156

a. Dependent Variable: Literacy Rate - Total

Table 8) Literacy Rate (Female)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.514[a]	.264	.233	12.006

a. Predictors: (Constant), Major Expenditures, Primary School Teachers, Number of Schools

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3680.002	3	1226.667	8.510	.000[a]
	Residual	10234.405	71	144.147		
	Total	13914.407	74			

a. Predictors: (Constant), Major Expenditures, Primary School Teachers, Number of Schools

b. Dependent Variable: Literacy Rate – Female

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	22.852	4.082		5.598	.000
	Number of Schools	.027	.017	.369	1.563	.123
	Primary School Teachers	.015	.006	.550	2.429	.018
	Major Expenditures	-3.697E-8	.000	-.427	-1.556	.124

a. Dependent Variable: Literacy Rate – Female

Table 9) Human Development Index

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.465[a]	.216	.183	.0612662

a. Predictors: (Constant), Major Expenditures, Primary School Teachers, Number of Schools

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.073	3	.024	6.520	.001[a]
	Residual	.267	71	.004		
	Total	.340	74			

a. Predictors: (Constant), Major Expenditures, Primary School Teachers, Number of Schools

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.465[a]	.216	.183	.0612662

b. Dependent Variable: Human Development Index

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.376	.021		18.056	.000
	Number of Schools	.000	.000	.355	1.456	.150
	Primary School Teachers	3.958E-5	.000	.303	1.295	.200
	Major Expenditures	-7.926E-11	.000	-.185	-.654	.515

a. Dependent Variable: Human Development Index

Annexure 6: Regression Analysis on GPI in GER and NER

Table 1: GPI in GER

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.101[a]	.010	-.003	.07663
2	.162[b]	.026	.000	.07653
3	.361[c]	.130	.093	.07284
4	.361[d]	.130	.080	.07336
5	.392[e]	.154	.092	.07288

a. Predictors: (Constant), STR in All School

b. Predictors: (Constant), STR in All School, STR in Community School

c. Predictors: (Constant), STR in All School, STR in Community School, Percent of Female Teacher

d. Predictors: (Constant), STR in All School, STR in Community School, Percent of Female Teacher, Percent of Dalit Teachers

e. Predictors: (Constant), STR in All School, STR in Community School, Percent of Female Teacher, Percent of Dalit Teachers, Percent of Janjati Teachers

ANOVA[f]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.004	1	.004	.747	.390[a]
	Residual	.429	73	.006		
	Total	.433	74			
2	Regression	.011	2	.006	.969	.385[b]
	Residual	.422	72	.006		
	Total	.433	74			
3	Regression	.056	3	.019	3.541	.019[c]
	Residual	.377	71	.005		
	Total	.433	74			
4	Regression	.056	4	.014	2.618	.042[d]
	Residual	.377	70	.005		
	Total	.433	74			
5	Regression	.067	5	.013	2.507	.038[e]
	Residual	.366	69	.005		
	Total	.433	74			

a. Predictors: (Constant), STR in All School

b. Predictors: (Constant), STR in All School, STR in Community School

c. Predictors: (Constant), STR in All School, STR in Community School, Percent of Female Teacher

d. Predictors: (Constant), STR in All School, STR in Community School, Percent of Female Teacher, Percent of Dalit Teachers

e. Predictors: (Constant), STR in All School, STR in Community School, Percent of Female Teacher, Percent of Dalit Teachers, Percent of Janjati Teachers

f. Dependent Variable: GPI in GER

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.032	.018		57.851	.000
	STR in All School	.001	.001	.101	.864	.390
2	(Constant)	1.030	.018		57.310	.000
	STR in All School	-.003	.003	-.621	-.924	.359
	STR in Community School	.003	.003	.732	1.090	.279
3	(Constant)	1.162	.049		23.912	.000
	STR in All School	-.003	.003	-.672	-1.050	.297
	STR in Community School	.003	.003	.664	1.038	.303
	Percent of Female Teacher	-.003	.001	-.343	-2.913	.005
4	(Constant)	1.163	.050		23.295	.000
	STR in All School	-.003	.003	-.670	-1.032	.305
	STR in Community School	.003	.003	.663	1.027	.308
	Percent of Female Teacher	-.003	.001	-.343	-2.881	.005
	Percent of Dalit Teachers	-4.566E-5	.002	-.002	-.021	.984
5	(Constant)	1.154	.050		23.079	.000
	STR in All School	-.004	.003	-.743	-1.149	.254
	STR in Community School	.004	.003	.779	1.203	.233
	Percent of Female Teacher	-.003	.001	-.391	-3.172	.002
	Percent of Dalit Teachers	-4.706E-5	.002	-.002	-.021	.983
	Percent of Janjati Teachers	.001	.000	.171	1.387	.170

a. Dependent Variable: GPI in GER

Table 2: GPI in NER

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.387[a]	.150	.138	.03645
2	.406[b]	.165	.142	.03636
3	.408[c]	.166	.131	.03659
4	.410[d]	.168	.120	.03682
5	.522[e]	.272	.220	.03468

a. Predictors: (Constant), STR in All School

b. Predictors: (Constant), STR in All School, STR in Community School

c. Predictors: (Constant), STR in All School, STR in Community School, Percent of Female Teacher

d. Predictors: (Constant), STR in All School, STR in Community School, Percent of Female Teacher, Percent of Dalit Teachers

e. Predictors: (Constant), STR in All School, STR in Community School, Percent of Female Teacher, Percent of Dalit Teachers, Percent of Janjati Teachers

ANOVA[f]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.017	1	.017	12.836	.001[a]
	Residual	.097	73	.001		
	Total	.114	74			
2	Regression	.019	2	.009	7.121	.002[b]
	Residual	.095	72	.001		
	Total	.114	74			
3	Regression	.019	3	.006	4.715	.005[c]
	Residual	.095	71	.001		
	Total	.114	74			
4	Regression	.019	4	.005	3.529	.011[d]
	Residual	.095	70	.001		
	Total	.114	74			
5	Regression	.031	5	.006	5.164	.000[e]
	Residual	.083	69	.001		
	Total	.114	74			

a. Predictors: (Constant), STR in All School

b. Predictors: (Constant), STR in All School, STR in Community School

c. Predictors: (Constant), STR in All School, STR in Community School, Percent of Female Teacher

d. Predictors: (Constant), STR in All School, STR in Community School, Percent of Female Teacher, Percent of Dalit Teachers

e. Predictors: (Constant), STR in All School, STR in Community School, Percent of Female Teacher, Percent of Dalit Teachers, Percent of Janjati Teachers

f. Dependent Variable: GPI in NER

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.021	.008		120.241	.000
	STR in All School	.000	.000	-.387	-3.583	.001
2	(Constant)	1.022	.009		119.683	.000
	STR in All School	.001	.002	.324	.521	.604
	STR in Community School	-.002	.002	-.722	-1.160	.250
3	(Constant)	1.028	.024		42.111	.000
	STR in All School	.001	.002	.319	.509	.612
	STR in Community School	-.002	.002	-.728	-1.162	.249
	Percent of Female Teacher	.000	.001	-.034	-.290	.772
4	(Constant)	1.027	.025		40.986	.000
	STR in All School	.001	.002	.290	.458	.649
	STR in Community School	-.002	.002	-.711	-1.124	.265
	Percent of Female Teacher	.000	.001	-.037	-.317	.752
	Percent of Dalit Teachers	.000	.001	.043	.376	.708
5	(Constant)	1.017	.024		42.757	.000
	STR in All School	.000	.002	.136	.227	.821
	STR in Community School	-.001	.001	-.468	-.779	.438
	Percent of Female Teacher	.000	.001	-.137	-1.201	.234
	Percent of Dalit Teachers	.000	.001	.042	.398	.692
	Percent of Janjati Teachers	.001	.000	.360	3.148	.002

a. Dependent Variable: GPI in NER

Annexure 7: Interview Schedules

	Policy makers	Practitioners	Experts	Head Teachers	SMC members
1	In what ways GON has been addressing the disparities between/among gender, different groups and areas? (policies)	In what ways GON has been addressing the disparities between/among gender, different groups and areas? (programs)	How do you think about GON efforts to address the disparities between/among gender, different groups and areas? (macro/micro-efforts)	Do you think there are different interventions to address the disparities between/among gender and different groups? (practices)	Do you think there are different interventions to address the disparities between/among gender and different groups? (practices)
2	How do you perceive persistent inequalities among different groups and areas?	How do you perceive persistent inequalities among different groups and areas?	How do you perceive persistent inequalities among different groups and areas?	Why there are inequalities among different groups and areas?	Why there are inequalities among different groups and areas?
3	What could be the reasons for such persistent inequalities?	What could be the reasons for such persistent inequalities?	What could be the reasons for such persistent inequalities?	What are the reasons for such inequalities?	What are the reasons for such inequalities?
4	In your experience what concerns have been taken into considerations while formulating policies/financing policies?	In your experience what concerns have been taken into considerations while formulating programs and budget?	In your experience how equity concerns are taken into considerations while formulating policies/financing policies, and programs and budget?	In your experience how these differences are addressing through the programs you received from the Government?	In your experience how these differences are addressing through the programs you received from the Government?
5	What measures do you suggest for addressing such inequalities?	What measures do you suggest for addressing such inequalities?	What measures do you suggest for addressing such inequalities?	What measures do you suggest for addressing such inequalities?	What measures do you suggest for addressing such inequalities?