

**FISCAL DECENTRALIZATION, PUBLIC SERVICE DELIVERY
AND POVERTY:
A CASE STUDY OF NEPAL**

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DOCTOR OF PHILOSOPHY

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This is to certify that the thesis entitled "**Fiscal Decentralization, Public Service Delivery and Poverty: A Case Study of Nepal**" submitted by Krishna Raj Panta in fulfilment of the requirements for the award of the degree of **Doctor of Philosophy** is his original work and has not been previously submitted for the award of any other degree of this or any other university/institution.

We, therefore, recommend that the thesis may be placed before the examiners for evaluation.

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Pakali Village Development Committees (VDCs)

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Chilime Village Development Committees (VDCs)

Balambu Village Development Committees (VDCs)

Mijhing Village Development Committees (VDCs)

Thabang Village Development Committees (VDCs)

ABBREVIATIONS

ADB	Asian Development Bank
ADDCN	Association of District Development Committee Nepal
APM	All Party Mechanism
BoP	Balance of Payment
CBN	Cost of Basic Needs
CBOs	Community Based Organizations
CBS	Central Bureau of Statistics
CDO	Chief District Officer
CHC	Community Health Service Centres
CIAA	Commission for Investigation of Abuse of Authority
CPA	Comprehensive Peace Accord
CPI	Consumer Price Index
CV	Coefficient of Variation
DACF	District Assembly Common Fund
DAO	District Administration Office
DDC	District Development Committee
DEO	District Education Office
DIP	Decentralisation Implementation Plan
DoHS	Department of Health Service
DP	Decentralisation Plan
DPHO	District Public Health Office
DTO	District Technical Office
ESP	Economic Stabilization Program
FCHVs	Female Community Health Volunteers
FEI	Food and Energy Intake
FGT	Foster Greer Thorbecke
GDI	Gender Related Development Index
GDP	Gross Domestic Product
GNI	Gross National Income
GST	Goods and Service Tax

HDI	Human Development Index
HFI	Horizontal Fiscal Imbalance
HH	Household
HLDCC	High Level Decentralisation Coordination Committee
HPI	Human Poverty Index
IMF	International Monetary Fund
INGOs	International Non-Government Organizations
KMC	Kathmandu Metropolitan City
LBFC	Local Body Fiscal Commission
LBs	Local Bodies
LDO	Local Development Officer
LFP	Low Fee Private
LGAF	Local Governance and Accountability Facility
LGCDP	Local Governance and Community Development Programme
LGRA	Local Government Reform Agenda
LGRP	Local Government Reform Programme
LSD	Local Service Delivery
LSGA	Local Self Governance Act
LSGR	Local Self Governance Regulation
MCMP	Minimum Condition and Minimum Performance
MDGs	Millennium Development Goals
MMDAS	Metropolitans/Municipal/District Assemblies
MoF	Ministry of Finance
MoFALD	Ministry of Federal Affairs and Local Development
MoLJ	Ministry of Law and Justice
MoPR	Ministry of Peace and Reconstruction
MPI	Multidimensional Poverty Index
NCAER	National Council of Applied Economic Research
NEP	New Economic Policy
NESAC	Nepal South Asia Centre
NGOs	Non-Government Organizations
NLSS	Nepal Living Standard Survey

NPC	National Planning Commission
NRB	Nepal Rastra Bank
NVC	National Vigilant Centre
OAGN	Office of Auditor's General of Nepal
OECD	Organization for Economic Co-operation and Development
PAF	Poverty Alleviation Fund
PG	Poverty Gap
PHCR	Poverty Head Count Rate
PPP	Purchasing Power Parity
PRIs	Panchayati Raj Institutions
SAP	Structural Adjustment Program
SAPPROS	Support Activities for Poor Producers of Nepal
SMC	School Management Committee
SPG	Square Poverty Gap
SPISE	Student Performance in SLC Exam
TTBAS	Traditional Trained Birth Attendants
UC	User's Committee
UNDP	United Nations Development Programme
VDC	Village Development Committee
VEC	Village Education Committee
VFI	Vertical Fiscal Imbalance
VIF	Variance-Inflated Factor
WAC	Ward Awareness Centre
WCF	Ward Citizen Forum
WHO	World Health Organization
WPI	Wholesale Price Index
YSESF	Youth and Small Entrepreneurs Self-Employment Fund

CHAPTER 1: INTRODUCTION

1.1 Introduction

The role of local governments and the issue of fiscal decentralisation have been prominent topics in the discussions surrounding public finance and fiscal policy in Nepal over the last three decades. For the advanced countries, this widespread phenomenon of decentralisation is a "tool for reorganizing the government" for effective public service delivery (Bennett, 1990; Ebel & Yilmaz, 2002; Wildasin, 2010), whereas for developing countries, it is a way to get rid of "ineffective and inefficient governance, macroeconomic instability, and inadequate economic growth" (Bird & Vaillancourt, 1998; Ebel & Yilmaz, 2002). Likewise, decentralisation, for developing and transition countries is an "important policy strategy" for efficient public service delivery and poverty reduction strategy (Boex & Martinez-Vazquez, 2006).

Decentralisation of governance has begun to be an important constituent of the development programmes of international institutions, like, World Bank, International Monetary Fund, etc. For transition countries, it is supposed to help ease tensions during transition and to address the public voices demanding self-governance. By definition, [fiscal] "decentralisation" is the transfer of [fiscal] "authority and responsibility" for "public functions" from the central government to its lower jurisdictions (Rondinelli, 1999). As there is contextual and conceptual variation in decentralisation, the concept of fiscal decentralisation ought to consist of economic, political, social and legal aspects of public finance. Fiscal decentralisation has to address the needs of economic stability, sustainable economic growth and efficient and equitable public service delivery for the people of a given jurisdiction (World Bank, 1999; Ebel & Yilmaz, 2002).

Poverty reduction has been an important fundamental issue in the world for a long time. It is defined as the lack of well-being of people, both in income and non-income terms (Atkinson & Bourguignon, 1982; Kumar, 2002; Kakwani & Silber, 2007; Sen, 2011;

Kumar, 2013). Inadequate access of people to local public goods and services undermines the policies of poverty reduction. The earlier approach of centrally planned investment did have some positive impact on poverty reduction in general, but the socio-economic-political situation prevented the efficient delivery of local public goods, like, basic health, basic education, safe drinking water, etc. Thus, the need for fiscal decentralisation emerged for ensuring efficient local public service delivery that can help in poverty reduction. That is why decentralisation began to be considered as an important means of pro-poor development and a crucial ingredient of anti-poverty strategies.

The growth of the Nepalese economy is influenced by the "top-down approach" of development and the "pre-capitalist" mode of production (Bhattarai, 2003). During 45 years of planned development (excluding the 1st and 2nd plan periods), the average annual economic growth rate was about 3.6 percent and per capita income growth at 1.3 percent (Table 1.1). None of the plans could achieve their targeted growth rate and the socio-economic indicators lagged behind. Additionally, increasing dependency ratio and decreasing employment rate, and a deficit in balance of payments were other unfavourable characteristics of the Nepalese economy. Over the period of three and half decades, poverty was reduced by only about 10.8 percent on average in total and that is mainly because of the decrease in urban poverty (see Appendix, Table I-1 & Table I-2). These socio-economic indicators suggest that there was status quo or the sluggish economic development and continuation of severe poverty in Nepal.

Table 1.1: Average Annual Growth Rate of Different Indicators during Last 45 Years (percent)

<i>Indicator</i>	<i>GDP</i>	<i>PCI</i>	<i>AgrGDP</i>	<i>Non-AgrGDP</i>	<i>Population</i>	<i>Inflation</i>
Growth Rate	3.8	1.3	2.9	4.3	2.29	8.2

Source: MoF & ADB/NRM, 2010; MoF, 2011.

In Nepal, even though decentralisation was introduced in 1952 as Tribhuvan VDC Development Programme to transfer the development activities down to the VDC level, it was the Local Self-Governance Act (LSGA) 1999 and the Local Self-Governance

Regulation 1999 that have assigned a number of functions to the local bodies (LBs), which became the major steps towards decentralisation. Actually, Nepal is facing the problem of low level fiscal decentralisation. Yet, poverty in Nepal has persisted with 25.16 percent of the total population still below the national poverty line in 2010/11 (CBS, 2011c). However, as per the human Development Index (HDI), Nepal ranks 145th out of 187 countries, with the value at 0.540 (UNDP, 2014).

The traditional theories of fiscal decentralisation maintain that decentralisation is a tool for efficiency gain and poverty reduction depends on redistribution. So, they did not link poverty reduction policies with fiscal decentralisation and considered the former as a separate function of the central government. But poverty being a case of shortage of basic public goods and services (as also the shortfall of food and non-food consumption and a case of human deprivation), efficient delivery of public goods and services to the poor that could be maximized through the process of fiscal decentralisation can be a "cornerstone" for "poverty reduction strategy". This is the theoretical foundation used in this study. In this background, there is a need to study the pro-poor nature of the expenditure of local governments and pro-poor effect of service delivered by them in rural areas where most of the residents are poor. Besides the local level study, a national level analysis of the effect of fiscal decentralisation on poverty may also be useful in policy formulation for poverty reduction in the Nepalese context. This research will try to fill the gap in these areas. The study focuses more on expenditure aspects rather than the revenue raising issues of fiscal decentralisation.

1.2 Policies towards Fiscal Decentralisation in Nepal: An Overview

The period of decentralisation reforms in Nepal can be divided broadly into two phases, though the constitutional provision of local entities as the exercise of decentralisation has started since 1948. The former one is Panchayat rule (1960-1990), which is supposed to be the phase of pseudo-reforms which did not disturb the power of the elite. Next is the period after 1990, after restoration of democracy, which is believed to be the phase of reforms for good governance (Gurung, 2006). In the first phase, decentralisation was not being

practiced more than the de-concentration rather than the devolution. It was used to strengthen the political hold of "Party-less Panchayat System" of governance down to the grass roots. In the second phase too, local entities were legalized under the LSGA 1999 as "Local Bodies (LBs)" (not as local governments). The absence of treatment of LBs as a part of constitutional obligation led to a lack of power sharing. It is only now that the Interim Constitution 2007 has recognized the LBs introducing them in a higher most legal framework. Moreover, the latest legal step, Local Self Government (Financial Administration) Regulation 2007 has defined the local financial architecture in Nepal.

In the process of decentralisation, constitutional framing of local government was initiated in 1962, just after ending the multi-party democracy and re-enforcement of the *Partyless Panchayati* political system. The country was administratively divided into 14 zones, 75 districts and 4000 village assemblies constitutionally as mandated in The Constitution of the Kingdom of Nepal 1962.¹ The Decentralisation Plan (DP) 1965 was another important step towards decentralisation. Later on, in 1975, the country was again divided into five development regions. Furthermore, The District Administration Plan 1974; The Decentralisation Act 1982; and Decentralisation Working Procedure Rules 1984 emphasized the involvement of local units in the development process. They, for example, provided to keep all district line agencies under the umbrella of respective District Panchayats. However, in practice, fiscal decentralisation was inadequate in that period (Shrestha, 2002). Nevertheless, the delegation of some revenue and expenditure authority to local units under district Panchayats was a landmark for fiscal decentralisation. Overall, the decentralisation under the Panchayat rule was in the form of deconcentration and delegation rather than the actual devolution of power and responsibilities to local units (Dhungel, Sapkota, Haug, & Regmi, 2011).

The Constitution of the Kingdom of Nepal, 1990, recognized decentralisation in the Directive Principles and Policy of the State. Two tiered local bodies were formed, namely,

¹The VDC Panchayat Act 1962; Town Panchayat Act 1962; and District Panchayat Act 1962 were launched recognizing the three tier system of local governance supplied with power and functions. However, later on Zonal Panchayat was dismissed after 1990 (Dhungel et al., 2011).

VDC Development Committee (VDC) and the Municipality as lower tier, and District Development Committee (DDC) as upper tier, provided by the separate acts promulgated in 1991 to define their power and functions. To overcome the lack of an explicit spirit of self-governance, a High Level Decentralisation Coordination Committee (HLDCC) under the chairmanship of the Prime Minister was formed in late 1995 to suggest the comprehensive framework for local self-governance. The LSGA 1999 and the Local Self Governance Regulation (LSGR) 1999 were prepared and promulgated on the basis of the recommendations of the HLDCC. These are supposed to be the “cornerstones” in the history of local self-governance and decentralisation in Nepal. Moreover, the Decentralisation Implementation Plan (DIP) 2002, devolved expenditure of four basic sectors: basic health, basic education, agricultural extension and veterinary services to LBs. In addition, rural infrastructure sector was also devolved to DDCs in 2004. As the latest development, the Committee on the State Restructuring and Distribution of the State Power under the Constitution Assembly has recommended the three tier governance system: central, provincial and local with three areas as: autonomous area, protected areas and special areas with certain local powers (Dhungel et al., 2011).

Considering the periodic plans, the Ninth Five Year Plan (1997-2002) laid emphasis more on decentralisation with an objective to tone up LBs by assigning them functions and authorities of plan formulation and plan execution (Dahal, Uprety, & Subba, 2001). The Tenth Five Year Plan (2002-2007) also continued the effort for decentralisation by aiming to strengthen capacity of the LBs as a long-term policy. The Eleventh Plan and the Three Year Interim Plan (2007-2010) focused on the restructuring and institutional empowerment of LBs and coordination with NGOs in local development (NPC, 2008). Along with providing strong legal background, the Twelfth Plan and the Three Year Plan (2011-13) formulated policy towards a re - evaluation and strengthening of LBs for effective public services. The Thirteenth Plan (2014-2016) focused on federalism, decentralisation and local governance. It proposed the strategy of fortifying LBs through restructuring, organizational strengthening and capacity development along with local election. Its aim was to make LBs efficient by providing them resources and authority, and to systemize the local financial resources according to the sectoral concept of decentralisation. Though

priority was given in the plans, the past efforts at decentralisation have not achieved their targets. Besides this, the LBs of Nepal are facing the problems of conflict and absence of regular elections, which are obstructing the proper practice of mobilization of local body finance and fiscal decentralisation.

The bottlenecks and limitations in the administrative and fiscal systems can be taken as one of the causes of weak development and of instability in Nepal. There is a long history of failure to address the policies for efficient measures of decentralisation and decentralised development. This is because of the unwillingness of the rulers, under the umbrella of highly centralized governance system, to share power and resources (which are in their grip) to the local people (Gurung, 2006) and the urban bias leading to unbalanced development strategies. In other words, the unwillingness of central authorities to share power due to fear of losing political control over local (Martinez Vezquez & Vaillancourt, 2011) has been an important factor in slow decentralisation. The practice of limited decentralisation is characterised by its inconsistency with other laws and their provisions, insufficient fiscal devolution to LBs, and absence of programmes to enhance their efficiency and the problem of duplication of assignments (Sharma, 2008). This provided the ground for a demand for a federal structure which, some people hope, would provide autonomous jurisdictions.

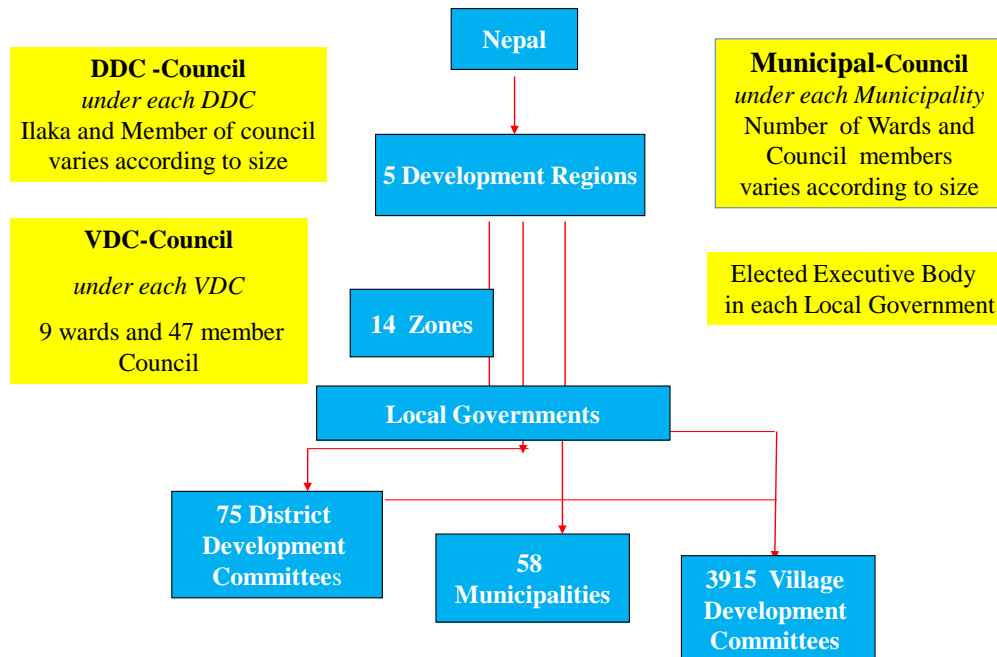
1.2.1 Structure of Local government System

The administrative division of Nepal includes five Development Regions, 14 Zones, 75 Districts, 3915 VDC Development Committees and one Metropolitan city, three sub-metro cities and 54 Municipalities.² There is provision for three types of local bodies in Nepal: District Development Committees (DDCs), VDC Development Committees (VDCs) and Municipalities. VDCs are rural LBs and Municipalities are urban, whereas DDCs consist

² Recently, Government of Nepal has converted 639 VDCs into 133 new municipalities. As they are under the implementation, this research accounts only for the existing structure and number of LBs, excluding the provision of new declaration. Further, Zonal administration is not functional nowadays. However, Regional Administrators of five development regions act to coordinate district administrations under their respective jurisdiction.

of both rural as well as urban areas. The jurisdiction of each DDC is divided into 9-17 areas (i.e. *Ilakas*); each VDC is divided into 9 *Wards*; and each Municipality into 9-35 *Wards* according to the population size (Fig. 1.1).

Fig. 1.1: Structure of Local Government in Nepal³



In general, the government system of Nepal comprises of three tiers. The uppermost tier is the central government (CG), DDCs are the middle, and VDCs and municipalities are the bottom tiers of the government system. The entire district that is governed by a DDC consists of VDCs and municipalities under it. Municipalities are autonomous to some extent as there is no compulsion to deal with DDC for most of their fiscal assignments. However, fiscal assignments of the VDCs have to be performed under the umbrella of DDC. Each LB is headed by an elected chief representative (Chairman) and assisted by an official head (Member-Secretary). Every tier of LB has its own level of financial activity controlled by its respective level of council that is responsible for approving the annual budget.

³ *Ilaka* is the small unit (area) of DDCs and the *ward* represents the small unit of VDCs and municipalities.

1.2.2 Legal Provisions

In Nepal, the most important legal development regarding transfer of fiscal powers to LBs (which is known as fiscal decentralisation) was the promulgation of the LSGA 1999 and Local Self Governance Regulation 1999. They defined the organizational and financial provisions of all three types of LBs- DDCs, municipalities and VDCs (See Fig. 1.1; Appendix Table I-3 & Table I-4). DDCs are provided with 16 categories of expenditure assignments and VDCs and municipalities with 11 categories (MoLJ, 2004; Shrestha, 2002). Since 2001/02, DDCs have been authorized to execute central programmes of some development sectors – agriculture extension service, veterinary service, basic education and basic health. Since 2003/04, small infrastructure has been added (Ligal, Shrestha, Chapagain, Bista, & Maharjan, 2005).

The expenditure assignments of LBs have broad coverage, including many of the development sectors. They include: agriculture, irrigation, soil erosion and river control, education and sports, health, drinking water, sanitation, development of women and weaker sections, rural infrastructure, public safety, etc. (MoLJ, 2004). They are relevant for the well-being of the people and try to meet the poverty reduction objectives of fiscal decentralisation.

Local governments are given the power to collect tax and non-tax revenue (within the rates and bases given by the Centre) as own source revenue, namely, the local taxes, fees and fines, service tax, land revenue, sales and others (MoLJ, 2004). There is provision for intergovernmental transfer/grants system from the Centre to LBs or among LBs. Grants may be either conditional or unconditional. Furthermore, legal provision of revenue sharing among the different tiers of government provides the ground for comparatively good sources of revenue of LBs. It consists of sharing of revenue raised as royalty from house and land registration, mineral, forestry, hydroelectricity, tourism fee, etc. The LSGA 1999 has provided authority to LBs to raise funds from donor partners and takes loans as well. Among the LBs, DDCs and VDCs have no control over major taxes, but Municipalities are

authorized to collect property tax. Therefore, the latter are in a better resource position than the DDCs and VDCs.

1.2.3 Trend of Fiscal Decentralisation

There are various methods for measuring fiscal decentralisation. However, scholars are found to use them according to data accessibility. Here, four types of variable are estimated on the basis of De Mello (2000) formula to observe the trends of fiscal decentralisation in Nepal (See Chapter 2, Section 2.2). These are expenditure decentralisation, tax autonomy, revenue autonomy and fiscal dependency.

For good expenditure decentralisation, there should be clear, concrete and stable expenditure assignments among the different levels of government (Boex & Martinez-Vazquez, 2006). In practice, LBs of Nepal are found to perform fewer functions than those assigned to them because of an inadequate revenue assignment. It seems to rule out the principle- “finance follows function” (Bahl, 1999b; Boex & Martinez-Vazquez, 2006) to some extent, due to the limited resource generation effort of LBs. Moreover, fiscal status of LBs of Nepal has been characterised by high vertical and horizontal fiscal imbalances as well (Panta, 2010).

Table 1.2: Expenditure Ratio of Local Bodies 2002/03 to 2010/11 (Rs. in million)⁴

<i>Year</i>	<i>Government Expenditure (a)</i>	<i>Local Bodies Expenditure (b)</i>	<i>Ratio (b/a) in percent</i>
2002/03	84006.10	7505.25	8.93
2003/04	89442.60	6497.29	7.26
2004/05	102560.47	6622.70	6.46
2005/06	110889.16	8544.71	7.71
2006/07	133604.61	13864.24	10.38
2007/08	161349.90	14033.33	8.7
2008/09	2196619.18	226432.28	10.31
2009/10	2271073.22	259510.00	11.43
2010/11	2953600.00	347600.00	11.77

Source: Analysis of the Fiscal Position of Local Bodies (Various Years), LBFC, Nepal.

⁴ Rs. refers to Nepalese rupees (NPR), in this thesis.

The path of expenditure decentralisation of LBs seems to be uneven because of the uneven nature of the trend in revenue assignment. The ratio of LBs expenditure to central government expenditure provides an idea of the pattern of expenditure decentralisation in Nepal. There is a fluctuating pattern, falling from 9 percent in 2002/03 to 6 percent in 2004/05 and again increasing to 10 percent in 2006/07 and going on increasing except the decrease in 2007/08 (Table 1.2). The ratio declines if we consider the ratio of LBs expenditure to total (central plus local) government expenditure. This is due to the irregular nature of own source revenue and uneven pattern of central grants/transfers. The observed scenario indicates the low level of fiscal decentralisation which also implies a high level of centralization of fiscal authority Nepal (Ligal et al., 2005; Gurung, 2006; Panta, 2010). This is a result of top-down planning process where targets are set in the Capital and which favours urban areas (Bienen, Kapur, Parks, & Riedinger, 1990; Zimmermann, 1996).

Tax Autonomy, Revenue Autonomy and Fiscal Dependency of Local Bodies

Certain discretion of the authorities provided to LBs to collect tax and revenue from defined sources at local level is referred as tax autonomy and revenue autonomy, respectively. Likewise, level of reliance of LBs on central transfer to meet their expenditure assignments is called fiscal dependency. According to the formula used by De Mello (2000), tax autonomy is calculated as the ratio of tax revenue of LB to its total revenue. Similarly, revenue autonomy and fiscal dependency equal to ratio of own source revenue and central grant transfer to total revenue of LB, respectively. These figures may not represent fully the level of fiscal autonomy as the efficiency of LBs plays important role in revenue raising of LBs through decentralised provision of revenue assignment. However, it may provide some idea on the issue.

LBs of Nepal are facing a problem of low level of tax autonomy. According to the available data, the tax autonomy for DDCs was the highest (0.26) in 2001/02, while it was lowest (0.03) in 2005/06 and is fluctuated in between periods (Table 1.3). This is small because DDCs lack major tax sources, like, the property tax and sales tax that remain in the control

of the central government. There was a significant jump in revenue autonomy in 2001/02 as the DDCs had revenue sources such as the natural resource taxes which are unstable and depend on the amount used. Even in the case of authorized taxes, LBs themselves cannot determine the tax base and the tax rate. The data reveals the case of high fiscal dependency of DDCs for the later years (over 84 percent in 2010/11) due to significant increase in the proportion of grants in their total revenue (ADDCN, 2009; LBFC, Various Years).

Table 1.3: Tax Autonomy, Revenue Autonomy and Fiscal Dependency of DDCs

<i>Year</i>	<i>Tax Autonomy</i>	<i>Revenue Autonomy</i>	<i>Fiscal Dependency</i>
1997/98	0.05	0.16	0.84
1998/99	0.05	0.24	0.76
1999/00	na	na	na
2000/01	0.19	0.44	0.56
2001/02	0.26	0.61	0.39
2002/03	0.03	0.56	0.44
2003/04	0.15	0.52	0.48
2004/05	0.20	0.58	0.42
2005/06	0.03	0.33	0.67
2006/07	0.07	0.27	0.73
2007/08	0.07	0.31	0.70
2008/09	0.10	0.21	0.78
2009/10	0.11	0.21	0.79
2010/11	0.08	0.16	0.84

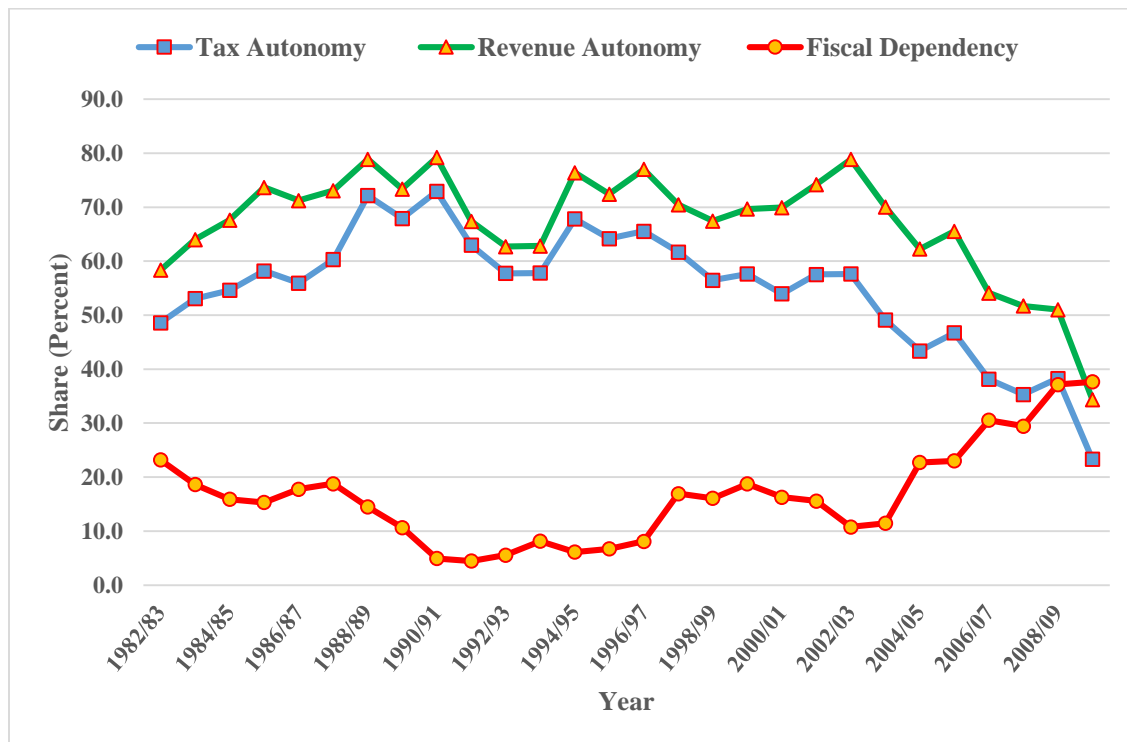
Source: Analysis of the Fiscal Position of Local Bodies (Various Years), LBFC, Nepal. Consolidated Report on Income and Expenditure of DDCs 2009, ADDCN, Nepal.

Among the LBs of Nepal, municipalities are levying different sets of taxes for quite some time. The main component of municipal revenue is its own source revenue. Revenue autonomy and tax autonomy of municipalities have shown a fluctuating trend.

Municipalities are less dependent on grants from the central government (LBFC/udle, 2010). After the LSGA 1999, the tax autonomy of the municipalities seems to be falling in comparison to other sources of revenue. Fiscal dependency is seen to increase after 2003/04, as the share of grant increases (Fig. 1.2). This may be due to the increase of local

development fees⁵ as the municipal grant. Next, dependency of VDCs on central grant ranges from 68 percent (2001/02) to 91 percent (2010/11) over the years (LBFC, Various Years). Fiscal dependency is high not only of VDCs, but DDCs and municipalities, they are also seen to experience increasingly growing fiscal dependency. In other words, since fiscal dependency is the ratio of grants to the total revenue of LBs, the present scenario shows the increasing centralization of the fiscal governance system in Nepal.

Fig. 1.2: Tax Autonomy, Revenue Autonomy and Fiscal Dependency of Municipalities



Source: Detailed Revenue and Expenditure Breakdown with Budget and Key Financial Indicators of 58 Municipalities (for 2008/09), LBFC/udle (2010).

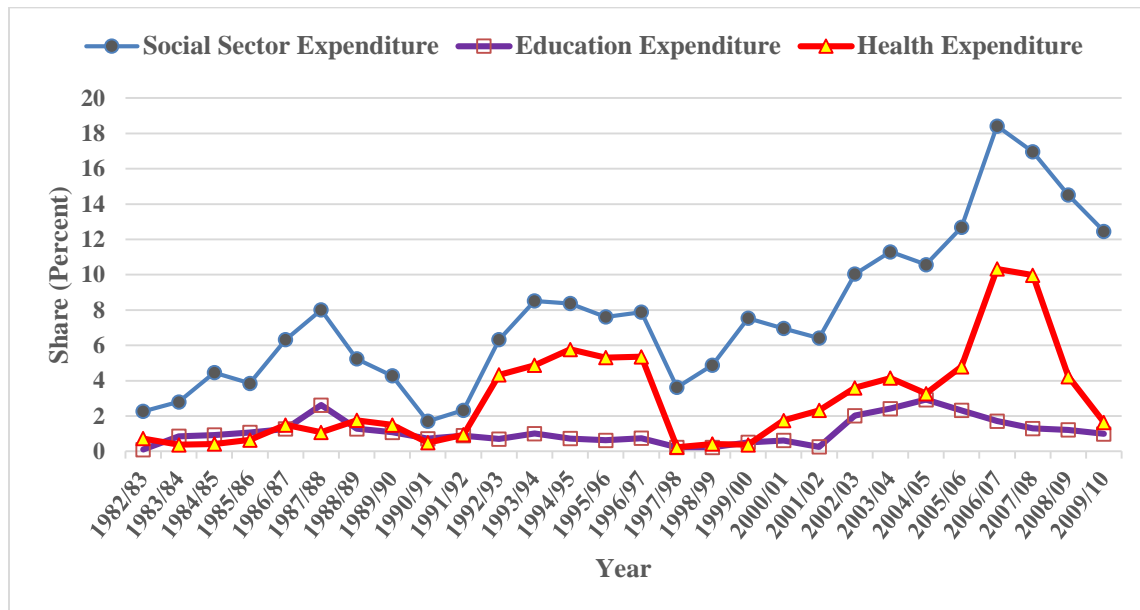
Trend of Social Expenditures of Local Bodies

The trend of expenditure allocation of LBs shows their focus on infrastructure development rather than on social sectors (health and education expenditure). Kandel (2006) observed an average 37 percent expenditure of some selected DDCs allocated for infrastructure

⁵ Since 1999, the central government abolished *Octroi*. It was replaced with *Local Development Fee* provided by central government municipalities as grant. Here, due to this replacement, share of own source revenue in total revenue of municipalities declines and share of grant rises.

development and about 35 percent and 21 percent on social expenditure and economic expenditure, respectively. Likewise, about 75 percent of the expenditure of selected VDCs was allocated for infrastructure development and only 5 percent for social services.

Fig. 1.3: Trend of Share of Various Expenditures to Total Expenditure in Municipalities



Source: Detailed Revenue and Expenditure Breakdown with Budget and Key Financial Indicators of 58 Municipalities (for 2008-09), LBFC/udle (2010).

Municipalities implement social programmes through investment in health, education, forestry, culture and sports, disaster relief, financial assistance, etc. Prior to 1991/92, expenditure on education exceeded that on health, but since then the latter is higher (Fig. 1.3). Health expenditure has displayed a fluctuating trend leading to variations in the share of social sector expenditure in total expenditure. However, it increased steeply in 2006/07 (10.3 percent of the total municipal expenditure). Hence, the overall increase in social programme expenditure after 1997/98 supports the view of contribution of municipal expenditure in reducing urban poverty by impacting improved human wellbeing.

The Vertical Fiscal Imbalance

Vertical fiscal imbalance (VFI) arises due to the inability of local government to achieve the second-best optimum in resource allocation. In other words, the asymmetry between

the decentralisation of expenditure assignments and revenue raising authority leads to a *vertical fiscal gap*. If the vertical fiscal gap deviates from the optimum level, then VFI arises, either it is positive or negative. It is outsourced also by the vertical fiscal externalities determined by coordination failure among local governments. In the situation of VFI, “marginal benefit from public goods and services” fails to equate with the “expected marginal cost of the public fund” (Boadway & Tremblay, 2005). Here, the case of DDCs gives the example of the problem of VFI existing in LBs of Nepal (Table 1.4). Here, all three kinds of fiscal gaps represented by share of own source revenue in total revenue, share of own source expenditure in total expenditure and share of own source revenue in total expenditure of DDCs are fluctuating following the decreasing pattern in the later years because of the increasing trend of central grant to DDCs.

Table 1.4: Vertical Fiscal Imbalance of DDCs 1997/98 to 2010/11 (percent)

<i>Year</i>	<i>Share of Own source Revenue in Total Revenue</i>	<i>Share of Own Source Expenditure in Total Expenditure</i>	<i>Share of Own Source Revenue in Total Expenditure</i>
1997/98	15.30	16.60	15.50
1998/99	23.50	18.70	23.00
1999/00	na	na	na
2000/01	na	na	na
2001/02	55.80	48.40	50.50
2002/03	53.80	44.60	60.90
2003/04	46.50	48.40	43.60
2004/05	57.98	56.87	70.60
2005/06	32.70	22.30	37.30
2006/07	27.30	17.80	35.90
2007/08	30.36	34.41	33.38
2008/09	19.28	25.73	28.36
2009/10	18.02	20.94	27.27
2010/11	16.28	17.06	17.36

Source: Analysis of the Fiscal Position of Local Bodies (Various Years), LBFC, Nepal.

As the data system of Nepalese LBs is complex and unsystematic, it is difficult to estimate actual fiscal imbalances, but we can draw some idea from the available data. According to Local Body Fiscal Commission (LBFC), data of fiscal assignments of all LBs for the early years are not available and average estimates from data of the sample LBs are used in the analysis for those years. Before LSGA, share of own source expenditure of DDCs was as

low as 16.6 percent (Table 1.4). After LSGA, it increased and reached 57 percent in 2004/05. However, from 2005/06 it began to fall sharply with the rise of grant over the year. Similar types of fluctuation can be observed in the share of own source revenue to total revenue and share of own source revenue to total expenditure of DDCs. These scenarios show the high variation in VFI of LBs represented as the resource gap to meet their expenditure assignments, exemplified by the case of DDCs. It means LBs are always short of resources (resource deficit) to meet their expenditure on local public services. However, central transfer to LBs fills this resource gap to some extent. The narrow tax base and lower level of tax rate allowed to the LBs and central control over major taxes such as property taxes, sales taxes, result in high vertical fiscal imbalance of LBs in Nepal (Panta, 2010).

Vertical fiscal imbalance affects the local public service delivery as it results in a low resource base to invest in basic public services. Hence, it affects poverty reduction and human development of the poor through the compromised quantity and quality of basic public services such as basic education, basic health, safe drinking water, etc. along with rural infrastructure development, irrigation, and other income generating programmes. It is tough to overcome vertical fiscal balance. However, the central government of Nepal, instead of providing more authority to LBs, is trying to address this problem to some extent through revenue sharing and grant transfer (Ligal et al., 2005).

Horizontal Fiscal Imbalance

Horizontal fiscal imbalance (HFI) arises if there is a mismatch between expenditure responsibilities and fiscal capacity of government to perform those responsibilities across the same level of governments. There are a number of factors determining the HFI. The major cause is the inequality in capacity among local governments for revenue raising and resource distribution. This difference mainly arises due to variation in fiscal effort, existing level of or the demand for quantity and quality of services, natural resource endowment, the skewed distribution of social or physical infrastructure, and unit cost of the service

production, etc. In summary, the HFI occurs due to the socio-economic, political and geographical variation among local governments of the same tier.

Just like the VFI, HFI also has implications for basic service provision and poverty reduction strategy. Because of the imbalance, the flow of population from fiscally more deficit region to a prosperous region creates excess demand for services that could be solved only by central transfer of fiscal authority or the fund to local government in need. Similarly, the resource deficit of local governments (in high poverty zone) that are short of resources to fund the basic public services and income generating programmes to poor leads to the disparity between the living standard of people of various regions. The problem exists at all, even the revenue sharing, and the conditional and unconditional grants (as in the case of Nepal) are applied as tools for correction of fiscal imbalances. However, central government is reluctant to devolve sufficient revenue sources and authority (more tax base and tax rate) and instead accuses the local governments of having inefficient revenue raising capacity due to its weak administration, the possibilities of misappropriation, leading to danger of revenue loss (Ligal et al., 2005).

Like other developing countries, Nepal is also facing the problem of HFI. This problem, among LBs of Nepal is illustrated by taking the example of 58 municipalities as given in Table 1.5. There are variations in per capita total revenue, per capita own source revenue and per capita capital expenditure among the municipalities from various locations and having different level of socio-economic development. Though imbalances estimated as coefficient of variation (CV) in all three indicators decreased (by 40-50 percent around) between the years 2001/02 and 2008/09, the imbalance still remains significant. The imbalance in per capita own source revenue is still higher than the other two indicators (CV: 99 percent & 58 percent for respective years). These figures indicate the variation in resource endowments among municipalities. The significant decrease in the horizontal imbalances in per capita total revenue and per capita capital expenditure between two periods of time suggests that conditional and unconditional grants/transfers to resource poor municipalities has succeeded. For example, there is provision of development grants only for the municipalities possessing own source revenue of less than Rs.10 million (i.e.

on the basis of “the lower the municipal own source revenue, the higher the individual share of development grant”) and according to the population and area of municipalities (Cyan, Pokharel, & Adhikari, 2009).

Table 1.5: Horizontal Fiscal Imbalance in Municipalities of Nepal 2001/02 and 2009/10 (Rs.)

<i>Measures of Variation</i>	<i>Per Capita Total Revenue</i>		<i>Per Capita Own Source Revenue</i>		<i>Per Capita Capital Expenditure</i>	
	2001/02	2008/09	2001/02	2008/09	2001/02	2008/09
Average	633.06	1742.66	411.42	658.10	265.21	910.95
Minimum	155.79	254.35	62.62	230.14	6.62	234.07
Maximum	2236.53	3887.40	1863.03	1702.90	1151.19	1981.96
Standard Deviation	430.98	630.55	378.00	382.05	208.00	394.33
Coefficient of Variation	68.08	36.18	91.88	58.05	78.43	43.29

Source: Detailed Revenue and Expenditure Breakdown with Budget and Key Financial Indicators of 58 Municipalities 2009/10, LBFC/udle (2010).

Though it is very hard to overcome problems of fiscal imbalances, the public finance literature suggests different policies (Ebel & Yilmaz, 2002; Boex & Martinez-Vazquez, 2006; Rangarajan & Shrivastava, 2008). Tools such as devolution of goods and service tax (GST), stable and statutory grant system, gap-filling transfers, equalization according to fiscal capacity, reasonable revenue sharing criteria, etc. are suggested. In summary, a good tax system and the good intergovernmental transfer system would be the remedy to reduce the fiscal imbalances. There is practice of grant transfer and revenue sharing provisions in Nepal to deal with fiscal imbalances. However, tax devolution and horizontal flow of payments from prosperous to poor regions are not practiced.

1.3 Poverty and Human Development in Nepal: A Brief Scenario

According to Mahatma Gandhi "*Poverty is the worst form of violence*". Globally, most of the developing and transitional countries are in trouble since almost one billion population is poor, below the \$1day poverty line in 2012 (Alexander, 2012). Nepal is facing a multi-dimensional problem of poverty with wide variation across geographical regions and societies. Worldwide, Nepal ranks 145th in the Human Development Index (0.540, 2013),

165th in GNI per capita, PPP (\$1160, 2011) and is one of the poorest countries of the world (UNDP, 2014). Its HDI value is below the South Asian average by 8.16 percent and less than the average World HDI figure of 20.8 percent. In South Asia, Nepal is the 3rd poorest country, poorer than Bangladesh (Table 1.6). On the other hand, inequality in the country measured as the Gini coefficient of consumption is 32.8 percent (CBS, 2011c). If adjusted for the inequality effect, HDI value for Nepal falls from 0.540 to 0.384 (UNDP, 2014). According to the latest measurement (2011/12 estimate), Multidimensional Poverty Index (MPI) derived from a study group of Oxford University, UK, 41.4 percent of people of Nepal fall below the poverty line and 18.4 population are in severe poverty (UNDP, 2014).

Table 1.6: Trend of Human Development Index of Nepal and Selected Countries

<i>Country/ Region</i>	<i>1980</i>	<i>1990</i>	<i>2000</i>	<i>2005</i>	<i>2008</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>
China	0.423	0.502	0.591	0.645	0.682	0.701	0.710	0.715	0.719
India	0.369	0.431	0.483	0.527	0.554	0.570	0.581	0.583	0.586
Bangladesh	0.336	0.382	0.453	0.494	0.515	0.539	0.549	0.554	0.558
Nepal	0.286	0.388	0.449	0.477	0.501	0.527	0.533	0.537	0.540
South Asia	0.382	0.438	0.491	0.533	0.560	0.573	0.582	0.586	0.588
LDCs	0.319	0.345	0.391	0.429	0.457	0.472	0.480	0.484	0.487
World	0.559	0.597	0.639	0.667	0.685	0.693	0.698	0.700	0.702

Source: Human Development Report, 2014, UNDP.

The official data shows that the poverty head count rate is estimated to have fallen from 30.9 percent to 25.16 percent by the end of 2010/2011 (CBS, 2011c)⁶. However, it is unfortunate that more than six million people of the country are still under the national poverty line. Furthermore, 16.4 percent of the population is below the international poverty line of \$1 a day (MoF, 2014) and 57.4 (2011 estimate) percent below the \$2 a day income poverty threshold (World Bank, 2014b). Though there is some reduction in the Poverty Head Count Rate (PHCR), Poverty Gap (PG) and Square Poverty Gap (SPG) which indicates poverty reduction between the years 1995/96 and 2010/11 (see Appendix, Table I-5), the high value of the Gini Coefficient of consumption distribution, 32.84 (2010/11)

⁶ According to economic survey 2013/2014, population below national poverty line reduced to 23.8 percent and population less than \$1 day income came down to 16.4 percent (MoF, 2014).

shows a continuity of high income inequality in the country (CBS, 2011c). In other words, the decline in poverty rates seems to be at the cost of lost income equality. However, the gap between the rich and the poor is most visible in urban areas and less in rural areas. The Gini Coefficient for them are 35.29 and 31.09 respectively (CBS, 2011c).

Available data, with all its limitations, show that poverty has come down over the period of three decades (1977-2011) by 10.8 percent on average. There was increase in the poverty headcount ratio during 1976-1996. After 1995/96, a decreasing trend is observed till 2010/11 (Table 1.7). From the policy perspective, reducing poverty to 25.16 percent is slightly falling short of the target of the Three Year Interim Plan (2007-2010), i.e. to 24 percent. However, achievement in poverty reduction during Twelfth Three Year Plan (2011-2013) also fell short by 2.8 percent points from the targeted 21 percent (NPC, 2014). This shows the slow progress in poverty reduction and existence of severe poverty in Nepal even in the first decade of the 21st century.

Table 1.7: Incidence of Poverty in Nepal, 1976/77 to 2010/11

	<i>Poverty Headcount Rate (percent)</i>						**Change (1976/77 to 2010/11)
	1976/77*	1984/85	1988/89	1995/96	2003/04	2010/2011	
Nepal	36.20	42.50	40.00	41.76	30.85	25.16	-30.50
Rural	37.20	43.20	42.00	43.27	34.62	27.43	-26.99
Urban	17.00	19.20	15.00	21.55	9.55	15.46	-4.25
Pop. Below Poverty Line ('000)	4506	6852	7694	9507	7672	6698	36.78

* Minimum caloric requirement per person per day is 2256 kcals.

** Data are not perfectly comparable.

Source: NPC, 1983; NRB, 1989; World Bank & UNDP, 1991; CBS, 2011.

Considering the progress in human development over a period of 40 years (1970-2010), Nepal has become the third fastest mover among the 135 countries of the world (UNDP/India, 2010) by securing increase in HDI value by 2.37 times. This is because of the significant progress in health index followed by education index, especially through improvement in life expectancy at birth and educational enrolment ratio, respectively. In these indicators, Nepal became second fastest mover over the aforesaid period

(UNDP/India, 2010). However, income index shows a slower improvement over the period (Table 1.8). In 2013, in terms of progress in human development, it moved ahead of Pakistan and became the third (previously it was the second) poorest country in South Asia. Moreover, annual average growth of HDI achievement of Nepal since the start of the first decade of the 21st century has stood at 1.42 percent (UNDP, 2014). In addition, we can clearly observe the regional variation in HDI value within the national territory signifying the disparity in human development (Panta, 2010; NPC/UNDP, 2014).

Table 1.8: Trend of Human Development Index and Other Components of Nepal

<i>Index</i>	<i>1980</i>	<i>1985</i>	<i>1990</i>	<i>2000</i>	<i>2005</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>
Education Index	0.267	0.328	0.433	0.517	0.550	0.672	0.689	0.689	0.689
Health Index	0.425	0.479	0.539	0.647	0.689	0.725	0.732	0.738	0.745
Income Index	0.358	0.366	0.382	0.416	0.43	0.454	0.458	0.464	0.467
Human Development Index	0.286	0.33	0.388	0.449	0.477	0.527	0.533	0.537	0.540

Source: Human Development Report, 2014, UNDP.

Some issues are arising about the achievement in poverty reduction in Nepal. Despite the efforts of the government and the non-government sectors, the overall progress in poverty reduction for 35 years is not satisfactory. In addition, the method of poverty measurement is traditional. It needs to be adjusted according to the need. Moreover, there is a need for alternative measurement of poverty that meets the ground reality of the specific country. Also, the historical data on poverty is not exactly comparable because of the inconsistency in the baskets and samples of the survey carried out in different periods (Joshi, Maharjan, & Piya, 2010) which may fail to lead to a clear idea on poverty reduction achievement of the country. Therefore, the claims of poverty reduction achievements of the country would be questionable, in a real sense.

Similar to the global trend, multidimensional disparities in poverty are found prevailing in Nepal. Considering the regional variations, Mountain, Mid-western and Far western regions of the country are more prone to higher poverty (Joshi et al., 2010; CBS, 2011c) and lower human development than the other regions (NPC/UNDP, 2014). Similar results

can be observed in the case of distribution of human poverty, and calorie intake gap and malnutrition as well (NESAC, 1998; UNDP/Nepal, 2004, 2009; CBS, 2013b).

Among the caste/ethnic groups, *dalits* and Muslims are the most deprived groups in all regions. Moreover, the existence of low Gender Related Development Index (GDI) allows us to understand the high gender disparity in human development, though there is significant jump in GDI over the years (NESAC, 1998; UNDP/Nepal, 2004, 2009; NPC/UNDP, 2014)). The unpleasant fact is that, women and *dalits* of backward regions become victims of both regional and caste/ethnic discrimination. They are deprived of asset ownership, health and education facilities, and opportunity in state affairs too.

Table 1.9: Gini Coefficient of Consumption Expenditure in Nepal (percent)

<i>Gini Coefficient</i>	<i>1984/85</i>	<i>1995/96</i>	<i>2003/04</i>	<i>2010/11</i>	<i>Change (1984/85 to 2010/11)</i>	<i>Average Annual Change</i>
Nepal	0.24	0.34	0.41	0.33	36.67	1.47
Urban	0.26	0.43	0.44	0.35	35.77	1.43
Rural	0.23	0.31	0.35	0.31	35.22	1.41

Source: NRB (1989); CBS (2011c).

Income and ownership of assets, like, land affect a person's access to basic needs. (Seddon, 1987). So, unequal distribution of income and land has a significant role in determining income poverty in the case of Nepal too. As stated above, about 37 percent increase in inequality (in consumption) has been observed in the last 25 years (Table 1.9). Considering income inequality, in 2010/11, the poorest 20 percent population had only 4.1 percent share in total income while richest 20 percent had 56.2 percent (see Appendix, Fig. I-1). In the year 2011, 15.7, 18.5 and 16.1 percent of households were facing inadequacy of income to meet their requirement of food, health care, and schooling respectively. About half (48.6 percent) of the total sample households reported their incomes as less than adequate to meet their overall consumption needs (CBS, 2011b).

Inequality in land distribution is the central cause of rural poverty in an agrarian economy like, Nepal (Ghai and Rahman, 1979 as cited in Seddon, 1987). According to NLSS III,

51.6 percent of holdings are marginal holdings, i.e. under 0.5 ha (CBS, 2011b). Also, those with smaller land holdings are more likely to be below the poverty line (CBS, 2011c). This scenario implies the land/asset poverty existing in the country. The problems in subsistence agricultural production due to very small holdings are leading the poor to food insufficiency.

Poor access to education and health facilities is an obstacle to skill development among the poor that is required for better employment and income opportunities. Among the total households, 16.1 percent have inadequate schooling facility and 18.5 percent in sufficient health-care facility (CBS, 2011a). According to the latest survey, 15 percent of the population has no access to safe drinking water and 38 percent population is deprived of proper sanitation facility (MoF, 2014). Likewise, 26 percent people have no access to road facility (CBS, 2011a). About 2.5 million people do not have employment and 30 percent are either unemployed or underemployed (NPC, 2010). In addition to this, the economy is facing increasing price inflation, i.e. change in Consumers Price Index by 9.1 percent and Wholesale Price Index by 8.3 percent for 2013/14 (NRB, 2014b). The combination of higher input cost and lower output price in agriculture, has accentuated rural poverty in the country. All these affect the ability of the poor to meet their basic consumption needs.

Besides the above facts and figures, the persistent problem of poverty in Nepal has been influenced by a number of other factors. The trend of low level of investment and high level of consumption (36.9 & 88.9 as a percent of GDP respectively, 2012/13) is an impediment to overcome poverty (MoF, 2014). In the same way, the nature of government finance constituting high current and low capital expenditure (14.6 percent and 3.2 as percent of GDP respectively in 2012/13: MoF, 2014) has also contributed to the slow progress in poverty reduction. This is because capital expenditure consists of a considerable share of expenditure on the supply of public goods and services. Even though, expenditure on social services and economic services are supposed to be comparatively pro-poor in nature, the existing level of such expenditure, i.e. 39.3 percent and 21.5 percent of total government expenditure respectively in 2010/11 (MoF, 2011)⁷ does not seem to be

⁷ Government of Nepal started a new series of categories of expenditure since year 2010/11, so the value differs. For details see MoF (2014); NRB (2014a).

sufficient to bring down poverty significantly. Among the social sector expenditures, expenditure on health and education constituted 6.2 and 16.2 percent (in 2012/13) of total expenditure (NRB, 2014a).

Low expenditure on agriculture, i.e. 7.6 percent (NRB, 2014a) has slowed down rate of growth of agricultural output and is a factor behind the persistence of poverty in an agrarian economy, like, Nepal (for trend, see Appendix, Table I-6). Poor credit facilities and comparatively high interest rates on agricultural lending have also contributed to increased rural poverty. A significant share of gender responsive budget directly or indirectly benefitting women (66 percent, 2013/14) and the continuously rising share of pro-poor budget (49.43 percent, 2013/14), shows regular initiatives of the government towards poverty reduction (MoF, 2014).

For poor countries, workers' remittances can be a substitute for foreign capital flows. Similarly, not only the impact on income, remittances has socioeconomic impact on poverty reduction in individual, household, community and the national level (Maimbo & Ratha, 2005). Remittances constituted 25.7 percent of GDP of the country (MoF, 2014). Among the households by quintile, remittance has covered 28.8 percent and 34.8 percent of average monthly income of the poorest and the richest households respectively (CBS, 2011b). Thus, it also leads to increased income inequality among the population (See Appendix, Table I-7). However, people (more among the poor) receiving remittances are spending a large part of the remittances on household consumption, contributing to reduce consumption poverty.

1.4 Initiatives in Poverty Reduction

Amidst severe poverty in the country, a number of initiatives have been taken by the government to reduce poverty. From the Fifth Five Year Plan (1975-1980), the issue of poverty was first discussed. This and the next plan introduced the objective of promoting agricultural production to tackle the issue. The Seventh Plan (1985-90) and the Eighth Plan (1992-1997) in addition added the focus on infrastructure development and regional

balance respectively. However, poverty reduction was the single objective in the Ninth Plan (1996-2002). In this plan, the Agricultural Perspective Plan (APP) was taken as the basic programme for employment generation and poverty reduction in the country. The Tenth Plan/Poverty Reduction Strategy Paper (2002-2007) was oriented towards the Millennium Development Goals (MDGs) focusing on sustainable growth and improved public service delivery, targeting rural areas and the marginalised groups. This plan highlighted the important role of decentralisation in poverty reduction and focused more on these two prominent issues.

The Three Year Interim Plan (2007-2010) focused on growth and poverty reduction by emphasizing the pro-poor policies and employment generation. The Three Year Plan Approach Paper (2011-2013) focused on employment generation, the expansion of credit facilities and the role of cooperation among and mobilization of each sector of investment. It also highlighted legal security of the employment right of the poor. On the basis of this paper, the Three Year Plan (2011-2013) focused on the strategy to expand agricultural and rural credit through enhancement of access to small credit services for rural development with emphasis to promote public/private/cooperative partnership. It had set the target of poverty reduction (to 21 percent) through improvement of living standard of people and sustainable development by encouraging employment generation, economic equality, regional balance, and social inclusion as indicated by the Millennium Development Goals (MDGs). Moreover, it recognized the importance of decentralisation and local self-governance as the tools for improving living standards of people. Furthermore, the importance of action for development of human skill for economic growth and poverty reduction was recognised.

The Thirteenth Plan (2014-2016) set the main target of reducing poverty to 18 percent with the objective of reducing existing economic and human poverty and ultimately to achieve its optimistic vision of upgrading the country from least developing to developing by the year 2022. It sets the strategies for poverty reduction as: generating productive employment and opportunities, focusing on capacity development, economic growth and equitable distribution; coordination among anti-poverty programmes and launching the demand

based target programmes for poverty reduction. Moreover, labour intensive development programme and optimum utilization of natural resources are the notable working policies of this plan. Programmes focusing on human skill development have been taken as the continuation of the targets of previous plans.

Among the initiatives of poverty reduction, the most poverty focused programme of the country is the Poverty Alleviation Fund (PAF). It is a demand-driven programme. Some of its guiding principles are targeting the poor (*Antodaya*), social inclusion, transparency, and demand-based. These programmes are implemented through Community Based Organizations (CBOs) taking care of full representation of the poor. The programme was launched in 40 districts of the country in FY 2009/10 and extended to 15 more districts in FY 2012/13. The expenditure up to the first eight months of 2013/14 is Rs. 12678.32, 89.5 percent of which came from World Bank grant, 6.9 percent from Trust Fund grant and 3.6 percent from Nepal Government's grant (MoF, 2014). This programme covers three areas of investment: income generating (67.5 percent), small infrastructure development (25.9 percent) and innovative programmes (6.6 percent). Though some programme assessment study reports found it effective in improving the income and consumption of beneficiaries, elite capture and corruption were reported reducing the benefits of the programme to the poor.

Another anti-poverty programme implemented by the Nepal Government, is Youth and Small Entrepreneurs Self-Employment Fund (YSESF). Under this programme Rs. 2672.14 million has been spent by mid-April of FY 2013/14 through small cooperatives, banks and financial institutions and generated self-employment of 20806 individual youths (MoF, 2014). Both these programmes are criticized (the latter is criticized more) as their accusations of partisan politics rather than fairness in programme implementation. There are other programmes expected to benefit the poor directly and indirectly. However, they are also not free of flaws leading to reduced effectiveness.

Despite the efforts made since the First Five Year Plan (1956-61), a number of programmes and policies, and substantial funds spent on poverty reduction through the different periodic

plans (considering poverty reduction as a main goal), Nepal has reduced poverty but failed to meet the targets of growth and equality (Joshi et. al., 2010).⁸ Though there has been some achievements, they have been less considering the vision, the objectives, targets, working policies and programmes adopted. The indifference of policy makers due to their pre-capitalist mind-set played a significant role in the plans becoming less successful. The New Economic Policy which was supposed to accelerate economic development also could not make any significant dent in poverty and inequality.

1.5 Motivation for the Research

Nepal is one of the poorest countries frequently plagued by political instability and severe armed conflict from 1996 to 2006 with heavy loss of lives (more than 13000 human lives) and property. The voice of the Historical People's Movement-2006 and point 3.5 of the Comprehensive Peace Accord (CPA)-2006 between a seven party backed Government of Nepal and then Communist Party of Nepal (Maoist), point to the need *"to eliminate the centralised and unitary form of state to end the multidimensional discrimination based on class, caste, language, gender, culture, religion and region"* (Peace Committee, 2007). Nepal was declared a "Federal Republic Democratic Country" on May 28, 2008 in the first meeting of the newly formed Constitutional Assembly and in the Interim Constitution of Nepal 2007 (Fourth Amendment, 2008). The Interim Constitution of Nepal 2007 also put forward the objective for "progressive restructuring of the state" by addressing the problems raised in CPA.

As explained earlier, there are problems of governance in Nepal and also the problems of poverty. To deal with these problems, the government has included them in development planning. Decentralisation of governance and providing local services through this process and programmes to achieve the Millennium Development Goals (MDGs) as the target for poverty reduction, are the major strategies set by the government. But these programmes could not address the local grievances as they could not achieve the expected targets.

⁸ For the achievement of different plans in different socio-economic indicators, see Appendix Table 1 and for different points of time, see Appendix Table 2.

Hence, this situation of both market failure and government failure in public service provision has been prevailing in the country for long. The situation was worse in the rural and remote areas. Theory suggests that fiscal decentralisation can be a tool for poverty reduction through efficient public service provision (Bird, Litvack, & Rao, 1995; Boex, Heredia-Ortiz, Martinez-Vazquez, Timofeev, & Yao, 2006). This is because, local government being closer to the people could address their problems better than the central government (Oates, 1972).

In this background, it is also important to think— whether the limited decentralisation, multidimensional disparities (inequalities) and poverty were the reasons for the political instability and Maoist conflict in Nepal. Whether the top-down approach of development played a role in underdevelopment and poverty in Nepal. If so, to what extent? If not, why not? Next, can fiscal decentralisation and better local public service delivery be the means of poverty reduction? Are there any possible factors affecting these processes or resulting in favourable or adverse circumstances? If yes, what are the flaws in the adopted policies and procedures? How can they be corrected? To get the answers to these questions, there is a need to analyse broadly, the effect of fiscal decentralisation on poverty in Nepal, both at the rural and national level. There is also a need to study the existing scenario of public service delivery and its implications for the poor. Likewise, Nepal being in the process of restructuring of the state, there is need to have a policy for appropriate design and power sharing among the central and sub-national units as per the spirit of interim constitution that is "*to raise the standard of living of the people by discharging the basic needs in equitable manner with balanced development*".

Though Nepal is declared as the federal state, the structure of federations is yet to be finalised, on which is gaining ground of hot debate. There is need of effective policy to decide the Centre-local relation of power sharing in the new federation. Considering these importance of the issue, it would be more relevant to study on the existing state of decentralisation and problems underlying it that may give the idea for the policy to come for new federal structure. In addition, Nepal being a country of diverse geography, caste, ethnicity and economic opportunity, it needs a decentralised development strategy to

address the prominent problems of regional imbalance and multidimensional poverty. However, the impact of fiscal decentralisation on poverty in the context of Nepal is an under researched area. Panta (2010) briefly examined only the correlation between fiscal decentralisation and poverty. Considering these facts, it was decided to test the relation between fiscal decentralisation and poverty in developing countries; and to contribute to policy formation in the country and simultaneously contribute to the literature in this domain.

1.6 Research Questions

To have a better understanding of the issues raised in the previous sections and the gaps in literature and the role of fiscal governance on socio-economic transformation of Nepalese society by enhancing the living standard of the poor, this study mainly focuses on the analysis of the linkage between fiscal decentralisation, public service delivery and poverty in the case of Nepal. To study this main question, the research has mainly examined the following theoretical issues through empirical analysis:

- Will fiscal decentralisation improve public service delivery in spite of the corruption at local levels and tendency for elite capture of institutions?
- Even if there is less corruption at the central level and greater sensitivity, the central government does not know the local conditions well enough to provide services meaningfully for each local area- characterised by widespread diversity.
- Poverty reduction is linked to the provision of local public goods and productive employment generation and the extent of the link is dependent on the quality of public service delivery.
- Fiscal decentralisation is characterised by the availability of local resources- directly and through transfers.

To examine the above questions, the research has studied the following issues by using secondary data and primary data obtained from the sample survey of LBs from different kinds of poverty zones, and by looking at the different patterns in different regions:

- To what extent fiscal decentralisation is linked to poverty reduction outcomes/ quality of life of the poor in Nepal:
 - Through direct channel
 - Through basic public service channels-basic education, basic health, etc.
- Is there any relationship between local public investment and share of expenditure on basic public services (such as basic health, basic education)?
- Has increased public service expenditure share led to better quality of life of the poor (captured by educational and health attainments) through an increase in local public services? Is there effective delivery or whether corruption prevents the benefits from reaching the poor? Is there elite capture of institutions?
- What are the structures and patterns of local body finance and poverty in Nepal?
- To what extent are the poor dependent on local public services?

1.7 Methodology, Data and Data Sources

1.7.1 Research Methodology

Approaches or Strategies of Inquiry

A researcher's core objective is to understand social problems. For this, he/she needs to prepare a research design or framework that uses the information available to answer his/her specific research questions to address the main research problem (that comes from existing theory and experiences). The research design should link the theoretical framework and the method of collection of empirical information required to complete a research work (Adhikari, 2006). The research design or strategy of inquiry may differ according to the philosophical perspectives of the research. Broadly, the existing literature suggests three strategies of inquiry or research designs: quantitative, qualitative and mixed.

The *quantitative research method* includes the study of (causal) relationship among the variables. This can further be classified broadly into experimental and non-experimental (survey). The experimental research method applies the simultaneous experiments to study

the impact of any specific variable to outcome, controlling the other variables, and to aggregate to impact and achieve the final result. The survey (non-experimental) method derives conclusions from the responses of a sample from the population. *Qualitative research method* mainly rests on the participant's view to study a social phenomenon linking it with a philosophical base of understanding. There are some methods of inquiry under this research strategy such as ethnography, grounded theory, case studies, phenomenological research and narrative research.

The third and recently developed strategy of inquiry has been the *mixed method strategy*, in which the researcher combines both the quantitative and qualitative methods in a single study to enrich the understanding by using strengths and minimizing the drawbacks of both of the methods. According to Ary, Sorensen & Razavieh (2009), this strategy of inquiry is based on the philosophy of pragmatism that uses the method according to need to deal with the research questions properly, i.e. action oriented research more than purely philosophical. However, this approach is challenged by the factors such as time and skill required in combining and resources needed to perform two large studies. Wheeldon (2010) has discussed the mixed method by developing the concept map and mind map as alternative method for data collection. Creswell (2011) classifies this method into three general categories: sequential, concurrent and transformative, where Ary et al. (2009) further breaks it down to six types of mixed strategy: concurrent design, parallel design, sequential design, fully mixed design, conversion design, and embedded design.

The typology of mixed method can be again classified according to their applied characteristics. Creswell (2011) has made six clear alternative strategies by combining the aforementioned three broad strategies on the basis of timing, weighting and purposes as: sequential explanatory strategy, sequential exploratory strategy, sequential transformative strategy, concurrent triangulation strategy, concurrent embedded strategy and concurrent transformative strategy. Let's present short glimpses of these strategies. This would be useful in selecting the proper design according to the nature of our research.

Sequential explanatory strategy is a two staged strategy where data collection and analysis using quantitative technique precedes the use of qualitative techniques based on the quantitative results. This research design is normally explanatory in nature as it is used to interpret and explain the results, i.e. relationship among the variables of interest. The design is useful for research with strong quantitative inclination as more weight is given to the quantitative data and results. Two forms of data and analysis are separated but connected to serve the clarification of results, achieved from quantitative analysis, by qualitative procedure. *Sequential exploratory strategy*, though similar to the explanatory strategy in nature, consists of reverse phases. Here, the qualitative data collection and analysis precede the quantitative procedure based on the qualitative results. The design has more weight of qualitative data and analysis, aims to focus on exploration of new phenomenon and may be useful to test the factors of emergent theory that came from the qualitative phase (Creswell, 2011).

The third, *sequential transformative strategy* is the method which uses theoretical perspectives to guide the research. This is inclined towards the nature of action research where a theoretical lens works in shaping all the procedure of research targeting the marginalised groups or problem ending with suggestions for action. Both of the phases-quantitative and qualitative are equally preferred in sequencing and weighting, i.e. Either of the phases may precede during the research procedure, but the second phase rests on the result of the first phase. This method of inquiry targets to improve the theoretical understanding of researcher and strengthens advocacy for the welfare of targeted population through the transformation of society.

In *concurrent triangulation strategy*, both the quantitative and qualitative data collection and analysis procedure move concurrently but separately; and the information obtained from these two distinct processes is compared whether there is convergence, contradiction or combination (Creswell, 2011). Here, the mixing of the two processes occurs during a discussion with the objective of merging of data (transformation if necessary) or integration and comparison of results come from those two databases followed side by side

interpretation. It seeks for robust results by strengthening one approach through the strength of another. No special weightage is given to any of the approaches.

In *Concurrent embedded strategy*, like in concurrent triangulation strategy, simultaneous collection of quantitative and qualitative data is practiced in a single phase. In this method of inquiry, primary database leads the research project, whereas the secondary database that is embedded within primary method plays a supportive role to enrich the arguments based on the primary method. Two sets of data are merged during discussion to get an integrated information either through comparison or simultaneous discussion needed for an overall and powerful assessment of research problems. Application of theoretical perspectives and addressing multiple research questions are possible in a single project in this approach. For example, if some issues could not be quantified because of the nature or the absence of quantitative data, the researcher may address those questions through qualitative interviews. For a more explicit example, the magnitude of corruption can be measured by quantitative method, whereas we can take advantage of qualitative interviews, at the same time, to collect information on the nature and processes of that corruption case. Though the secondary method is embedded in the primary method, it differs in questions and level of information, serving the former (secondary) as processes and later (primary) as outcomes. It means, the secondary method serves the purpose of overcoming the lack of information and thus, the weaknesses of outcomes from the first method. However, data from the secondary method needs to be transformed, in some way, to integrate with the primary method of discussion.

In *concurrent transformative strategy*, there would be simultaneous collection of both data (from primary and secondary method). This research method contains the features of triangulation and embedded strategy of inquiry. The research would be guided by a specific theoretical perspective based on some ideology or theoretical framework that leads to a methodological choice in each and every stage of research procedure. In other words, the research characterises the mixed method within a transformative framework. Furthermore, the flexible choice of triangulation or embedded concurrent model enables this theoretical

perspective. In this method, merging, connecting or embedding would be the procedure of the mixing of information from qualitative and quantitative methods (Creswell, 2011).

The researcher can use any method of inquiry in dealing with the research issues. The preference rests on the nature of issues in an inquiry. All the aforementioned methods possess the strengths and weaknesses of the mixed method, in general. Broadly, the strength of capability to empower the research process and outcomes through the interaction of quantitative and qualitative models; and the weakness as being more time consuming, skill-intensive, complex and sometimes, confusing than any individual strategy of research. Among the above six methods, concurrent strategies have comparatively less weaknesses than the sequential methods due to being single phase approaches.

Why Mixed Method?

Wheeldon (2010) points out the importance of the mixed method, philosophically based on pragmatism as opposed to choice of “positivism and constructivism”. This method provides more space for “flexible abductive approach” instead of “inductive approach” with a specific conclusion based general premises or “deductive approach” with general conclusion derived from specific premises. In the mixed method, the researcher has the advantage of both qualitative and quantitative methods where each method becomes supplementary rather than a substitute for another.

The literature justifies various implications of the use of mixed strategy of inquiry where these purposive differences further affect the choice of designs of the researches. Much of the literature makes use of the mixed method to achieve clearer findings, expanded explanations, identification of contradictions and in-depth study, during a research. This makes the research more effective with more powerful arguments and evidences. Greene, Caracelli & Graham (1989) has tried to elucidate the purposes of the choice of mixed method illustrating the results of theoretical and empirical review and suggested the probable design options. The authors noted five different purposes to select the mixed

method design in a pyramidal order of the most to the least constrained design options as: triangulation, complementary, development, initiation and expansion.

In *triangulation purpose*, the researcher seeks to analyse the convergence of evidences or corroboration of findings from different methods on the same issue. While testing the findings, the researcher tries to get a better understanding of the issue of study through a multi - method of collection of data, analysis and merger of results. The researcher aims to perform data collection and analysis simultaneously (Sheperis, Young, & Daniels, 2010). Here, for example, the researcher may collect the quantitative data through survey and qualitative information (as perception of the participants) through interview or group discussions. From this method, the researcher rationalizes the enhancement of validity of concepts and outcomes, and minimizing the biases of individual methods through each other. In *complementary purpose*, the researcher aims to apply the results obtained from one method for expansion, improvement, exemplification and clarification of the results derived from another method. It helps to improve the quality of interpretation, significance and validity of concepts and results through the strength of both methods and neutralizing the possible biases during the research. For example, we can collect information on the perception of parents on the quality of education of schools of their children through quantitative questionnaire and the impact factor on their perceptions of quality through qualitative interviews (Ary et al., 2009).

Development purpose is rationalized to strengthen the validity of concepts and results taking advantage of intrinsic strength of both methods sequentially. For example, selection of the participants for in-depth interviews could be done on the basis of the quantitative survey of the programme participants conducted in the first phase (Greene et al., 1989). Another purpose, *initiation* seeks to explore the paradoxes and contradictions that may come up with the findings, then urging for the reframing of the concept and the research questions of one method from the questions of others. The rationale is to intensify the magnitude of inquiry, results and explanation, through the paradoxical perspectives and different methods of inquiry which may generate a new insight on the issue of research. For example, as against the negative perceptions of the local residents about the local public

services observed from qualitative interview, if they simultaneously rated service providers as “good” in a quantitative survey, then it needs a mixed method of inquiry to overcome such contradictory outcomes.

Expansion intends to extend the extent and range of inquiry through the use of qualitative and quantitative methods for different components of inquiry rationalizing to expand the scope of study by proper selection of these methods (Greene et al., 1989). For example, a researcher might use the qualitative method to observe the implementation procedure of the government projects, and for the project effectiveness through the quantitative analysis.

The above discussion leads us to an understanding that the selection of the research design rests on the nature of the inquiry or nature of research issues and questions. Furthermore, it depends on the information required and availed during the research process and the nature of the result obtained from an analysis whether there is need of further inquiry or not. Both the quantitative and qualitative methods have some weaknesses that leads to the questions on the validity and robustness of the concept, procedure and results. So, to overcome the weaknesses, the researchers can select the mixed method of inquiry where the former two methods act as complementary to each other. The mix method is also not free from weaknesses, as mentioned earlier. It is time-intensive as well as cost-intensive as it needs more data collection, extensive analysis of text and numeric data. Furthermore, same researchers should have the know-how on both quantitative and qualitative techniques of research (Johnson & Onwuegbuzie, 2004; Ary et al., 2009; Creswell, 2011).⁹

Where This Research Stands and Why?

As mentioned earlier, the choice of research design depends on the nature of research questions supporting the main issue of research and availability of the required information. The main research problem in this study is to analyse the relations between fiscal

⁹ Johnson & Onwuegbuzie (2004) has discussed clearly the strengths and weaknesses of mixed method of research along with the strength and weaknesses of pragmatism which is its philosophical base. The authors presented these issues also in a clear tabulation form comparing with the perfections and flaws of the qualitative and quantitative methods as well.

decentralisation, public service delivery and poverty. Within this, the researcher needs to analyse some issues as mentioned in Section 1.6 of this chapter, broadly, such as the dependence of the poor on basic public services; patterns of local public expenditure and the extent to which it is pro-poor; problems of elite capture and corruption in local body functioning; and relation between fiscal decentralisation and poverty reduction outcomes. Most of these issues such as local body finance, poverty and other socio-economic factors, require quantitative data and methods (as in most of the economic researches). However, problems related to individual's perceptions on the issues such as the nature and processes of elite capture and corruption, face difficulties in generating the quantitative data and in explaining the problems fully, which may leave research outcomes incomplete, to some extent. So, in order to take advantage of both quantitative and qualitative methods of inquiry (to some extent), this research has opted for the *mixed method of inquiry*. In theoretical perspective, this research follows pragmatism as the philosophical base.

The research method applied here is *deductive* (hypothetic-deductive) as it aims to generate and formulate some hypotheses (existing practical and theoretical understandings) rather than inductive as exploring any theory (Hammond & Wellington, 2013). This research is *explanatory* as it intends to test some existing hypotheses under some theoretical domains, instead of exploring the hypothesis as in the case of *exploratory* method. In addition, it broadly adopts, the *survey method* of quantitative strategy and the use of *narrative method* of qualitative strategy during data collection and analysis. The research rationalizes the complementary, developmental and expansionary purposes to carry on mixed method of research, in particular; and purpose of triangulation to some extent.

Considering the time factor, the research is *concurrent* as it applies a single phase data collection and analysis method (i.e. both quantitative and qualitative data collection and analysis performed at the same time). Though adopting a mixed strategy, it is inclined more or prioritized to quantitative method (in weightage). According to Creswell (2011), mixing of qualitative and quantitative data is done either by merging at one point of time or treated separately. Within the framework of mixing, developed by Creswell, the present research applies the integration (merging two databases) and *embedding* techniques. It is mostly

using embedding method where the primary objective of collection of quantitative data (primary form) is supported by the qualitative data (secondary form), where the primary form embeds the secondary form of information. In this research, mixing of data is performed at any stage of research procedure, wherever needed. A brief theoretical framework is presented in the beginning of the research.

Finally, among the six strategies explained by Creswell, our research method follows the *concurrent embedded strategy* the following characteristics: single phased study, embedding the secondary (qualitative in this case) research settings by primary (quantitative in the case) one, and other aforementioned characteristics. This is mostly a survey-intensive method where the method aims to test the validity of the theory underlying the hypothesis and to suggest for refining of or identification of the limits of theory. The study has taken advantage of the practice of multilevel design, use of one method in another framework, acquiring experience in dealing with different types of data and perspectives. However, the study cannot escape from the effect of demerits of the method used as it was more time consuming, costly, difficult in the transformation of some data, etc. Though mix method has been applied, the study did not engage in in-depth interview because of some constraints and instead used the general interview according to need.

1.7.2 Nature, Sources and Methods of Collection of Data

The procedure of data collection is determined by the research framework which suggests the nature of data required. As given by the research framework, the study required data from multiple sources, hence, through multiple method. For using the mixed research design, the research needed both quantitative and qualitative data. Where one form of data combined with another, has complemented each other to get the analysis enriched with robust results. Because of more weightage to quantitative method in mix research design used here, data collection method is also inclined more towards quantitative survey followed by some qualitative interviews. During the research procedure, documentary review was also performed to get secondary data or information. In Nepal, there is a dearth of data on variables this research requires and more scarce at the local level as well. So, to answer the questions and issues raised in the research project, secondary data could be used

only up to a point. Beyond that, primary data was generated through field survey. However, the study intended to take maximum benefit of secondary data collected from a number of government and non-government agencies and availed it during the analysis. Important information from local service providers of sample VDCs were also considered during the study. Furthermore, information from field observation also helped the study in the analysis and interpretation of the findings of research.

The primary survey was conducted from April 2012 to November 2012. During the survey period, financial documents of sample DDCs and VDCs were collected to get the information on financial activities such as revenue, expenditure, and project selection, etc. Likewise, educational information from local schools and health related information from local health posts were collected to prepare the data in the respective fields.

1.7.2.1 Collection of Primary Data

Sampling Design and Sample Selection

As the research method used is concurrent embedding, we have used *concurrent sampling*. Hence, we collected both quantitative and qualitative data at the same phase where the former (quantitative) has embedded the latter. In this background, we have used both probability sampling and non-probability sampling design using both closed-ended and open-ended questionnaires (Plowright, 2011). Furthermore, simple random sampling was used for collection of quantitative data and purposive random sampling for qualitative data. However, purposive sampling and quota sampling were used for selection of sample sites and the number of respondents according to the size and population of VDCs.

For the survey, the lowest unit of sample was VDC and ultimate sample was the households. First, VDCs from three different sets of ecological/development regions were selected purposively- two from Eastern Terai, one from the Central Mountain (as the mountain has low population density) and two from Mid-western Hill. In addition to this, one VDC from the urban Kathmandu Valley, which also represents the central region, was also included to capture the rural–urban difference. VDCs with different level of resources

and poverty profiles were selected from different sets of regions to make it easier to separate the effect of fiscal decentralisation and other variables on poverty according to the objectives of the research. The selection of VDCs also aimed to capture the governance factor through comparing the effect in conflict and non-conflict areas. It was tried to consider the size and the population of VDCs that could have an impact on level of local service delivery. By this sampling, the study had hoped for the generalizability of the result to some extent, but there can be no claim for perfect generalizability. Though results may not be perfectly general for the country as whole, but they provide some insights to the problems being studied. Not of least importance, the researcher did not undermine the comparative convenience in visiting and accommodation in the area, during the selection of VDCs.

Before selecting the districts and VDCs, the researcher consulted the different documents to simply know about the level of resource richness, development and poverty profiles of the district and VDCs within the districts. After selecting the district, the researcher consulted the DDC functionaries to ease the selection of the VDCs according to the need of the research and broad criteria those the researcher made. The socio-economic conditions of the VDCs were also considered.¹⁰ After selecting VDCs, he selected the sample households. In this process, the researcher purposively allocated the quota of 100 households each from three sets of VDCs, from each of the three development regions-eastern, central and mid-western (representing all of the western regions). Likewise, the quota was again allocated tentatively to VDCs considering the number of household and location: 60, 40, 70, 30, 50 and 50 households from Pakali, Laukahi, Kathmandu, Chilime, Mijhing and Thabang VDC, respectively. Though not in a specific way, ward-wise¹¹ representation was also taken into care of during selection of sample households. Total sample size covers about 6 percent households of sample VDCs. The researcher has to observe the variation in the nature and magnitude of the problems as pointed by research

¹⁰ For information on the demographic and socio-economic conditions of sample VDCs, see Appendix Table V-1.

¹¹ Ward is the lowest unit of VDC which consists of one or more small VDCs.

questions. Hence, the coverage of households became less in the cost of the coverage of the sample area and problems.

In the next stage, the sample households for quantitative survey were selected by using simple random sampling. The researcher collected the voter lists of the sample VDCs prepared in 2007 from Office of Election Commission of sample districts, which could give the ward-wise and VDC-wise lists of the households of each VDC with the short profile of household heads and voters in the house. Traditional lottery method was used to select the sample households for each VDC, according to the quota each had got. For the qualitative interview, purposive sampling was applied. In one hand, these samples were embedded in the samples of quantitative survey.¹² Next, some long interviews were taken with the functionaries of sample VDCs, DDCs, and school teachers and other local service providers in sample VDCs. In case of absenteeism of any household head for a long period of time or migrated, then any of the neighbouring household was selected for survey. In total 301 respondents were interviewed. Among which a couple of respondents were from the Maoist commune enjoying the collective life. So, in total 300 households were selected. Interview of one respondent could not be completed due to his reluctance to provide answers to all questions.

Design of the Questionnaire

The questionnaire was designed according to the research questions of the study. It was finalized after a long trial and error practice to fit with the research questions as much as possible. It was pre-tested as well and modified according to need. Moreover, the researcher also consulted some questionnaires from World Bank documents and Nepal Living Standard Survey 2003/04 to facilitate the design of questionnaire on household level and VDC level information. The questionnaire was prepared on the related variables serving to the answers of research questions. As mentioned earlier, questionnaires were

¹² During the survey, some specific questions to some selected respondents were asked on the related issues along with the quantitative (closed-ended) questionnaire as the supporting qualitative (open-ended) questions.

both structured (close-ended) and unstructured (open-ended) as per the purpose to get quantitative and qualitative information, respectively. The researcher had tried to answer the research questions like dependence of poor on public services (or choice of public education and public health services according to the income level), which threads the implication of public services for poverty reduction, through collecting the information on variables such as: income; employment; consumption; types of school used to educate their children, types of health institutions consulted during illness, and causes of choice of such services; etc.

Relating to research questions on the effectiveness of local services, the questions on the performance of VDC, extent of pro-poorness of the VDC projects, extent of elite capture, corruption, etc. were asked. These questions could be useful to capture the relation between local public services and their pro-poorness which may provide some insights on implications of fiscal decentralisation on pro-poor outcomes. Except the questions related to household income and consumption, all other questions were supplied with answers with coded options as those were based on the perception of the interviewee. Samples of both types of questionnaire are enclosed in the appendix (Appendix Table V-15 & Table VI-1).

Some supplementary unstructured questions were asked for more clarification during the survey along with structured questions. For example, along with the questions on the performance of VDCs; presence of elite capture and corruption; method of project selection and pro-poorness of the project; etc., some open-ended questions were asked to the respondents. Similarly, to intensify the answers on the causes of use and quality of education and health services (public or private), some unstructured questions were also asked. In addition, separate qualitative interview (with open-ended questionnaire on the problems in local body functioning, fiscal decentralisation and public service delivery) were taken with some stake holders such as officials of sample DDCs, VDCs; teachers and health technicians; and leaders of political parties.

1.7.2.2 Sources of Secondary Data

Different documents and publications of – national and international government and non-government agencies; and other publications were used as secondary data sources. The following are the major sources of secondary data:

- A. Ministry of Finance (MoF): Economic Survey reports, Budget Speech documents, Red Book, and Other Publications etc.
- B. Ministry of Local Development (MoLD): Annual Programme, Budget and Progress Reports of ministry; different reports of Local Body Finance Commission (LBFC), Local Governance and Community Development Programme (LGCDP), etc.
- C. National Planning Commission (NPC): Different Plan Documents, reports and other publications, etc.
- D. Central Bureau of Statistics (CBS): Population Census Reports of Different Year, Agriculture Census Reports, Population Monograph, Land Monograph, Nepal Living Standard Survey Reports, and Nepal Labour Force Survey Reports, National Accounts Statistics Reports, Small Area Estimation Survey, etc.
- E. Nepal Rastra Bank (NRB): Government Finance Statistics, Economic Reports, Periodical Economic Bulletins, Periodical Economic Reviews, NRB Working Papers and other publications.
- F. Annual Reports of Commission for Investigation of Abuse of Authority (CIAA), Nepal and Annual Reports of Office of Auditor's General of Nepal (OAGN), Nepal.
- G. Reports and Publications of international agencies such as World Bank, International Monetary Fund (IMF), United Nations Development Programme (UNDP), etc. and other NGOs and INGOs.
- H. Books, Journals, Working Papers, Research Articles, etc.

1.7.3 Specification of the Indicators

According to the framework of research and research questions, there are a number of indicators involved in the linkage between fiscal decentralisation, public service and poverty. Among them, some are quantitative and some are qualitative. Likewise, some are continuous and some are discrete; some are numerical but others are not; some are ordinal, some are categorical; some are dichotomous (dummy) or some are non-dichotomous. During the quantitative analysis, variable values of qualitative forms are converted to quantitative forms.

1.7.4 Methods and Tools of Data Analysis

This research being mixed method research, method of data analysis also characterises the mixed category, addressing the concurrent strategy of inquiry. First, during the data preparation, qualitative data are transformed into a quantitative form by generating code and themes qualitatively and calculating the frequency of the occurrence (Creswell, 2011). Thus, qualitative and quantitative data both are made comparable and used in the analysis. The STATA software was used for quantitative analysis and qualitative analysis was carried by simple use of narratives during explanation, which was transformed into presentable form from text or audio records. Collected data were entered in the excel sheet, then framed according to the variable required and refined in the format according to the need of data analysis based on the research questions. During coding, a code book was prepared as per record. The variables were labelled. After preparation of data, it was transferred to STATA software for further analysis. Similarly, indicators for different analysis were estimated by using given data and formula that are described in the respective chapters.

The tools of the analysis differ according to the nature of questions of study and nature and availability of data. But, some simple tools are more general and can be used in a number of contexts. Broadly, simple descriptive tools, regression analysis, other statistical tests and narratives are used in the survey data analysis of this research.

1.8 Structure of the Study

The broader perspective of this study is to analyse the linkage of fiscal decentralisation with poverty outcomes through public service provision. For this, the analysis is divided into: analysis of dependence of poor on public services, patterns of local public expenditure on pro-poor sectors and then analysing the implication of fiscal decentralisation for public service delivery and poverty reduction. On the basis of these analyses, the dissertation is divided into six chapters.

Chapter one introduces the research problems and presents a brief overview of Nepalese economy. Then, it provides a short glimpse on legal and fiscal practice of local governance and discusses briefly the problems of poverty in Nepal. Lastly, the chapter presents the research questions and discusses the methodology used to address these research questions.

Chapter two discusses the theoretical issues of fiscal decentralisation, public service delivery, poverty and their linkages. The chapter also identifies the gap in literature which helps to identify the questions for research and their relevance in the Nepalese context.

Chapter three consists of the analysis of the main theme of the research, i.e. the linkage of fiscal decentralisation with poverty reduction outcomes/quality of life of the poor directly and indirectly through different pro-poor channels such as - basic health and basic education, along with different variables that affect poverty, by using district level data of Nepal. By using secondary data and regression analysis, the attempt is to test the theoretical issues in the context of Nepal and thus in the context of a developing country.

Chapter four examines the relation between local public expenditure (revenue as a proxy, in some cases) and public service delivery at local level. Depending on local body data from diverse localities, it tries to justify the importance of fiscal decentralisation for effective public service delivery.

Chapter five analyses the role of public service delivery in improving the living standards of the poor (across the region and the resource richness of the local bodies). For this, firstly, it analyses the extent of dependence of the poor on basic public services by comparing the use of public services by different income groups and major causes of such choices. It discusses the nature and process of choice qualitatively by using some relevant narratives from respondents.

Chapter six accounts the problems of fiscal decentralisation and public service delivery. In relation to this, it discusses the performance of local bodies, effect of corruption and elite capture on the public service delivery at local level. It takes up the issue of “conflict of interest.”

Finally, *Chapter seven* presents the overall summary of the research and derives some concluding remarks.

**CHAPTER 2: THEORETICAL ISSUES REGARDING
FISCAL DECENTRALISATION, PUBLIC SERVICE DELIVERY
AND POVERTY**

2.1 Introduction

This chapter is an introduction to the theories of fiscal decentralisation along with its short evolutionary history through a review of the literature. To facilitate in defining the linkage of fiscal decentralisation and poverty, the chapter further accounts the need of public sector, the relation between decentralisation and public service delivery, and the need of public service delivery for poverty reduction. Similarly, it discusses the concept of poverty and the factors affecting it. Finally, this chapter explains the theoretical linkage between fiscal decentralisation and poverty, direct as well as through pro-poor channels. This chapter also provides a brief introduction to the practice of measurement of fiscal decentralisation and poverty.

2.2 Fiscal Decentralisation: Theories and Issues of Measurement

2.2.1 Theories of Fiscal Decentralisation

Evolution of the Concept

Decentralisation, which is being paid attention by policy makers of the day, is not a new phenomenon. Though, it was never as popular as it is today, the concept of decentralized state can be found existing even in the eighteenth and nineteenth century. It was there in "non-classiest utopian thought" or in "revolutionary Marxism". It was actually the concept of self-governed "communes" against the "Leviathan State" (Alfonso, 1997). Among the two thinkers (Rousseau and Montesquieu), Rousseau was in favour of proximity of government to the people through "local representative bodies". Montesquieu was in support of disintegrating the central authority to multilevel governments based on the

"theory of separation of power". However, William Blackstone proposed the "theory of mixed constitution" based on the balance of power within the mixed government system, an idea derived from Aristotle (Blackstone, 1979; Sharma, 2008). Alternatively, Marxist approach argues for the replacement of historical bourgeois government entities by a "communal" system which is based on the concept of "self-government of producer" (Marx, 1994; Alfonso, 1997) reflecting the local self-governance.

By the end of the 1970s, neoliberals, from the perspective of "higher efficiency gain" and the need of "decentralized production method", began to emphasize on decentralisation of activity within the privatization and the free market sphere. It was considered to be an easier means to spread out the roots of capitalistic development over small jurisdictions of a country. Marxists have also emphasized on decentralisation as the means of strengthening social units and disintegration of state power for the "road of the communist dream of statelessness-i.e. communism"(Alfonso, 1997) to which, some Marxist followers have entitled as "market socialism".

The basic theories of decentralisation can be derived from the propositions of Rousseau and Montesquieu. The two perspectives- "benevolent" (i.e. maximizing social welfare) state and "malevolent" (i.e. self-disintegration of Leviathan) state are reflected in the *Musgravian fiscal framework* and *Buchanan's public choice theory* respectively. The former emphasizes on efficient resource allocation through intergovernmental transfers which is supposed as an important tool for fiscal decentralisation. However, the latter stresses on smaller units of government with independent local taxation. The theories of fiscal decentralisation can be linked to the various approaches to development. First, top-down approach- an approach with cooperative decentralisation where there is heavy dependence of local units on revenue sharing and lower to higher accountability among the different layers of governments. Second, is the approach characterizing dualism (layers of government with separate and distinct responsibilities), with the local governments having independent tax power and accountability towards local people, referred as bottom-up approach (Sharma, 2008).

Within the literature, the first generation theories mainly focus on enhancement of economic efficiency of public goods and services through better resource allocation according to local tastes and preferences. While second generation theories deal with the political issues and try to link fiscal decentralisation with the theory of the firm, economics of information and transaction, the principal - agent problem and the theory of contract (Oates, 2005; Vo, 2009). According to them, political participants (both voters and officials) have own objective functions and may or may not work to maximize the common welfare. Similarly, there exists asymmetric information about the local taste and preference and cost structure that varies with the efficiency of the provision of local public goods and services. Another is the problem arising from local control or accountability of the citizens and the officials, and unverifiable information during the election process (i.e. incomplete contract). The major difference between the first generation and the second generation theories is that the latter does not consider the governments as pure “Guardians of Public Interests”. Rather, they have “own private interest” and if they are unrestricted, the behavioural aberration may occur during their functioning (LUO & CHEN, 2010).

The most important contributions to the first generation theory are Samuelson's *theory of public expenditure*, Tiebout's *theory of local public expenditure*, Musgravian *fiscal framework*, Oate's *decentralisation theorem*, Oslon's *principle of fiscal equivalence* etc. On the other hand, *market preserving federalism* of Weingast, *incomplete contract* of Seabright, *models of representative governments* of Lockwood and Basley and Coate, Wagner's *public choice theory* are the best of the second generation theories of fiscal decentralisation (Vo, 2009; Bos, 2010). However, the idea of linking decentralisation and poverty (which is the area of this research) in general emerged only after the mid '90s. This will be discussed in the subsequent sections.

The Theory of Fiscal Federalism

The traditional theory of public finance has emphasized the role of fiscal decentralisation as significant for efficient resource allocation of public goods and services according to local tastes and preferences. Among the assignments of the public sector, the traditional

theorists prefer to keep the functions of redistribution and macroeconomic stabilisation under central control and the responsibilities for allocation of local public goods to the local level since the local governments are closer to the people (Musgrave, 1959; Oates, 1999).

The earlier theories of fiscal federalism are based on some principles. One of the principles is the Pareto-optimal provision of local public goods. According to this principle, the decentralized provision of local public goods through the local governments is Pareto efficient because they have better knowledge about the local tastes and preferences unlike the central government which provides a uniform level of services to all regions. However, these theories were of “strong normative flavour” (Ahmad & Brosio, 2006). They do not have the political economy approach introduced by Brennan & Buchanan (1980). Tiebout (1956) developed a model (popularly known as "Tiebout's sorting") in which there is competition among local governments to provide public services according to the preferences of the people. In this model, consumers reveal their preferences by "voting with their feet". They move to the jurisdictions where they get the best net benefit (value of services *minus* tax payments), and local governments try to check this mobility by sorting of public goods according to local preferences (Oates, 2006; Vo, 2010) leading to the competition among local governments. Here, during voting, people may or may not know whether the low price-tax ratio results in services with poor quality or not.

Tiebout model introduced the concept of "impure" or local public goods with congestion property, into theory of public finance. Such local public goods are provided by sub-national governments. Thus, it has provided the foundation for the decentralisation of public services and the role of local government. However, this contribution is not free from criticisms as it is based on some idealistic or simplifying assumptions. For example, tax-benefit combination, as assumed by the Tiebout, is not the sole determinant of citizens' mobility in developing and poor countries like Nepal. Citizens' mobility depends also on employment opportunity at the destination, settlement of the existing immobile properties, culture, and family connection, etc. For developing countries where there are strong ties of people with their family and village due to strong traditional social and kinship ties, mobility becomes poor. For example, “Hukou” system in the case of China restricts inter-

jurisdictional mobility of people, contrary to Tiebout's hypothesis (LUO & CHEN, 2010). Likewise, the cost of transfer, and setting off the existing settlement and setting up the newer one also affect voter's mobility.

Another assumption, Pareto-optimality of public goods and services depends not only on voter's mobility, but also depends on rational voting behaviour of the consumer (Boadway & Shah, 2009; Vo, 2010). Furthermore, the public welfare gain depends on whether government is democratic or entrepreneurial (Bewley, 1981). So far, in the so called tax competition framework as well, it will not have a significant effect on overall fiscal achievement. The additional transportation cost of moving from high to distant lower tax region leads to aggregate tax collection of local jurisdiction unchanged. However, combined tax collections across both jurisdictions may fall after deducing the travel cost characterising as fiscal externalities. (Wagner, 2007). In addition, voter's mobility will not be induced due to absence of substantive and explicit tax-expenditure connection (as the practice of non-Wicksellian revenue system). Next, the proposition of competition among local government will not exist in practice as these entities are not like the "profit-seeking" firms.

Another principle of fiscal federalism is the Arrow-Musgrave-Samuelson (AMS) perspective of social welfare maximization. This principle suggests that having good information about the demand and supply of local public goods according to the local tastes and preferences, the local government can provide "higher level of social welfare" than the uniform central provision of public goods (Oates, 1972; Musgrave, 1959; Smoke, 2001; Vo, 2010). Musgrave (1959) in his fiscal framework categorizes the whole public finance assignments in three parts, among which, stabilization and distribution functions are assigned to the central government while resource allocation is left for local governments (Oates, 1972; Musgrave & Musgrave, 1989; Smoke, 2001; Vo, 2010).

The division of fiscal assignments between the central and the local government in the Musgravian fiscal framework is not sacrosanct. Nowadays, important stabilizing role of decentralized governments is experienced in some cases of industrial countries through the

state policies affecting the income and the unemployment situation of the state and through the provision of sub-national borrowing. Likewise, the redistributive role of decentralized governments at the local level are found significant for intra-jurisdictional redistribution (limited to local jurisdictions) in developing countries where there is less environment for mobility of consumer (Pauly, 1973; Smoke, 2001). However, for some “capital-intensive services” and public goods producing inter-jurisdictional externalities, service provision is better left to the central government (Smoke, 2001).

Oates (1972), in his pioneering work – *Fiscal Federalism*, combined Olson's notion of "fiscal equivalence" and Tiebout's concept of local public goods. He argued for the variation in the provision of local public goods from the layers of government, and hence for maximum welfare, the benefit incidence of the specific public goods and services should correspond to the set of consumers of such goods and services. Oates developed the *decentralisation theorem*:

"For a public good-consumption of which is defined as over geographical subsets of the total population and for which the costs of providing each level of output of the good in each jurisdiction are the same for the central or the respective local government- it will always be more efficient (or at least as efficient) for local governments to provide the Pareto-efficient levels of output for their respective jurisdictions than for the central government to provide any specified and uniform level of output across all jurisdictions." (Oates, 1972, p.35)

According to this theorem, the local government will always provide "Pareto-superior" levels of output in their respective jurisdictions than the central government's uniform service provision (Tresch, 2002). This is because of better information available to the local government about the tastes and preferences of the local citizens as well as cost- efficient ways of providing the required public goods.

Some assumptions of the decentralisation theorem – absence of externalities and economies of scale, in comparing the benefits from local public goods, do not hold in some cases. In the real world, effect of economies of scale do not always hold because a capable local government can produce more public goods and instead of producing, other needy

local governments can purchase those public goods from them. Similarly, controlling inter-jurisdictional externalities in the costs and benefits of the public goods, as assumed by the theorem, is almost impossible because of the open boundaries between the jurisdictions (Wagner, 2007) and the nature of public goods. That is also because, in poor countries, inter-jurisdictional dependency on public services can be observed due to the limited provision of public goods and services like health and education services in some poor jurisdictions. Besides these, another concept of fiscal federalism is the *subsidiarity principle* which states that the fiscal and regulatory functions to be assigned to the lowest unit of government, except in some special cases. In addition, Brennan and Buchanan (1980) in their *public choice theory* looked at the structure of the fiscal institutions and constitutional provisions of decentralisation. They are in favour of greater decentralisation of taxes and expenditure to lower levels of governments. Most of the theories in favour of fiscal decentralisation consensually agree that local public goods that are free from economies of scale and inter-jurisdictional externalities, should be provided by local governments. Likewise, they mainly focus on the devolution of fiscal assignments from the national government to its sub-national entities, in the form of four pillars (of fiscal decentralisation) viz., expenditure assignment, revenue assignment, intergovernmental fiscal transfers and sub-national borrowing.

Forms and Types of Decentralisation

According to the level of discretion of certain central power and responsibilities to sub-national governments, we can observe three forms of decentralisation: deconcentration, delegation and devolution. Among these three, *deconcentration* is the weakest form of decentralisation because under this the central government provides limited authorities to its local line agencies run by the local officials who are appointed by the centre and accountable to them. *Delegation* refers to that broader process of decentralisation through which local government officials get some discretion over responsibilities, though they are accountable to the centre. The most complete and inclusive form of decentralisation, *devolution* is the transfer of administrative as well as fiscal power and responsibilities to sub-national governments that are essential for the local provision of public goods and

services.¹³ In this form of decentralisation sub-national governments are autonomous politically to elect their level of government and financially independent to raise revenue and spend for the local public services by using discretion over decision in planning and implementing local projects.

There are three types of decentralisation: political, administrative and fiscal decentralisation. *Political decentralisation* is the constitutional or legal provision of certain political authority to sub-national governments. It constitutes the power to sub-national government to strengthen local democracy through increased participation of local political organizations and local election, strong legislature and empowerment of local public interest groups (Litvack, Seddon, & Ahmad, 1999). *Administrative decentralisation* refers to the transfer of administrative authority and responsibilities, including autonomy to sub-national governments in local affairs such as controlling local bureaucracy, managing local public services and financial functions provided by certain legal and regulatory framework. Devolution and fiscal decentralisation which are the focal points of this study are defined in the next sub-section.

Defining Fiscal Decentralisation

Based on the earlier description, fiscal decentralisation can be defined as the transfer of fiscal power and responsibilities from the central government to sub-national governments through which sub-national governments achieve decision-making authority in budgeting, planning and implementation of public functions for public service delivery. In other words, fiscal decentralisation is, “the empowerment of the people by the [fiscal] empowerment of their local governments”(Bahl, 2005). This phenomenon is based on the *theory of perfect correspondence* and the *decentralisation theorem* both of which maintain that local provision of public goods and services increases efficiency as compared to a central provision (Oates, 1972; Qian & Weingast,

¹³For detail, see Bird & Vaillancourt (1998); Litvack, Seddon, & Ahmad (1999); Martinez-Vazquez & McNab (2003).

1997; Tresch, 2002). There are four major functions of fiscal decentralisation according to the nature of the fiscal authorities. The first, *expenditure decentralisation*, is defined as the transfer of spending power or expenditure responsibilities to sub-national governments, measured in terms of the share of sub-national government expenditure in total public expenditure. This is based on the subsidiarity principle that favours the provision of public goods and services by the lowest level of government provided with the required level of capacity.

Second, *revenue decentralisation* is defined as the transfer of revenue raising authorities (power to collect tax and non-tax revenue) to sub-national governments so that they can provide local public services from their own resources. It is measured as the share of own source revenue of sub-national governments over the total public revenue. The third is *intergovernmental fiscal transfers*. This is the transfer of funds from the central government to the sub-national governments to meet the latter's resource deficit (vertical fiscal imbalance). This would enable the sub-national governments to undertake their expenditure responsibilities of providing local public goods and services. The fourth, *local borrowing* is the authority of sub-national governments to borrow resources to overcome their deficits.

2.2.2 Issues about Measurement of Fiscal Decentralisation

Responding to multidimensional central government's discretion of power and responsibilities to local government, fiscal decentralisation possesses multidimensional fiscal character. For example, central government devolves power to local governments to collect local revenue that can be named as revenue decentralisation. The discretion provided to local governments in selecting the pattern of expenditure with certain autonomy in the selection of the projects to be undertaken is called expenditure decentralisation. Central grants to local governments also affect the fiscal health of local governments. Hence, the measures of fiscal decentralisation vary according to the nature and dimensions of both fiscal power and fund transfer to the local governments.

Various studies have used different measures of fiscal decentralisation, almost all based on different compositions of revenue and expenditures of sub-national governments and central/federal government. Baskaran, Feld, & Schnellenbach (2014) during a meta-analysis observed 44 percent using expenditure decentralisation, 22 percent revenue decentralisation, 5 percent tax autonomy, and 5-10 percent used weighted average of expenditure and revenue decentralisation, as the measures of fiscal decentralisation. Similarly, Gu (2012) has screened out some practices of measures of fiscal decentralisation as composite and un-combined indicators according to the use of different nature and composition of revenue and expenditure of subnational and central government, transforming them to functional form. The author also listed some combinations of vertical fiscal imbalances (both composite and un-combined) considering these indicators as fiscal decentralisation measures characterized by transfer (grant) dependency of subnational government (Appendix Table II-1).

Among the fiscal decentralisation indicators, the ratio of sub-national revenue (expenditure) to total government revenue (expenditure) is called revenue (expenditure) decentralisation and popularly used in most of the studies. It is much simpler and more feasible because of the ease of data availability. However, multidimensional character of transfer of fiscal authority cannot be captured through these individual indicators.¹⁴ However, without accounting political and administrative decentralisation this measure of decentralisation cannot capture fully the overall impact of decentralisation on the other indicators of an economy.

Martinez Vezquez & Timofeev (2010) and Gu (2012) have discussed extensively the different measures of fiscal decentralisation. The former study looked at the explanatory power of different measures of decentralisation and concluded that no single variable can explain the complete effect of decentralisation. Hence, both fiscal and non-fiscal variables should be taken into account. The author suggests that the Composite Ratio (Revenue

¹⁴There are three forms of decentralization process- deconcentration, delegation and devolution differing in scope of authority, degree of autonomy and direction of autonomy of subnational government given to them from central/federal government (Martinez Vazquez & Timofeev, 2010).

Ratio/1-Expenditure Ratio) is a comparatively better indicator of decentralisation and has more explanatory power compared to other indicators.¹⁵ Likewise, the latter study elucidates the importance of both the indicators- Composite Ratio (CR) and VFI as both of them have an impact on fiscal decentralisation representing the two faces of public sector finance.¹⁶ However, there is a need for taking into account intergovernmental fiscal transfers in addition to revenue-expenditure imbalance as it affects the expenditure discretion and fiscal equalization among subnational governments. This has a crucial role in public sector in balancing revenue raising power and expenditure responsibilities of subnational government (Sharma, 2011; Gu, 2012).

As discussed above, it is very difficult to estimate fiscal decentralisation variable comprehensively and public finance analysts have not arrived at a consensus on how to define and measure it. Only the magnitude of the ratio of sub-national (local) revenue or expenditure to total government expenditure does not fully reflect the effect of fiscal power of the local government. The scale of such ratio may differ according to the efficiency of local government during the exercise of the given power. Then, only the quantitative estimate of fiscal decentralisation cannot capture the whole dimension of discretion of power and responsibilities to sub-national government. The qualitative issue is important as well. It would be better to have an interaction between some kind of qualitative index of effectiveness of functioning of the sub-national government and the quantitative estimates of fiscal activities, i.e. expenditure and revenue assignments. Hence, no accurate level of fiscal autonomy can be estimated without accounting for efficiency, which depends on political economy, such as level of local democracy, transparency and accountability, etc. In other words, without including the effect of administrative and political decentralisation, fiscal decentralisation alone cannot represent the actual autonomy of sub-national (local) governments.

¹⁵Martinez Vazquez & Timofeev (2010) has examined the explanatory power of six indicators of decentralization: Expenditure Ratio, Revenue Ratio, Composite Ratio, Revenue Autonomy, R-Scale and E-Scale for different socio-economic outcomes.

¹⁶ For detail, see Gu (2012).

The existing practice of estimation of fiscal decentralisation variable reflects more the magnitude of fiscal decentralisation enjoyed by sub-national governments than the fiscal power transferred by central government to them. However, due to difficulties in quantitative estimation and the inclusion of these factors, it is challenging to estimate a broad measure of fiscal decentralisation that serves as the best indicator in this analysis. Some aforementioned limitations in definition and data availability make it difficult to generate the better alternatives to the existing measures of fiscal decentralisation. This could be the issue for further research.

Though there may be some limitations, this study has used the fiscal decentralisation index developed by Vo (2008) which is near the vertical fiscal imbalance indicator. The index is the interaction between two ratios of sub-national expenditure assignment, viz., “fiscal autonomy” and “fiscal importance” where the former is the ratio of own source revenue (OSR) to the total sub-national expenditure (SE) and the latter is the ratio of sub-national expenditure (SE) to total government expenditure (GE) deducting the central grant to the sub-national government in a particular jurisdiction. Mathematically, this fiscal decentralisation indicator is the geometric mean of the interaction of indicators representing fiscal autonomy and fiscal importance, as

$$FDI = \sqrt{\left(\frac{OSR}{SE}\right) \times \left(\frac{SE}{GE}\right)}$$

This fiscal decentralisation index (FDI) is an effective indicator of fiscal decentralisation as it covers the degrees of both revenue raising power and spending power of the sub-national government provided by the central/federal government. However, it is not free from the criticism that increase in sub-national expenditure will not have any effect on composite index, as this component cancels out during the interaction of the two ratios in measurement (Martinez Vazquez & Timofeev, 2010; Gu, 2012).

Using traditional approach as well, we can estimate fiscal decentralisation variable as the ratio of sub-national (local) expenditure (revenue) to total national expenditure

(revenue)(Oates, 1972; Zhang & Zou, 1998; Davoodi & Zou, 1998; De Mello, 2000; Akai & Sakata, 2002; Ebel & Yilmaz, 2002; Habibi et al., 2003). However, these are incomplete explanatory indicators, as discussed above. Then, the traditional indicator of fiscal decentralisation for i^{th} fiscal item will be,

$$FDI_i = \frac{\sum FI_{ij}}{TN_i}$$

Where, i = fiscal items as expenditure, revenue, transfer, etc. and $j=1, 2, 3, 4, \dots, n$ local governments.

Then,

$$\text{Expenditure decentralization (ED)} = \frac{\text{Aggregate local government expenditure}}{\text{Total national expenditure}}$$

$$\text{Revenue decentralization (RD)} = \frac{\text{Aggregate local government revenue}}{\text{Total national revenue}}$$

Alternatively,

$$\text{Tax Autonomy (RA)} = \frac{\text{Local government tax revenue}}{\text{Total local government revenue}}$$

$$\text{Revenue Autonomy (RA)} = \frac{\text{Aggregate local government own source revenue}}{\text{Total local government revenue}}$$

$$\text{Fiscal Dependency (FD)} = \frac{\text{Local government revenues from grant transfer}}{\text{Total local government revenue}}$$

2.3 Public Service Delivery: Concept and Linkages

Public Goods and Market Failure

Neoclassical economics provide insights on demand for and supply of private goods through a theory on these phenomena. Market is the central concern in this theory. The theory explains the nature of goods and services to be produced, organization of resources during production and patterns of distribution of final goods and services. In the case of public goods, demand and supply are decided through political institutions with

“Wicksell’s rule of unanimity”¹⁷, instead of “competitive process” as in the choice of private goods (Musgrave, 1959; Buchanan, 1999). The individuals in the community decide to demand public goods through the “governmental–political processes” because the bilateral exchange process in “market arrangement” as in the case of decisions on private goods are “insufficiently inclusive” (Buchanan, 1999), where there is exogenous effects on the parties involved in decision procedure. Furthermore, revealed preferences as the tools for decision making in market provision is replaced by the voting procedure in public goods provision (Musgrave, 1959). Hence, there is relevance of such theory of public sector (in addition to existing theories of the private sector) where James M. Buchanan added as the “pure voluntary exchange theory of public finance” that is based on revisited Wicksellian approach as did the Samuelson’s theory of “public goods”, and his justification of “government intervention” in the economic domain, so as to overcome “market failure” due to public goods.

Samuelson, in his pure theory of public expenditure, classified the goods into: “private consumption goods” and “collective consumption goods” (Samuelson, 1954). The former possesses the exclusive nature of consumption among the individuals (where one person can be made better off only by making another worse off) and the latter as the common goods with non-exclusive consumption characteristic (where consumption from one individual does not reduce the availability of the same goods to others). In other words, consumption of private goods is “exclusive” and “rival” in nature. For example, food and clothes used by a consumer are private goods. However, consumption of public goods is “non-excludable” and “non-rival” in nature. Here, for efficient resource use marginal price should equate the marginal cost (both equal to zero, in this case), e.g., improved national

¹⁷ Knut Wicksell (1851-1926) contributed the principle of “unanimity and voluntary consent” in taxation. According to this principle, government should decide the expected utility against the taxes sacrificed by a consumer. Then, this decision should be taken under unanimity, i.e., consensually, without neglecting any interest group (Head, 1974). Public activity should be achieving just income distribution that might come from just system of taxation (Segura & Rodríguez Braun, 2004). However, the Wicksellian rule of unanimity seldom serves in practice as the norms of policy formation of an economy (Buchanan, 1999).

defence system. Public goods can further be divided into pure public goods, impure public goods and local public goods (Jha, 2010).

The market works only for the narrow Pareto-optimal utility frontier where one person's utility can be increased only by decreasing that of others. Then, the market fails entirely or becomes inefficient to provide public goods which urges for government's role in public goods provision (Musgrave, 1959). Generally, there are five situations of market failure (Walsh, 1995). First, private market cannot provide public goods which are non-excludable in nature. It is because, there is no need for consumers to pay for the services provided by such goods, therefore, an individual consumer may understate their demand for such goods to avoid paying for that. Here, arises the problem of "incentive compatibility" (Jha, 2010). Then, instead of revealing preference for such goods, consumers will "free ride", leading to market failure in the provision of public goods (Tresch, 2002). . The second case of market failure is increasing returns to scale, that is, diminishing unit cost by increasing the scale of production. In this case, in the absence of competition, monopoly on the market (only of large investor) arises leading to diminishing public welfare in order to increase profit through holding down production and fixing the price that exceeds the cost. This further leads to the need of public ownership or the regulation of private sector monopoly in many countries (Walsh, 1995).

Third, the market fails to deal with the externalities embedded in the nature of public goods (though externalities can arise to some extent in the provision of private goods also). The private producer will not consider the negative externalities, i.e. the cost to the society arising from that production, leading to over-production and over-consumption. Likewise, if they do not take into account positive externalities, it leads to under-production and under-consumption. In the fourth, private market fails to provide merit goods, for example, education, health, etc., whose social valuation is more than the individual valuation (Walsh, 1995). In addition, if they deal with those goods, private market may restrict the access of some inefficient individuals to these services through its price mechanism. Similarly, there will also be failure of the market to control the provision of demerit goods, like, drugs, beverages. Lastly, the problem of asymmetry of information may arise in private provision

of public goods due to difference in the level of information of producer and consumer on the quality and quantity of goods. It may lead to over-provision or under-provision of public goods (Walsh, 1995). However, the most important, but generally not accounted factor in the literature is the black economy that affects the whole process of public service provision either private or public (Kumar, 2013).

In summary, the market fails in case of public goods due to its non-excludability characteristics or case of high cost of exclusion; non-rival nature of consumption; and due to the existence of both of the characteristics (Musgrave, 1959). There is the need for government intervention and budgetary provision to correct these problems through public provision of social goods. However, Oakland (1987) has described different cases of private provision of public goods. According to him private market supplies public goods under certain conditions where private market functions efficiently and if there is no government intervention in public goods provision.

The concept of pure public goods is criticized as it does not fit with the public services provided by modern governments. There is a mixture of private and public good characteristics in a number of public goods. Furthermore, instead of final consumption goods, many governments supply the intermediate goods. Next, conflicting interests of public sector policy makers for some extra incentives also undermine an efficient allocation of public goods, though they have full knowledge about the tastes and preferences of locals (Oakland, 1987).

The major concern of this research is local public goods. These are the public goods whose benefit incidence are confined to a particular locality. Local public goods have congestion property that the cost of production increases with the increase in regional population under limited space of local jurisdictions. For example, a park in the city, where economies of scale would be balanced with diseconomies of city size. In this case, tax should be levied for the higher utility region to cover the cost of service provision and subsidies should be given to lower utility region, to achieve optimum social welfare. These arguments on local public goods are applicable as described by theory of perfect correspondence and Tiebout's

hypothesis, in decentralisation, to achieve optimum social welfare through local goods provision.

The mainstream economic literature does not consider the politico-economic factors affecting the market structure. Markets seldom function as depicted by the normative theory. The black market also exists in the private provision of both private and public goods. Here, price mechanism acts unnaturally. The overpricing of goods to acquire more profit, and to reduce quality and sometimes quantity, are also tools for the black market. In addition, there may be the presence of elite capture during the distribution of consumption goods that excludes other consumers by consuming more of these goods. Thus, the market fails to achieve the real welfare of the consumer which requires control through government regulations. However, we should be careful that public intervention also may not be free from maladies.

Need of Public Sector and Government Intervention

We discussed earlier the case of market failure in public goods provision leading to allocative inefficiency. Economists argue for government intervention, instead of reliance on “invisible hand” of market forces (as proposed by Adam Smith), to correct this problem through public provision of public goods leading to the need of the public sector in an economy. Paul Samuelson added the “pure theory of public expenditure” on collective consumption goods (Samuelson, 1954; Tresch, 2002). According to Tresch (2002), this seminal work has thrown light on the problem of externality in non-exclusive goods provision; introduction of government in “standard general equilibrium model” assuming social welfare maximization as the sole preference of government; introduction of *benefits-received principle* of taxation to test the fairness of taxes; and importance of *first-best* allocation of pure private goods in competitive market, considering, at least, the two pure private goods model.

Musgrave (1959) stressed on the need for public sector as market mechanism alone is not sufficient to deal all the economic problems. A public sector, with a proper public policy

in guiding, correcting and supplementing the private sector in service provisions is essential for the regulation of private competitive market to achieve full information to both producers and consumers; getting rid of inefficient competition due to decreasing cost; protection of contractual arrangements and exchange (those are essential for market operation) through legal process; correction of externalities and market failure of some special public goods provision through budgetary or subsidy or other mechanisms; adjusting social values interrupted by market mechanism through adjustment of distribution of income and wealth; achieving macroeconomic stability; and estimating the proper discount rate for “valuation of future consumption”. There is the need for government intervention to correct these characteristics of market failure through the provision of an efficient public sector (Wodon & Moreno-Dodson, 2007). However, there may also be other alternatives such as social cooperatives institutionalized by the community itself, as practiced in these days.

The literature on public economics presents the public provision of public goods as an alternative to correct the inefficiencies of market mechanism. According to this literature, public goods should be produced and provided by the public sector. The major argument for the government intervention rests on the assumption that the allocation inefficiency of the market fails to generate proper incentives for producer or consumer or both of them. Marketed production of socially inefficient output leads to sub-optimal welfare. The government can correct these deficiencies of the market mechanism and produce “optimum pattern and quantity” of output following by its optimum “distribution” as well (Walsh, 1995). However, there may be other alternatives as well.

After liberalization, in developing countries, there is a growing private sector in merit goods provision such as health, education, etc., where the market may limit the access to it. The government may act on this issue by either producing the goods or regulating the private market for merit goods provision. But, in most of the developing countries, the government is not being able to regulate them properly, which is creating large disparities in the case of consumption of such merit goods.

Though government intervention and the public sectors are considered as solutions to market failure, various arguments can be observed on the means of government intervention in solving this problem which varies with country context consisting various sets of markets, planning, budgeting and regulation systems. However, the general model of choice for remedy of market failure is considered to either be regulated or subsidized or the government production model or all of all. Anyway, the objective and role of government here is to address and confirm the “rational collective decision” that mainly allows for the public provision of public goods. However, after liberalization, the government is found, somewhere, limiting its role; so as to facilitate the public goods provision by regulation and deregulation of market based management.

The effect of government intervention on provision of public goods does not remain always the same. The phenomenon differs in nature and magnitude according to the settings of the government systems (institutional framework) and enforcement of rules and regulations, along with proper monitoring of action. A benevolent government works hard as it has the sole objective of achieving optimal social welfare. However, if a government suffers maladies, such, as black economy, corruption, elite’s capture, then government intervention may not be fully effective in providing optimal public goods, either through public production or government regulation of private provision of public goods. The policy (government) success or failure depends on the nature and the level of incentives of government officials towards achieving the goal of a program followed by the nature of interference of interest groups (Glazer & Rothenberg, 2001). The traditional literature of public economics talks more about the efficiency of public service provision, but most fail to recognize these aspects.

Public Expenditure and Public Service Delivery

More than three decades of liberalization with reliance on “market mechanism” could not lead to expected growth in developing countries. Even if there is growth, the distribution of its benefits is not just. This is supposedly due to the lack of effective executive apparatus as legal and political institutions with efficient legal, regulatory and fiscal frameworks in

developing countries. Hence, efficient functioning of market-based new economic reforms requires institutional reform and capacity building through government intervention. Furthermore, growth could be a sufficient condition for poverty reduction, if and only if, it is supplemented with policies to make it broad-based like using labour intensive methods, enhancing the access of poor to assets (i.e. knowledge, long life etc.), providing short-term safety measure (through transfers) to poor (Coady & Fan, 2008).

A pure market mechanism alone is not sufficient to maintain pro-poor growth and distribution. To correct market failure and to achieve these goals, government expenditure could play a key role through some public spending policies with a complete framework attached to it. Coady and Fan (2008) bifurcates the perspectives of public expenditure into: *welfarist approach* and *social justice approach*, according to the nature and objective of such expenditure. Mainly, the former is linked to government incentives to correct market failure and achieve optimal allocation of resources; and poverty reduction through improved resource distribution mechanism. The *social justice approach*, however, is the public intervention for achieving a *just society* through ensuring the rights of citizens to access some basic needs (i.e. *basic need approach*) or capabilities of functioning (i.e. *capability approach*) where the market fails.¹⁸

To improve the welfare and achieve a just society, government has to spend (referring it as public expenditure)¹⁹ on public goods and services. However, there should be appropriate institutional setting (both legal and organizational) in order to attain efficient outcomes from public spending on these goods and services. In addition, we cannot overlook the broad consequences for political economy and social feasibility in determining the nature and magnitude of those outcomes in an economy. The World Bank and International Monetary Fund (IMF), have developed three categories of public expenditure: social

¹⁸ The basic needs approach concerns with the needs of commodities (with most character of public goods), for example, food, basic health, basic education, safe drinking water, housing, etc. However, the capability approach conceives income as the means of achieving utility from consumption goods and services; and social status as well. For detail, see Streeten (1984); Weigel (1986).

¹⁹ Public expenditure carries the property of indifference of benefits and distribution; and levies a cost to society upto the point that “they have alternative uses and are financed by distortionary taxes”; the cost is measured as “marginal cost of public funds” where the public investment will be worthy if the social returns of investment exceeds the marginal cost of public funds (Coady & Fan, 2008).

expenditure, economic expenditure and other expenditure, which most of the developed and developing countries apply in accounting for their government expenditure.

Among the categories, social expenditure consists of the expenditure on public services such as education, health, social safety (financial assistance, for instance); these are effective for overcoming capability deprivation through enhancing knowledge, long life, and short-run incomes of an individual. Economic expenditure means spending on economic services such as agriculture, transport, energy those have a direct repercussion on the resolution of capability deprivation by generating access, employment and income. These types of expenditures, and services provided through them, have both the long term impact on human and social capital building, and short-term effect as a safety from vulnerability through increased income led by direct transfers. The government can apply these expenditures for poverty reduction, if they mostly target for the poor, as the poor cannot compete in the private market for these services due to their budget constraints.²⁰

As mentioned above, political economy plays an important role in determining the process and the effects of public expenditure and public service delivery that the developing countries are facing up. The government policies in these countries are impaired by administrative hurdles, and political and bureaucratic constraints along with their social attitudes. The inadequate and incompetent administrative structure with administrative and technical deficiencies do not allow formulation of appropriate public expenditure policies and their proper implementation. Similarly, the conflict of interest of politicians and bureaucrats who exercise more power on the probable outcomes of such spending (thinking whether they are beneficial to them or not) constrain the actual outcome of public expenditure and services provided through it.

Lack of proper targeting of public expenditure due to these lacunae, constrain poverty reduction outcomes as well. Black economy, corruption and elite's capture are also evident in adversely affecting public expenditure and leading to under-provision of public services

²⁰ For detail framework on process and consequences of public expenditure, see Ali & Fan (2007); Coady & Fan (2008).

from given resources. Overall, along with aforementioned “market failure”, the case of “government failure” may also arise, leading to “development failure” of the state. Hence, the important role of social, political and administrative factors affect economic benefit as the level, composition and effectiveness of public expenditure, and public services as output (Coady & Fan, 2008). More description of public expenditure and public service delivery linking them with fiscal decentralisation and poverty, which is the core objective of this research, is provided later in the subsequent chapters and sections.

Decentralisation and Public Service Delivery

We discussed the need for public provision of public goods and services. Now, let us dwell briefly on the importance of decentralisation in public service delivery. The literature on fiscal decentralisation lays emphasis on increased allocative efficiency, production efficiency and accountability of fiscal decentralisation. Decentralized governments allocate resources efficiently (i.e. allocative efficiency) than the central government, as local government being close to the local people have more knowledge of the local demand and way of addressing it (Musgrave, 1959; Braun & Grote, 2000). In addition, local governments are considered to be more responsive than the central government in preference matching of varieties of local demand (Azfar, Kähkönen, & Meagher, 2001). Moreover, Tiebout’s hypothesis of “voting with feet” also gives rise to competition among local governments in efficient service provisions (may be applicable mostly in developed countries).

Decentralized service provision leads to production efficiency through cost-efficiency and efficient quantity in production of local public goods. The proximity of local government to the local people reduces the information and transaction costs during production and distribution. There could be the practice of Wicksellian rule²¹ of unanimity in decisions on

²¹ Knut Wicksell (1851-1926) contributed the principle of “unanimity and voluntary consent” in taxation. According to this principle, government should decide the expected utility against the taxes sacrificed by a consumer. Then, this decision should be taken under unanimity, i.e., consensually, without neglecting any of interest group (Head, 1974). The public activity should be achieving the just income distribution that might come from just system of taxation (Segura & Rodríguez Braun, 2004). However, the Wicksellian rule of unanimity seldom serves in practice as the norms of policy formation of an economy (Buchanan, 1999)

choice of public services. Then, quantity and quality of public services produced perfectly matches with the local preference leading to the production efficiency and allocative efficiency. The increased accountability of local governments provide incentives to locals willing to pay for delivered services either as taxes or user charges (Azfar et al., 2001; Khan, 2013). Here, this phenomenon facilitates the cost recovery for the service provided that enables decentralized government to raise their revenues. Thus, prior knowledge on the institutional arrangement, budget constraints and revenue resources ease the local governments for cost-efficient output and optimal service provisions in their jurisdictions.

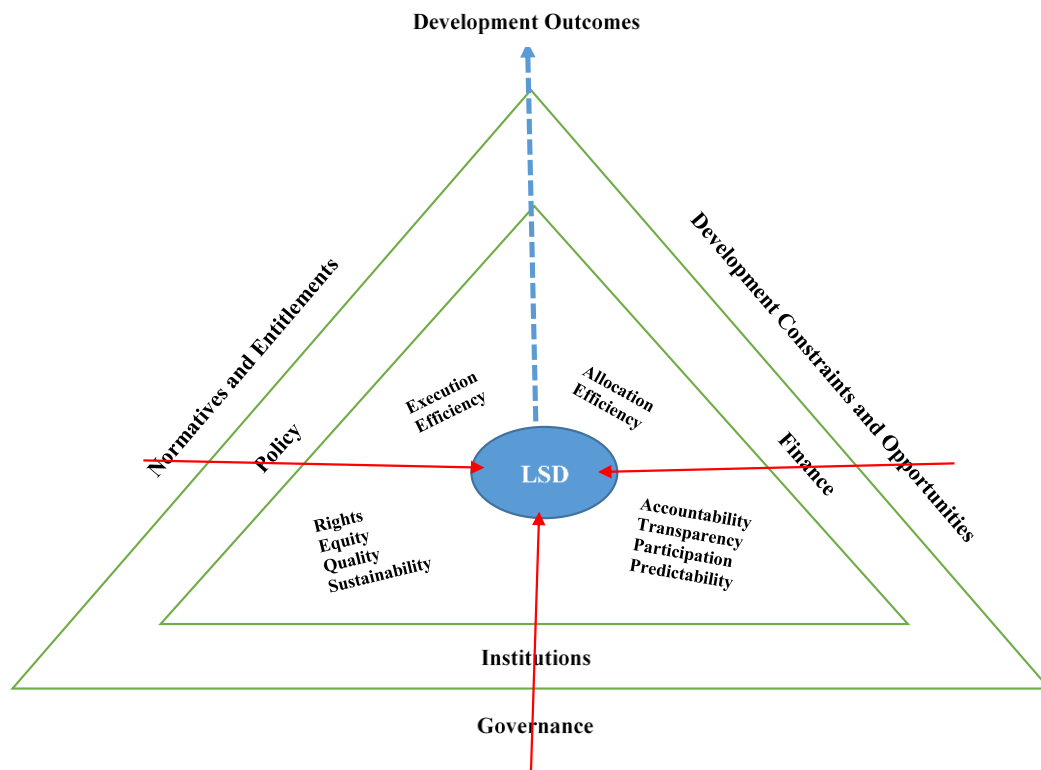
Accountability is the most important justification for local public service delivery. The local government and its service providers being close to the local citizens, there could be a strong network of accountability among the parties as “citizens, service providers and policy makers” (Khan, 2013). There may exist intergovernmental accountability, i.e. bottom-up accountability from service provider (local government) to policy maker (central government) as the compliance of rules and regulations adopted for local service provision. Likewise, there is accountability of local government towards their service users, i.e. top-down accountability as the optimal service provisions match the preference of locals.

Decentralisation empowers the local citizens through participation in decision making and project implementation process. The local citizen responds to the local government’s service provision through “voice” and “exit” mechanism. A close scrutiny of local citizen holds the policy makers and local service providers accountable for effective and efficient service delivery, maintaining transparency and minimizing the effect of corruption in service provision. “Voting with feet” by citizens, either through migration or via election mechanism,²² acts as deterrent to service providers to engage in corrupt practices in service provision (Azfar et al., 2001; Khan, 2013); and urges policy makers to induce local service providers to enhance their efficiency in service provision.

²² Migrating towards jurisdiction with better service tax mix. In this situation, local service provider may lose both the tax base as well as labour and capital. Respond by not re-electing the inefficient service provider and elect better one.

Considering local service delivery, literature emphasize the need for good policy environment, appropriate fiscal mechanism and accountable institutions to achieve local development with efficient local service delivery. Allan Layug proposed a conceptual framework (Fig. 2.1) of the dynamics of local service delivery (LSD), and the factors determining interaction among them to make efficient local service provision (PIDS, 2009). Emphasizing on decentralized provision of service delivery, the author argues for consistency of local service delivery system with *perfect correspondence principle* and *subsidiary principle* of decentralisation, and the *decentralisation theorem*. According to them achieving the expected development outcome is not possible without the cooperative actions of policy, finance and governance using the opportunities from them and overcoming their constraints.²³

Fig. 2.1: Local Service Delivery (LSD) Triangulation Framework



Sources: Adapted from PIDS (2009), Conceptualized and Developed by Allan Layug.

²³ For detail, see discussion paper of Philippines Institutes of Development Studies- “Improving Local Service Delivery for the MDGs in Asia: the Case of the Philippines” (PIDS, 2009).

Because of the aforementioned properties of decentralisation, decentralized service provision is supposed to be more efficient and accountable than the central government provision of service delivery (Bardhan & Mookherjee, 2011). However, there is a huge dichotomy between theory and practice of decentralisation in service provision (Khan, 2013). The local governments and decentralisation process has been found suffering from different maladies. In fact, incomplete (or partial) decentralisation with deconcentration rather than devolution limits the responsibilities of local service providers leading to inefficient service delivery outcomes. Likewise, devolution of responsibilities without adequate resource transfer to local governments would result in service gaps among jurisdictions and among income groups within the jurisdiction (Hewett & Montgomery, 2001). Next, even when there is devolution of authority, local governments may not have the capability to exercise the given power and responsibilities for public service provisions (Ahmad et al., 2006). In addition, Bardhan & Mookherjee (2011) identifies the problems of elite capture and corruption even in the case of decentralized service provision.

The “voice” and “exit” mechanism is also poor in developing countries. Tiebout’s “voting with feet” through migration is also complicated by some economic inefficiencies and family ties, in these country contexts. In the case of election mechanism as well, Keefer & Khemani (2005) argues for “political market failure” as the inefficient electoral competitions in developing countries due to some limitations such as: incomplete information to voters on the performance of the electoral candidates (or political parties); social and ideological polarization of voters that overlooks the quality of services as the standard of choice; incredible promises of political competitors to the voters that could later remain unfulfilled. The campaign finance during elections also adds to these. This limits the proper “exit” mechanism of citizens or “free rider problem” as the response to inefficient local service provisions which weakens the so called “proper accountability” in a decentralized system of service provisions. The low revenue raising power of local governments also becomes a hurdle in the practice of decentralized public service delivery. These issues are discussed in detail in Chapter 6 of this thesis.

Lastly, the important issues are the problems of equalization, spill-over effect and economies of scale in decentralized service provision. Some of the services, with spill-over effects, may overburden the local government in service provision. There may be lower efficiency of public services, mainly due to the existence of positive externalities (Calabrese, Epple, & Romano, 2012).²⁴ There is diversity in resource endowment and capability of local jurisdictions, and full decentralisation may lead to further disparity among those units in the absence of cooperative federalism. Hence, redistribution function is supposed to be more viable in a centralized model than in a decentralized system. These problems strengthen the arguments against decentralized service provision. However, a proper mix of centralized and decentralized service provision could be an important policy tool for basic service provision in the developing countries.

Public Service Delivery and Poverty

As public service delivery is the area for linking decentralisation and poverty, it could be important to look at the linkage between public service delivery and poverty, i.e. implication of public service delivery for poverty reduction (in our study). The *basic needs approach* and the *capability approach* of poverty, both focus on the shortage of access of poor to basic services required for living a quality life. The poor cannot compete in the market for those services, because of their household budget constraints, leading them to depend on public services for their necessary entitlements. Their budget constraints do not allow them to purchase necessary goods such as education, health after their purchase of subsistence goods²⁵ such as food consumption (Bardhan & Mookherjee, 2011). In other words, because of low incomes of poor, competitive markets cannot maximize the welfare of the poor, though the marginal utility of the good is higher for poorer than for the non-poor, leading to denial of their access to such services through the price mechanism. They

²⁴ However, the product of the jurisdiction (producer) can be marketed each other among the jurisdictions according to their need that can minimize the problem of overproduction.

²⁵ Bardhan & Mookherjee (2011) consider health as the necessary consumption rather than essential. However, in developing countries health is considered as important as food consumption. Poor also prioritize health and spend for treatment of chronic illness even being in debt or curtailing the food consumption which further deteriorates their living condition. Next, low quality of public health service in most of the developing countries such as Nepal and India, compels poor to go to costlier private health care, unlike the assumption of Bardhan & Mookherjee (2011).

have to head towards cheaper or free public services to get such necessary goods and services. This justifies the rationale of the public good provision to the poor that the public good will give benefit the poor more than the non-poor. In other words, it defends the idea of dependence of poor on public services. Besides these facts, Hewett & Montgomery (2001) observed large rural-urban gap, and gap between small and larger cities in the supply of public services, in developing countries. Next, compared to non-poor, urban poor are found much less likely to have access to public services. The authors argue that such inadequacy of public services hinders poverty reduction efforts.

The Millennium Development Goals (MDGs) is an important international document on poverty reduction strategy. The governments of the poor (or developing) countries are focusing on categories of public service delivery to achieve these goals. Among the eight goals of the MDGs, the second and the third goals are directly related to achievements in education and health respectively, i.e. more emphasis has been given to better education and better health. Among the public services, education and health services have an impact on better quality of life of the poor leading to extended knowledge, and a long and healthy life, respectively. Likewise, services such as transportation, agriculture, irrigation, etc. directly or indirectly lead to employment generation and income for the poor, which also supports food security and leads to a decent living standard. However, these services are interlinked to promote the achievement from their individual effect. Thus, through enhancing competent human resource development, productive employment, empowerment and security, public services help in reducing income poverty and human poverty of the poor who are unable to access the private market for the necessary services.

Wodon & Moreno-Dodson (2007) argue that poverty reduction is not the function of the government only. They recognize the role of the private sector as well in achieving this goal. The private sector contributes to social protection through education, health care service, etc. either purely private or under public private partnership (or under corporate social responsibilities, these days). On the contrary, private sector operates on the principle of minimal wages and maximum profit in the production process, leading to the low

purchasing power of poor, and excluding the poor to access market mechanisms, and as well access to private services.

Becker and Arrow argues that the differences in the socio-economic status of consumers affects the choice of goods and services such as education and health care provisions (Arrow, 1986; Wells & Crain, 1992). The cost and quality of the services under the domain of services, mainly represent the basis of economic and non-economic rationality of a consumer's decision. However, the rationale of choice of services depends not only on the budget of the poor/non-poor. The factors such as availability, cost-effectiveness and quality of services- *menu dependence*; level of awareness of the citizen, severity (intensity) of the need for the services or *urgency to decide- chooser dependence* (Sen, 1997); level of the capture and corruption, etc. (Bardhan & Mookherjee, 2011); also control the decision of the poor on the choice of the services.

Lack of cost effectiveness, community insurance and imperfect targeting deteriorate the quantity and quality of the public services and thus constrain the welfare maximization of poor (Bardhan & Mookherjee, 2011). Similarly, local (political and bureaucratic) capture, black market and corruption lead to the diversion of public goods to the non-poor (at the cost of the poor) and shrink the public services available to the poor (Kumar, 2002). It is argued that the high poverty areas are more likely to have more local capture and corruption than lower poverty areas because the poor are relatively uninformed (Lanjouw & Ravallion, 1999; Ahmad & Ravallion, 2000; Bardhan & Mookherjee, 2000, 2011). Hence, even for poverty reduction through decentralisation, it can be possible only through transparency, accountability and building institutional capacity of local governments (Elhiraika, 2007). This research tends to test these issues empirically. The issues of the relation between public service delivery and poverty reduction will be discussed more in the subsequent discussion in this chapter and later.

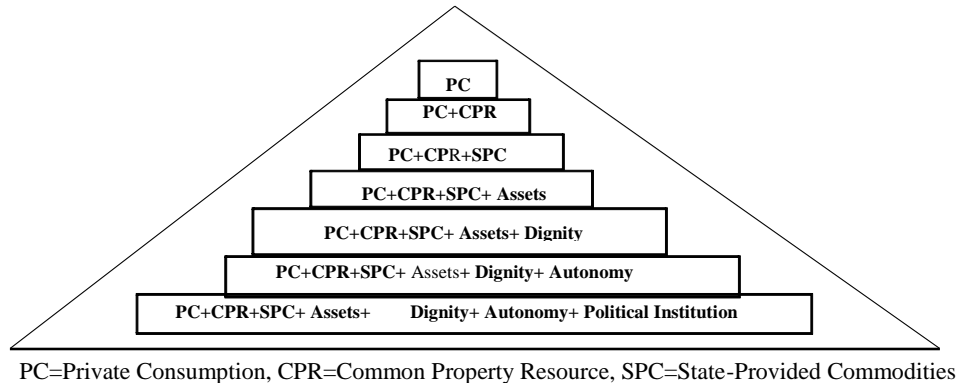
2.4 Poverty: Conceptual Understanding and Issues of Measurement

2.4.1 Poverty: Multidimensional Phenomenon

Poverty is now a worldwide phenomenon. Traditionally, poverty was conceptualized as the shortage of minimum income and consumption to meet the calorie intake in need. After 1980s, the broad concept of poverty as the multidimensional approaches came up in addition to the concept of "minimum subsistence". Along with a shortfall of income, poverty is redefined as the deficiency of access of a person to different dimensions of non-income basic needs such as access to basic education, basic health, safe drinking water and natural assets, etc. Later on, deprivation in intangible elements such as dignity, autonomy, security, etc., is also added to the concept of poverty. Thus, poverty has become the comprehensive and holistic approach to human deprivation (Kumar, 2004; Azad, 2004). Broadly, the concept of poverty is found to be divided into two approaches: Utilitarian approach- considering the micro aspects, i.e. first, lack of consumption of commodities such as good and services, and secondly, the non-utilitarian approach- taking poverty as a function of bundle of both commodities and non-commodity basic needs. The evolution of the concept of poverty over time can be figured as a pyramid (Fig. 2.2) where the top to bottom stages indicate the gradual adding up of elements required to define a person as poor (Panta, 2010).

Blank (2003) has figured out the conceptual map of theories of the causes of poverty. According to her, the classical economists, from Mill to other thinkers, argue that poverty is the result of individual behavioural choices, and welfare programmes lead to perpetuating poverty by creating welfare dependency and poverty traps. However, the political economy approach of Marx and other followers think -"capitalism causes poverty" and "social and political forces" are responsible for aggravation of poverty. According to Marx, capitalist development amasses the wealth in one pole and deprivation on other (Marx, 1984). Thirdly, liberals and neoliberals such as Marshall and Keynes, consider poverty as the result of "economic underdevelopment" and "lack of human capital development".

Fig. 2.2: Pyramid of Poverty Concept



Source: Modified from McGee and Brock (2001)

Considering the literature, some of them has defined poverty as the shortage of necessary calorie intake²⁶ and some has conceptualized it beyond the calorie norms, but adding up the socio-economic aspects of the life of an individual.²⁷ Recent literature proposes three different perspectives regarding poverty (Lipton & Ravallion, 1995; UNDP, 1997; Jha, 2003). First, the *income approach*, defines poverty as the deficit of income of a person to meet a certain minimum level of consumption as defined by a poverty line (Foster, Greer, & Thorbecke, 1984; Paul, 1989). This is also referred as the monetary approach of poverty. The method of setting poverty line, in this approach, is based on either the cost of food energy intake or the cost of both food and non- food basic consumptions (Ravallion, 1996; Ravallion & Sen, 1996). But this approach does not incorporate the non-monetary attributes of basic needs and fails to incorporate key other dimensions of poverty such as literacy rate, life expectancy, etc. Here, increase of income of an individual does not necessarily imply the rise in her/his control over the resources to fulfil the basic needs, like, health, education, safe drinking water, etc. (Kumar, 2002). Likewise, we can observe strong correlation between the state of wellbeing and quality of life and less with income (Atkinson & Bourguignon, 1982; Kakwani & Silber, 2007).

Though the monetary (income or consumption) approach has some shortcomings, most of the economists, policymakers and scholars consensually consider inadequate income and

²⁶ See also, Dandekar & Rath (1971); Martin Ravallion (1996); Wodon (1997); Thorbecke (2007).

²⁷ See also, UNDP(1997); A. Sen (2011)

consumption as the basic constituents of poverty. The major drawback is that it fails, in practice, to account publicly provided goods and services. For some, consumption is more appropriate to explain the monetary approach of poverty than the income as consumption is supposed as a better indicator of long-term welfare (Deaton, 1997). However, Atkinson & Bourguignon (1982) prefers income approach more than the consumption as former elucidates more the minimum ability of an individual than latter.

Second is the *basic needs approach*. According to this concept, poverty is the deprivation in both monetary and non-monetary basic attributes such as food as well as basic health, basic education, safe drinking water, shelter, etc. over which increased income only may be unable to exercise command (Atkinson & Bourguignon, 1982; World Bank, 2001). The weakness of this approach is that it needs high level of subjectivity in determining the adequate level of provision of such attributes.

The third, the *capability approach*, broadens the definition of poverty as deprivation of basic capabilities. According to this, access to the commodities and services is not itself "ends" (i.e. wellbeing) but only the "means" to attain "valuable functioning" (Sen, 2011). He distinguishes the factors of poverty and stages of their effect on poverty outcomes as mentioned in Clark (2005):

Commodity → Capability (to function) → Function(ing) → Utility (e.g. happiness)

This "capabilities and functioning" theoretical framework proposed by Amartya Sen is more logical and inclusive than other approaches. Because it accounts for the significance of a variety of factors (whether personal, society or others, like, time lags) affecting the wellbeing of a person. Likewise, he added the access of a person for participation in different aspects of social, economic and political life of the community, in the notion of poverty. Various instrumental relationships exist between low income and low capability for various communities, family, and individuals. Relative deprivation of income may lead to absolute deprivation of capabilities (Sen, 2011). Sen's approach is close to Marxian approach, as former considering poverty as the "failure of capabilities to achieve valuable

functioning” and the latter believing it as “lack of realization of historically created possibilities”. But it seems unlikely to recognize the Marxian logic that the source of poverty is the accumulation of capital (Jha, 2003). In other word, this approach fails to address poverty as a result of exploitation as considered by Marx. Following Tagore, Sen overlooked the series of exploitation of developing countries by industrial countries, which Gandhi had pointed out in defining the economic nationalism (Jhunjhunwala, 2000). Next, it is difficult to measure the capability endowment *ex ante* and the functioning can be measured only *ex post* (Thorbecke, 2007).

Kumar (2013) considers the poverty as a “social category” characterised with social perception of dynamic nature, being of “space-and time-specific”. For him, exploitation in society is the source of poverty (as near to the Marxian view); and societal disruption accentuates poverty leading to a complex nature of a solution in tackling it. A static poverty line based on a “fixed notion of material welfare” fails to address the rapidly changing social perception. Then the policy to tackle poverty should be determined by the nature of perception (broadly social and specifically of ruler) on poverty rather than by a fixed poverty line. Thus, the poverty effect in a society, according to him, is the composition of both processes of “social conception” and “social philosophy” of that society (Kumar, 2013). He defines poverty as the “complex historical process” rather than the current consequences produced by the existing deprivation of particular population in the given society.

Absolute and Relative Poverty

Being have different in nature, poverty can be defined in absolute and relative terms. The *absolute poverty* refers the situation of failure of an individual to overcome the shortage of minimum subsistence income and consumption standard by poverty line estimated as the income level an individual or household needs to achieve the package of essential goods and services. *Absolute poverty line* differentiates the individuals or households into poor and non-poor, but fails to compare the income among these categories of the individuals or households. In other words, it may not reflect the relative difference in living standard among them. On the other hand, *relative poverty* measure compares the distance of income

of a bottom quintile or decile with the mean income of the community reflecting the income distribution among the categories. Contrary to absolute poverty measure, in this approach, the individual or household being short of mean income is considered as relatively poor. Hence, the relative poverty line may be higher than the absolute poverty line or the average living standard of the community. Index of absolute poverty measure is fixed over time and space. However, the relative poverty value keeps changing, i.e. shifts up with the rise in average expenditure. The absolute poverty line being simple in estimation and understanding, it is widely used such as the \$1 or \$1.25 a day per capita income as defined by World Bank (1990) and UNDP (2000).

Relative poverty is useful to express the income inequality in a community since it estimates the gap between the average income of that community and the income of a particular individual or household. It changes over time and space where the needs are conditioned by the society to which they belong (Paul, 1989; Kumar, 2013). Hence, relative poverty and absolute poverty may follow different paths and may have an inverse relationship as well (Ahmed, 2013). Though relative poverty could be the appropriate measure of poverty, more emphasis is found to be given to absolute poverty due to its simplicity in most of the developing countries, mostly ignoring the issue of inequality.²⁸ However, developed countries are providing more weight to relative poverty, in their policy perspective, extending it further to emphasis on multidimensional analysis, wellbeing and social exclusion as well during defining, measuring and addressing poverty (United Nations, 2009).

2.4.2 Issues of Measurement of Poverty

Method of measurement of poverty differs according to the definitions of poverty as discussed earlier. Though there are a number of measures of poverty suggested by different

²⁸ Relative measure of poverty would have more implication in policy perspective especially for developing countries since it gives the broader picture of poverty problem and helps to formulate multifaceted programmes of poverty reduction. However, in contrast, Ravallion, Chen, & Sangraula (2009) argues that absolute poverty line estimated by using constant real value is more relevant in policy perspective of poor countries and more prominent the relative terms in middle income and advanced countries.

literature, *Poverty Head Count Index* has drawn great public attention.²⁹ This Poverty line is the most practiced measures of poverty that counts the population below a certain threshold of consumption or income needed by an individual or household, considering them as poor. Poverty lines are estimated basically using the Food and Energy Intake (FEI) Approach and the Cost of Basic Needs (CBN) Approach (Ravallion, 1998; Nunes, 2008). The former accounts the adequacy of income or consumption expenditure to achieve the predefined level of food energy measured in terms of calorie intake and the latter incorporates both food and non-food consumption bundles estimated by comparing the costs of each sub-bundles needed to meet the basic consumption. These lines are estimated as the share of cost of respective consumption bundles to the total consumption budget.

Poverty Head Count Rate (PHCR) is the threshold level of income or expenditure required to live a minimum life (Kumar, 2013). Here, the individual or household those have level of income or expenditure below the defined line are considered as the poor. However, it seems not be able to explain the gap between the poverty line and the income of a poor and the inequality within the poor. To fill the gap, some scholars have developed the alternative measures of poverty, such as poverty gap, square poverty gap, human development index, etc.³⁰ In policy perspective, for poverty reduction, broader study of the nature of poverty is most in need. Hence, looking to aspects such as depth of poverty, severity of poverty (or inequality) and exclusion (or deprivation), in addition to the absolute poverty line, only could lead to an effective poverty reduction strategy.

Poverty Gap Index (PG) measures the distance (gap) of a poor from the predetermined poverty line, popularly known as the depth of poverty. This can be helpful in poverty reduction through “transfers” targeting the poor by estimating the magnitude of resources required to transfer to shift up the poor from poverty line (Ahmed, 2013). However, this index cannot explain the inequality among the poor. The *Square Poverty Gap (SPG)* defines the severity of poverty or inequality existing among the poor. It is estimated as the

²⁹ See Atkinson (1987); Paul (1989); Ravallion (1996, 1998); Nunes (2008); Ravallion et al. (2009); United Nations (2009), .

³⁰ For more detail, see Sen (1976); Clark, Hemming, & Ulph (1981); Foster, Greer, & Thorbecke (1984); Kakwani (1993); Clark (2005).

distance of sum of square of the income of the poor from the predefined poverty line, describing the quality of life of the poor. It measures the chronic poverty and can be helpful to suggest the policy for anti-poverty strategy targeting the most needy and ultra-poor. Algebraically formula for these poverty indices (popularly known as FGT or FST index) proposed by Foster et al. (1984) is given in Appendix Table II-2.

The *Human Development Index* is the multidimensional poverty index, which represents the human wellbeing in a country, measures the citizen's achievement in three important aspects of better quality of life: a long and healthy life (health outcomes), access to knowledge (education outcomes) and decent living standard (income and wealth achievements). It substitutes the conventional measure of development of a country captured by economic growth rate and the rise in income per capita (OPHI, 2011). However, the conventional measure of HDI possesses the limitation as it lacks the components of socio-economic and political freedom and empowerment; control of violence, security and discrimination, etc.

UNDP in 1990 has estimated HDI and Human Poverty Index (HPI) to measure poverty as the weighted average of achievements in health, education and income components, on the basis of Sen's capability approach. Three components of the HDI - education index, health index and income index cover the health care attainments, educational attainments and purchasing power of an individual (per capita income), respectively which all are the indicators of quality of life of an individual.³¹ However, the newly developed Multidimensional Poverty Index (MPI) covers so many other aspects of deprivation in a human life for measuring poverty. Mathematical interpretations of estimation of these poverty measures are given in Appendix Table II-2.

³¹ For further detail, see UNDP (2010) and OPHI (2011).

Poverty of Poverty Measurement

It would be more useful to account the effectiveness of the poverty measurements which could give the idea about the drawbacks of some poverty indices and need of new indices to represent the holistic approach of poverty. It may facilitate to move for the effective policy formation for poverty reduction in a country. In developing countries, debates on poverty are limited to calorie intake and nutritional norms that is supposed to the energy required for survival of an individual, i.e. for good health and normal activities. However, capability deprivation incorporates the lack of human capabilities (i.e. skills and physical capabilities, and social status) more than the material needs in the definition of poverty (United Nations, 2009). UNDP (1990) has defined poverty as the lack of access of an individual to the education and health facilities, command over resources and democratic participation. The HDI and Human Poverty Index (HPI) derived by United Nations Development Programme (UNDP) capture only the ranking and comparison of relative achievements among the countries or population groups but fail to address or measure the intra-country comparison of inequality. In developing countries, instead of recognizing the deprivation, poverty line is updated only by adjusting the inflation, but undermining the real increase of cost of living of the poor according to space and time (United Nations, 2009).

Poverty Line: an Inadequate Measure of Poverty

Absolute poverty, defined by monetary poverty-line approach enables cross-sectional and inter-temporal comparison of poverty among countries. This simple poverty measure (as a World Bank dollar a day and national poverty line of the individual countries), though being dominant in use in developing countries, has some flaws and problems in its use. The issue is discussed more in some literature such as Ravallion (1996), United Nations (2009), Kumar (2013), etc. Some major flaws can be pointed out as follows:

1. The calorie requirement, a food component of poverty line, represents only a small fraction of nutritional needs. Likewise, the prescribed calorie base is inefficient to meet the necessary consumption for a manual labour to work for full day. Likewise,

- the growing environmental pollution and health hazard existing in developing countries demand more energy than the defined quantity. In addition, the other elements and minerals are equally important for a good health of a person which are not accounted in poverty line. Hence, suboptimal calorie provision leads to a nutritional deficit (i.e. malnutrition) for workers and finally results in induced rates of their morbidity and mortality (United Nations, 2009).
2. Undermining the non-food compositions (like education, health etc.) during estimation of poverty line or inconsistent or arbitrary settings of the cost of non-food consumption underestimates the official poverty line, resulting in lower than the actual poverty line that leads to exaggeration of living standard of poor or underestimates the actual extent of poverty (Ravallion, 1996; United Nations, 2009).
 3. Ranking the household poverty by expenditure using the distribution of consumption expenditure per adult equivalent per household may lead to perverse results. The ability of households irrespective of real income to overcome the basic needs such as health and education as the measure of poverty may misinform us to conclude the improved living standard of a household or individual.³²
 4. Poverty line approach ignores the intra-household disparities in access to assets, income and consumptions of different entitlements. Considering only the household size and rural-urban difference, instead of realizing the heterogeneous demand for energy, according to labour and existing situation of the health of different members of households would rule out the plausibility of the poverty line (United Nations, 2009; Kumar, 2013).

³² For example, according to United Nations (2009), consumption expenditure of a poor met from possessions or debt bondage may be higher than the person spending from the income gained after selling of assets implies former having more consumption and thus above the poverty line than the latter (e.g. the case of health expenditure that depends on the severity of illness rather than income of a person). Similarly, sometimes consumption of a poor from the income after selling of child labour in the cost of their schooling. These cases cannot represent, in real, the improved living standard or real shift above poverty line. The long term hazard resulting from the situation would become unaccounted during estimation of consumption poverty which the developing countries are facing up.

5. The poverty line accounts only the private expenditure excluding public goods and services which are more significant in developing countries to improve living standard of an individual or household (United Nations, 2009). It makes the estimation incomplete.
6. The deflator used in poverty line does not reflect the effect of the time change, but not the space dimension that affects the actual cost of living of the poor led by the spatial difference in price (Ravallion, 1996).
7. Only being based on average per capita expenditure at household level, poverty line ignores the “social exclusion and marginalisation” those having a significant effect on the welfare of an individual. Likewise, absence of account of self-perception of the poor is another deficit of poverty line approach (United Nations, 2009; Kumar, 2013).
8. Absence of the issue of inequality in poverty estimation would dilute the effect of poverty reduction strategies and may insist and perpetuate poverty instead of reducing it (Nunes, 2008; United Nations, 2009). Comparatively progressive FGT index and Sen’s poverty index as well fails to account the inequality between rich and poor, though they consider the degree of inequality among poor.
9. The poverty line is insufficient to define “chronic poverty” that exists in the society which refers to acute poverty generating the “poorest of poor” (Ravallion, 1996; United Nations, 2009). This undermines the implication of anti-poverty programmes targeting the poorest. Likewise, the discrete (fixed) poverty line can only divide the population between poor and non-poor, but fails to explain poverty as the continuous phenomenon possessing multidimensional, multifaceted and volatile characteristics relative to the time and space.
10. The most important issue is that entire poverty debate lacks the account of effect of black economy on poverty. The poverty estimation using the consumption or income data after accounting black income effect only will provide the actual picture of poverty in an economy (Kumar, 2013). Similarly, the effect of growing

commercialization and degrading quality of goods and services have led to more consumption, which may shift up the actual poverty line than the defined level.

From the above discussions, we can make some remarks in response to poverty line approach. Poverty line can serve for the reduction of primary poverty, i.e. a food component of poverty, but not sure to deal with the non - food deficit. Next, its assumption of ability of money for access to the goods and services could be disaffected by the supply-side failure in the society. Furthermore, decision of the household head mostly affects the access of other members to the consumption of the secondary needs which may alter the effectiveness of the poverty line. Hence, according to United Nations (2009), to overcome these deficits in poverty reduction strategies, there should be integrated approach of poverty estimation with the wide coverage of issues of multidimensional wellbeing, social understandings, environmental aspect, relative and subjective approach. Only the new index with these properties represents the holistic approach of poverty, a shift of the approach from monetary poverty to holistic wellbeing.

2.5 Factors Affecting Poverty

As discussed earlier, poverty is the shortfall of income and non-income capabilities of an individual or broadly of the people of a country. Thus, poverty is the function of growth and distribution factors. On the other hand, it relates to the governance factors as well. For most of the developing countries, the major causes of poverty are sluggish economic growth, unfair distribution of the benefits of growth and policy failure. There is a hot debate globally about poverty reduction and policy issues in the poverty measurement, growth and distribution effects on poverty, and causality between growth, distribution and the policy variables (Khan, 2011). In other words, we can categorize the factors those affecting poverty as: macroeconomic, microeconomic and governance factors, which include sectoral growth, unemployment, inflation, public expenditure, distribution of income and facilities, disparity, corruption, black economy, etc. Theoretical and empirical discussions

are there in other sections of this chapter and other chapters. So, the study here needs to provide only a brief review of the issues of the factors affecting poverty directly or indirectly.

2.5.1 Macroeconomic Factors

Investment, Saving and Poverty

Saving and investment are the promoters of growth. In his *General Theory*, Keynes defines investment as the device to increase income and output through adding to the stock of capital goods. According to him, saving and investments are the residual of income to consumption and they are always equal. (*ex post*). However, Kaldor (1957) suggests that as growth is determined by investment of profits, there is a need for an increase in saving to increase the growth, where worsening of income causes lower saving and thus results in slow growth and poverty (Khan, 2011). The investment includes both private and public investment. It has both macroeconomic and microeconomic effects on poverty. Its macroeconomic effect works through its impact on the macroeconomic variables like rate of growth, level of employment, an increase in aggregate demand and national saving. In the same way, it affects poverty through the microeconomic channel by improving the quantity and quality of goods and services, price changes and changes in household disposable income. Empirical evidence shows that there is a positive association between investment and poverty reduction. Moreover, public investment has more association with effective poverty reduction (Anderson, Renzio, & Levy, 2006).

Growth, Distribution and Poverty

Economic growth, through the increase in household income reduces the income poverty by decreasing the shortfall of resources to attain minimum basic needs. Dollar & Kraay (2002) have emphasized role of growth on poverty reduction and said that “Growth is Good for the poor”. According to them, the income of overall population and the income of poor, both increase simultaneously during the growth process. However, it is not a convincing

argument. The relationship between the rate of economic growth and the rate of poverty reduction depends on a number of factors (Osmani, 2003). Firstly, it depends on the rate of growth, elasticity of employment generation, and the extent of integration of the poor in the growth process. Secondly, the effect of growth on poverty reduction depends on whether the distribution of the increased income is pro-poor or not. Otherwise, growth may blow up the income inequality.

Pro-poor growth can be defined as one where the income of poor rises more than proportionately. Bourguignon (2003) addressed the links between the rate of economic growth, the acceleration of poverty reduction process, and the changes in the income distribution. He proposed that the distribution of income reduces poverty through “distribution effect” and by enhancing “poverty elasticity of growth”. Hence, the distribution of income also affects poverty and inequality. Ferreira & Ravallion (2008) argue that there is a strong correlation between growth rates and rates of poverty reduction (as cited in Habito, 2009). In addition to this, higher equality would be good, preferable and friendly for pro-poor growth and thus would lead to a faster poverty reduction (Sen, 2011).

Poverty is also a function of the sectoral composition of economic growth. Kumar (2006) points towards the faster growth of service sector, where there is a continuous displacement by the organized part over the unorganized part in India. So, ignoring the changing ratio of the organized and unorganized sector would overestimate the growth rate of the Indian economy through the overestimation of growth of the unorganized sector. The unorganized sector (mostly exists in rural areas) has lower wages and income, also leading to less growth and more poverty than the urban area possessing a higher presence of the organized sector.

Simon Kuznets (1955) observed an inverted U-shaped relationship (known as Kuznet’s Curve) between per capita income and income inequality and hypothesized that the increase and decrease of per capita income and income inequality as the interaction of economic growth is possible only in the long run. In a developing economy, shifting of the population from rural agriculture sector to non-agricultural sector causes the income

distribution to result from initial equality to growing inequality and then after a long course of development, continuous massive shifting leads to the decrease in income inequality. Similarly, according to Kuznets (1955), “average per capita income of the rural people is usually lower than that of the urban” and income inequality within the distribution groups for rural people is slightly less than for the urban population.

Unemployment, Wage and Poverty

Employment is the source of labour income, i.e. income of the poor. So, a reduction in income due to unemployment is one of the major factors in increasing poverty (Prasad, 2008). Next, a firm can reduce its cost of production either by reducing employment or by cutting down wages. Reduction in employment adversely affects the poor by leading to loss of income. But, according to pre-Keynesian idea, increasing the labour market by reducing the cost of production (through lowering the wages) and raising the expansion of the economy would trim down unemployment and underemployment. This enhances the income of the poor through increased employment and thus contributes to the growth of output as well as to the reduction of poverty and inequality. However, as Bhaduri (1986) points out trying to increase employment by reducing wages would be counterproductive as it would reduce effective demand thereby bringing down the level of employment.

At the micro level, on the demand side, lower average productivity leads to lower demand for labour that in fact affects the poor through lower real wages and earnings. So, the difference in productivity among the sectors causes the variation in the demand for labour and thus varies the real wages. This finally results in the difference in income between labour across the sectors. This results in variation in incidence of poverty among the various sectors of the economy and employment. Similarly, on the supply side, limited capacity of poor in integrating with the growth process and in access to employment generation determines the poverty level. This depends on the skill or quality of labour force and its market and access of poor to capital and productive assets also.

Price Inflation and Poverty

Price behaviour is an important factor that affects poverty and inequality as it remarkably relates to the purchasing power of people. Inflation is the rise in price or money wages which is led by excess demand of goods or factors. Inflation has had a negative impact on the growth of many developing countries. Kane & Morisett (1993) proposed that inflation can affect income distribution through four channels: the first, heterogeneity of bargaining power in different income groups and shift in wage index which is associated with high inflation. Secondly, differences in access to shifting of assets from liquidity to domestic indexed assets or foreign currencies across the income groups. Thirdly, through the liability of subsidized loans whose interest rates may not fully reflect the inflationary pressure.

Fourthly, through fiscal drag- heterogeneity in tax payment lags and unequal sharing of the tax burden by different groups (Kane & Morisett, 1993). Inflation is associated (in effect) with the lower income groups and lower wage earners characterized by low income share, lower minimum wage and higher rates of poverty (Kumar, 2006; Easterly et.al., 1998 as cited in Crowe, 2006) as they are unable to address the increased price of goods and services due to low income. In fact, when price of goods and services, then rises to maintain their real wages, workers began to raise the money wage. If the money wage rises with the rate that equal to price rise, then no change in the real wage leads to no effect of inflation. But there is a different case that large section of the labour of unorganized sector cannot bargain for the increase in real wages. According to Kumar (2013), inflation as the result of rising share of elites in national resources, growing use of capital/energy intensive technology and modernization that overlook the agriculture sector, exacerbates poverty through redistribution of income from the bottom (worker) to the upper (businesses) section of people.

Inflation is measured either by the Consumer Price Index (CPI) or Wholesale Price Index (WPI). But, WPI is supposed to be the appropriate measure because it does not differ across various consumption baskets and the localities (Kumar, 2006). Kumar further says that the

absence of representation of the fast growing service sector in the inflation index will underestimate the rate of price rise that negatively affects the people of poor and middle income categories.

2.5.2 Microeconomic Factors

Income Distribution, Land Distribution and Access to Other Facilities, and Poverty

Poverty is the lack of deprivation of access to not just income, but other assets and facilities also. They can be categorized as the human, physical, natural, financial and social capital, of which, human capital refers to skilled, knowledgeable and healthy human resources, those who can work to earn and enhance economic growth. The main sources of human capital formation are education and health. Better health and education indicators provide grounds for more sustainable growth (ADB, 2005). Therefore, access to and attainment from these facilities possesses strong relationship with poverty. The higher the attainment in education and health indicators, the lower is the incidence of poverty. Education produces skilled human resources while improved health facilities result in physically able human capital to generate comparably better income. Furthermore, education and health are correlated with each other and work jointly to produce efficient human capital. So, people's access to health and educational facilities is important to reduce poverty through an increase in income. Access to facilities like safe water, housing, road, transportation, communication, market, etc. also affect the poverty status of the people. Moreover, credit facilities and remittances these come under the financial capital are directly correlated with poverty through income effect. Land as a natural asset and also the source of food and income of the farm population have a significant effect on poverty. Lack of it is the root cause of rural inequality and poverty.

Lorenz Curve measures the inequality (or equality) by bringing out the share of different income groups in the population. It can be used to measure inequality in land distribution also Furthermore, Gini Coefficient also measures the extent of inequality in distribution.

2.5.3 Public Intervention

Public Intervention, Public Expenditure and Poverty

Because growth alone is not sufficient for poverty reduction, there is a need for public intervention. A sufficient growth constitutes the elements such as pro-poor (broad based) growth, integration of poor households to the growth process and short run transfers to poor (Coady & Fan, 2008). This depends on government intervention. Keynes (1936) argued for increased public expenditure, for an economy to be brought out of depression. The *welfarist approach* of public intervention argues for the need for intervention to tackle market failure in allocation and redistribution of resources to the poor, to achieve poverty reduction. However, the *social justice approach* considers public intervention to supply the basic needs and increase the capability of the poor. So as to serve those objectives, taxation and public expenditure are the tools for public intervention. Hence, through these means, government tends to meet the optimal allocation of resources by maximization of a “weighted social welfare function”. This is through the maximization of per capita income, improving income distribution and reducing the poverty rate.

Public expenditure can be categorized as economic (agriculture and infrastructure), social (health, education, drinking water, etc.) and others including general administration and office expenses (Fan & Rao, 2008). Moreover, the simultaneous equation model (Fan & Rao, 2008) considers rural poverty as the function of agriculture growth, changes in price of agricultural products, changes in rural wage and rural non-farm employment. A good public intervention holds the characteristics of a progressive redistribution system with progressive direct tax and pro-poor expenditure that can help to generate income and employment for the poor. Likewise, it should have the policy for direct transfer to the poor, i.e. “social safety net”. In other words, public intervention is needed to overcome the externalities, to achieve equity or equitable distribution of income and increasing returns to scale in an economy, i.e. the conditions of market failure (Tresch, 2002).

New Economic Policy and Poverty

The New Economic Policy (NEP) is based on the principle of “market does all in an economy”. It minimizes the role of government and prefers the economic decisions through the interaction of market forces. The increasing private sector and diminishing public sector are the crux of NEP that is achieved through globalization and liberalization. The theoretical foundation of the NEP is the concept of “laissez-faire economy” of Adam Smith proposed in his book “*Wealth of Nations*” which favours the need of private activities in maximizing the national wealth (Prasad, 2008). Proponents of NEP consider it as a means to overcome macroeconomic instability resulted by the economic shocks such as inflation, fiscal deficit, balance of payment (BOP) deficit, unemployment, etc.

The major tools of the NEP are the Structural Adjustment Program (SAP) and Economic Stabilization Program (ESP) developed by the International Monetary Fund (IMF) and The World Bank. As opposed to this, critics argue that NEP serves only the limited elites and adversely affects the large number of poor population. It is because the market cannot protect the deprived sections. Many developing countries are found unable to solve their macroeconomic problems through this policy. Allowing for competitive markets, deregulation of price, cut in public expenditure and wage rate, withdrawal of subsidies, trade liberalization, privatization, etc. are the major components of this policy. But, NEP has led to increased unemployment, slowdown of the domestic production and trade, and poverty in developing countries. In addition to this, it has also led to the proliferation of the black economy, which again resulted in increased unemployment and poverty (Kumar, 2002; Prasad, 2008).

2.5.4 Governance Factors

Good governance is a precondition for development as it induces efficient markets and discourages market failure. It strengthens the capability of the state to maintain rules and regulations needed for the economic and social development of a country. In contrast, lack of good governance through lack of efficient democracy and accountability leads to “rent-

seeking and corruption” that further causes insufficient property rights and welfare-reducing policy intervention. Again, finally resulted high “transaction cost” cause market failure, which benefits only a minority of elites and rich at the expense of the majority of the poor. Khan (2011) argues that poverty reduction is an “arithmetic function” of growth and distribution. Hence, growth and distribution have a significant effect on poverty reduction. However, growth and distribution are dependent on the policy of the government, and “optimal policy mix” is determined by “effective relationship between growth and distribution”.

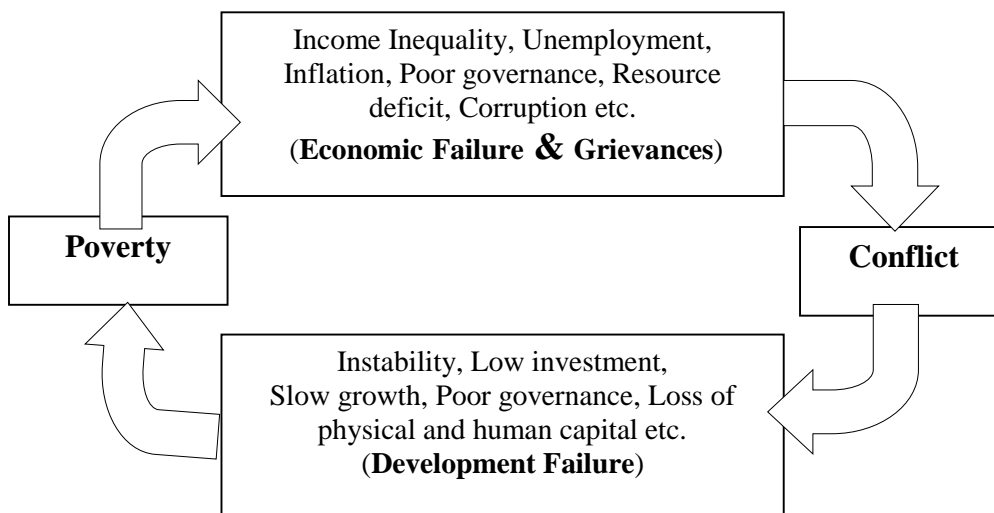
Good governance has a causal effect on growth and distribution, has an impact on poverty reduction as well. In the neo-classical framework, good governance is supposed to be the necessary condition for poverty reduction, as it eases the fair distribution of benefit of growth (Sittha, 2012). In contrast, poor governance impedes the poverty reduction initiatives, thus further reproduces poverty and strengthens it. According to Sittha (2012), good governance can be characterized by six indicators clubbed into three categories: government setting mechanism (i.e. voice and accountability and political stability/absence of conflict); efficiency and effectiveness of government (i.e. government effectiveness and regulatory quality), and institutional set up (i.e. rule of law and corruption control). However, the failure of government policy because of the rising black economy leads to slowdown of the possible growth rate, reduction in employment situations, lowering of investment and induced income inequality, all of which induce poverty through the poor development of basic services reducing the access of the poor to those services (Kumar, 2013).

Conflict and Poverty

Poverty-Conflict nexus possesses a two way relationship through a broader array of institutional factors. Empirically it has been observed that the poorer countries are more prone to conflict, while conflict affected countries are likely to have more poverty (World Bank, 2005). According to Collier et al. (2003), doubling of per capita income leads to a halving of the risk of war. Likewise, each and every percentage point increase in GDP leads

to an equivalent reduction in the risk of war (Collier & Hoeffler, 2004; Sharma, 2006; Hughes et al., 2009).

Fig. 2.3: Two Way Effect of Poverty and Conflict



Source: Based on the Sharma (2006).

Black Economy, Corruption and Poverty

According to Kumar (2002), black incomes are factor incomes, property incomes that should be reported to the direct tax authorities but are not. The black economy is such an economic activity that has a connection with illegality. Undeclared profits, which is a major constituent of black income is generated by showing higher cost and lower revenue. Gupta (1992) divided black incomes into reportable and unreportable. All the black incomes generated through legal economic activity (interest, wage, salaries, corporate dividends, etc.) but not reported to the tax authorities are reportable. However, those earned through illegal activities (bribes, crime, black market, etc.) are unreportable black incomes (Kumar, 2002).

The black income, comprising some leakage of social efforts, results in the difference in actual and estimated social outcomes. This causes the people to be less well-off than reported. Similarly, black economy adversely affects all the macroeconomic variables like growth, investment, saving, employment, money supply, etc. as well as the national

economy (Kumar, 2013). It reduces economic growth, increases the fiscal and budgetary deficit, worsens the balance of payment, increases the cost of production, and weakens the distribution system so on and so forth. It adversely affects the public expenditure on public services like education, health, drinking water, rural infrastructures, etc. through the budget deficit. In this way, the black economy leads to policy failure of the country by causing resource deficit, and insufficient allocations and ineffective expenditure in pro-poor social infrastructures. All these discourage pro-poor growth and distribution, and increase poverty and inequality. Similarly, corruption plays an important role in leading a developing economy to poverty. Because of corruption, public money goes to the pocket of few persons and it cuts the public expenditure, retarding economic development. Corruption disfigures the expected cost- benefit ratio and makes development projects onerous for an economy (Pandey, 2009).

Though there is lack of reliable data, national and international experiences signify the widespread existence of black economy and corruption in Nepal. The high practice of illegal activities like bribe, commission, smuggling, etc. has greatly worsened the governance system of Nepal (Prasad, 2008). This severe situation has caused grievances to the people and increased distrusts to the government. According to Kumar (2002), black economy in India increased from 35 percent of GDP in 1990/91 to 40 percent of GDP in 1995/96. However, now it has reached about 50 percent of GDP as estimated on the basis of increased number of scams, rise of the share of (black income prone) service sector, and the fall in the share of (comparatively black income free) agriculture in Indian economy (Kumar, 2013). It has caused the deficit in achieving the targets of health, education etc. Though it is not estimated, it may be applicable in Nepalese context as well, since the Nepalese economy is also more or less similar to the Indian economy. Furthermore, increasing trend of cases of corruption filed and the cases declared (CIAA, 2013), signifies the probable rise in share of black income and corruption in Nepalese economy.

Next, good governance is based on some fundamental rights to the citizen as: right to participate in public decision-making, and inclusion of their needs and interests in policy and allocation of resources. So, socio-eco-political discrimination by the State either by

rules or through practice distorts deprived groups, for their access to basic facilities and state representations. Hence, discrimination based on gender, caste/ethnic, and regional discrimination negatively affect the poverty reduction goal.

2.6 Fiscal Decentralisation and Poverty: Exploring the Linkage

On the basis of information mentioned above, we can expect a linkage (either direct or indirect) between fiscal decentralisation and poverty. This relation might be either positive or negative or null according to the nature of policy environment of an economy. However, estimating or establishing the linkage or assessing the causal relation between these two prominent variables is still challenging (Ahmed, 2013). Principally, a positive linkage between fiscal decentralisation and poverty reduction (as well as human development) could be expected through fulfilment of basic needs and capability enhancement of people of a jurisdiction using the tools of efficient local public service provision. The role of proper accountability through good governance and empowerment of the poor could not be overlooked at the time of assessment of linkage between fiscal decentralisation and poverty.

Decentralized public services, both social and economic services, as explained earlier such as basic education, basic health, agriculture, irrigation, transportation and other rural infrastructures, financial assistance, etc., acting on poverty reduction, have positive impact on poverty reduction and human development. Different socio-economic and political system and institutional settings, along with macroeconomic stability, are other influential variables on poverty. The better the allocation and production efficiency of the decentralized government, the more positive will be the impact of fiscal decentralisation on poverty reduction. This section looks at the linkage between fiscal decentralisation and poverty with both the theoretical underpinnings and empirical evidences. A conceptual framework has also been elucidated ahead.

2.6.1 Fiscal Decentralisation and Poverty: Theoretical Linkages

As discussed earlier, fiscal decentralisation is a process of devolution of a package of multifaceted fiscal assignments from the central to the local governments, and poverty is a multidimensional phenomenon. The objective of fiscal decentralisation is public welfare maximization by an efficient delivery of public goods and services. Similarly, poverty reduction strategy also has the aim of overcoming deprivation due to a shortage of basic public goods and services available to the poor. Since both aspects relate to public goods and services, they potentially can affect each other. This study mainly needs to analyse this issue.

Traditionally, there are two ways of intervention for poverty reduction: "growth mediated security" (indirect strategy) and "support-led security", i.e. direct strategy (Dreze & Sen, 1989; Bird, Litvack, & Rao, 1995; Rao, 2002). The former acts through acceleration and distribution of growth, while the latter consists of a direct service package for the poor to meet their shortage of basic food and non-food consumptions. The third way for a poverty reduction strategy came up after 1990s in the form of "pro-poor growth" strategy (Goetz & O'Brien, 1995), i.e. inclusion of the poor in the growth process which provides employment and income generating programmes by targeting the poor.

According to Bird et al. (1995) and Rao (2002), identifying the characteristics of and then causes of poverty, formulation of a package of poverty reducing policies- either "capacity improving" or "safety net", and cost efficient and cost effective implementation are the core ingredients of the "poverty alleviation strategy". But, this can be feasible in the democratic local governance (Braun & Grote, 2000) which is supposed to create an environment for welfare maximization of local poor, their empowerment, and participation in decision making. Hence, theoretical understanding gives us an idea that we can link fiscal decentralisation and poverty in following major ways:

First, fiscal decentralisation affects public service delivery as the local government has better information and accountability about the basic public services to local people.

Similarly, the poor have less money to spend on basic goods and services, like, basic education, basic health etc. out of their income. Because of budget constraint, they have to depend more on public services (which are generally cheaper than the private ones). Then, we can easily assume that efficient delivery of such basic goods and services through decentralisation will benefit the poor more in comparison to the non-poor section of the population (Bardhan & Mookherjee, 2011). However, the extent of pro-poor benefit from such services depends on the nature, composition and dimensions of fiscal decentralisation.

Local public goods are non-rival and non-excludable in nature, and market system is neutral to social welfare (as it considers the profit only). Therefore, the market fails to provide goods and services equitably because of inequity in income distribution in society; breakdown of the market and technical assumption in the case of resource allocation, and asymmetric information among the citizens. Pro-poorness being the case of social welfare maximization, the second-best policy of public expenditure might be more efficient than the lump-sum redistribution policy of first-best one. So, there is a need for government intervention in the provision of local public goods and services. But, sometimes the government may also fail to correct the market failure and to achieve efficient outcomes of the pro-poor expenditure, due to limited information, less accountable bureaucracy, political pressure, elite capture, corruption etc. However, democracy facilitated by periodical election tends to correct this problem through the increased awareness of citizens. Thus, pro-poor efficiency gain depends also on the political economy of decentralisation such as level of local democracy, transparency, accountability, institutional capacity, etc. (Elhiraika, 2007).

Second is the linkage of fiscal decentralisation and poverty through pro-poor expenditures. Expenditure on social services, like, basic health, basic education and drinking water contribute to human resource development (only if leakages are constrained). Furthermore, expenditure on economic services such as expenditure on agriculture, irrigation, rural roads, etc. provides poor the access to other basic facilities to raise their income. Principally, these are the effective channels of income and non-income poverty reduction. Because of the nature of pro-poor targeting of local expenditure (as described in the

theories), it is argued that the greater the expenditure decentralisation and revenue autonomy that local government gets, the greater will be the magnitude of pro-poor expenditure (Bird et al., 1995). Furthermore, proximity of local government towards the targeted poor reduces "information cost" and "transaction cost" in formulating and executing the pro-poor policies (Oates, 1972). Then, pro-poor expenditure is not only cost-efficient, but also efficient in service delivery. But, the pro-poor nature of local expenditure depends on the power structure in the society, where the rich may corner the welfare gain.

Third, fiscal decentralisation preferably shows positive impact on resource mobilization that will be of essence to mobilize the local resources that can be used on poverty reduction programmes. Ideally, increasing public interest to pay taxes, because of transparency in tax-benefit combination (generally there is dominance of benefit), leads to increase in local tax effort and user charges. But, the user charges would not have to generate an adverse equity effect (resulting from the imposition of charges to poor) which may discourage the poor to use such basic services (Boadway & Shah, 2009). Local governments, under fiscal decentralisation, could raise their revenue by bringing small firms and individuals (which are residual of the national tax sphere) to the formal tax base and thus broadening the tax sphere (Bahl, 1999a). Besides all these, though it is a political issue, enhancing local participation under fiscal decentralisation includes the poor in decision making in the formulation and implementation of pro-poor policies and programmes that helps in the empowerment of the poor.

Hence, fiscal decentralisation, as the means of provision of basic needs, facilitator of economic opportunity, and a tool for enhancing empowerment and security to poor, can affect poverty reduction positively (Boex et al., 2006). Spending on basic facilities, like, basic education, basic health care, rural infrastructure, agriculture extension, etc., can affect poverty reduction through direct and indirect channels, other things remaining the same. So, poverty, defined as the deprivation of basic facilities (both income and non-income), can be impacted by provision of local public services through the process of fiscal decentralisation.

Though most of the literature argue for the positive impact of fiscal decentralisation on poverty reduction, the efficiency, and sign (positive or negative) and magnitude of such impact depends on the political economic factors such as institutional capacity, accountability, and degree of autonomy in fiscal assignments of the local governments. Distinct from the traditional theories of fiscal federalism, Bardhan & Mookherjee (2011) have concentrated on the decentralisation effect of accountability on service delivery. According to them, decentralisation enhances "intra-regional targeting" of the antipoverty program in low poverty region but deteriorates in high poverty regions. This is because of lack of awareness of the poor in the high poverty regions that may lead to corruption and capture by local elites and bureaucrats. However, the extent of local level capture may be "context- and system-specific"(Bardhan & Mookherjee, 2011). Thus, a theoretical linkage between fiscal decentralisation and poverty also has constraints. Inability of the local government to perform some redistribution and stabilizing function as described in previous sections, chances of capture of local elites, voter's free mobility and flight of capital across jurisdiction, chances of ambiguity and corruption, etc., are the major constraints of fiscal decentralisation. In fact, while discussing the reduction of inequity and poverty, the neo-classical literature misses the political economy and structural aspects led by the power structure in society. Hence, it represents a static analysis.

Certain issues are rarely highlighted in the available literature on decentralisation. In practice, because of lack of technical and administrative efficiency, some local governments in developing countries are found less capable to perform the given function of resource collection and efficient use of the available resources. These problems put a question mark on the traditional principle of efficient resource mobilization and resource allocation by local governments. Similarly, "flypaper effect" and "rent seeking behaviour" of local governments discourage the effective resource mobilization and allocation motive of fiscal decentralisation. Another aspect is the impact of conflict and absence of periodic elections to local bodies (which Nepal is facing now). This reduces legitimacy and accountability of local governments which then impacts the implementation of antipoverty programmes at local level (Panta, 2010). In contrast to the existing theories, all the local expenditures on basic facilities are not purely pro-poor. The facilities, like, road, schools,

electricity, health centre, irrigation, and markets benefits non-poor too. In addition, most of the local governments in developing countries (as in the case of Nepal) are found to be less engaged in prioritizing and planning for special package for poor. Though it is difficult to estimate the pro-poor effect of such facilities, it cannot be ignored as a whole during analysis.

In brief, we can draw some conclusions from the reviewed literature. First, the widely accepted concept is that fiscal decentralisation has an important role in enhancing public service delivery, which is a major route for poverty reduction; it is because of proximity of local government to the local poor. Similarly, fiscal decentralisation is dedicated to poverty reduction through pro-poor spending and proper resource mobilization. But, the efficiency, sign and magnitude of impact of fiscal decentralisation on poverty reduction depends also on both political and administrative decentralisation. Second, unlike the traditional literature on fiscal federalism, fiscal decentralisation and poverty are not exclusive subjects of analysis, both are interrelated. As most of the theoretical literature has discussed linear relationship between fiscal decentralisation and poverty, there is a need for further study (also country specific) on the possibility of a non-linear relationship between them. Third, there is a need of extensive discussion about the execution efficiency and the effect of conflict and political instability in assessing the impact of fiscal decentralisation on poverty that is not highlighted by most literature.

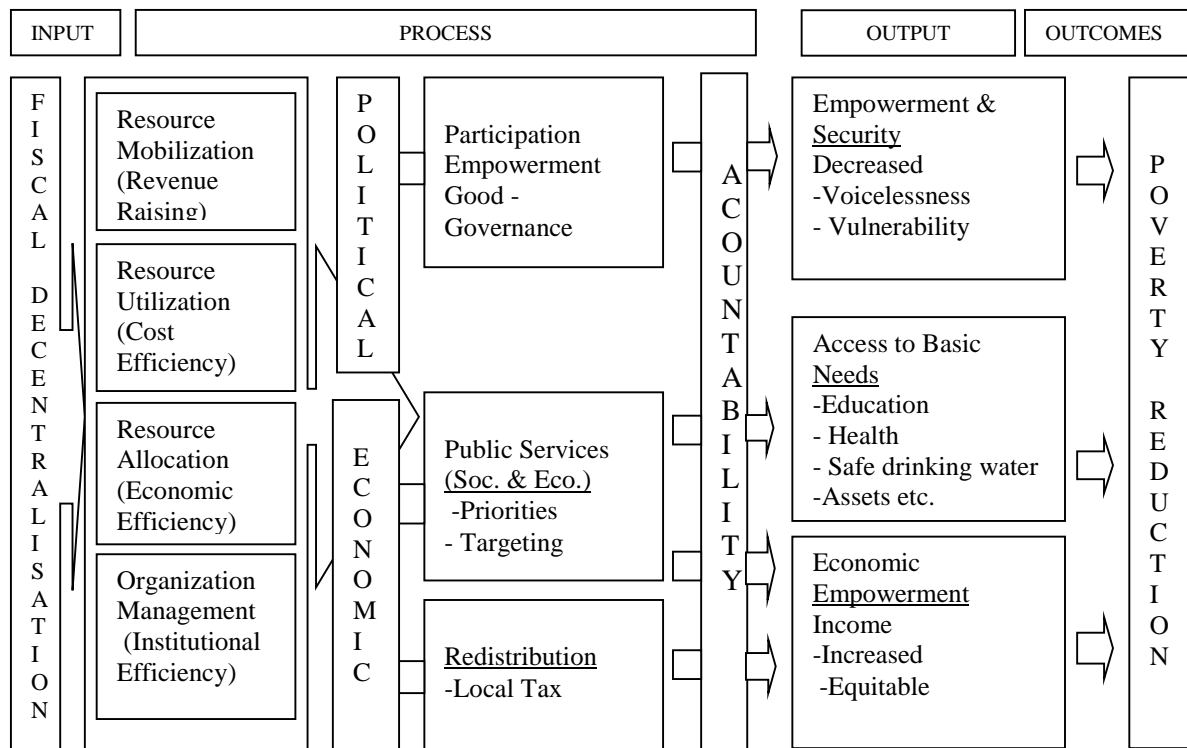
Fourth, both the centralization and decentralisation of fiscal assignments are important for poverty reduction and are not alternative for each other. Only the fiscal policy with the proper mix of both phenomena can lead to the overall poverty reduction and equality. So, policy concept of fifty, fifty and fifty (i.e. 50 percent for central and remaining 50 percent to the state, and the balance 50 percent to local) for the allocation of fiscal authority to three tiers of government (Kumar, 1994) may be applicable to have a sound impact of fiscal decentralisation on poverty reduction in case of developing countries like Nepal. Fifth, there is an important role of fiscal decentralisation on poverty reduction in developing countries, like Nepal, which has geographical, ethnic, economic diversities among the small jurisdictions. Lastly, though empirical research on fiscal decentralisation is challenging, the hypotheses made in the theoretical discussions should be tested by

quantitative analysis while deciding the level of fiscal decentralisation and policy for poverty reduction in a country which is also a part of this research.

Conceptual Framework of Linkage between Fiscal Decentralisation and Poverty

The theme of the study can be summarized as a conceptual framework as given in Fig. 2.3. According to this figure, fiscal decentralisation, through efficient resource mobilization and allocation, acts on poverty reduction through political and economic channels. Considerable participation and voice of the people through political channel contribute to reduce political poverty. However, the decision-making power in the supply of public goods and services, and revenue raising power of the local government assist to reduce economic poverty by providing access of people in the social services, assets and other facilities. It reduces poverty through increased and equitable income as well. But, for efficient outcomes, the whole process should be supported by proper accountability.

Fig. 2.4: Linkage and Channels of Impact of Fiscal Decentralisation on Poverty



Source: Author's sketch based on Braun & Grote (2000); Jutting et al. (2004); Steiner (2005)

2.6.2 Fiscal Decentralisation and Public Service Delivery: Role as Pro-poor Channel

Public economics literature argues for government intervention in the public service provision where the market fails to provide these services due to externalities generated from these provisions referred as the “tragedy of commons” (LUO & CHEN, 2010). Similarly, they take into account the benefit of fiscal decentralisation in public service delivery due to the proximity of its apparatus (i.e. local governments) to the tastes and preferences of local people. The services delivered are supposed to be poor friendly as they try to overcome the shortage of basic needs of the poor. Here, it would be noteworthy to account for some socio-economic services, and how and to what extent they serve as the means of poverty reduction. Among the public services discussed in the previous sections, basic education, basic health and agriculture extension services which might have an effect on the education, health and income components of human development as well as the income and capability poverty, are discussed relating them with fiscal decentralisation, in this section.

2.6.2.1 Fiscal Decentralisation and Educational Services

As discussed in public economics literature, there exists a market failure in education as it is considered as a public good that possesses positive externalities. In addition, market provision of education will generate the equilibrium less than the social optimum. Proponents support the public provision of education from both “efficiency and equity perspectives”; that is estimated through the cost-benefit analysis of full set of effects of education, such as marketed and non-marketed, private and public, consumption and inputs effects (Haveman & Wolfe, 1984).³³ Being a public good, its price (p) mostly would be fixed below the marginal cost (MC), according to normative theory (i.e. $p = 0$ or $p < MC$). However, the quantity and quality of public education depend on the overall public policy option of a government.

³³ Haveman & Wolfe (1984) has highlighted the effects of and benefits from education (proposing a detail list of twenty points) in achieving better family and society with better economic and socio-cultural environment that would be relevant in study of poverty impact of decentralized education.

Broadly, education benefits the people by generating “higher wage (income) and higher human capital efficiency”; from spill over effect of knowledge by emitting “social benefit” through “private benefit” (i. e. positive externalities); by improving family health through increased information (that leads to productive human capital and then income); and finally leading to economic well-being of a family, and increased social productivity and a civilized society by encouraging economic activity and minimizing criminal activity through better knowledge of educated social members (Haveman & Wolfe, 1984; LUO & CHEN, 2010). Hence, fiscal decentralisation could be helpful in poverty reduction through the effect on public educational services.

According to the first generation theory of fiscal decentralisation, benefit area of public education should match with the jurisdiction providing such education service. Hence, they have emphasized on local provision of education service than the uniform central provision, because local government could have more knowledge of local needs and preferences than the central government. However, as a constraint, the positive externalities of decentralized education may lead to low efficiency of public education because of the unwillingness of local governments to invest more in education considering the spill-over of the benefit of their investment, as in the Chinese case (LUO & CHEN, 2010). Though public sector is dominant in educational service provision and its financing, the elite’s capture in expenditure on public education diverts more share of benefit towards non-poor, impeding poverty reduction objectives (Coady, 2008).

Winkler (1989) categorizes rationale of education decentralisation in three broad categories: educational financing; educational efficiency and effectiveness; and power redistribution. First, central government decentralizes education services as to share the financial burden with the local governments or communities. Second, the subsidized education carries a high unit cost to the central government and leads to an inefficiency of service provision. However, if it is localized, low information and transaction cost give rise to efficient education service. Second, proper accountability and administration through decentralized provision would lead to quality and cost-effectiveness of education. Third,

power redistribution through decentralisation strengthens the voice of local community and helps to improve the performance of teachers and staff making them more accountable rather than selfish. However, there are some arguments also in favour of centralization. The national and international standardization of educational qualification through the same standard of curriculum development is required to make the quality of human resource produced competent. Local governments and communities may not be efficient in these matters administratively and technically, in developing countries. Financially also, local governments of developing countries are less efficient as they are more dependent on central grant because of their low revenue raising power.

The success and failure of decentralisation (education decentralisation) can be determined by the factors such as: socio-economic, and cultural settings; level of support or capture by elites, and local empowerment; efficiency of planning and management; and spaces for further reforms (Duan & Zhan, 2011). Besides these facts, Ahmed (2013) mentions the decentralisation of primary and secondary education in some Latin American countries with the objective of achieving quality education. However, most of the studies in this field have observed mixed response of the pro-poor bias of such practices, and are mostly dominated by failures.

According to theories and empirical studies, the poverty impact of fiscal decentralisation can be assessed through the assessment of the effects on the educational services and educational outcomes. Student-school ratio and student-teacher ratio are widely used as indicators of the level of education services. Likewise, student enrolment rate and the literacy rate are used as the indicators of educational achievements. In assessing the effect of fiscal decentralisation on education outcomes as a pro-poor channel, these indicators could be used in the analysis. However, promotion rate, repeaters rate and intake ratio are also found used in some cases. Subsequent chapters provide some description on these issues.

2.6.2.2 Fiscal Decentralisation and Health Care Services

Health is an important factor for human resource development. A healthy long life is the source of competent labour and thus the source of employment and income. Hence, it helps

to reduce both income poverty and capability deprivation. There is an important role of health care services in poverty reduction and improving quality of life of a poor. As discussed earlier, the poor have less access to private health care services because of their budget constraints to compete in the private market (i.e. market failure in health service provision). Then, public health care (it is supposed to be either free or cheap) supplied through the government intervention, could be the option for access to health care for the poor.

According to the proponents of decentralisation, decentralized health care services could have allocative and production efficiency because the local government could have more knowledge about local health problems and there could be need-based allocation of resources (Khaleghian, 2004). Decentralized health provision also plays for efficiency through reduced transformation and information costs because of proximity of local government to the local users which is the benefit of decentralisation (Oates, 1972). Moreover, decentralized health care provision may result in improved coverage and quality of services through local participation and top-down accountability during service provision. In summary, an appropriate decentralized health policy and its proper implementation could result in the efficient, equitable, and quality health services in need which further leads to positive health outcomes (Asfaw, Frohberg, James, & Jutting, 2007). For example, there is a lower mortality rate in countries having higher local health expenditure and fiscal decentralisation (Robalino, Picazo, & Voetberg, 2001; Asfaw et al., 2007; Coady, 2008). However, the achievements and their evaluation are not easier (Litvack et al., 1999) because of highly differentiated levels and nature of health provision (Saavedra, 2009), i.e. primary, secondary and tertiary level; and preventive and curative health services; etc.

Literature has also pointed out some cons of decentralized health service provision. The poor resource management and improper handling of the decentralized health system may produce worse services leading to poor and negative health outcomes (Saltman & Bankauskaite, 2007). The diseconomies of scale, low financial, technical and administrative capacity of local governments could be the obstacles in decentralized health

service provision, mostly in developing countries. These problems challenge the efficiency criterion of decentralisation in public service provisions. Next, incomplete decentralisation (incomplete in the sense of legal and fiscal devolution) due to the unwillingness of policymakers (Pokharel, 2000) and horizontal disparities in service provision among local governments with unequal resources, also deteriorate the equitable and efficient health service provision. Last but not least, corruption and elite's capture are prominent problems that limit the access of poor to adequate and quality health services which impedes the poverty reduction outcomes of decentralized health care services (Braun & Grote, 2000; Bardhan & Mookherjee, 2011; Kumar, 2013).

Unclear assignments, loose Centre-local relation and inadequate capacity of local governments have hindered the access of rural residents to necessary health care services as studied in some developing countries of Asia and Africa (Litvack et al., 1999; Asfaw et al., 2007). de Leon (2014) in a study of 56 sample cases by using *Critical Comparative Literature Review (CLR)* and *Evidence Based Research (EBR)*, it concludes that the decentralized health care provision is still unclear. However, there are mixed (some positive and some negative) effects of decentralisation on health care provisions according to country-context.

The outcomes of public health services depends on the magnitude of public health expenditure (both local and central level), quantity and quality of those services, and accountability criteria as well. In fact, because of diseconomies of scale, local governments in developing countries are more or less indifferent to provide costly services and preventive health care services with large coverage such as immunization (De Mello, 2004). They are also less likely attracted to invest their constrained budget more on health because of spill-over effect of these provisions, in a number of developing countries. In addition, they consider public health service provision mostly as the responsibility of central government.

On the basis of above discussion based on some theoretical and empirical literature, we can come to a point that the poverty effect of fiscal decentralisation could be examined through

the effect of the latter on health services and health outcomes. Population per hospital bed and population per health manpower are popularly used indicators of the level of health service provision. However, the health outcomes are mostly standardized as infant mortality rate, immunization coverage, life expectancy at birth, skilled birth attendance, fertility rate, etc., in different literature in this field. Subsequent chapters of this thesis discuss empirically the effect of fiscal decentralisation on health outcomes.

2.7 Conclusion

First generation theory of fiscal decentralisation argues for a decentralized public goods and service provision because of its allocation and production efficiency through better allocation of available resources addressing local demands of the local tastes and preferences. While the second generation theory adds to the politico-economic aspect of decentralisation dealing with issues such as theory of firm, economics of information and transaction, principal-agent problem and theory of contract, focusing more on accountability criterion during service provision. The difference is that the second generation literature challenges the concept of the pure benevolent nature of government in decentralisation for public service provisions. They consider that the situation of benevolent government does not prevail always because of some kind of self-interests inherent in service providing political agents. However, theories of both generations overlooked the redistributive flavour of decentralisation. The third generation theory, emerged after mid-1990s, addressed this shortcoming and linked fiscal decentralisation with poverty, raising worldwide interest on these issues.

Most of the available literature agrees with the local government provisions for public goods and services that are free from the problems of externalities and economies of scale. For this, they argue, there should be a transfer of some fiscal assignments and authority from the Centre to local government entities, referring the phenomenon as fiscal decentralisation. In practice, market fails to entitle the goods and services defined by *basic needs approach* and *capability approach* of poverty as the shortage of access of the poor to the basic services required for living a quality life. This is because, poor cannot access

the market for those services due to their budget constraints, leading them to depend on the public services for their necessary entitlements. In another case, the government has the goal of poverty reduction by eliminating deprivation of such defined necessary goods and services through the process of public expenditure and public service delivery. Theoretically, this is the objective of fiscal decentralisation to attain maximum public welfare through efficient delivery of basic goods and services to local people. Hence, fiscal decentralisation can affect poverty reduction through the channel of public service delivery. In this process, public services such as basic health, basic education, agriculture extension, etc. are supposed to be more pro-poor channels effective for poverty reduction through fiscal decentralisation, mostly in developing countries.

Based on the above discussions, we can observe a framework of linkage that- fiscal decentralisation through proper resource mobilization and allocation, affects poverty reduction through political and economic channels. Political channels reduce the political deprivation through inducing empowerment and security. Next, economic channels lower the economic poverty through enabling access of poor to basic public services and the economic empowerment of poor by increased and equitable income. However, this would not lead to a better result unless the whole process is supported by proper accountability.

Poverty and fiscal decentralisation are non-exclusive and cooperative to each other. Though there are some arguments that accounts for the sound effect of fiscal decentralisation on poverty reduction, it is not more apparent in actual practice in some developing countries. This is because, theoretical linkage between fiscal decentralisation and poverty possesses some constraints. Local governments are inefficient to perform some redistribution and stabilizing functions due to inadequacy of resources, chances of externalities or spill-over effect, voter's mobility, flight of capital, etc. during some kinds of public service provisions. Furthermore, capture of local elites, chances of ambiguity and corruption, etc. also impede the effect of decentralisation on poverty reduction.

In brief, to achieve efficient outcomes from fiscal decentralisation, there is needed to overcome the problems such as administrative hurdles, political and bureaucratic constraints, and social attitudes, arising during service provision. Hence, political economy

of decentralisation: effect of execution efficiency, accountability, conflict and political instability are also to be considered during assessment of poverty impact of fiscal decentralisation. These arguments provide the space for centralization of some public services. Therefore, there is a need of both centralization and decentralisation of fiscal assignments to achieve the poverty reduction objectives better. A proper mix of both phenomena, probably a policy concept of fifty, fifty and fifty (i.e. 50 percent central, remaining 50 percent to state and the balance 50 percent to local) for allocation of fiscal authority among the three tiers of government would be preferable for poverty reduction in developing countries.

Existing literature on fiscal decentralisation mostly cover the extensive discussion of fiscal assignments and factors affecting the phenomenon. Hence, there are some limitations of these literature. Firstly, limited literature are available that explore the linkage between fiscal decentralisation and poverty, negligible studies either the national or subnational level. Secondly, the available studies offer inconsistent results, i.e. some concluding with positive and some with negative impacts. Thirdly, being of cross-country or sector-specific analysis, they would lack the generalizability of result as the countries studied have different socio-economic and political context. There is a need of country-specific and locality specific studies for a deeper understanding of the problem. Fourthly, most of the literature lack the political economy approach, which has made the studies quite incomplete with less effective outcomes.

Fifthly, these studies rarely cover the impact of other macro-variables in the poverty impact analysis of decentralisation. Lastly, unless the study on choice of public services is linked with the rational choice theory, analysis of the impact of public services on poverty would not be complete. Similarly, without the study of pro-poor nature of the allocation of resources by identifying their priorities and linking it with poverty effect, one cannot confirm that local governments focus on basic services like education, health etc. This will help us to understand the positive impact of fiscal decentralisation on poverty reduction only in an incomplete way. The present study tries to bridge this gap in literature and research as much as possible by exploring the linkage of fiscal decentralisation and public service delivery, public services and poverty, and the overall linkage between fiscal decentralisation and poverty reduction outcomes.

CHAPTER 3: LINKAGE OF FISCAL DECENTRALISATION WITH POVERTY REDUCTION OUTCOMES IN NEPAL: AN EMPIRICAL ANALYSIS

3.1 Introduction

Both fiscal decentralisation and poverty reduction are topics of worldwide interest, particularly in the developing countries. The concepts became important for efficient public service delivery in developed economies after the collapse of welfare state and the rise of neo-liberal economic model with structural adjustment and state reforms; and to overcome the government failure in centralized service provision in developing countries. The linkage between these two topics is of interest to academics and policy makers. Fiscal decentralisation and poverty reduction are concerned with two important economic themes – efficiency and redistribution respectively (El-Zahab, 2005). Of these, fiscal decentralisation aims for efficient service delivery and poverty reduction entails the redistribution of income and wealth.

Unlike the traditional literature on public finance, the recent theories on the redistributive role of local government through fiscal decentralisation consider the two basic principles: proximity and accountability of local governments to the local people, and its implications for the efficient supply of basic public goods and services. Local governments being closer to the local people may have better knowledge of local demand for and the means to supply of these goods and services. Hence, they can play significant role in poverty reduction by welfare maximization of poor through effective design and implementation of poverty reduction programmes, i.e. efficient delivery of basic public goods and services (due to shortage of which the poor get poorer). In other words, we can observe an important implication of fiscal decentralisation in poverty reduction through the nexus of effective supply of basic public goods and services. In this regard, it is following the well-known theories, for instance, subsidiarity principle of fiscal decentralisation (Oates, 1972) and capability approach of poverty (Sen, 2011). However, in the case of developing countries like Nepal, this theoretical context may not be completely applicable because of weak local governments and poor decentralisation. Less accountable local governments are also the

problems in these countries. Though some level of social welfare is achieved through local public service provision, it does not result in a greater poverty reduction due to the presence of inequality and imperfect pro-poor targeting of those services.

On the above mentioned theoretical premise this chapter tries to study the following questions:

1. Is there any statistical relation between fiscal decentralisation and poverty reduction outcomes? If so, to what extent? The study needs to observe the degree of direct association between these two phenomena.
2. How does the result vary with the variation in basic service channels?
3. Which of the basic service channels are effective in poverty reduction?
4. Is there any effect of quality of governance on the statistical relationship between fiscal decentralisation and poverty reduction?

To get the answer to these queries, district level data of Nepal, obtained from different secondary data sources as explained in the subsequent sections are used in this study.

3.2 Theoretical Framework

The third generation literature of fiscal decentralisation looks at the implication of fiscal decentralisation policy on poverty reduction strategy. The main basis of this is the common ground of efficient public service delivery. The shortage of basic services is the cause of poverty and supply of these services is the focal objective of fiscal decentralisation. Contrary to the earlier approach which is against the redistributive role of local governments and for the efficiency ground of fiscal decentralisation (Musgrave, 1959; Oates, 1972; Bird & Vaillancourt, 1998; Ebel & Yilmaz, 2002), fiscal decentralisation through its better basic service provision and empowerment of local governments in identifying and executing the pro-poor programmes, can have impact on poverty reduction (Bird, Litvack, & Rao, 1995; Rao, 2002). It is because, fiscal decentralisation relies on the famous subsidiarity principle which argues that local governments being closer to the local people have better knowledge about their problems and ways of solution (i.e. both demand and supply) than the central government.

Local government can formulate and execute the pro-people programmes in their jurisdictions. Similarly, it can plan and run anti-poverty programmes/projects better as well. Furthermore, this process bears low information and transaction cost also (Oates, 1972; Bjornestad, 2009). This type of bottom-up approach to development and pro-poor strategy emphasizes on the local participation at all levels, such as problem identification, plan formulation, execution, and monitoring and evaluation. It is either directly through local users themselves or through their representatives which makes the officials accountable. In summary, fiscal decentralisation as an appropriate means of providing basic needs, facilitator of economic opportunity and tools for empowerment and enhancing security becomes an efficient device for poverty reduction or improving quality of life of the poor (Boex et al., 2006).

For these reasons, fiscal decentralisation policy is increasingly adopted by different developed and developing countries. Likewise, different institutions like the World Bank, Asian Development Bank, etc., are also focusing on poverty alleviation programmes through fiscal decentralisation and local participation. But, caution should be taken about the dangers of decentralisation such as capture of local elite, corruption, weak democracy and accountability. Therefore, fiscal decentralisation needs proper coordination with political and administrative decentralisation for its well-functioning.

As explained above and in Chapter 2, we are going to test the theoretical understanding on the linkage of fiscal decentralisation with poverty reduction outcomes in the case of Nepal. Here, according to the research questions developed in Chapter 1, we are going to analyse whether the fiscal power devolved to local governments (three local bodies- DDCs, VDCs and Municipalities, in this study) from central government characterised by fiscal decentralisation is effective for poverty reduction/improving quality of life of poor and whether fiscal decentralisation through different pro-poor channels are effective for poverty reduction. For this, the following hypotheses are tested in this chapter.

Hypothesis 1: The larger the fiscal autonomy of local governments measured in terms of expenditure decentralisation, the higher the poverty reduction in terms of poverty head count (PHCR), poverty gap (PG), and square of poverty gap (SPG); and improvement of quality of life of poor proxy by HDI, *ceteris paribus*. In other words, other things remaining constant, an increase in local government expenditure or revenue-raising power measured by fiscal decentralisation, leads to poverty reduction captured by poverty incidence, depth of poverty and severity of poverty; and improvement in the quality of life of poor as reflected in the HDI.

Next, our theoretical understanding suggests for the better knowledge of local government about the critical areas of pro-poor resource allocation, i.e. targeting their spending to the poor. Being accountable to the local people, local governments, through efficient allocation, spend more on pro-poor and pro-people projects. Thus, here, fiscal decentralisation focuses on the pro-poor social and economic expenditure which is the core factor in poverty reduction or in improving the living standards of the poor.

Spending on education and health are important for the human skill development of the poor. Hence, this analysis focuses on whether socio-economic expenditures—expenditures on education, health etc. – have effect on poverty reduction and improving the quality of life of the poor. It also examines whether these basic service channels are working for poverty reduction. Because, we have district level data on social expenditure (which includes expenditure on education, health etc.) and economic expenditure (which includes the expenditure on agriculture, irrigation etc.), we will test the pro-poor effect of these expenditures. Similarly, we analyse the relationship of fiscal decentralisation and the socio-economic expenditures with the education and health outcomes which are the parts of the quality of life of the poor. Then, to analyse the aforesaid effect, we can build the following other hypotheses concerned with the basic education and basic health channels.

Hypothesis 2: The higher local government fiscal autonomy (characterised by expenditure decentralisation), the higher will be the educational attainments (represented by increased

literacy rate and combined net enrolment rate) which finally contributes to poverty reduction and improvement in the quality of life of the poor, *ceteris paribus*.

Hypothesis 3: Holding all other factors unchanged, as local government fiscal autonomy (characterised by expenditure decentralisation) increases, the better will be the health care achievements (represented by increased life expectancy and trained birth attendance) that contributes to poverty reduction and improvement in the quality of life of the poor.

To test the above hypotheses by using cross-section data, we use the following multiple linear regression model or OLS regression model as we are using contemporaneously dated data on the used variables (Woolridge, 2009):

$$y = \beta_0 + \beta_1 z + \mu \quad \dots\dots\dots(4.1)$$

Where z is the set of independent variables and μ is a stochastic error term. However, β_0 , β_1 are coefficients and y is the dependent variable.

In our study, we are analysing the relation between fiscal decentralisation and poverty reduction outcomes/quality of life of the poor. Theoretically, in a functional form, poverty reduction outcomes/ quality of life of the poor is the function of a number of variables as,

$$\text{Poverty/Quality of life} = f(\text{fiscdec}, \text{socio-ecoexp}, \text{inflation}, \text{corruption}, \text{gdp}, \text{agravadperworker}, \text{trade}, \text{education}, \text{health}, \text{conflict} \dots\dots\dots, n)$$

Following the equation (4.1) and adjusting our dependent and independent variables, we have the following regression equation to test **Hypothesis 1:**

$$PR_i = \alpha_0 + \alpha_1 FD_i + \alpha_2 (X_i) + \mu \quad i=1,2,3 \dots\dots\dots, n \quad \dots\dots\dots(3.2)$$

Where PR is the poverty indicator as: poverty head count ($PHCR$), poverty gap (PG) and square of poverty gap (SPG); and HDI which represent the quality of life of the poor. FD is the fiscal decentralisation variable (core explanatory variable). X is the control variable which includes the other factors affecting the poverty/quality of life of the poor, such as in our analysis, per capita GDP ($PCGDP$), per capita agriculture value added ($PCAGR$),

socio-economic expenditure or pro-poor expenditure (*SEEXP*), trained birth attendance (*TBA*), combined promotion ratio (*CPR*), primary net enrolment rate (*PNER*), conflict (*CONFLICT*), political empowerment index (*PEI*), corruption index (*CI*). μ is the error term. Extending the equation (3.2) by incorporating all the control variables, the poverty rate of i^{th} district will be,

$$PR_i = \alpha_0 + \alpha_1 FDI + \alpha_2 PCGDP_i + \alpha_3 SEEXP_i + \alpha_4 TBA_i + \alpha_5 CPR_i + \alpha_6 CONFLICT_i + \alpha_7 PEI_i + \mu_i$$

$$i = 1, 2, 3, 4, \dots, 75 \quad \dots \dots \dots (3.3a)$$

$$HDI_i = \beta_0 + \beta_1 FDI + \beta_2 PCAGRVAD_i + \beta_3 SEEXP_i + \beta_4 TBA_i + \beta_5 PNER_i + \beta_6 CONFLICT_i$$

$$+ \beta_7 CI_i + \mu_i \quad i = 1, 2, 3, 4, \dots, 75 \quad \dots \dots \dots (3.3b)$$

Likewise, for testing **Hypothesis 2**, i.e. relation between fiscal decentralisation and quality of life of poor through basic education channel, we have another regression equation as:

$$EDU_i = \lambda_0 + \lambda_1 FDI + \lambda_2 (X_i) + \mu_i \quad i=1, 2, 3, \dots, n \quad \dots \dots \dots (3.4)$$

Where *EDU* is education outcomes: literacy rate (*LR*) and combined net enrolment rate (*CNER*), in this case. *FD* is fiscal decentralisation (core explanatory variable). *X* is the control variable which includes the other factors affecting the education outcomes such as per capita GDP (*PCGDP*), education expenditure (*EDEXP*), student-school ratio (*SSR*), student-teacher ratio (*STR*), corruption index (*CI*), decentralisation x corruption (*DECCORRUPT*), conflict (*CONFLICT*). μ is the error term. If we include all individual control variables, the equation will be,

$$LR_i = \lambda_0 + \lambda_1 FDI + \lambda_2 PCGDP_i + \lambda_3 EDEXP_i + \lambda_4 STR_i + \lambda_5 CI_i + \lambda_6 CONFLICT_i + \mu_i$$

$$i = 1, 2, 3, 4, \dots, 75 \quad \dots \dots \dots (3.5a)$$

$$CNER_i = \lambda_0 + \lambda_1 FDI + \lambda_2 PCGDP_i + \lambda_3 EDEXP_i + \lambda_4 SSR_i + \lambda_5 DECCORRUPT_i + \mu_i$$

$$i = 1, 2, 3, 4, \dots, 75 \quad \dots \dots \dots (3.5b)$$

To test the **Hypothesis 3** which intends to define the relation between fiscal decentralisation and poverty through health care channel, the following equation is used:

$$HLTH_i = \gamma_0 + \gamma_1 FD_i + \gamma_2 (X_i) + \mu_i \quad i = 1, 2, 3, 4, \dots, n \quad \dots \dots \dots (3.6)$$

Where HLTH is the health outcomes: life expectancy at birth (*LEB*) and trained birth attendance (*TBA*). *FD* is fiscal decentralisation (core independent variable). *X* is the vector of control variables affecting the health achievement such as GDP Index (*GDP*), health expenditure (*HEXP*), social expenditure (*SOCEXP*), population per hospital bed (*POPBED*), immunization DPT3 (*DPT3*), and political empowerment index (*PEI*), female literacy (*FL*). μ is the error term. If we extend this model, including all the control variables, the regression equation will be,

$$LEB_i = \gamma_0 + \gamma_1 FD_i + \gamma_2 GDP_i + \gamma_3 SOCEXP_i + \gamma_4 FL_i + \gamma_5 POPBED_i + \gamma_6 CONFLICT_i + \gamma_7 DPT3_i + \mu_i$$

$$i = 1, 2, 3, 4, \dots, 75 \quad \dots \dots \dots (3.7a)$$

$$TBA_i = \gamma_0 + \gamma_1 FD_i + \gamma_2 GDP_i + \gamma_3 HEXP_i + \gamma_4 POPBED_i + \gamma_5 PEI_i + \mu_i$$

$$i = 1, 2, 3, 4, \dots, 75 \quad \dots \dots \dots (3.7b)$$

3.3 Data and Methodology

3.3.1 Introduction to Variables and Data Sources

Use of transparent, consistent and authentic data is the important and basic requirement to expect a concrete result from a statistical analysis. It is a challenging task to get accurate and consistent data for long time period that is required for a good econometric analysis, even in the so called well-structured data system. There is scarcity of long time series data in Nepal on major indicators of both fiscal decentralisation and poverty. Even more scarce is the local level data. In addition, the available data on local body finance sometime lacks consistency. Though being more interested to perform an analysis using a large panel

dataset, the study has to limit at single period data because of dearth of adequate district level data on most of the variables of interest.

We had to work hard to get and to systematize the available data. Besides this, among the three types of local bodies in Nepal, data on VDC finance are not available. So, the study had to depend on the DDCs and municipal data only. However, the revenue and expenditure of VDCs depend heavily on the grant-in-aid. Such a grant is transferred to VDCs through DDCs and also accounted in the DDC finance. So, the DDC data covers the revenue and expenditure of VDCs as well leaving out the nominal share of their own source revenue. Except the data on GDP, inflation, and central revenue and expenditure, it is hard to get historical data on other indicators (along with the variables which are used in this analysis) such as corruption, literacy at national level as well. It is almost impossible to get district level historical data on these indicators. In this context, only the district-wise data on the variables for the year 2003/04 are included in the analysis.³⁴

Dependent Variables and Data Sources

The study has used cross-sectional data on income poverty and fiscal decentralisation for Nepal. In this analysis, we have used district level data on head count measure of poverty and HDI as the core dependent variables. Here, it is logical to use both types of indicators of poverty as the former captures the effect on income or consumption poverty and the latter covers both monetary and non-monetary dimension of poverty and factors affecting capability deprivation. Income or consumption poverty indicators capture only the deprivation due to shortage of income or consumption bundles, but more or less ignore the other socio-economic deprivation resulting from inadequate access to health, education, political participation, social security, etc.

³⁴ However, data on HDI, GDP and literacy rate are of the year 2001, since the district level estimates on those variables for 2003/04 are not available.

The poverty indicators used in this analysis are derived by J. Foster, J. Greer and E. Thorbecke (FGT) as discussed in Foster, Greer, & Thorbecke (1984). Among these indicators, poverty head count rate (PHCR) represents the number of people falling below a predefined poverty line. Poverty gap (PG) measures the distance of a poor person from the poverty line. Squared poverty gap (SPG) measures the inequality among the poor and hence the severity of poverty. Next, HDI, which represents the human well-being in a country, measures the citizen's achievement in three important aspects of quality of life: a long and healthy life (health outcomes), access to knowledge (education outcomes) and decent living standard (income and wealth achievements). It substitutes the conventional measure of development of a country captured by economic growth rate and the rise in income per capita (OPHI, 2011).

The conventional measure of HDI has the limitation that it lacks the components of socio-economic and political freedom and empowerment; control of violence, security and discrimination, etc. We have used HDI estimated by UNDP on the basis of Sen's capability approach. Three components of HDI- education index, health index and income index cover the health care attainments, educational attainments and purchasing power of an individual (per capita income) respectively which are the indicators of quality of life of an individual. Basic public service delivery, such as education, health etc. as the nexus between fiscal decentralisation and poverty, has the direct effect on these components of human development. Furthermore, there is an inverse relationship between poverty and the human development. Hence, HDI may represent a good proxy for poverty where an increase in HDI means the decrease in poverty. More discussion on the measurement of poverty indicators and HDI has been presented in the Chapter 2 of this thesis.

Data on our dependent variables poverty and Human Development Index are obtained from secondary sources, i.e. Small Area Estimation Survey 2006 conducted by Central Bureau of Statistics and the Nepal Human Development Reports 2004 prepared by UNDP/Nepal, respectively. All the data used are cross-sectional. The data on poverty is based on Nepal Living Standard Survey (NLSS II) 2003/04 and Human Development Index is estimated for 2001 on the basis of National Census Report 2001 prepared by Central Bureau of

Statistics. The surveys are conducted within some interval of time, so we can get the district (local) level data only for specific time periods. Estimation of district level HDI has started since the preparation of Nepal Human Development Report 1996. However, estimation of district (local) level poverty started only after 2006 since the publication of Small Area Estimation Survey Report 2006.

There are other variables used as dependant variables, in case of models with two pro-poor channels. Here, the overall literacy rate among the population of age 6 years above and combined net student enrolment (which includes net enrolment in primary, lower secondary and secondary level) are the education outcomes applied as the dependent variable in the case of education channel. However, life expectancy at birth and trained birth attendance are the health outcomes taken for the model of health channel. However, trained birth attendance is used as both dependent and independent variable in different models. Definition and data sources of these variables are given in Appendix Table III-2.

Main Independent Variable and Data Sources

Our main independent variable in this analysis is fiscal decentralisation. Responding to multidimensional nature of central government's discretion of power and responsibilities to local government it possesses multidimensional fiscal character. For example, central government devolves the power to local governments to collect local revenue, which we can name as revenue decentralisation. However, the discretion provided to local government to select the pattern of expenditure with certain autonomy in the selection of the projects out of their total revenue resources, carries the meaning of expenditure decentralisation. Next, there is an important role of central grant transfer to local governments in fiscal health of local governments. Hence, measures of fiscal decentralisation vary according to the nature and dimension of both fiscal power and fund transfer to local governments. The issues of measurement of fiscal decentralisation have already been discussed in Chapter 2.

There are some limitations in the existing definition and estimation of the fiscal decentralisation index. Because of shortcomings in various definitions and data availability, we are also unable to give better alternatives than the existing practice of measurement of fiscal decentralisation. It could be the issue of further research. At this time, among the different measures of fiscal decentralisation variable discussed in Chapter 2, the fiscal decentralisation index developed by Vo (2008) is used in this analysis, which is near to the vertical fiscal imbalance indicator. The index is the interaction between two ratios of sub-national expenditure assignment, named as “fiscal autonomy” and “fiscal importance” where the former measures the ratio of own source revenue with the total sub-national expenditure and the latter is the ratio of sub-national expenditure to total government expenditure deducting central grant to the sub-national government in a particular jurisdiction as discussed in Chapter 2. Fiscal decentralisation as the expenditure ratio is estimated individually for each and every district of Nepal. Because revenue and expenditure data of Jumla district are unavailable, the estimation covers only 74 districts among the 75 districts of Nepal.

As described earlier, it is very difficult to get data for two decades on the indicators needed to estimate the fiscal decentralisation variable: data on local body revenue and expenditure (of three local bodies DDCs, VDCs and Municipalities). Lots of difficulties were experienced during the collection of data on this central explanatory variable. As fiscal decentralisation variable is calculated as the ratio of sub-national finance to total government finance, sub-national revenue/expenditure (local government revenue/expenditure, in this study) are calculated by simple addition of revenue/expenditure of each DDC and municipality/municipalities located under the jurisdiction of respective DDC (among 75 DDCs and 58 municipalities). Then fiscal decentralisation variable is estimated on the basis of sub-national (local) and central government revenue and expenditure, as mentioned in Chapter 2.

The data on the DDC finance are obtained from Audit Report of the Auditor General published by Office of Auditor General of Nepal (OAGN) 2004. However, municipal data were obtained from the annual report of Detailed Revenue and Expenditure Breakdown

with Budget and Key Financial Indicators of 58 Municipalities, 2005 jointly published by the Ministry of Local development (MoLD)³⁵ and German Technical Assistance (GTZ) as given in Appendix Table III-1. Because there is no such breakup of DDC revenue and expenditure, we could not take the advantage of taking account of district level conditional and unconditional grants; and social and economic expenditure, which could be more important in the analysis.

Local government expenditure and central government expenditure both include both current expenditure and development expenditure. It is because, the current expenditure which constitutes the larger part of total expenditure consists of wages, salaries, other office costs and some programme expenditure which directly or indirectly affect public service delivery, poverty reduction and quality of life of the people. However, development expenditure has direct repercussion on the latter indicators. Hence, it would be worth using the total expenditure in calculating the expenditure decentralisation variable which represents the local autonomy in allocating the available resources to meet both current and development components of local expenditure.

Other Independent Variables and Data Sources

As explained in Chapter 2, there are a number of factors that affect poverty or the quality of life of people. Among them, one of the most important explanatory variables is pro-poor expenditure such as expenditure on basic education, basic health, drinking water, other poverty alleviation programmes; and agriculture, irrigation, etc. It is measured as the share of such expenditure in total expenditure. For human development, social expenditure such as expenditure on education and health are more important. So, in this analysis, central government expenditure in districts on social sector and economic sector (as economic sector covers expenditure on agricultural activities, irrigation, etc.) are taken as other major explanatory variables. These categories of expenditure do not serve the poor only, but consists of pro-poor effects to some extent. Hence, in this study, it is coined as socio-

³⁵ These days, Ministry of Local Development (MoLD) is renamed as Ministry of Federal Affairs and Local Development (MoFALD).

economic expenditure in general, and health expenditure and education expenditure in specific. Similarly, some governance factors, like, level of conflict, corruption, etc. which are the hurdles for poverty reduction and human development of the poor, are also considered as other control variables in this study. However, due to lack of district-wise data, we could not include inflation, though it is an important factor affecting poverty. Other relevant variables on education and health facilities and attainments in these sectors are also included according to the need of the analysis.

Along with the fiscal decentralisation, this research has incorporated other explanatory variables affecting the poverty as the control variables to capture other socio-economic effect on the poverty/quality of life. Here, we have used cross-sectional data on those control variables. Though there are a number of factors affecting poverty/quality of life of the poor, the study could not incorporate all of those because of lack of data. Likewise, less number of observations would be inadequate to apply the appropriate degrees of freedom needed in regression analysis. These problems reduced the importance of this analysis to some extent. As mentioned earlier, we are performing regression estimations of some determinants of poverty along with fiscal decentralisation representing the effect through basic service delivery channels. For instance, literacy rate and combined net enrolment rate are taken as the dependent variables to study the effects through education channel. For the health channel, life expectancy at birth and trained birth attendance are used as dependent variables. The definition and data sources of other dependent and independent variables are summarized in Appendix Table III-2 to Table III-6.

3.3.2 Methodology

From the policy perspective, it may be better to study the causal relationship of a dependent variable with independent variable than estimating only the simple association between them. Hence, according to the nature of research questions and data available, the multiple regression analysis method using cross sectional data is adopted to test empirically the hypotheses developed in section 3.2. Because of dearth of data, we could not apply the panel data regression with the datasets on the district or other local bodies, which could be

more useful in case of these types of research questions. Here, we could study the impact under diversity in local fiscal governance over time, if the data had supported. We have to depend on less number of observations those may not be adequate to get the robust results generally, as much as by using large dataset. The study tries to develop some preliminary idea on effect of fiscal decentralisation on poverty, even by using limited data available in Nepalese case.

The nature of the data on different variables and methods of estimation has been given while introducing the variables. Transformation of data structure of dependent and independent variables such as log, percent, index, etc. was also done by using different statistical tools. STATA software was used to perform this analysis.

Some econometric problems might arise during regression analysis due to the nature of data. There could be the chances of problem of heteroskedasticity in the cross sectional data which might question the fairness of the results. So, robust standard errors were estimated to avoid that problem in the models. Variance Inflation Factor (VIF) was estimated to test the problem of multi-collinearity. Similarly, other tools for statistical tests were applied according to the need during the analytical process.

3.4 Fiscal Decentralisation and Poverty Reduction Outcomes: Empirical Results

We have discussed the theoretical linkage between fiscal decentralisation and poverty reduction outcomes reviewing some important literature in Chapter 2. In this section, following the discussion of some empirical literature, we are going to empirically study the potential effect of fiscal decentralisation on poverty reduction outcomes in Nepal, in context of districts on the ground of hypotheses developed in the previous section. Than the national (macro) level study, it may be comparatively more effective in policy perspectives which captures geographic, socio-economic and political variation among the local jurisdictions (district in this case). The empirical results we are discussing are the outcome of OLS cross-sectional analysis with 75 observations using district level data of Nepal for the year 2003/04. The regression results obtained from different sets of analyses

are explained according to the level of significance and the sign of the variables incorporated which is followed by rigorous logical discussion.

3.4.1 Fiscal Decentralisation and Poverty: Empirical Evidences from Literature

The traditional theories of fiscal federalism argue against sub-national governments' involvement in redistributive policies (Tiebout, 1956; Musgrave, 1959; Oates, 1972). So, this literature is not willing to accept the direct relationship between fiscal decentralisation and poverty. In the meantime, the trend of literature after mid-1990s, are found to focus more on the important role of sub-national governments in the formulation and implementation of pro-poor policies (Sepulveda & Martinez Vezquez, 2010). From the point of view of relationship between fiscal decentralisation and poverty, most of the empirical literature have observed positive effect of fiscal decentralisation on poverty reduction. However, some have witnessed the negative relationship as well.

International Experiences

As discussed in the case of theoretical linkage, we can categorize and discuss the empirical evidences in three ways. First, fiscal decentralisation leads to increase local public expenditure which then improves public service delivery that result in poverty reduction. As empirical evidence, Bird et al. (1995) examined the link between intergovernmental fiscal relation and poverty in the case of Viet Nam by analysing the expenditure on health and education to the "need" variables. Here, the centrally sponsored schemes on education and health implemented through local government were found to have a less significant impact on poverty. So, they suggested for greater expenditure and revenue decentralisation.

Aslam & Yilmaz (2011) made a finding that all service provisions by government increased significantly, following the decentralisation reforms of 2001 in Pakistan. Similarly, Garcia & Rajkumar (2008) analysed the positive linkage between decentralisation and service delivery in education and health in SNNPR in Ethiopia. In another study, Arze del Granado, Martinez-Vazquez, & McNab (2005) noticed that an increase in fiscal decentralisation led

to increase in share of education and health expenditure in total government expenditure and the effect was found more in developing countries than in the developed countries. They suggested that because of their human development effect, these expenditures may have a positive impact on quality of life of the poor.

The second category of the empirical works has tried to examine the direct relationship between fiscal decentralisation and poverty. Boko & Baliaoune-Lutz (2009) found a small but positive correlation between local revenues and HDI in case of Uganda. It means an increase in government grant and local revenue led to reduction in district poverty. Contrary to the above findings, Nguyen (2008), in the case of Viet Nam, observed that a higher degree of fiscal decentralisation led to a decrease in poor people's income. In a recent study, Ahmed (2013), in his PhD research, observed the significant relationship of fiscal decentralisation with poverty (where poverty headcount, poverty gap and square poverty gap and human development index are taken as proxy) in the case of Pakistan. From the regression of available data of 1975-2009 period, he came to the conclusion that fiscal decentralisation is statistically significant to reduce poverty either the poverty incidence or depth or severity of poverty. Likewise, it is important to improve quality of life of poor as represented by human development index. The phenomenon is observed to be more effective to bring down both the rural and urban poverty.

Some recent studies have made a conclusion that there is a quadratic relationship between fiscal decentralisation and poverty and have estimated certain threshold of the magnitude of the impact of fiscal decentralisation on poverty. Amin Abou El-Zahab (2005), in his PhD research, used data for 52 countries from 1970-2002 and studied the relationship between fiscal decentralisation and poverty. From sets of regression analysis, he observed negatively significant impact of fiscal decentralisation on poverty head counts and positively significant on income of the poor, in the case of all countries (developed and developing countries). However, the author observed a quadratic relationship of squared fiscal decentralisation with the poverty head counts and income of the poor, i.e. positively significant and negatively significant relationship, respectively. According to him,

expenditure decentralisation after 37 percent threshold, begins to lead to have negative impact (i.e. reverse effect) on income of the poor.

Yao (2007) observed the significant but non-linear relationship between fiscal decentralisation and poverty reduction outcomes, direct as well as indirect through different pro-poor channels. For the positive impact on poverty reduction, he observed a maximum effective fiscal decentralisation threshold at 25 -35 percent. A similar conclusion has been derived by Sepulveda & Martinez Vezquez (2010). They found the significant effects, but non-linear and "inverted U" shaped relationship between fiscal decentralisation, and poverty and inequality. The result implies that fiscal decentralisation, only up to the level of 32 percent of expenditure decentralisation, possesses the maximum efficiency in poverty reduction outcomes as captured by HDI. Beyond that level, it leads a reverse effect. Likewise, fiscal decentralisation acts against the income inequality, only in the case of government size of above 20 percent of GDP.

We can find some other studies on the issue. According to a Norad Report on Decentralisation and Poverty Reduction (2008), a significant reduction in both income and human poverty was observed in Tanzania after the decentralisation reform named as Local government Reform Agenda (LGRA) 1996 and Local government Reform Programme (LGRP) 1999. This was due to pro-poor service delivery, mobilization and participation of the poor, and the central government fiscal transfer (Braathen, 2008). Wignaraja & Shrivardana (2004), have discussed about the six different models of decentralised development in South Asia (Pakistan, Sri Lanka, Nepal, Bangladesh model, and Kerala and Gujarat models of India). The study accounts for the participation of local governments, NGOs and Community Based Organizations of the poor through decentralised development, supportive in pro-poor growth and poverty reduction.

Besides the impact of fiscal decentralisation, the third trend of empirical studies has analysed the effect of political and administrative decentralisation on poverty. Some of them have tried to focus on the accountability criteria of local government and its role on the anti - poverty effect of decentralisation. For example, Braun & Grote (2000), in a study,

concluded that political and administrative decentralisation ensures necessary participation of poor in decision-making and local government accountability to the people that is required for pro-poor consequences of fiscal decentralisation. Some of the literature have suggested that the sign and magnitude of poverty outcomes depends on the politics of Centre-local relations and attitudes of the governments towards the pro-poor policy (Crook & Sverrisson, 2001; Jutting et al., 2004). However, Azila-Gbettor, Harrison, & Tibu (2014), using non-monetary method (using social indicators different from general monetary measurement of poverty) with qualitative study of 130 participants of Akatsi district of Volta Region of Ghana, observed about half of the respondents feeling less the impact of provisions of social amenities under the settings (provided through intergovernmental fiscal transfer only) of District Assembly Common Fund (DACF)³⁶ on poverty reduction. The results of this study corroborated with the findings of Crawford (2008). He argues for the need of inclusion of economic and social indicators both to have a complete analysis of well-being produced by fiscal decentralisation.

Still, there are limited empirical literature in explaining the impact of fiscal decentralisation on poverty. However, the results of available empirical literature are somehow modest and contradictory (having positive or negative results) but are in conformity with the theoretical findings. Much of the literature have observed the positive and significant relationship of fiscal decentralisation with basic service delivery and poverty reduction. Rare of them have watched the reverse relation which is supposed to be due to the effect of low accountability, elite capture, corruption, etc. Hence, there is a need for coordination of political and administrative dimensions of decentralisation to have its sound effect on service delivery and poverty reduction. The mixed result from the literature urges us to conclude the necessity of both the central and local role in strategic policy for poverty reduction in a country. But, the ratio of Centre-local role may be different according to the socio-economic, political and geographical variations of the jurisdictions.

³⁶ In Ghana, after Local Self Government Act 1993, fiscal decentralisation was considered as the tools for poverty reduction through rural development. Under this Act, District Assembly Common Fund (DACF) has been established to transfer the financial autonomy to Metropolitans/Municipal/District Assemblies (MMDAS).

There are some limitations of these literature. The majority of the studies are concerned with the correlation between fiscal decentralisation and poverty (except a couple of studies). Next, since the robustness of results depend on the use of variables, their measurement technique, quality of data and method of analysis (all of them different in different studies), the studies led to inconsistency in the findings. Though it is imperative, very few studies have discussed about the role of efficiency of local bodies in the local public service delivery and poverty reduction (in terms of both cost and quality). Likewise, assessment of the pro-poor nature of local public expenditure and service delivered, and the dependency of the poor on those public services may help to examine the proper effect of fiscal decentralisation on poverty which is in less emphasis on the available studies.

The literature is constrained by lack of appropriate data. Most of the studies have used worldwide or national data. Such studies are not enough because the result differs according to context and country-specific or localities. So, specific research such as rural/urban case studies might be important to explore the problem in actual ground, though it is not an easy task to generate the data on different need variables at local level. Next, even by using the national or international data, it might be important to analyse the impact of fiscal decentralisation on poverty considering a number of determinants of poverty such as governance, inflation, private investment, etc.

National Evidences

There are very few studies on fiscal decentralisation in Nepal, even fewer linking fiscal decentralisation and poverty. However, LBFC and Local Governance Coordination Development Programme (LGCDP) which are under the Ministry of Federal Affairs and Local Development have made some attempts on the study of fiscal assignments to local bodies (LBs) apart from a couple of academic research works.

A positive outcome of decentralisation on local public service delivery is witnessed in the case of Nepal. Support Activities for Poor Producers of Nepal (SAPPROS Nepal), in a survey, examined the "competing institutional delivery models" for the service delivery

system in hill, mountain and Terai, and found the "community-based model" better than "central agency model" in performance, cost effectiveness and local participation, in the case of local infrastructures (World Bank, 2002). Almost similar findings were there in the case of education and health services. This encouraged the government to hand over the management of these services to local bodies and communities. In the same way, a study by Poverty Alleviation Fund (PAF) found that the unit cost of selected infrastructures was 13 to 47 percent less of the projects implemented by the community organization than those implemented by the central government (World Bank, 2009). In spite of this (Kandel, 2006) in a paper on patterns of local governance has concluded that the existing pattern of local governance is not poverty reduction oriented as there is poor fiscal decentralisation in Nepal with unclear assignments. Similarly, there is a low level of local expenditure and even that has the major share of administrative expenditure. Programme expenditure of local bodies also consists of the major share of rural infrastructure development expenditure rather than social expenditure on education and health.

Panta (2010), in his M. Phil. research work, examined the correlation between fiscal decentralisation (as captured by the ratio of sub-national revenue to total government revenue) and poverty (as captured by Human Development Index). With the use of national level data, the study noticed a positive and moderately significant relationship between these two main variables. Ligal, et al. (2005), in a study of the expenditure effectiveness of District Development Committees (DDCs), observed negative correlation with Human Poverty Index (HPI) and positive with HDI with more effective expenditure of DDCs. Here, higher correlation of HPI noticed to exist with the rise in the expenditure effectiveness of DDCs than with the higher central government budget.

Devkota (2013) in his PhD research work, observed the increase in public service delivery in post LSGA period compared to pre-LSGA period. Through simple descriptive statistics method of analysis of the local capital expenditure on public services and the availability of such services in DDCs, VDCs and Municipalities of 20 sample districts covering the period 1996/97-2001/02, the author concludes that there is a good impact of fiscal decentralisation on local public service delivery. Besides the above findings, a couple of

studies observed positive relationship of fiscal decentralisation variable with other macro-variables like the size of government, economic growth etc. (Nepal, 2007; Devkota, 2013, 2014). However, some studies have discussed just the legal and practice of fiscal assignments of LBs of Nepal and the problems associated with them (Shrestha, 2002; Shrestha, 2009; Subedi, 2014).

Even after five decades of decentralisation in Nepal, there are almost limited works on such an important area. So far, there is a need to link fiscal decentralisation with a poverty reduction strategy of the country. Absence of literature indicates that the policy makers have not paid adequate attention to this aspect. Even after the so called "cornerstone" step, i.e. execution of LSGA 1999, fiscal decentralisation in Nepal is in its infancy and nature and extent of assignments to local bodies are unclear. On the basis of the available empirical works, we can expect that fiscal decentralisation can have a positive role in public service delivery at the local level. Likewise, a positive relation (though moderately significant) between fiscal decentralisation and poverty reduction is also possible and these are the main variables of concern of this study.

Data is important in formulating the effective development policy of a country. Nepal is poor in overall data system, as poor in data on local body finance and poverty. No long time series data in those areas and on the majority of the required micro and macro variables are available. The data used in above cited literature might have been generated from inconsistent surveys and might be of poor quality. So, there is a need for a study that examines how the changes in local fiscal authority affects the poverty level in Nepal. Even by generating survey data, a holistic and rural level study might contribute to explore the problem since most of the poor reside in rural areas. Though it is a difficult task, there is need for such study to set up the level of fiscal decentralisation that might be effective in poverty reduction in a country of socio-economic and political diversity. This research intends to add to such dimensions in the sphere of existing literature. Furthermore, the effect of conflict and the absence of periodical election of local bodies on the pro-poor impact of fiscal decentralisation in this conflict affected and transitional country also could be the appropriate topic of research.

3.4.2 Fiscal Decentralisation and Poverty Reduction Outcomes: Direct Linkages

The summary statistics of the variables given in Appendix Table III-3 gives an idea about the statistical nature of variables used in this analysis. Here, the core dependent variable poverty head count (PHCR) ranges from 0.044 to 0.603 and HDI, which captures the quality of life of people ranges from 0.304 to 0.652 in 75 individual districts. Similarly, the core independent variable, fiscal decentralisation of districts, represented by expenditure ratio, ranges from 0.04 to 0.41. The given table provides the minimum, maximum, mean and standard deviation value of all the indicators for all 75 districts that are used to test our first hypothesis in this chapter. However, the value of fiscal decentralisation for Jumla district could not be estimated due to unavailability of data on revenue and expenditure of that district. This reduced the number of observations to 74 in the analysis.

Fiscal Decentralisation and Poverty Outcomes

The regression results generated from equation (3.3a) estimates the relation between fiscal decentralisation and poverty as represented by poverty head count rate (PHCR), poverty gap (PG) and square poverty gap (SPG). This is published in Table 3.1. Though it could be too early to draw definitive conclusions from the analysis due to data limitations and possible measurement errors, we can get an idea of some kind of relationship between our two core variables (fiscal decentralisation and poverty) as the result shown in the different models. The overall result implies that fiscal decentralisation measured in terms of expenditure of local governments as the interaction between fiscal autonomy and fiscal importance³⁷ could lead to poverty reduction as represented by headcount poverty, poverty gap and square poverty gap.

Fiscal decentralisation has statistically significant and inverse relationship with all the three measures of poverty at 5 percent level ($p < 0.05$). This result supports the possibility of

³⁷ See Chapter 2, for the measurement of fiscal decentralisation index used in this analysis.

Table 3.1: Determinants of Poverty Headcount, Poverty Gap and Severity of Poverty

	(1)	(2)	(3)
<i>Dependent Variable/ Independent Variable</i>	<i>Poverty Headcount^b</i>	<i>Poverty Gap^b</i>	<i>Square Poverty Gap^b</i>
Fiscal Decentralisation ^b	-0.352** (0.155)	-0.129** (0.0589)	-0.0585** (0.0281)
District Per Capita GDP ^a	-0.309*** (0.102)	-0.0953** (0.0393)	-0.0405** (0.0185)
Socio-economic Expenditure ^a	-0.130*** (0.0406)	-0.0362** (0.0157)	-0.0140* (0.00752)
Trained Birth Attendance ^a	-0.0997** (0.0498)	-0.0390* (0.0200)	-0.0182* (0.00978)
Combined Promotion Rate ^b	-0.00458** (0.00223)	-0.00177* (0.000910)	-0.000835* (0.000442)
Conflict ^c	0.00109*** (0.000382)	0.000356** (0.000150)	0.000150** (0.0000712)
Political Empower Index ^a	0.0585 (0.0362)	0.0221 (0.0134)	0.0102 (0.00620)
Constant	2.533*** (0.350)	0.809*** (0.128)	0.348*** (0.0593)
Observations	74	74	74
R²	0.669	0.580	0.527
F	45.37	32.72	26.20
Variance Inflation Factor (VIF)	1.68	1.68	1.68

Robust standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Note: ^a variables expressed in logarithm ^b variables expressed in ratio

^c variables expressed in absolute number

redistributive role of local government to some extent, also in Nepal as observed in other developed and developing countries (El-Zahab, 2005; Yao, 2007; Sepulveda & Martinez Vezquez, 2010; Ahmed, 2013). Here, one unit increase in fiscal decentralisation represented by the spending power of local bodies reduces the headcount poverty, depth of poverty and severity of poverty by 0.352, 0.129 and 0.058 units respectively, everything

else remaining constant. In other words, one percent uplift in the expenditure autonomy of local governments pushes up the 0.35 percent of poor above the predefined poverty line, lowers the distance of poor by 0.13 percent and reduces inequality among poor by about 0.06 percent, *ceteris paribus*.

Another important control variable is socio-economic expenditure, which is supposed to consist of comparatively pro-poor expenditure, i.e. expenditure on education, health, drinking water, agriculture extension, irrigation, housing, etc. Statistically, there exists positive and strongly significant ($p < 0.01$) impact of socio-economic expenditure on poverty reduction, *ceteris paribus*. However, as indicated by coefficients, the comparatively less impact of exists on the reduction of poverty gap and square poverty gap than on the reduction of the poverty headcount rate. It is because, there is a different mechanism of impact due to difference in definition and the measurement of three poverty indices. Considering the magnitude, holding other things constant, one percent rise in share of socio-economic spending in a district from the central budget leads to reduce the district poverty headcount ratio by 0.013 units.³⁸ Though the magnitude of impact is low, the observed result supports the understanding that the socio-economic expenditure carries pro-poor ingredients in it (Bird et al., 1995; Boex & Martinez-Vazquez, 2006).

The next control variable, District GDP per capita, also has positive and statistically significant relationship with poverty reduction ($p < 0.01$). In this case, one percent increase in GDP per capita of an individual district tends to lower the poverty of that district by 0.003 units. Other factors, the health outcome and education outcome represented by trained birth attendance and combined promotion rate, respectively, have positive and statistically significant ($p < 0.05$) impact on poverty reduction. These results show that poverty could be lowered by improving health and education indicators. They increase the incomes of the poor through competent human skill development and opening up the possible access to employment opportunities. However, conflict characterised by total

³⁸ For level- log regression, the interpretation becomes: $\Delta y = (\beta_1/100) \% \Delta x$, i.e., increase in x by one percent probably lead to increase in y by $(\beta_1/100)$ units of y. The case applies to all other log variables used in the analyses.

number of people killed and handicapped in a district during the reference year, has positive and highly significant relationship with poverty profiles of that district. This supports the idea that poverty increases with the increase of bad governance resulting in conflict and insecurity.

From the regression results, our alternative hypothesis that an increase in local government expenditure or revenue power measured by fiscal decentralisation, leads to poverty reduction captured by poverty represented by head counts, poverty gap and square poverty gap *ceteris paribus*, is accepted and null hypothesis is rejected. It means, unlike the traditional understanding of normative public economics, local (subnational) governments also may undertake redistribution within their jurisdictions, i.e. fiscal decentralisation could be an efficient means of poverty reduction.

Our models possess explanatory power of relationship of fiscal decentralisation and other important control variables with poverty outcomes as indicated by good R^2 (0.669). Likewise, low value of Variance Inflation Factor (VIF) shows that multi-collinearity among variables is not serious. Moreover, robust standard errors are estimated to overcome the problems of heteroskedasticity. However, limited data (observation) and possible estimation error in measurement of fiscal decentralisation and poverty indicators may undermine the importance of these robust results to some extent. Inclusion of macroeconomic factors such as inflation, employment etc. in the model could be very effective, but we could not do that due to lack of district level data on these variables. Due to similar data problem, we could not include microeconomic factor like remittances as well, which is supposed to be more effective in poverty reduction in case of Nepal. The inclusion of the private sector could give a more vivid picture on the issue which became quite impossible due to the data unavailability.

Fiscal Decentralisation and Quality of Life (Human Development)

The Human Development Index provides a broader picture of human welfare than the FGT poverty measures. As mentioned earlier, it includes both income and non-income

components of poverty, i.e. educational attainments, health attainments and the level of income. Hence, in general, there should be a negative relationship between human development and poverty. According to the hypothetical framework, HDI, which represents the quality of life as the proxy of poverty reduction outcome is regressed on fiscal decentralisation and other control variables and the results are given in Table 3.2.

Table 3.2: Determinants of Human Development Index

<i>Dependent Variable/ Independent Variable</i>	<i>(1) Human Development Index^a</i>
Fiscal Decentralisation ^a	0.0683** (0.0280)
Per Capita Agriculture Value Added ('000) ^c	0.0303*** (0.00896)
Socio-economic Expenditure ^a	0.265*** (0.0321)
Trained Birth Attendance ^b	0.00230** (0.00105)
Primary Net Enrolment Rate ^b	0.00469*** (0.00134)
Conflict ^c	-0.00117*** (0.000436)
Corruption ^c	0.000558 (0.00162)
Constant	-1.975*** (0.178)
Observations	74
R²	0.679
F	38.73
Variance Inflation Factor (VIF)	1.72

Robust standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Note: ^a variables expressed in logarithm ^b variables expressed in ratio

^c variables expressed in absolute number

The regression results obtained from the equation (3.3b) elucidates the relationship of HDI with fiscal decentralisation and other control variables. We can observe statistically significant and positive ($p < 0.05$) impact of fiscal decentralisation on the HDI. In this case, one unit rise in fiscal decentralisation characterised by an expenditure ratio of district

government is expected to lead to increases in HDI by 0.0683 units.³⁹ This means, devolution of more fiscal power and responsibilities to local governments is more likely to reduce poverty and improve quality of life people represented here by human development index (Lindaman & Thurmaier, 2002; Yao, 2007; Ahmed, 2013).

Next, highly statistically significant and positive coefficient of socio-economic expenditure ($p < 0.01$) depicts the impact of socio-economic expenditure on improvement of living standard of poor characterised by HDI. As discussed in the theoretical chapter, the socio-economic expenditure comprises the expenditure on health, education, drinking water, irrigation, housing, transport, etc. which affect the health, education, and income of person directly or indirectly as they are components of HDI (Bird et al., 1995; Arze del Granado et al., 2005). The per capita agriculture value added as percent of GDP has positive and statistically significant impact on HDI ($p < 0.01$). This supports the argument that activities performed to increase agricultural productivity probably contributes more for the improvement of quality of human life, particularly in the rural areas through the income effect on the HDI. However, the increased magnitude of trained birth attendance and primary net enrolment affect human development by contributing towards long, healthy and knowledgeable life. Negative and highly significant coefficient of conflict shows the impact of bad governance on the living standards of people.

The observed value of R^2 (0.679) signifies the explanatory power of independent variables to explain the change in the living standard of an individual in the model. No effective case of multi-collinearity is observed as characterised by comparatively low value of Variance Inflation Factor (VIF). The problem of heteroskedasticity has been solved by estimating robust standard error. Low observations due to lack of required data would lower the value of the analysis, in this model as well. Possible errors in estimation of variables also could not be ignored (Akpan, 2011).

³⁹ For log-log regression, the interpretation becomes: $\Delta y = \beta_1 \% \Delta x$, i.e., increase in x by one percent probably lead to increase in y by β_1 percent. The case applies to all other log variables used in the analyses.

From these four models, we can make a conclusion that, fiscal decentralisation represented by more fiscal power and autonomy to local governments can be the means of poverty reduction and improvement in the quality of life of the poor (El-Zahab, 2005; Yao, 2007; Sepulveda & Martinez Vezquez, 2010; Ahmed, 2013). Here, the first hypothesis of this study holds in all the cases: impact of fiscal decentralisation on lowering the incidence of poverty, shortening the distance of poor, reducing the inequality among poor and improving the living standard of the poor. Moreover, government investment on socio-economic sectors (which is supposed as pro-poor sector as well) also plays important role in achieving these objectives. The overall study supports the argument that fiscal decentralisation can be the means of poverty reduction acting through economic channel as pro-poor investment and political channels as good governance (Bird et al., 1995; Braun & Grote, 2000; Vedeld, 2003; Jutting et al., 2004; Steiner, 2005; Boex & Martinez-Vazquez, 2006). However, less likely to the theoretical arguments in favour of decentralisation, more significant impact of socio-economic expenditure from central government on poverty outcomes implies for more implication of centralized service provisions over the local provisions possible in poverty reduction strategy.

3.4.3 Fiscal Decentralisation and Poverty Reduction Outcomes: Linkage through Different Pro-poor Channel

As per the discussion in the theoretical chapter, fiscal decentralisation may have an impact on poverty reduction outcome through different pro-poor channels such as basic education, basic health, agriculture productivity, etc. comparatively having direct impact and other channels, like transportation, electricity, etc. having indirect impact. By improving indicators of these outcomes, we can improve quality of life of poor by adopting appropriate fiscal decentralisation policy. Among these channels, basic education and basic health care contributes to poverty reduction by improving employment opportunities through competent human skill development characterised with knowledgeable, and long and healthy life. It leads to socio-political empowerment as well. However, agricultural productivity has a direct impact on improving income. It is more important as it contributes to increased employment and incomes of rural poor and supplies cheaper food for the urban

poor. On these theoretical bases, in this section, we are analysing the possible effect of fiscal decentralisation variable on the basic education and basic health (two basic channels only) by using related indicators and cross-section OLS method, in the case of Nepal.

In Nepal, DIP 2002 is a major step of decentralisation of basic services to the local bodies. Basic education, basic health, agriculture extension and veterinary services are decentralised through this plan. However, it is not considered as proper decentralisation in practice because central government performs these functions mostly through its line agencies in the districts. Local bodies have only a nominal role in presiding the management committees of those services. Both the real fiscal and bureaucratic management are carried by the line agencies of the central government, which shows the poor decentralisation of basic service provisions.

The summary statistics, given in Appendix Table III-3, provide the general idea about the statistical nature of the dependent and independent variables used in the analysis in this section. Among the dependent education variable, district literacy rate of age 6 year above (LR) consists the minimum value as 26.6 percent in Humla districts and maximum as 77.1 percent in Kathmandu. However, another dependent variable combined net enrolment rate (CNER) ranges from the value as 29.77 percent in Saptari district to maximum 77.98 percent in Lalitpur districts. Similarly, among the dependent variables for health outcomes, Mugu district has the least value of life expectancy at birth (LEB) as 44.07 years and Bhaktapur attains highest value as 71.33 years. Next, the lowest trained birth attendance (TBA) is observed in Mugu as 4.76 percent and the highest in Mahottari as 67.8 percent.

3.4.3.1 Fiscal Decentralisation and Education Outcomes

In the regression between fiscal decentralisation and some indicators of educational outcomes by using equation (3.5a) and (3.5b), we can observe the following results. Fiscal decentralisation as represented by the ratio of local government expenditure to the total national level expenditure less central grant to local governments, is found to be positively significant, with literacy rate ($p < 0.1$) possessing small coefficient (Table 3.3). Here, with

one percent rise in fiscal decentralisation literacy rate is expected to rise by 0.05 units. However, the relationship of fiscal decentralisation is positive, but insignificant with the combined net enrolment. Less or non-significant relationship of fiscal decentralisation with these two education outcomes is not surprising because local governments in Nepal mostly

Table 3.3: Determinant of Education Outcomes

<i>Dependent Variable/ Independent Variable</i>	(1) Literacy Rate 6 Years Above	(2) Combined Net Enrolment Rate ^a
Fiscal Decentralisation ^a	5.152* (2.649)	0.0575 (0.0511)
District Per Capita GDP ^a	21.06** (10.52)	0.316** (0.147)
Education Expenditure ^a	18.94*** (4.445)	0.411*** (0.0882)
Student-Teacher Ratio-All Level ^b	-0.217* (0.127)	
Corruption ^c	-0.202 (0.165)	
Conflict ^c	0.0432 (0.0506)	
Student-School Ratio-All Level ^b		-0.000648* (0.000332)
Decentralisation x Corruption		-0.0142*** (0.00447)
Constant	-60.39 (49.85)	1.986*** (0.672)
Observations	74	73
R²	0.536	0.454
F	12.91	11.12
Variance Inflation Factor (VIF)	1.92	1.78
Breusch-Pagan / Cook-Weisberg	0.669	0.694
<i>p-value</i>		

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Note: ^a variables expressed in logarithm ^b variables expressed in ratio

^c variables expressed in absolute number

do not focus their investment on education rather investing more on rural roads.⁴⁰ Along with poor practice of decentralisation in the education sector, local governments consider the education service as the responsibility of central government and invest comparatively

⁴⁰ For detail, see Chapter 4 and Chapter 6 of this thesis.

less in this sector. However, non-formal education programmes through local governments may have some role in improving the overall literacy rate. Moreover, central expenditure on education⁴¹ (as percent of total expenditure) is highly significant (at 1 percent level) and positively related with both literacy rate and combined net enrolment rate (Faguet & Sanchez, 2008) displaying the centralization of education, in practice.

District per capita GDP also has positive and statistically significant impact on these two education outcomes (at 5 percent level) showing the inducing role of income in attaining the education outcomes as in the case of Pakistan (Ahmed, 2013). The student-teacher ratio has a negative relationship with a literacy rate (Ahmed, 2013) and combined net enrolment rate is negatively affected by school-student ratio. These results support the idea that improving educational facilities could lead to increase educational achievement. However, decentralisation affected by corruption may lead to negative impact on the educational outcomes- combined net enrolment rate, as indicated by the regression result in this case. All these results imply that improving the income and education facilities through increased investment in education and focusing also on income generating programmes, fiscal decentralisation could work better for better educational attainments.

The R^2 value in the model shows the moderate fit of the model, i.e. the model is capable of explaining the relation between dependent and independent variables. Low Variance Inflation Factor (VIF) signifies the low level of problem of multi-collinearity and comparatively high Breusch-Pagan / Cook-Weisberg *p-value* proves the model is out of risk of the problem of heteroskedasticity.

3.4.3.2 Fiscal Decentralisation and Health Outcomes

Theoretically, it is argued that fiscal decentralisation has an important role in improving basic health care services. It is because of matching of local preferences with the service delivered at the local level due to better knowledge and accountability of local officials

⁴¹ It would be more relevant, if local expenditure share on education could be taken as the expenditure variable. The researcher could not incorporate that variable due to unavailability of data. However, the analysis may give insight on the effect of education expenditure on the educational achievement.

towards local needs (Oates, 1999). Hence, better health outcomes are expected to be achieved by local health care provision than under the central provision (Khaleghian, 2004). However, the results could be different in different developed and developing countries and depends on the nature of health services provided. Mixed empirical results are observed in general and particularly in this analysis.

Coming to the present study, fiscal decentralisation represented by the ratio of local expenditure to the national expenditure is positively and statistically significant to improve both the life expectancy at birth ($p < 0.1$) and trained birth attendance ($p < 0.01$). Here, one percent increase in fiscal power to local governments is expected to lead to 0.019 units (year) of life expectancy and 0.083 units of trained birth, *ceteris paribus*. This suggests us to conclude that fiscal decentralisation may help in poverty reduction by providing long and healthy life, and reducing maternal mortality rate, neonatal death and infant mortality rate through increasing trained birth attendance as there is a close correlation between the maternal mortality rate and trained birth attendance (Buor and Bream, 2004 as cited in Engel et al., 2013). Hence, our *hypothesis 3* is accepted, in this case. However, the achievement could not be supposed as the result of more investment by local government on health,⁴² but because of an active mobilization of female community health volunteers (FCHVs) and traditional trained birth attendants (TTBAs) and some local spending used for providing very low incentives to them in the form of campaign expenses; and sometimes for purchasing medicines for local health institutions. However, we cannot overlook the effect of a certain percent of social spending (on these outcomes) necessary to allocate by local bodies (DDCs, VDCs and municipalities as targeted expenditure) according to government rules and regulations following the norms of Local Self Government Act 1999 and its regulations.

⁴² A report estimated 2.43 percent of total public spending on health financed by local bodies in 2003/04 which is our reference period in this analysis. Among which total contribution by DDCs, municipalities and VDCs are estimated as 1.08, 0.16 and 1.19 percent, respectively. However, central government expenditure constitutes 58.17 and from external development partner 32.66 percent (Nepal Health Economics Association, 2009). Similarly, after new arrangement, these days, DDCs/VDCs have begun to contribute for ANM recruitment, construction of local birthing center and trainings for mother groups in VDCs (DoHS, 2011).

Table 3.4: Determinants of Health Outcomes

<i>Dependent Variables/ Independent Variables</i>	(1) Life Expectancy at Birth (Year) ^c	(2) Trained Birth Attendance ^b
Fiscal Decentralisation ^a	1.950*	8.351***
	(1.102)	(2.696)
GDP Index	0.133**	0.570***
	(0.0608)	(0.193)
Social Expenditure ^b	0.124***	
	(0.0389)	
Female Literacy 6 Years Above ^a	7.216***	
	(1.738)	
Population per Bed	-0.0000843*	
	(0.0000493)	
Conflict ^c	-0.0208	0.0719*
	(0.0239)	(0.0377)
Immunization DPT3 ^b	0.0891*	
	(0.0476)	
Health Expenditure ^b		2.506**
		(1.161)
Population Per Bed ^a		-3.028*
		(1.635)
Political Empower Index ^a		10.07**
		(4.545)
Constant	25.78**	52.78**
	(10.66)	(21.25)
Observations	74	70
R²	0.540	0.462
F	9.149	11.50
Variance Inflation Factor (VIF)	1.46	1.40

Robust standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Note: ^a variables expressed in logarithm ^b variables expressed in ratio

^c variables expressed in absolute number

According to our regression results, social spending of central government as percent of total expenditure have positive and significant ($p < 0.01$) effect on life expectancy at birth as observed by other study (Nepal Health Economics Association, 2009; Engel et al., 2013). Moreover, health expenditure share also has positively and statistically significant ($p < 0.05$) effect on trained birth attendance leading to the low maternal mortality rate. Here, mixed results are observed. Local service provisions through fiscal decentralisation

becomes more effective in the case of trained birth attendance, but central expenditure on health and social sector has more effect in improving overall life expectancy. Next, the positively significant impact of income represented by district GDP implies the possible effectiveness of the economic wellbeing in achieving healthy life of the locals (Prasai and Adhikari, 2012 as cited in Engel et al., 2013).

Considering other factors, female literacy and immunization coverage are expected to help to improve life expectancy. Moreover, population per bed possesses negative relationship with both the dependent variables that means the need of supplying more hospital beds to attain better health of the poor.⁴³ Conflict has mixed effect on the overall healthy life and positive to trained birth attendance.⁴⁴ The mixed result may be because of less or no disruption of health sector by rebels and their pressure to the health service provider to be more accountable to the local people and “functional support system” among local health service stakeholders, including the female community health volunteers (FCHVs) and traditional trained birth attendants (TTBAs) for local health service provision, even in the absence of skilled health workers during conflict (Devkota & van Teijlingen, 2010; Upreti et al., 2012). Lastly, another governance factor, political empowerment of the people seems to be more effective in making people to move towards trained birth attendance which positively affects maternal and child health.

The empirical results reveal that poverty reduction is possible through improving the health outcomes of the poor.⁴⁵ For this, improved basic public health care service is a necessary condition which could be achieved basically via public expenditure on social sector in general and health sector in particular. Fiscal decentralisation could be the means of these provisions. However, poor practice of fiscal decentralisation in Nepal, nominal in health sector,⁴⁶ shrank its role in overall health achievement and central expenditure became the

⁴³ However, population per health manpower could be the good indicator to assess the impact of health service on trained birth attends where the lack of data prevented the researcher to go for that.

⁴⁴ Though curative health care service was disrupt to some extent during conflict, preventive health care service was functioning well in the conflict area.

⁴⁵ Trained birth attendance helps to achieve MDGs by reducing child mortality (MDG-4) and maternal mortality (MDG-5), hence has the contribution on poverty reduction.

⁴⁶ The decentralisation in health sector became far more deconcentration rather than effective devolution of power and responsibilities to local bodies and even to district local officials characterized by capacity

powerful predictor of long and healthy life of the people (as indicated by our analysis). As in the case of previous regressions, observed R^2 value allows us to rate the moderate explanatory power of the model. However, estimation of robust standard error and the low value of Variance Inflation Factor (VIF) permits us to consider the model more or less free from problems of heteroskedasticity and multi-collinearity, respectively. Working with large dataset could generate, the more robust and general results that the study could not perform here because of data constraints.

3.5 Conclusion

In this chapter, we analysed the relationship between fiscal decentralisation and poverty reduction outcomes as proxied by FGT indices and HDI using multiple regression analysis and district level cross-sectional data of Nepal. According to regression analysis, we found overall positive and significant relationship between fiscal decentralisation and poverty reduction outcomes. There exists negatively significant impact of fiscal decentralisation as represented by expenditure decentralisation on poverty captured by poverty head count, poverty gap, square poverty gap; and the positively significant impact on human development as captured by HDI. The degree of association does not seem to change with the change in proxies used for poverty. However, it is moderately significant at the 5 percent level of all the proxies. We can observe strongly significant and positive relation of governance factor such as conflict with poverty and negative relation with human development. From these observations, we can conclude that expenditure decentralisation, in the case of a country like Nepal, would be effective in poverty reduction if it is implemented properly and with proper transparency and accountability represented by good governance.⁴⁷

Next, highly significant coefficient of socio-economic expenditure reveals two facts. First, socio-economic spending by central government seems to be more effective (less like to the general argument of fiscal decentralisation). Second, if local government focuses more

constraints of local offices and central control over the local level political appointment and procurement (Engel et al., 2013).

⁴⁷ The level of fiscal devolution, and transparency and accountability of functioning of local government is discussed more in the Chapter 6, while discussing the problems of fiscal decentralisation.

on social spending that may be more effective in poverty reduction, which is less likely to be in practice, in the case of developing countries like, Nepal. Rise in per capita income has strong impact on reducing poverty and improvement of human development. This seems to be made possible by increasing agricultural productivity as revealed by strongly significant coefficients of these indicators. The significant coefficients of health and education indicators in the regression results show that poverty can be lowered by improving these indicators.

In the case of relationship of fiscal decentralisation with different pro-poor channels like, basic education and basic health, the regression shows mixed results. Fiscal decentralisation has positive and statistically significant relationship with the overall literacy, but not significant with school enrolment. This implies that the small expenditure on non-formal education could have more impact to induce overall literacy, but local spending is not effective for formal education. On the contrary, education expenditure under the centralized scheme seems to be highly effective for poverty reduction through enhanced educational attainments. However, as indicated by the regression coefficients, In addition to quantitative improvement of educational facilities like, lowered student-school ratio and student-teacher ratio, it would be more effective if other initiatives also taken to improve quality of education.

Fiscal decentralisation seems to be less effective in improving life expectancy, but more effective for inducing trained birth, though coefficients that are statistically and positively significant in both cases. Here, this is not due to greater local investment on health sector, but effective incentives provided by small spending to the female health volunteers (FCHVs) and traditional trained birth attendants (TTBAs). Central spending on health and the overall health sector is more effective to improve overall long life but less effective for maternal health. The result implies that local investment in health, as it is low, is less effective for overall health care (both preventive and curative) but more effective in preventive health.

Summarizing the discussion, we can conclude that as poverty is a multidimensional phenomenon, fiscal decentralisation can be an effective instrument for poverty reduction through basic public service delivery. However, unlike the general understanding, the effect varies with the countries and localities specificity. Unless there is proper decentralisation, decentralised service provision may not be better than the centralized service provision. For example, poor decentralisation in education and health sector and low focus of local government on these services in case of Nepal, makes the fiscal decentralisation to be less effective in service provision than the centralization.⁴⁸ The case is further diluted by less accountability of local government affected by conflict and corruption in developing countries, as in case of Nepal, as discussed in later chapters.

⁴⁸ Local bodies in Nepal think education and health sector as the responsibility of central government and they focus their investment more on rural roads. For detail, see chapter four of this thesis.

CHAPTER 4: FISCAL DECENTRALISATION AND PUBLIC SERVICE DELIVERY IN NEPAL

4.1 Introduction

According to the theories of fiscal decentralisation, local governments have better knowledge about the demand for and existing supply of basic public goods and services at the local level due to their proximity to local people. There is an important role of fiscal decentralisation in the supply of basic public goods and services according to local tastes and preferences. Hence, the decentralised provision of local public goods is Pareto-optimal (Tiebout, 1956; Oates, 1972). Next, through “Tiebout’s sorting”, local governments compete with each other in providing public services according to the preferences of the people of their jurisdiction that leads to efficiency in resource allocation.⁴⁹ Hence, it is argued that there will be maximum social welfare possible from the local public goods unlike in the case of uniform central provision (Oates, 2005). Due to the proximity of service providers to the users there will be low “information cost” and “transaction cost” in formulating and executing public service policies at local level. However, there may arise the question whether the conditions required for this prevails in developing countries like Nepal. Do local governments in these countries compete for revenue generation themselves or exhibit rent seeking behaviour. As experienced from some developing countries, competition among them for service provision is rarely found because of weak local governments.

Poverty is the result of capability deprivation due to the lack of access of poor to basic services. They have little access to the market for these services due to their low income. The market mechanism fails to achieve maximum social welfare. The poor, especially, are adversely affected. Benevolent governments can correct this market failure in service provision. Hence, proper supply of basic public services by the government can be the key

⁴⁹ Competition among local government could be applicable for developed countries but may not in the case of developing countries, like Nepal. Local governments of developing countries are mostly suffered by resource deficit and low revenue raising capacity. They mostly possess rent seeking behavior to central government and are less competitive for service delivery.

means for poverty reduction. It is argued that local governments invest a larger share of their resources on these basic services. In this situation, efficient public service delivery would be the core objective of fiscal decentralisation and at the same time, it would be the major component of poverty reduction strategy. But, the result of action depends on the proper utilization of resources determined by transparency, accountability and institutional capacity of local government. In other words, the nature and magnitude of the outcome of decentralised service provision depends on the political economy of decentralisation, which is determined by the level of democracy and extent of elite capture of institutions and corruption during the process of service provision (Elhiraika, 2007). The latter two are visible in developing countries like Nepal.

The main focus of this research is to study the effect of fiscal decentralisation on poverty reduction outcomes. To achieve this objective, this chapter examines:

1. The relation between the local public expenditure (constrained by revenue of the local government) and public service delivery at the local level.
2. Whether investment in basic services, like education and health (which affect poverty reduction through the human skill development of the poor) increases with the increase in total expenditure of local government.
3. Whether the nature and pattern of expenditure vary with variation in localities, resource richness and the level of existing local demand.

In the process of analysis, simple descriptive statistical tools and the regression method are used according to the availability of data and the nature of data collected mostly from field survey and secondary sources. VDCs (rural LBs) and municipalities (urban LBs) are taken into account in this study. However, as a part of this analysis, Chapter 6 discusses whether the increased public expenditure share can lead to better service provision in education and health. It also examines the underlying problems in the process.

4.2 Theoretical Framework

The normative public expenditure theory rests on the “economic rationale” and “optimality condition” for the government provision of public and private goods, followed by efficiency and redistributive motives. However, the public choice theory, depends on the economic analysis of “political process” determining the “government policy and its outcome” (Tridimas, 2001). So, to have a complete analysis of public expenditure, the study has to consider both types of the theories. As introduced in the first section of this chapter, theoretically, social welfare maximization is the key goal of each and every benevolent government. Then, it is assumed that local government, being of benevolent nature, ranks its sets of expenditure bundles matching the tastes and preference of local communities in order to maximize social welfare of the community under its jurisdiction. This means, to correct the market failure in service provision local government prioritises its expenditure towards the supply of bundles of basic public services such as basic education, basic health, drinking water, etc. which are the important bundles for the poor. Hence, they are important from the poverty reduction perspective. From the human development viewpoint, these categories of expenditure have an effect on living standards of poor through improving human skill development and minimizing the capability deprivation of the poor. But, this social ordering of categories of local public expenditure is conditioned by budget constraint (as determined by revenue) of local government.

Apart from the demand factor, the social ordering of such expenditure depends on the nature and magnitude of revenue and expenditure authority of local government provided through fiscal decentralisation. This further depends on the categories of revenue sources of local government those carry certain discretion in spending procedure. So, the factors such as own source revenue, central transfer and local borrowing would become important in determining the nature of expenditure of a local government. On the basis of these understandings, to examine the research questions above empirically, we can form a hypothesis as follows:

Hypothesis: Share of expenditure on basic public services in total local public expenditure (basic health, education and social service as whole) increases with the increase in total local public expenditure (as determined by local revenue), *ceteris paribus*.

To analyse the above hypothesis, this study has followed the simple linear models used by Elhiraika (2007) based on certain assumptions as follows:

1. The local government budget constraint will be equal to the total expenditure on different bundles producing social welfare.
2. Marginal utilities of those expenditures satisfy first-order conditions and second order conditions.
3. For a non-profit government, total expenditure equals total revenue.
4. Demand for expenditure (E) is function of pre-determined revenue (R^P) of local government, i.e. $E=R^P$.
5. If local government can control its revenue level, own source revenue (OSR) and revenue (R) will be endogenous but for the tax base and tax rate fixed by the central government, OSR and R will be exogenous.

Demand for education and health services will depend on income, the level of total local expenditure fully based on the level of total revenue, with factors determining it, existing level of development of such services in that jurisdiction, etc. Considering the share of expenditure on concerned bundles to the total budget of government to overcome the problem of endogeneity⁵⁰, the education and health expenditure equation each [that follows the linear regression model based on Elhiraika (2007)] for time t in our analysis becomes,⁵¹

$$EE_t = \alpha_1 + \alpha_2 OSR_t + \alpha_3 GT_t + \alpha_4 LB_t + \alpha_5 Y_t + u_t \quad t = 1, 2, 3, \dots, 28 \quad (4.1)$$

$$HE_t = \beta_1 + \beta_2 OSR_t + \beta_3 GT_t + \beta_4 LB_t + \beta_5 Y_t + u_t \quad t = 1, 2, 3, \dots, 28 \quad (4.2)$$

⁵⁰ Here, the expenditure ratios of the respective bundles are assumed to be neutral with respect to own source revenue.

⁵¹ Generally, it is difficult to get proper estimation and data on existing level of development in developing countries, so the variable is not accounted in these equations.

In addition, demand for aggregate social expenditure (SE),

$$SE_t = \gamma_1 + \gamma_2 OSR_t + \gamma_3 GT_t + \gamma_4 LB_t + \gamma_5 Y_t + u_t \quad t = 1, 2, 3, \dots, 28 \quad (4.3)$$

Here, Y_t is income (Local GDP per capita); OSR_t , GT_t and LB_t are shares of own source revenue, grant, transfer and local borrowing in total local revenue (in other words, revenue autonomy, fiscal dependency and debt dependency of local government) respectively at time t ; and u_t is the disturbance term. In our case, EE_t , HE_t and SE_t are the respective shares of expenditure on education, health and the overall social sector of municipalities to the total expenditure of municipalities at the time t . Other factors are controlled. For fiscal decentralisation to increase efficiency of service delivery, own source revenue should have positive coefficients. Likewise, all other independent variables are expected to have a positive effect on the dependent variables. There should be a rise in demand for social services, education and health expenditure with the rise in per capita income, own source revenue and grant transfer of a local government (Elhiraika, 2007). But, the demand for social, education and health expenditure vary with the nature and dimension of fiscal decentralisation affecting the conditionality and the level of local borrowing.

According to Fosu (2007), the institutional framework of government decision making would have important implications for the choice of expenditure bundle which could be specified by a structural model. But, because of unclear budgetary decision process and ill-defined fiscal responsibilities among the governments in developing countries which lacks proper democratic political participation, estimation of the structural model may be sensitive and less significant. So, reduced form model as an alternative may be preferable that can yield, comparing more robust results across the public choice under different institutional settings with simple specifications.

Another way to examine the pattern of education and health expenditure of a local government is to compare the ratio of expenditure on pro-poor services to the total local government expenditure with respect to time and resource richness of LBs. Here, we expect that increase in the share of pro-poor expenditure in total local expenditure with the passage

of time and similarly with the increase in resource level of LBs (assumed as the increase in level of fiscal decentralisation).

Let, $aexp_{it}$ and $abexp_{ijt}$ be the aggregate expenditure as a whole and aggregate expenditure on the j^{th} basket of the important categories for poor of i^{th} VDC at time t respectively, then expenditure ratio for i^{th} VDC for j^{th} bundle at time t will be:

$$exratio_{ijt} = \frac{abexp_{ijt}}{aexp_{it}} \dots\dots\dots(4.4)$$

Where, $i = 1, 2, 3, \dots, N$; $j = 1, 2, 3, \dots, \eta$; and $t = 1, 2, 3, \dots, n$

Similarly, if pop_{it} be the population of i^{th} VDC at time t , per capita expenditure of j^{th} bundle for i^{th} VDC at time t will be,

$$pcexp_{ijt} = \frac{abexp_{ijt}}{Pop_{it}} \dots\dots\dots(4.5)$$

Where, $i = 1, 2, 3, \dots, N$; $j = 1, 2, 3, \dots, \eta$; and $t = 1, 2, 3, \dots, n$

The objective of social welfare maximization through resource allocation and fiscal decentralisation may not be achieved due to some flaws in the process. The low efficiency of local government obstructs the proper service delivery due to the lack of proper management of local finance and the project implementation. When provision of services is characterised by economies of scale and spill-over effects, provision by local bodies would not be efficient. Unclear and mismatching sharing of responsibilities between the central and local governments, i.e. incomplete decentralisation, prevents the achievement of the objective of social welfare maximization. Moreover, the more visible problems of elite capture and corruption at local level interrupt the objective of poverty reduction through proper welfare maximization of poor by local government.

For better performance of the aforesaid relation of expenditure on social bundles with the revenue decentralisation, there is need of optimal sharing of expenditure and revenue assignment based on minimizing the effect of economies of scale and spill-over effect, increased efficiency of local governments, restricting elite capture and corruption through

proper local participation in decision-making (Ahmad et. al, 2005; Elhiraika, 2007). We cannot neglect the fact that structure of local public expenditure also depends on the political choice that reflects the conflicting demands of utility maximizing voters, which the politicians looks forward to address, remaining within a certain institutional framework (Tridimas, 2001). Hence, all these measures depend on the political economy of decentralisation as explained in the earlier section. Chapter 6 discusses on these issues.

4.3 Introduction to Variables

In this chapter, we are going to examine the relationship between local public investment and share of expenditure on basic public services such as social sector in aggregate, and education and health care services in particular. We are going to observe whether there is an increase in the share of expenditure on these basic services with the increase in local expenditure (by taking local revenue variables as proxy).⁵² In other words, we study the effect of expenditure (revenue) as determined by fiscal autonomy variables as the share of local expenditure on those basic services. Because of difference in data availability, there are two types of analysis in this case. In an observation, we perform simple regression analysis by using data of the municipalities of Nepal. However, in another, due to lack of adequate data, we are using only simple descriptive statistics to compare the pattern of the share of social, education and health expenditure in total expenditure of VDCs⁵³ surveyed during the research. This will be followed by the intra-VDC comparison of per capita expenditure on those categories. We have chosen these variables because the supply of public goods and services directly relates to the nature and magnitude of the government expenditure given its resource availability. Next, the aforesaid categories of expenditure carry high implication for living standard of people, in effect.

⁵² For a balanced budget of local government total revenue equals total expenditure. We need to examine the effect of change in total local expenditure on its share on overall social, health and education sector. For simplicity, we are estimating the effect of revenue variables (those constitute total revenue and total expenditure of local government) on the local expenditure share on overall social, education and health sectors.

⁵³ VDC and VDC are used interchangeably in the thesis both referring to local body as Village Development Committee (VDC).

In the case of regression analysis of aggregate municipal data, we have three models and three dependent variables, one for each model. For the first model, the share of social sector expenditure in total expenditure of municipalities is the core dependent variable. In the second and the third models the respective shares of education expenditure and health expenditure are the dependent variables. The independent variables in all the three models are shares of own source revenue, revenue from grant transfer and local borrowing in total local government revenue. Due to lack of data on GDP of municipalities we could not include the income variable in this analysis. Also, no variable representing the level of development could be included in the model due to lack of data. All the variables are continuous, in this case. The variables used in this analysis are calculated as:

$$\text{Social sector expenditure ratio (SE)} = \frac{\text{Expenditure on social programmes}}{\text{Total municipal expenditure}}$$

$$\text{Education expenditure ratio (EE)} = \frac{\text{Expenditure on education}}{\text{Total municipal expenditure}}$$

$$\text{Health expenditure ratio (HE)} = \frac{\text{Expenditure on health}}{\text{Total municipal expenditure}}$$

$$\text{Own source revenue ratio (OSR)} = \frac{\text{Revenue from Own source}}{\text{Total municipal revenue}}$$

$$\text{Grant transfer ratio (GT)} = \frac{\text{Revenue from central transfer}}{\text{Total municipal revenue}}$$

$$\text{Local borrowing ratio (LB)} = \frac{\text{Revenue from local borrowing}}{\text{Total municipal revenue}}$$

In the case of VDC level analysis, all the variables with expenditure ratios of categories of bundles (social sector, education, health and rural infrastructure) are estimated by using same formula and expenditure data of VDCs:

$$\text{Expenditure ratio} = \frac{\text{Expenditure on the category of bundle}}{\text{Total expenditure of VDC}}$$

However, per capita expenditure on different categories of bundles are calculated as:

$$\text{Per capita expenditure} = \frac{\text{Expenditure on the category of bundle}}{\text{Total population of VDC}}$$

4.4 Data and Methodology

There is a lack of adequate data on local government finance. During the survey, the researcher observed the unsystematic accounting in the VDC offices. There was difficulty to get data even for the latest five years in each and every VDC whether it is urban or rural, mountainous or hilly or Terai, rich or poor. Municipal data are comparatively more systematic than that of the VDCs. So, the study has to be limited to only a few variables, leaving out some important variables of interest. It needed to work hard to synchronize the very crude data according to the need of the study. It was uncomfortable to limit the study. For example, if the data for local body finance and poverty at VDC or municipal level for a long time series were available, the analysis would have been more meaningful and generalizable. Even with the limited data, the analysis is expected to provide, at least, some insights to this research problem.

Two sets of data are used in this analysis. First, the relation between local public investment and expenditure on social services in case of municipal finance is observed by using historical time series data of revenue and expenditure details of all municipalities (58 in number) for the period of 28 years (1982/83-2009/10) obtained from joint publication of Ministry of Local Development (MoLD)⁵⁴ and German Technical Cooperation (GTZ) of Nepal. Secondly, VDC financial data used in the analysis are of maximum 5 years (2007/08-2011/12) of four VDCs (among the six VDCs surveyed), primarily collected from the audit report and other financial documents of VDCs. Similarly, VDC level population data is calculated by taking base reference of the rate of population increase estimated by the Central Bureau of Statistics (CBS), Nepal. Financial data for two VDCs, namely, Mijhing and Pakali, was available only for the two latest years. So, financial data of these VDCs are not included in this assessment. However, the VDCs included in the study cover the geographical and economic variations that we need.

⁵⁴ Now, name of Ministry of Local Development (MoLD) has been changed as Ministry of Federal Affairs and Local Development (MoFALD). Here, MoLD is used in the thesis to address the historical compatibility as used in different documents for long time.

Simple regression analysis (OLS) is performed to examine the effect of changes in revenue categories on the expenditure on sets of local basic public service delivery: aggregate social services, basic education and basic health care, by using municipal data. This type of relationship is observed in case of surveyed VDC by using simple descriptive statistics comparing with timer. This study observes intra-VDC and inter-VDCs comparison of different expenditure categories. Likewise, per capita expenditure and expenditure ratios of different local basic public spending are calculated respectively to enable the multidimensional comparison, as described in the earlier section. Method of calculation of variables has been already defined in the earlier section that introduced the variables of interest. Tabulation and graphical presentation of results are properly described to develop a level of understanding on the issues. Tools for statistical tests are also used according to the need. For example, Dickey-Fuller unit root test is performed to test the non-stationary problem of time series data. Some variables are transformed to first difference to overcome the non-stationary problem. In the analysis, some issues which could not be explained by statistical methods are discussed using qualitative narratives collected from the interviews of the respondents in the survey area. Lastly, information from secondary sources and literature are used as the supportive evidences for the issues discussed.

4.5 Local Public Investment on Basic Public Services: Empirical Results

As discussed earlier, benevolent governments try to maximize social welfare to reach the Pareto-optimal condition. For this purpose, it synchronizes the order of maximum utilities possible from different consumption bundles. Then, it goes on choice of bundles those are carrying maximum benefit for the society. Government spends on those services which have higher welfare implications for the community. Using both the decentralisation theorem (Oates, 1972) and the capability approach of poverty (Sen, 2011), it is argued that local government, due to its benevolent nature, through the basic local public investment, tries to supply the basic public services to the poor who are unable to participate in the market mechanism because of their low income (budget constraints) (Bird et al., 1995; Yao, 2007; Bardhan & Mookherjee, 2011). The bundles such as education, health and social sector as whole, are the important entitlements for capability improvement of the

poor if these are targeted to poor. This tells us that local government allocates maximum part of the resources available towards those expenditure categories.

The impact of public investment in poverty reduction depends on the nature and magnitude of policy and programmes having a direct or indirect effect on poverty reduction; degree of concentration of expenditure towards the poverty intense regions; extent of policy implementation oriented to benefit the target groups (Bird et al., 1995). Generally, these propositions sound better. But, is this principle always viable? If not, how does it respond to variation in characteristics of local government? And why? We will focus our concentration on these issues in this analysis. Here, we will observe the cases of expenditure behaviour possessed by different LBs from the various locations of a developing country, Nepal. Let's start the empirical study with the international and national experiences from different literature.

International Experiences

Zambia, an underdeveloped country, has observed a significant decline in health expenditure, in real terms, of districts. An analysis performed by Bossert (2003) using the data and information of 1992-1998, where these years reflect the effect of ambitious health sector decentralisation, showed relatively low difference in total per capita health expenditure with the degree of urbanization (rural-urban difference) and income difference (5th quintiles/1st quintile) among the districts. However, during the initial year, per capita health expenditure is preferred more in case of rural and poor districts and then urban and wealthier districts in the median year, and lastly, neutral to rural-urban and income level difference, over the period of 1995-1998. But, they cannot confirm this equity due to decentralisation in governance in Zambia. This may be due to the role of grant to districts for the same. From the analysis of the available data, with its limitations, they obtained no clear proof of the impact of decentralisation on the health system of Zambia.

Duan & Zhan (2011) studied the impact of fiscal transfer on government expenditure in China by using data of 114 counties of Shanxi province for 1994-2005. Through a

multivariate panel data analysis, the study observes the negative correlation between fiscal transfer and the share of expenditure on public goods such as education, health, social security, etc. with highly significant coefficient that discourages the county government's expenditure on those public goods. However, financial-capacity transfer, unexpectedly gives the positive result as a significant increase in expenditure share on those local public goods and services. As the joint effect of earmarked fiscal transfer and financial-capacity transfer, they observed positive, but not robust impact on these public spending. Next, own-source revenue shows negatively significant correlation with spending on public goods and services, in this case.

On these counter-intuitive results, the authors advanced some arguments. Firstly, they found no evidence of expanding of quantity and improvement in the quality of public services in that province after the supply of the aforementioned types of transfer. It is because, financial- capacity transfer channelled by public service department is mainly used to hike the salary of the existing employees and therefore very little money is available to raise the level of services to the citizens. Likewise, no contribution to promote the public services by earmarked grant is due to the high leakage and misuse of some subsidies out of the designed project diverting the funds from public services to other administrative consumptions (also see Shen & Zou, 2008). Next, because inter-regional relationship is competitive rather than cooperative, local governments have more incentives to investment in infrastructure projects to induce inflow of more capital investment than on the public services with inter-regional spill-over effects (LUO & CHEN, 2010).

The study derives another conclusion that earmarked grant has significant positive correlation with economic expenditure. But the effect of financial-capacity transfer is found unclear. However, positive correlation with the joint effect of both types of transfer on the spending on economic construction⁵⁵ shows the economic expenditure (thus economic development) friendly nature of transfer in China. It is because, there is space

⁵⁵ However, except some localities of Guangdong province which are found focusing their expenditure more on education rather than administration, most of other local officials show similar trend to focus on spending on economic construction instead of public service provisions (Duan & Zhan, 2011).

for “manipulation and payment arrears” in these expenditures, which provides some incentives to the local officials. The authors conclude that there should be strong management, regularity in the transfer process and motivation to the local officials to check the diversion of funds from public good provisions to other excess administrative expenses. We can learn from this study that unless and until there is transparency, accountability and institutional efficiency no improvement in local public spending through fiscal decentralisation and its positive effect on public services is possible.

For India, Chakrabarti & Joglekar (2006), used panel data of 15 major states (over the period 1980/81 to 1999/2000) to analyse the patterns and changes in the government education expenditure over a period of two decades. The entire period is split into two sub-periods – pre and post-reform. The study found that the states with higher per capita income spend more on education, though the income elasticity is less than one. It means that the richer states spend more on education than the poorer ones. Another important finding of the study is that grant transfer has significant positive impact on public investment in education both at the aggregate level and at the disaggregated levels i.e. elementary, secondary and higher levels. Similarly, public expenditure in rural areas was found comparatively higher than in the urban areas (result with positive coefficient and significant in the aggregate and at the elementary level). This could be because of the relatively less presence of the private sector in education in the rural areas. Next, the allocation of public resources to the social sector (such as education) was found declining significantly in the post reform period showing the clear effect of a cut in subsidies as a consequence of economic liberalization.

Ramakumar (2008) has analysed the level and composition of social and economic expenditures of Centre and State level of India by using data with “functional classification” from 1950/51 to 2005/06. He found that though total expenditure of the states as percent of GDP increased in the 1980s, declined in the first half the 1990s, then found continuously rising into the 2000s, the share of social expenditures and economic expenditures to the total expenditure of the states declined in 1990s and 2000s along with the fall in development expenditure. However, non-development expenditure such as debt

servicing is finding increasing during the same period. Next, expenditure by the states on education, housing and rural development as percent of GDP declined sharply in 1990s and 2000s. But, expenditure by the states on health, drinking water and sanitation as percent of GDP fell throughout the period of 1980s, 1990s and 2000s. Here, the social and economic expenditure of the states (sub-national governments), which has crucial implication for supply of basic needs to the people, is found mostly not moving with the rise in total expenditure of the states as percent of GDP. This scenario reveals the fact that the economic liberalization with financial adjustment possessed adverse effect on social sector expenditure through the curtail of such expenditure in order to reduce fiscal deficit (Kumar, 2002; Ramakumar, 2008; Chandrasekhar & Ghosh, 2011).

Kumar (2002) has looked at another aspect of public expenditure. He argues that not only is there insufficient allocation of resources to education and health (sometimes even less than target) in developing countries (taking the case of India), but also there is “sub-optimal utilization” of these resources, due to the presence of the black economy. At the macro-level, there is government failure in planning and policy failure in achieving targets due to siphoning off of allocated funds from targeted programmes (Kumar, 2013). The diversion of funds from public services to private gains adversely affects the community at the micro-level as it leads to deterioration in the quality and the quantity of public services hurting the poor more. The officials target their budget expenditure towards the area (such as purchasing materials, construction and repairs) those having more space for corruption rather than matching the public need. The trend can be observed in many developing countries in the central as well as the local level.

In an another study of 21 OECD countries by using pooled time series data from 1980 to 2001 (but only from 1991 to 2001, in the case of spending on primary, secondary and higher education), Busemeyer (2007) observed that total public spending has positive and significant impact on total public social expenditure, health expenditure and expenditure on pensions. However, fiscal decentralisation has negatively significant relationship with public expenditure on pensions and public social expenditure, but positively significant with total public expenditure and health expenditure. Busemeyer (2008) further observed

positive and significant impact of fiscal decentralisation on the expenditure at all levels of education. Moreover, total public social spending is positively significant with public expenditure on education. Here, it should be noted that in this study, all these expenditures are estimated as percent of GDP. The study holds for the hypothesis that the rise of total public expenditure, there is rise in social, education and health expenditure, in the case of OECD countries. Similarly, given the expenditure decisions that lies closer to the local level, if fiscal decentralisation (as the devolution of fiscal power to sub-national governments) increases, then there will be an increase in education and health spending by the public sector which has implication for poverty reduction through human skill development.

National Experiences

Very few Nepal specific studies are found on these issues. As in the case of other developing countries, in Nepal as well, local spending on social sector, in general, and education and health, in particular, is lower than the spending on rural infrastructure like rural roads and buildings. Adhikari (2006), observed low priority on health expenditure by Kavre DDC during the both time periods -1991/92-1996/97 and 1997/98-2001/02 as 0.02 percent and 0.05 percent of total expenditure of DDC, respectively. However, there were 0.2 percent and 1.6 percent of expenditure on schools for those periods respectively. Besides, bridge projects and irrigation projects were found as top most priority sectors of DDC's expenditure pattern.

In a study of VDC governance and the use of block grant carried out in 202 sample VDCs of 25 representative districts, Inlogos (2009) observes the focus of VDCs on physical infrastructures (such as roads, electricity etc.) than the education and health sector, during their planning. According to the study, of the annual average of capital block grant (in the years 2006/07-2007/08), while 35 percent was spent on rural roads, only 17 and 3 percent respectively were spent on education and health sector. This shows that health and education were low priority items the pattern of expenditure of VDCs. However, VDCs

consider health sector less important than the education sector among these two social expenditure those are important in the perspective of human skill development.

Cyan et al. (2009), in a study of some rural VDCs based on discussions with VDCs secretaries, came to know that rural roads and electricity were the prime sectors of local investment. On the priority scale education ranks third and drinking water fourth. But, health is not found in their priority. However, in the case of municipalities there was mostly decreasing pattern of capital investment on education and increasing pattern of health expenditure and the overall social expenditure, in the case of municipalities.⁵⁶ Investment in the construction of road/bridge gets first priority in the case of DDC's expenditure. Where, education and other social works come after the other important categories of DDC expenditure. The authors have signified the diversity in priority sectors in local body investment, according to the variation in local need because of diversity in geographical location. However, they do not account for the existing level of development as the influencing factor of priority setting of local public expenditure.

Koirala (2011) carried out a study on the extent of practice of LSGA 1999, based on discussions with different stakeholders related to implementation of LSGA by taking samples of 6 DDCs, 5 municipalities and 12 VDCs. In this study, along with the information from interviews and group discussion, he collected the financial information as the expenditure characteristics of sample LBs. He observed that LBs are not matching the performance of expenditure functions devolved by central government through its regulations as DIP 2002, in the case of local basic public services such as basic health, basic education, agriculture and veterinary service extension, etc. Financially, they have allocated very low share of their revenue resources on those services. For example, sample VDCs, DDCs and municipalities are found to spend 7 percent, 12 percent, 3 percent respectively on education and 4 percent, 6 percent, 5 percent of their total expenditure

⁵⁶Cyan et al. (2009) analysed the data on municipal expenditure for the year 2003/04-2006/07. They observed the increase in average social expenditure over the period from Rs.4.2 to Rs.9.9 million. Again, among the social sector, high share in total capital investment (36.5-56 percent) in health, then education (21.4-9.3 percent). Financial assistant and miscellaneous are the other important priority sectors of municipal investment.

respectively on health, in average. This shows the low priority accorded to health and education by the LBs. Here, LBs are found not following the LSGA functions. This pattern of resource allocation does not conform to the objective of poverty reduction via human skill development through basic public service provision and fiscal decentralisation.

Devkota (2013) in his thesis studied the trend of local public expenditure on some sectors by simple tabulation of data of six consecutive years (1996-2001). In a study of a sample of 20 DDCs, 14 municipalities and 60 VDCs, he compared the pattern of per capita development expenditure before and after LSGA. He observed that the per capita development expenditure (in rupee term) of all three LBs: DDCs, VDCs and municipalities on the social sector: education, health, drinking water and sanitation, are increased remarkably after LSGA. However, per capita development expenditure on education is higher than the other two sectors both in DDCs and VDCs. However, municipalities possess the highest per capita development expenditure on drinking water and sanitation than the other two sectors. Similarly, he found per capita capital expenditure of all three LBs on road and transport is significantly increased over the years. Moreover, unlike DDCs and VDCs, per capita expenditure on agriculture is observed to be diminishing by the passage of years and especially after LSGA. In this analysis, the author took into account only the per capita development expenditure on different sectors. But, the result might be different, if the total local expenditure on education, health, drinking water, etc. was considered. It is because, the current expenditure such as salary of teachers may also have an effect on local economic growth and local public service delivery.

A World Bank study report on local service delivery in Nepal, prepared in 2014, showed the larger share of administrative cost, social security expenditure and rural roads in the total VDC expenditure in Dhankuta and Dhanusa districts. Considering the three years average (from 2009/10 to 2011/12), 14.10, and 6.5 percent of total VDC expenditure of Dhankuta district are found to spend on local roads and bridges; and education respectively. The shares are observed 8.11 and 0.09 respectively in the case of VDCs of Dhanusa district. The nominal share of health expenditure, in this case, is incorporated in other expenditures in the expenditure analysis of both the districts. Also in the case of municipalities and

DDCs of both districts, expenditure shares of roads and bridges are higher than that of education and health expenditure. However, contrary to the expenditure pattern of Dhanusa, municipal expenditure on health is more than the education expenditure in Dhankuta district (World Bank, 2014a). A similar pattern is observed in the case of Dhanusa DDC as well, where the share of total expenditure on rural roads and bridges is five times more than the share of education and health. However, education expenditure was found to be higher than health expenditure.

The World Bank study has also compared the expectation of citizens and the actual pattern of expenditure of LBs. The report points out that though 90 percent of respondents of two sample districts perceived education and health as prime sectors, LBs are found focusing on more on rural roads (which they kept it in third priority) (World Bank, 2014a).⁵⁷

We can draw some conclusions from the empirical literature discussed above. Firstly, the pattern of local expenditure differs between developed and developing countries. Local governments of developed countries were found to focus mostly on health and education expenditure unlike those of the developing countries. There is an increase in social spending with the increase in local public spending in the case of the developed nations. The level of development of countries also alters the impact of fiscal decentralisation on social spending. Secondly, rural infrastructure is the most important sector of investment for local governments as it induces investment and has less spill-over effects. Thirdly, local officials may seek to extract rent from the local projects through diversion or misuse of funds which could be easier in the case of construction projects. Fourth, the nature of local spending depends on the expenditure responsibilities provided to local government. For example, LBs of Nepal consider education and health spending *de facto* under the responsibilities of central government, though *de jure* devolved to them through DIP 2002. Lastly, the most important factor is the local demand, which varies with the geographic, socio-economic and political variation of local government.

⁵⁷ For detail, see Annex 5 and 6, World Bank (2014).

4.5.1 Local Investment On Basic Services: How Do VDCs Response?

This segment of the study consists of results obtained from the analysis using financial data of four different VDCs used in survey (different both in geographical location and the resource richness) as introduced in the earlier chapter. By using equations (4.4) and (4.5) we have calculated the share of expenditure on different important bundles: rural infrastructure, education, health and social sector as whole, and applied graphical comparison by using a timer. We used data of Thabang, Balambu, Chilime and Laukahi VDCs available for the years 2007/08- 2011/12. From the summary statistics, we can observe VDCs having minimum per capita expenditure Rs. 175.58 and maximum of Rs. 1859.64; and minimum zero per capita education and health expenditure to maximum of Rs.142 and Rs. 47 respectively, for the observed time period. However, similar variation is visible in the case of expenditure ratios for different bundles (Appendix Table IV-1).

The source of VDC expenditure is their revenue composed of central block grant and own source revenue collected by VDC itself, among which block grant constitutes major share and there is very low or (somewhere) zero share of own source revenue. Among our sample VDCs, urban VDC, namely, Balambu has 52 percent of the block grant and Terai VDCs Pakali and Laukahi constitute 88 and 98 percent respectively in 2009/10. However, another three mountain and hill VDCs are observed solely (100 percent) dependent on the central block grant for their expenditure assignments (Field observation, 2012).

Graphical Presentation

Per capita expenditure is supposed to be the basic measure to compare the social welfare achieved from public expenditure. Here, the per capita expenditure is indexed by dividing all values by 100 to make the graph simpler. Thabang, a remote VDC of mid-western hill, affected by the severe armed conflict of ten years period, possesses least per capita total expenditure for the given period (Fig. 4.1). Almost similar status is observed in the case of Laukahi, a small Terai VDC. Conversely, mountainous VDC, Chilime, keeps its top position in per capita expenditure among the sample VDCs, followed by Balambu, an urban VDC locating in Kathmandu, the capital valley, attributes the second highest per capita

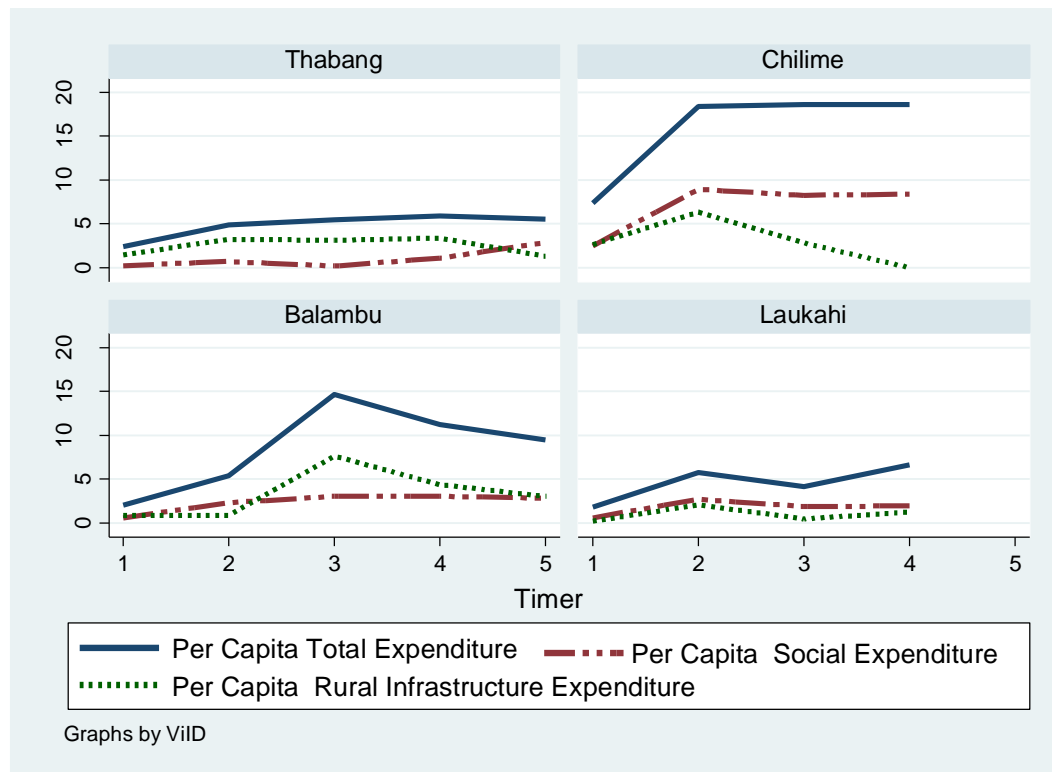
spending. Except Chilime and Thabang VDCs (which are more or less following), the others do not follow the variation of per capita social expenditure with the variation in total per capita expenditure. Nonetheless, expenditure on rural infrastructure is the priority for Thabang and Balambu VDCs (which are more or less following the pattern of total expenditure) than the social expenditure. Social expenditure is the priority for the other two VDCs- Chilime and Laukahi.

Balambu and Chilime VDCs possess certain jumps in the expenditure pattern over the timer. In Balambu VDC, due to the inefficiency of local official, some funds were unspent and balance forwarded to the successive years. Likewise, because of comparatively more efficient new official, more tax revenue was raised and spent efficiently. These factors induced the jump in revenue, then in per capita expenditure of this VDC. Similarly, increase in additional earmarked central grant (amounting 1.5 million - 3 million)⁵⁸ from 1 billion in the first timer caused the sudden jump in expenditure of all VDCs the second timer onward. Grants from DDCs and other institutions have also the effect on changes in the pattern of expenditure of VDCs. Except in the case of Chilime VDC, per capita expenditure on rural infrastructure is observed more or less moving with direction of total per capita expenditure in all the sample VDCs. Moreover, hike in social expenditure in case of Chilime VDC is due to the change in expenditure on social security allowances to senior citizens and the widows.⁵⁹ And sudden decrease in rural infrastructure spending is due to the diversion of a major share of funds to capital investment in the Chilime Hydro - project. All these scenarios reveal the fact of an irregular expenditure pattern of LBs, in the case of Nepal.

⁵⁸ To decide the amount of additional capital grants (since 2008/09) remaining within the range of 1.5 million to 3 million, central government has produced VDC Grant Operation Manual, 2008 (Cyan et al., 2009).

⁵⁹ Every year central government provides the fund for the social security allowances through VDCs. But, sometimes central government releases the amount of allowances of previous year (i.e., late release of the fund) by adding up to the amount of current year. It adds up the revenue of VDCs, hence uplifting the magnitude of total social expenditure in the current year.

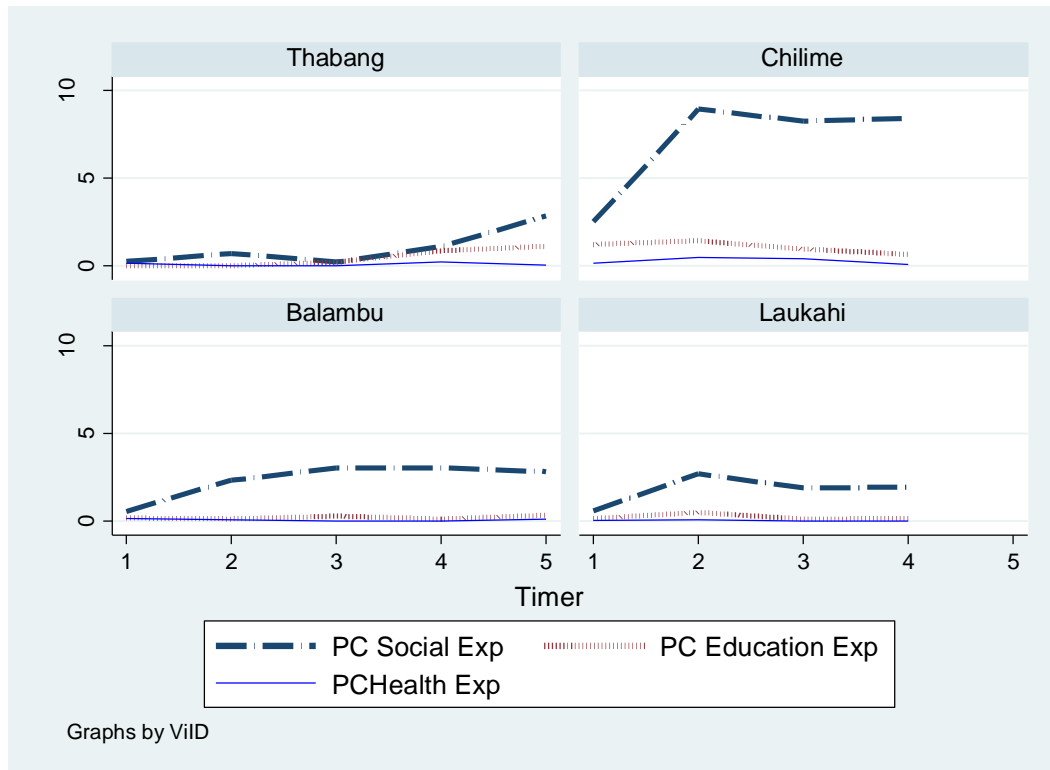
Fig. 4.1: Per Capita Expenditure Pattern of Sample VDCs by Timer



Source: Financial Documents of Sample VDCs.

In the case of intra social expenditure bundles i.e. per capita expenditure on education and health, the latter is of lowest priority in each and every VDC. In these LBs, education expenditure is preferred over the health expenditure. However, curves for these two categories of expenses are not found moving along with the line of social expenditure curve (Fig. 4.2). It shows a similar pattern in the sample VDCs studied by Koirala (2011). This violates the propositions i.e. local expenditure on social bundles (health and education) increases with the increase in total local public expenditure and thus violates the theoretical understandings on the importance of relation between local provisions of public spending and capability enhancement of the local poor.

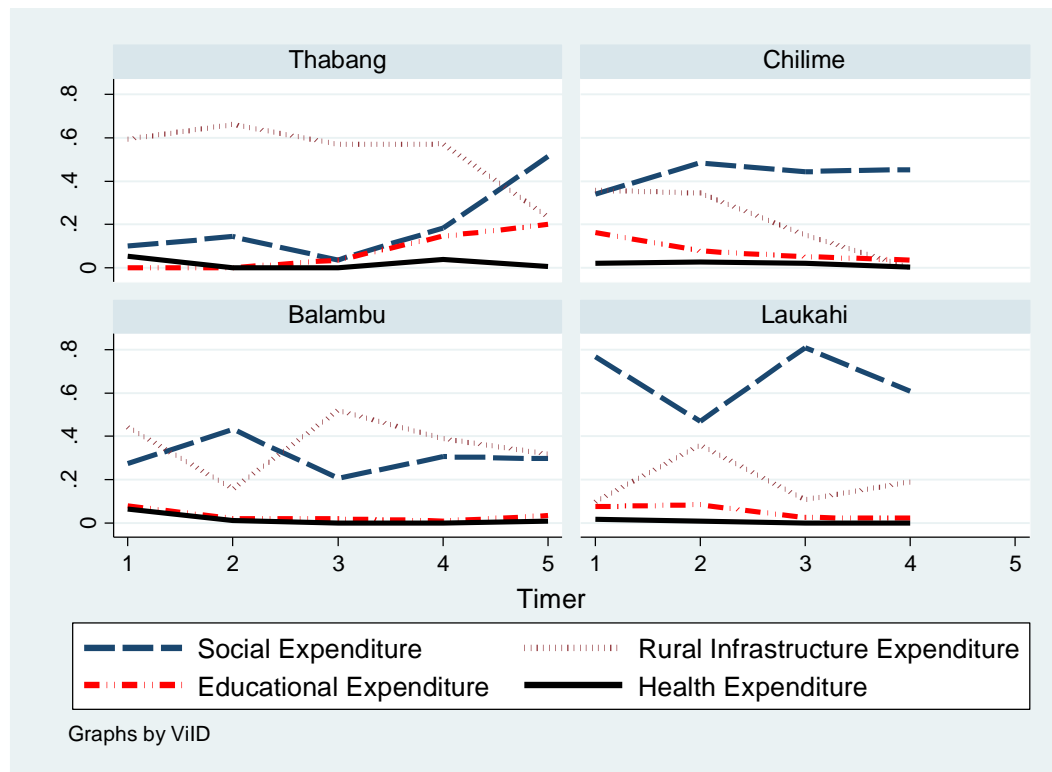
Fig. 4.2: Per Capita Social Expenditure Pattern of Sample VDCs by Timer



Source: Financial Document of Sample VDCs.

The evidence shows that in addition to education and health expenditure, social sector expenditure constitutes a high share of other social expenses such as expenditure on drinking water projects, social security allowances to the senior citizens, and other income generating projects for special categories of population which also have direct or indirect implications for the poor to some extent. Interestingly, Thabang, the VDC has a zero per capita expenditure on education in the first two timers and the same on health in the second and the third timer, reveals the low local priorities on education and health for those timers, where other sectors such as rural roads found to be more important during the period.

Fig. 4.3: Expenditure Ratio to Total Expenditure of Sample VDCs by Timer

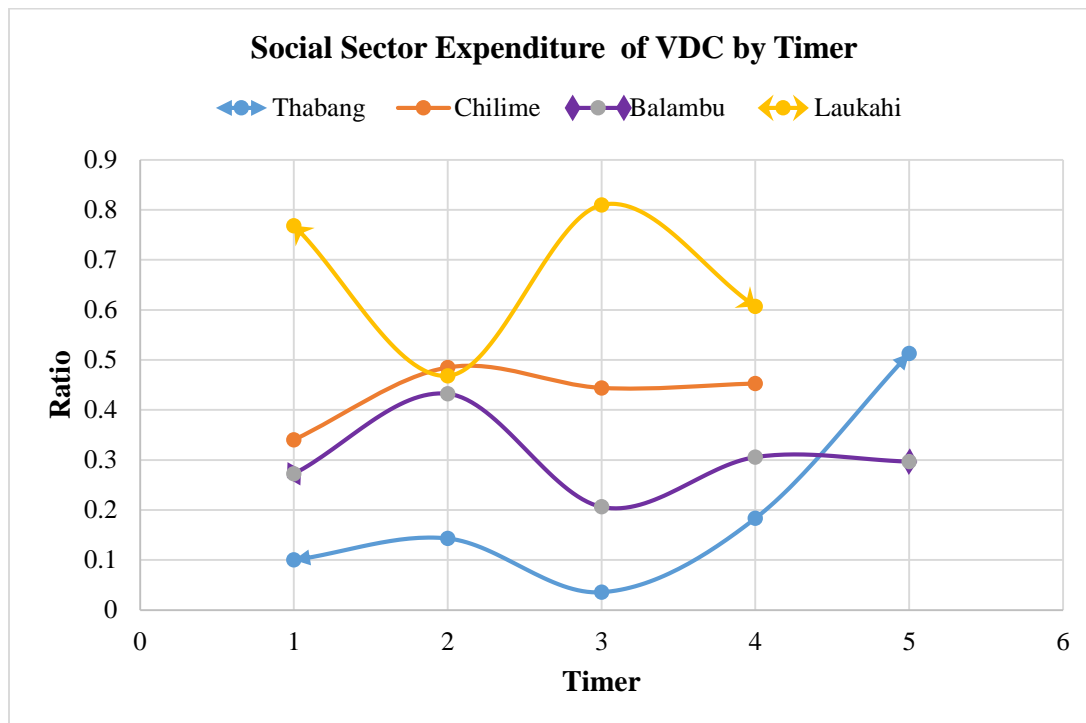


Source: Financial Document of Sample VDCs.

Let's compare the share of expenditure on some important bundles. We can observe the expenditure on rural infrastructure in higher priority for Thabang and Balambu VDC and higher importance given for social expenditure in Chilime and Laukahi (Fig. 4.3). Both education and health expenditure are in low priority for all four VDCs. However, among these two bundles, more preference given to education is evident. We can observe the share of education expenditure increasing by timer in Thabang VDC. But, there is decreasing pattern of rural infrastructure. Social expenditure shows highly fluctuating trend in this VDC. The social expenditure and expenditure on rural infrastructure are moving in opposite directions in Chilime and Laukahi VDCs. However, Balambu VDC also shows an interesting feature that we can observe the convergence of social and rural infrastructure expenditure at the initial timer. Then, these two take the divergent path for two median timers and then ends again to a converging point in last timer. The figure shows the uncertain and irregular pattern of local investment in the social sector as well (Koirala, 2011).

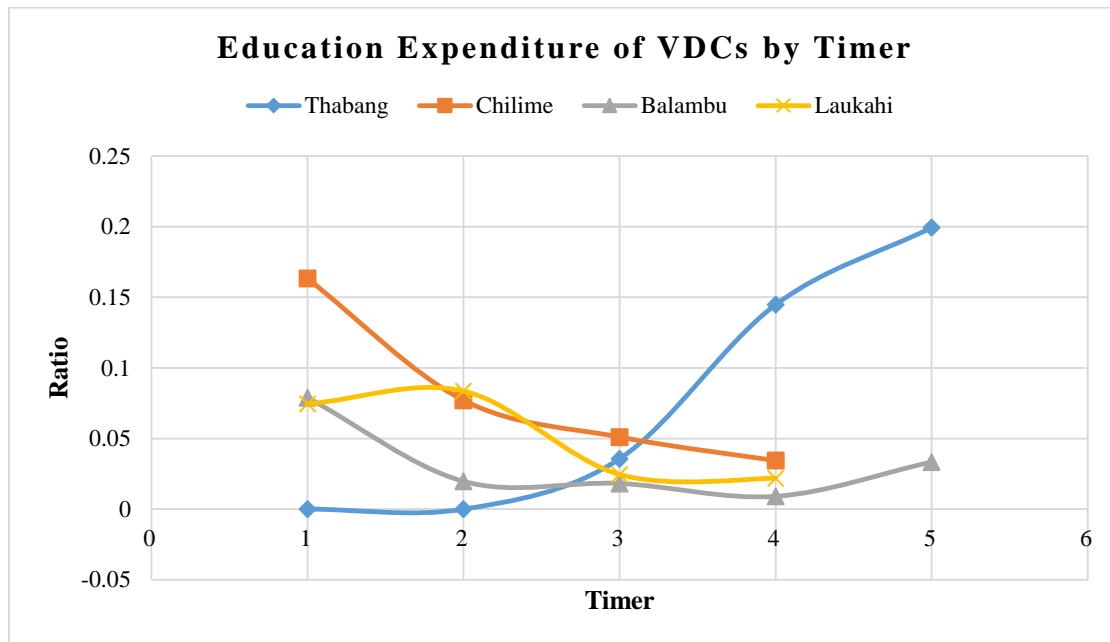
Now, come to the sector wise analysis. Except in Chilime VDC, social sector expenditure shows more fluctuating trends in all other three VDCs, higher most fluctuation in Laukahi and Balambu (Fig. 4.4). Chilime and Balambu show first increasing and then more or less decreasing trend from second timer and slightly rising in fourth. The urban VDC Balambu shows lower level of social sector expenditure share for all the points of timer. However, Thabang witnesses considerable rise in the share of social sector expenditure after the third timer. Thus, except Chilime and Thabang which possess more or less rising trend of social expenditure, other two VDCs have decreasing trend.

Fig. 4.4: Ratio of Social Expenditure to Total expenditure of Sample VDCs



Source: Financial Documents of Sample VDCs.

Fig. 4.5: Ratio of Education Expenditure to Total Expenditure in Sample VDCs

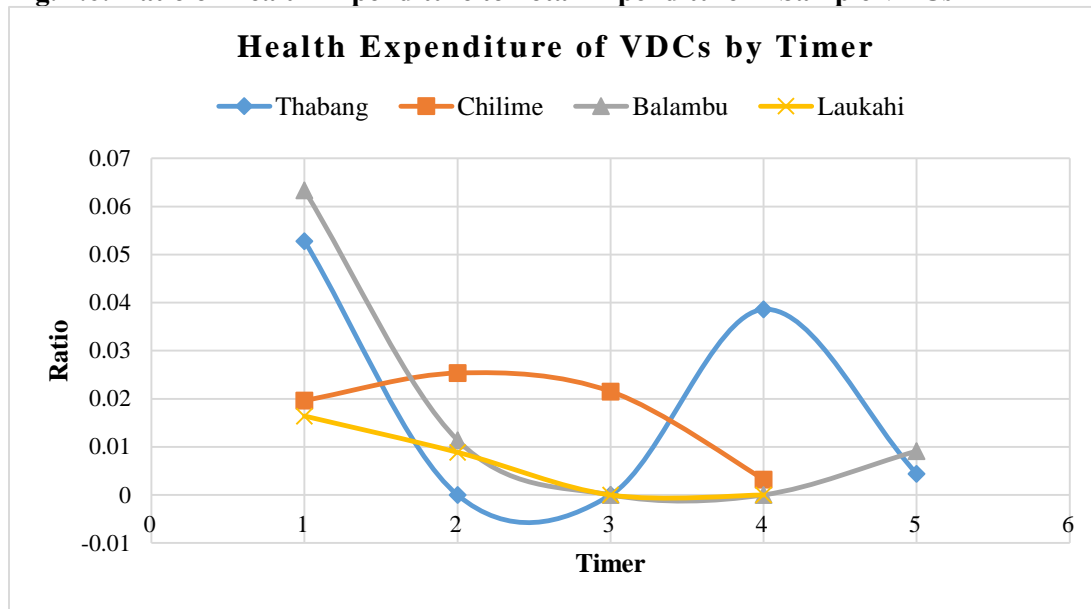


Source: Financial Documents of Sample VDCs.

Among the expenditure ratios (ratio to total VDC expenditure) of different social bundles, Thabang, a VDC from the Mid-western hill, has steeply rising curve of education expenditure among all the four VDCs which are characterised by downward sloping curves for the same (Fig. 4.5). The mountainous VDC, Chilime, is found to have decreased share of education expenditure over time. This pattern is firstly followed by Laukahi VDC from Terai and next by the urban VDC, Balambu.

There is mostly decreasing pattern of the share of health expenditure for all of four VDCs (Fig. 4.6). Where, Thabang shows highest fluctuation and finally, the downward sloping pattern of health expenditure. Here, the almost L shaped curve for Balambu VDC means the highly decreasing pattern of such expenditure up to the third timer, then a slight increase in the last period. The slightly convex curve for Chilime shows the increase in health expenditure from first timer to second and then continuously decreasing in the subsequent points of time. However, decreasing, but less fluctuating pattern exists in case of Laukahi VDC. Last but not the least, zero investment on education or on health sector in some points of time in Thabang, Balambu and Laukahi VDCs shows the low priorities accorded to these sectors though they are important bundles for human development (Fig. 4.2, 4.3 and 4.6).

Fig. 4.6: Ratio of Health Expenditure to Total Expenditure in Sample VDCs



Source: Financial Documents of Sample VDCs.

The high fluctuation on the expenditure patterns of given VDCs justify the irregularities in the decision of VDCs in resource allocation. There is no hard and fast rule practiced in resource allocation for different projects, unlike the principles of fiscal decentralisation. One thing is clear that people select the projects according to their existing priorities remaining within the framework provided by Ministry of Federal Affairs and Local Development (MoFALD) according to the norms of LSGA 1999 and its regulations. For example, Thabang, being a remote VDC, and facing serious problem of transportation, allocated more than 75 percent of its capital expenditure on the rural road project for three earlier years giving it high priority. Similarly, Balambu VDC has prioritized the projects on rural infrastructures such as rural roads and other community buildings, focusing on the implementation under people's participation scheme.

Most of the VDCs focus on rural infrastructure – mainly rural road projects (opening the tracks and gravelling the existing roads) as LBs (DDCs, VDCs and municipalities) are supplied with the responsibilities of “planning, construction and maintenance” of rural roads provided by National Transportation Policy, 2002 (World Bank, 2014a). As these projects may allow the space for ambiguity and corruption, in some cases, VDC officials

favour spending on them. Then, unlike the relation between fiscal decentralisation and poverty through the basic public service delivery, these LBs allocate a very low share of their resources to education and health care services sorting these as of low priority as in the case of Indian states (Ramakumar, 2008). Hence, contrary to the case of OECD countries (Busemeyer, 2007), our hypothesis that share of expenditure on health and education; and social expenditure as a whole increases with the increase in local public investment is mostly not accepted in the case of rural LBs (VDCs) of Nepal. But, among these two sectors, education expenditure gets more priority than health expenditure.

Also, unlike the Chinese experience⁶⁰, the education and health sector financial management is under the central government of Nepal through its line agencies. However, the institutional management (such as Village Education Committee and Health Centre Management Committee) is kept under the LBs through by-laws of education and health sector extension service provision as devolved since 2002 (World Bank, 2014a). Since the recruitment of teachers and health staffs and payment of their salaries are done by the central level through their line agencies, local officials consider the education and health services under the responsibility mainly of the central government administratively and financially. It is also because the major investment in the projects for infrastructure, buildings of such services as well are done by the central government. Hence, the locals do not focus more on these sectors.

To overcome the problem of high pupil-teacher ratio or shortage of teachers in public schools under their jurisdiction, VDCs allocate some funds from their own resources to recruit teachers on contract basis. Similarly, sometimes they allocate some resources to improve the infrastructures such as school building, playgrounds, furniture, etc., in addition to direct investment of central government in these projects. This validates the hypothesis that more preference is given to education than health when it comes to resource allocation by the VDCs. They spend on local health centres/ health posts/sub-health posts, under the

⁶⁰According to Shen & Zou (2008), in China, there is over-decentralisation of the education and health services. About 90 percent and 60 percent of the total budgetary expenditures on education and health respectively are made by sub-national governments.

heads such as purchasing some medicines, allowances for the volunteer health workers, some support for the vaccination programmes, etc. However, the magnitude of local expenditure on these projects is highly nominal but more effective for health campaigns and awareness building.

A major portion of social sector spending is expenditure on drinking water projects for most of the LBs. In addition, it has a considerable share of expenses such as social security allowances and widow allowances which are conditionally included along with the general block grant to the VDCs. Fluctuation in these expenses for different years due to the late transfer of social security allowances from the central government causes the fluctuation in the social sector expenditure as well. Similarly, specific programme expenditure for women, *dalits*, children and the physically disabled are also included in social spending. These constitute approximately 15 percent of the total expenditure of the VDC. Besides these, some LBs are found to focus on investment in capital share (e.g., investment share by Chilime VDC on Chilime Hydropower Project) and small electricity projects (e.g., by Thabang VDC) also.

The overall scenario tells us that though education and health sectors are highly important for human skill development, local governments do not necessarily focus on these sectors in some developing countries. In Nepal, unlike the over-decentralised public health service in China, where about 60 percent (in 2003) of total budgetary health expenditure is covered by counties and townships (Shen & Zou, 2008), Nepalese local governments are not more responsible for local health care services, and fiscal responsibility for this sector mostly rests on the central budget (Kelley, 2012). This is because, unlike in the developed countries, LBs of this country have unclear functional assignments and they prioritize their expenditure according to their existing need. Sometimes, they opt for the indirect route to meet their priorities if it is not supported by the general rules and regulations. For example, in some VDCs, people work for the infrastructure projects to compensate the amount spent on salary of teachers which is not permissible to spend from general block grants to VDCs. It is done by manipulating the accounts by changing the heads of expenditure as well (Inlogos, 2009).

Hence, we can conclude that unlike the general propositions on local government's expenditure, their priorities and the expenditure pattern vary according to the geographical location and the level of demand of the projects. It might also be determined by the existing level of development of those sectors, resource richness of local governments, and the level of the interests of the local elites. The unit cost of projects also could be important during the local project selection. Finally, the most important basis of local resource allocation is the investment area covered by and the rules of the central government. The actual expenditure pattern may differ between developed and developing countries, and within these, among country groups as well. No case of "one size fits all" can be observed in case of pattern of expenditure of local governments and their contribution to the human skill development and poverty reduction. Lastly, this statement of a respondent of remote Thabang VDC, elucidates the variation of local demand, according to locality and its level of development which play important role in the allocation of resources by LBs. He says:

"I hope for road facility to my VDC but it is only a dream till now" (Interview, 2/11/2012).

4.5.2 Public Investment on Basic Services: Municipal Experiences

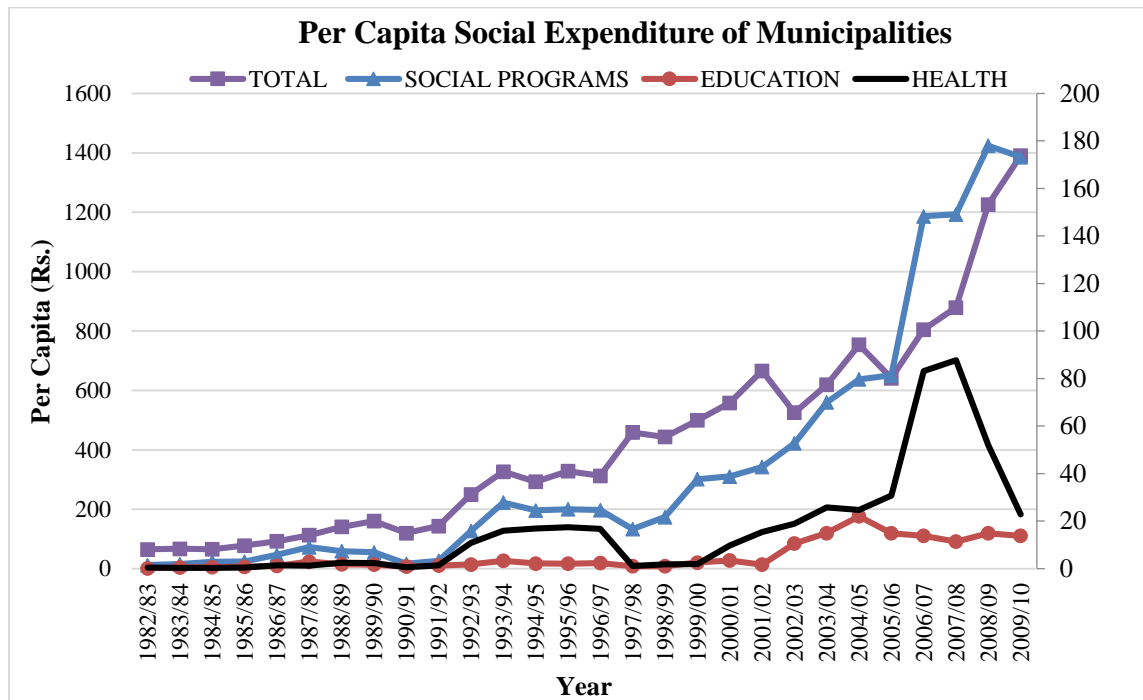
Graphical Analysis

The municipalities exhibit somewhat different trend of expenditure on the social bundles. Social bundle of municipal expenditure consists of expenditure on education, health, forestry, cultural/sports, disaster relief, financial assistance and miscellaneous headings. Here, per capita social sector expenditure is more or less rising with the rise of total per capita expenditure (Fig. 4.7).

Moreover, per capita expenditure on health and education are slightly increasing with the increase in total expenditure, except for the last two years where there is a remarkable rise in current and other capital expenditure. Unlike the VDCs, municipalities are found to spend more on health projects than the education ones. The changing priority from education to health expenditure observed over time coincides with the fast growth of

private sector in education sector in urban areas (Cyan et al., 2009; World Bank, 2014a). But, the share of these expenditures in the total expenditure is very low, showing the less priorities given to them.

Fig. 4.7: Trend of Per Capita Expenditure of Municipalities on Some Categories



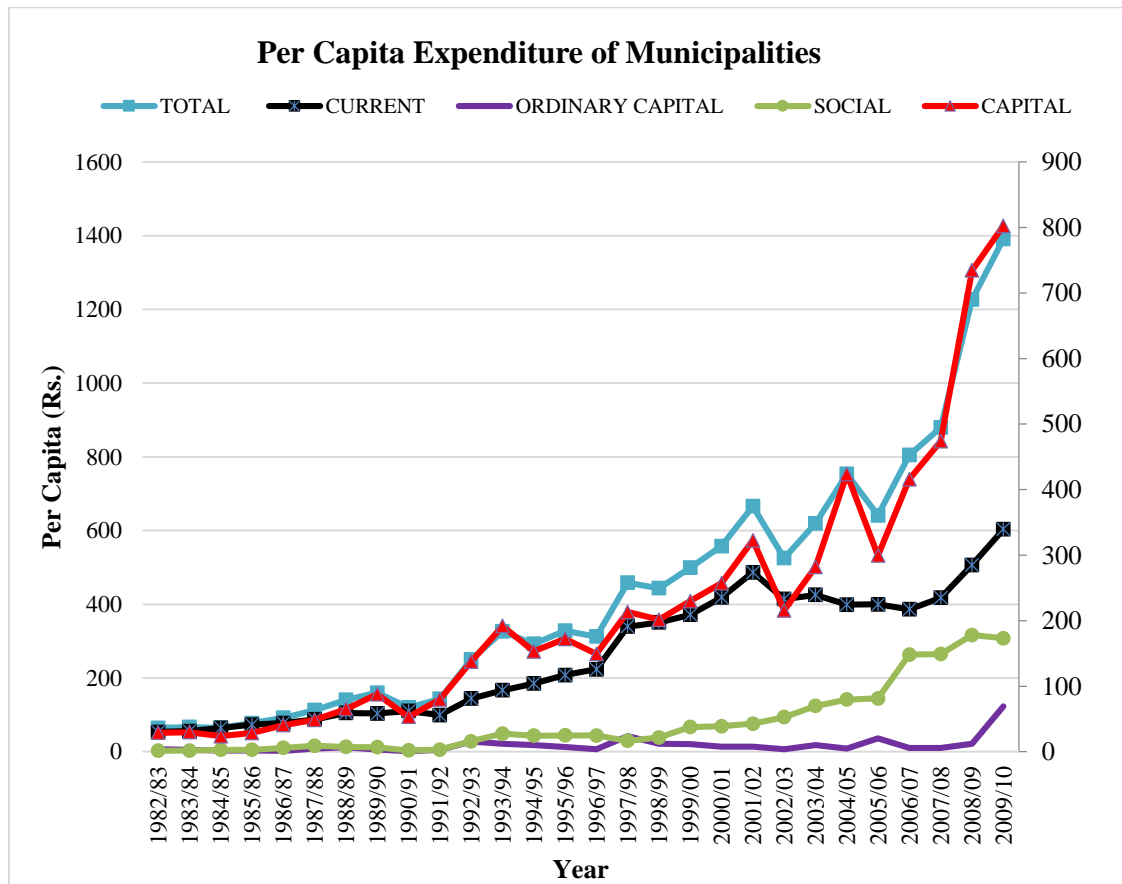
Source: Revenue and Expenditure Details of All Municipalities, Various Years, GTZ/udle.

We can observe capital expenditure of municipalities moving with the total expenditure. Social expenditure is also increasing with the increase in total expenditure but at a much smaller pace than the total expenditure (Fig. 4.8). Municipalities mostly select capital building projects such as inner roads, drainage, street lights, land/build purchasing, building construction, and other construction and development projects (Cyan et al., 2009; World Bank, 2014a). Next, current expenditure constitutes the second major share of total expenditure. However, due to the variation in priorities, a large variation in investment pattern can be observed among municipalities (Cyan et al., 2009).⁶¹ Among the social

⁶¹Among the three municipalities of different localities, in 2008, Bhaktapur Municipality which lies in capital valley was found to focus more on education and sanitation. However, Bhimeswar Municipality of hilly Dolakha district and Biratnagar Sub-metropolitan City of the eastern Terai spent 46 and 43 percent budget in rural roads respectively giving education and sanitation least priority (Cyan et al., 2009).

expenditure, there is a considerable share of financial assistance to needy individuals and institutions other than education and health expenditure. The social expenditure takes off towards a notable rise only after the year 1999/2000, i.e. after the LSGA 1999 and after 2006/07, i.e. after the historic people’s movement in 2006 or the starting of peace process.

Fig. 4.8: Trend of Per Capita Expenditure of Municipalities on Some Categories



Source: Revenue and Expenditure Details of All Municipalities, Various Years, GTZ/udle.

Regression Results

Let’s analyse the determinants of social sector expenditure in case of municipalities by using regression analysis applying aggregate data of 58 municipalities of Nepal covering the period of 28 years (1982/83-2009/10). Among the variables in the regression equations (4.1), (4.2), (4.3), income variable (Y) has been dropped due to the absence of data on income (GNI per capita or GDP per capita) for municipalities, though it was an important factor. Likewise, due to data unavailability, existing level of development is not included

in the equation though it is one of the most important determinants of the level of demand for services. Among the 28 observations, the lowest social sector expenditure share (to total municipal expenditure) observed in 1990/91 as 1.71 percent and the highest 18.42 in 2006/07. Likewise, the shares of education and health expenditure (in total municipal expenditure) have the lowest value in 1982/83 and 1997/98 respectively, and the highest values in 2004/05 and 2006/07 respectively. Table 4.1 presents the basic summary statistics of variables used which are estimated by using the formula given in section 4.2.

Table 4.1: Summary Statistics of Variables

<i>Variable</i>	<i>Obs</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Min</i>	<i>Max</i>
Social Expenditure	28	7.73	4.36	1.71	18.42
Educational Expenditure	28	1.12	0.74	0.10	2.93
Health Expenditure	28	2.94	2.74	0.24	10.33
Own Source Revenue	28	67.07	10.08	34.40	79.20
Grant Transfer	28	16.62	9.07	4.50	37.60
Loan	28	2.42	2.12	0.00	9.60

The regression result shows that grant transfer (share of grants to the total municipal revenue) has highly statistically significant effect on the variation of municipal expenditure on social programmes ($p < 0.01$). One unit change in grant transfer leads to 0.281 unit rise in share of social expenditure (Table 4.2). However, own source revenue of the municipality and revenue from loans (from internal/external borrowing and town development fund) are not found significant on the variation in magnitude of social expenditure as they are mostly allocated for capital investment. Year 2006/07 seems to be the year for a significant increase in social spending of the municipality. There is no clear justification from any literature on the dummy effects at the municipal expenditure as there is a dearth of literature on municipal fiscal activities. However, this may be because of increase in municipal financial activity directed to some extent towards social sector due to comparatively conducive political situation after the end of the conflict and the great political movement, and the starting of the peace process.

Table 4.2: Regression Estimates of Determinants of Social Expenditure of Municipalities

<i>Dependent/ Independent Variable</i>	(1) <i>Social Sector Expenditure</i>	(2) <i>Education Expenditure</i>	(3) <i>Health Expenditure</i>
Own Source Revenue ^a	0.0258 (0.104)		0.0752 (0.0864)
Grant Transfer	0.281 *** (0.0747)	0.0246 (0.0229)	
Local Borrowing ^a	0.249 (0.260)	0.0193 (0.0523)	0.231 (0.206)
Year 2006/07	7.008* (3.454)		7.488** (2.682)
Own Source Revenue		0.0120 (0.0210)	
Year 1987/88		1.438** (0.647)	
Year 2004/05		1.798*** (0.622)	
Grant Transfer ^a			0.126 (0.135)
Constant	3.117** (1.315)	-0.167 (1.732)	2.768*** (0.481)
Observations	27	27	27
R²	0.552	0.448	0.335
Adjusted R²	0.471	0.316	0.214
F	6.786	3.406	2.772
Dickey-Fuller unit root	-3.225	-3.152	-3.475

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ Note: ^a variables are in the first difference.

No explanatory variable seems to have a significant relationship with educational expenditure and health expenditure captured as their respective shares in total municipal expenditure. Hence, the revenue variables are not significant in these cases, but have a positive relationship. The dummy years are significant as there was a least educational expenditure in the year 1987/88 and more in 2004/05. Likewise, we can observe the significant increase in health expenditure and social sector expenditure as a whole in the year 2006/07. The correlation between the variables used in the analysis also gives the idea about the level of association among them (Appendix Table IV-2). The observed low values of R^2 for model 2 and model 3 show the less explanatory power of the independent variables to explain the change in health and education expenditures. The values of Dickey-

Fuller unit root test which are more or less near the critical values implies the models more or less free from non-stationary problem.

The descriptive results imply that our hypothesis that there is an increase in expenditure on basic services to increase in total local public investment (revenue as proxy), holds, in the case of aggregate social sector expenditure. But, the hypothesis is rejected in the case of educational and health expenditures, contrasting the findings of Arze del Granado, Martinez-Vazquez, & McNab (2005) that fiscal decentralisation leads to increase in the shares of education and health expenditures in total local expenditure. However, the positive coefficients of own source revenue and grant transfer implies the increase of categories of social sector expenditure with the increase in revenue categories, though the changes are not significant. Municipalities focus on expenditure on social programmes in aggregate (such as education, health, culture/sports, disaster relief, financial assistance and others) in general, if they have more resources to spend. But they do not focus so much on the education and health expenditures in particular, but focus more on other items of spending. Here, central expenditure on those sectors could be more effective. However, we could not include the variables representing central expenditure in municipalities on education and health expenditure through its line agencies due to data unavailability.

Besides the central schemes, educational institutions in municipalities themselves can meet the resource deficit through school fees and contributions from their urban residents with higher incomes (Henderson, 1968). Similar is the case of health services as well. It reduces the demand for public education and health expenditure compared to the spending on other services. We can also say, public expenditure on education rises where the public education institutions are more vital and it falls in the presence of the strong private education sector, as in the case of Bolivia (Faguet & Sanchez, 2008). It is applicable in the case of health services and health expenditures as well. Here, Wagner's "law of expanding public expenditures" that "the public expenditure (including social spending-such as education) will increase with the increase in urbanization, population density, industrialization, through the demand for more public services" and "increase in growth and income"

(Buracom, 2011)⁶² do not follow in the case of municipal expenditure on education and health. Hence, the law could be locally applicable in the countries and localities where the public services are more strong and vital, unlike the case of developing countries like Nepal. However, it could be viable in the case of central expenditure on these services. The study could be more robust if it was handled with large data set and panel data analysis, which could not become possible due to limit of data availability.

4.6 Conclusion

From the aforementioned analysis of expenditure pattern of the two types of local government, we can draw some conclusions. First, the hypothesis that expenditure share on basic services such as basic education and health increases with the increase in total local public investment, does not hold always in case of Nepal. The pattern of such expenditure is not found following the theoretical propositions in the case of rural local bodies-VDCs. But, overall social sector expenditure is found moving more or less according to the total local public expenditure in urban local governments (municipalities). Second, such types of expenditure pattern are conditioned by the location of local government, level of local demand for those services, types of local government and the powers and responsibilities they are provided with. For example, from the graphical description we can observe comparatively more focus on education expenditure in VDCs than the health expenditure but vice versa in the case of municipalities.

According to the results, resource richness of local government does not seem to be effective for the pattern of local public expenditure. The result implies that possibly there could be other determinants of the patterns of local social expenditure beyond the variables included in this analysis. For example, the effect of transparency, accountability, the extent of elite capture of institutions, possibility of corruption and other politico-economic factors in decision procedure could also be determinants of the nature and the magnitude of

⁶²Adolph Wagner (1835-1917) formulated a “law of expanding public expenditure” which states that “the public expenditure (including social spending-such as education) will increase with the increase in urbanization, population density, industrialization through the demand for more public services” and “increase in growth and income” (Buracom, 2011).

expenditures on these social spending. These issues were not discussed in this chapter but are taken up in Chapter 6.

Third, from the analysis and the literature studied, we can come to a point that the actual practice of expenditure pattern could vary among developed and developing countries, and within these country groups as well, across different periods of time (Tanzi & Schuknecht, 2000; Tridimas, 2001), and according to the nature and practice of expenditure assignments performed by local governments. Finally, our analysis reveals that no case of “one size fits all” can be witnessed in the case of pattern of expenditure of local governments and their contribution to the human skill development and poverty reduction through capability improvement of the poor. Other aspects of the study, the performance of LBs and effectiveness of local service delivery is discussed in Chapter 6.

Historical data on the breakup of the expenditures of VDCs would be more appropriate to get more general results, which the study could not include in this analysis because of unavailability of such data. The case of the expenditure pattern of DDCs also became impossible due to the same reason as data scarcity.

CHAPTER 5: LOCAL PUBLIC SERVICES AND POVERTY IN NEPAL

5.1 Introduction

As discussed in earlier chapters, the main target of poverty reduction strategy is to reduce deprivation caused by dearth of basic public goods available to the poor. The poverty reduction packages – either "capacity improving" (long-run) or "safety net" (short-run), typically consist of the supply of basic public goods to the poor (Bardhan & Mookherjee, 1998; Rao, 2002). The issue of "pro-poor growth" strategy for poverty reduction through employment and income generation has also become important in the last two decades. Both of these emphasise human skill development of poor through the provision of, at least, basic public services, like, education and health. In addition, promotion of irrigation facilities, agricultural services etc. directly act on income poverty by generating employment and incomes for the poor.

Because of their low incomes, poor and marginalised people have to depend more on the public services (which are supposed to be cheaper or even freer than the private ones), like, basic education, basic health, etc. Hence, supply of basic public services is supposed to benefit the poor more in comparison to the non-poor. But the choice of these services and the magnitude of gain to the poor will depend on the efficiency (both quantity and quality) of service provisions which again depends on the political economy, such as the level of local democracy, chances of elite capture, ambiguity, corruption, etc. (Bardhan & Mookherjee, 1998; Braun & Grote, 2000).

This chapter tries to examine the issues raised above empirically in the case of Nepal by using the survey data of VDCs with various characteristics (geographical, social and fiscal). It tries to understand the dependence of categories of people on public education and health services. It examines the role of those services in improving the living standards of the poor (across regions and the resource richness of the VDCs).

5.2 Public Services and Poverty: Theoretical Framework

As discussed in the theoretical chapter, a consumer chooses the bundles of goods and services through cost-benefit analysis among the logical orders of the bundle in a consumption basket (Ricker and Ordeshook, 1973 as cited in Wells & Crain, 1992). However, there may be a role for self-perception of the consumer as well in choosing the bundle of goods and services (Wells & Crain, 1992), for example, education and health services in this study. The other factors are the budget and time constraint, and also the level of information the consumer has about the price and market behaviour. Thus, we can say that both economic and non-economic factors influence the consumers' choice of the bundle of goods and services. Hence, differences in socio-economic status of consumers determined by their household budget and social status affect their choice of goods and services such as education and health care provisions. Moreover, a consumer's decision is determined as well by the cost and quality of services available.

Because of their household budget constraint, the poor cannot purchase their necessities in the market (Bardhan & Mookherjee, 2011). Therefore, the poor have to depend more on public services. The story does not end there. Beyond the budget constraint, availability, cost effectiveness, quality of services, level of awareness of the poor, intensity of the need are also factors determining the choice of public goods and services (Sen, 1997). However, as pointed out earlier, elite capture, black market and corruption, etc. may bring down the extent of benefit the poor receive from public services through the degradation of quantity and quality of goods and services provided (Kumar, 2002). The following sections test these issues empirically in the case of education and health services in Nepal.

Based on the above theoretical assumptions and research questions, we test the following hypotheses empirically in this chapter:

Hypothesis 1: Household per capita expenditure ratio (ratio of household expenditure on education and health to total household expenditure) increases with the increase in total household income, holding everything else constant.

According to our earlier discussion, education and health services are crucial factors for human skill development which affect employment and income of a person. Though food consumption is the subsistence requirement of a household, it tends to spend the residual money, after the food consumption expenditure, on the education of their children and necessary health services to the members of the household. However, health services could be more basic and urgent. But, the money available to spend on these categories will differ according to the level of income of the household.

Hypothesis 2: Poor are more likely to choose public services than the non-poor, i.e.

- a) Choice of public education will increase with the decrease in household income, *ceteris paribus*.
- b) Choice of public health will increase with the decrease in household income, *ceteris paribus*.

On the basis of *hypothesis 1*, as the poor have little money to spend on education and health, they have to opt for the cheaper or free services to meet these needs. Moreover, public services are cheaper or free because they are provided by the benevolent government. The objective of this type of government to maximize public welfare, assuming the provision of equivalent welfare weights to both the poor and the non-poor. Here, because of household budget constraint, the poor will be unable to choose the costlier private services in the market. But, the choice of the services will depend not only on their cost but also on their availability – in terms of both quality and quantity. These understandings are the foundation of poverty reduction strategy through public service delivery. If the hypotheses hold, then public spending on the basic services, like, health and education will have implication for reducing poverty. Next, as discussed in the fourth chapter, it is supposed that local government, having more information about local needs, and then it will investment on those basic services. Thus, public service delivery is one of the threads of the linkage of fiscal decentralisation and poverty reduction outcomes. But, this situation prevails if there is no local capture and corruption that may result in lowering the quantity and quality of the public services.

In any analysis, the choice of the model depends on the nature of the variables (mostly, the dependent variable whose probability we are going to estimate). In the case of *hypothesis I*, we are going to observe the relation between consumption (household per capita expenditure on education and health care consumption) and income (household per capita income). Considering as the Keynesian consumption function (Mankiw, 2003), we choose the linear regression model to test this hypothesis. It projects conditional mean of response variable y as the linear function of k explanatory variables as,

$$E[y / x_1, x_2, x_3, \dots, x_k] = \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \dots + \beta_k x_k$$

Given the values of fixed parameters β_s , the regression model predicts the average value of y in the population for different values of explanatory variables $x_1, x_2, x_3, \dots, x_k$. Then, for the cross sectional sample from population, the linear regression model for each observation in the sample $i=1, 2, 3, \dots, N$, will be,

$$y_i = \beta_0 + \beta_1 x_{1i} + \beta_2 x_{2i} + \beta_3 x_{3i} + \dots + \beta_k x_{ki} + \mu_i \dots \dots \dots (5.1)$$

Where, μ is a stochastic disturbance (control factor) which represents the all unobservable factors which might affect y . Here, $N > k$ (assuming more samples than the parameters to observe the statistical inference). β_0 is a constant term and $\beta_1, \beta_2, \beta_3, \dots, \beta_k$ are the population parameters of $x_1, x_2, x_3, \dots, x_k$ variables respectively. Thus, there are $k+1$ population parameters. Another important assumption in the general multiple regressions is that the conditional expectation of error term μ is,

$$E [\mu / x_1, x_2, x_3, \dots, x_k] = 0 \dots \dots \dots (5.2)$$

This denotes that there is no correlation between explanatory variables and the error term (Baun, 2009; Woolridge, 2009).

In our analysis, as discussed earlier, household expenditure ratio (*hhexpratio*, which captures the per capita household expenditure on education and health in the aggregate) is the dependent variable. The explanatory variables are household size (*hhs*), per capita household income (*hhinc_pc*), remittances (*remit*), total land-holding (*tothldng*), education of household head (*edhh*) and major occupation of household head (*occup*). Then, our empirical model becomes,

$$hhexpratio_i = \beta_0 + \beta_1 hhs_i + \beta_2 hhinc_pc_i + \beta_3 remit_i + \beta_4 edhh_i + \beta_5 occup_i + \mu_i \dots \dots \dots (5.3)$$

Where, household, $i=1, 2,3,4,5,\dots\dots, 299$; and *edhh* and *occup* are the categorical variables with six categories each.

In the case of hypothesis 2, we are testing the household choice for education services and health services. As said in rational choice theory, parents who are utility maximiser, make decisions from clear value preferences on the basis of cost-benefit analysis and expect for the efficient activities from the service providers for better educational outcome and preference matching of their children (Bosetti, 2004; Hatcher, 1998). Here, the choice depends on the characteristics of the parent (household) such as household income, education of the parent, etc. and characteristics of the available services such as access, quality, cost, neighbourhood, etc. (Goldring & Phillips, 2008). Other characters, like, household size, sex, occupation of the household head, birth order, etc., also explain the level of individual's preference to the local basic services. Similarly, other unobservable variables such as social networks, interpersonal and formal networks, parental involvement, parent's satisfaction, also have an effect on parental choice of the services (Howell & McLaughlin, 1989; Goldring & Phillips, 2008).

Goldhaber (1996) has analysed parental choice of schooling as the phenomenon dependent on expected performance in the respective sectors through maximization of utility function. But, in our model, proxies of poverty (along with other family characteristics) are the major explanatory variables and other non-observable factors are controlled through disturbance

term.⁶³ Let's suppose, U_{i1} and U_{i2} are the maximized utility of i^{th} household choosing j^{th} service (private or public) respectively. Assuming U_{ij} as the linear function, we have the equation,

$$U_{ij} = \alpha_0 + \alpha_1 X_{ij} + \alpha_2 Y_{ij} + \alpha_3 Z_{ij} + \dots + \alpha_k K_{ij} + \mu_{ij} \dots \dots \dots (5.4)$$

Where X, Y, Z, \dots , and K are the explanatory variables and μ is the error term. Here, α_s are assumed to be positive for the assumption of maximization of utility with the increasing value of the given variables. However, we have to analyse the choice of one (public) service with reference to another (private) service; we have to follow the latent variable model. Let, $L_i = U_{i1} - U_{i2}$ be the latent variable determining the choice of service of i^{th} household. If $L_i \geq 0$, household i uses public services and it selects for private services, if $L_i < 0$.

$$L_i = U_{i1} - U_{i2} = \alpha_1 (X_{i1} - X_{i2}) + \alpha_2 (Y_{i1} - Y_{i2}) + \alpha_3 (Z_{i1} - Z_{i2}) + \dots + \alpha_k (K_{i1} - K_{i2}) + (\mu_{i1} - \mu_{i2}) \dots (5.5)$$

Then, assuming $C_i = 1$, for the choice of public service and $C_i = 0$, if choice of private service. Then the probability of choosing C_i will be,

$$\begin{aligned} \Pr [C_i = 1] &= \Pr [L_i \geq 0] = \Pr [\alpha_1 (X_{i1} - X_{i2}) + \alpha_2 (Y_{i1} - Y_{i2}) + \alpha_3 (Z_{i1} - Z_{i2}) + \dots \\ &+ \alpha_k (K_{i1} - K_{i2}) + (\mu_{i1} - \mu_{i2}) \geq 0 \quad \text{and} \\ \Pr [C_i = 0] &= \Pr [L_i < 0] = \Pr [\alpha_1 (X_{i1} - X_{i2}) + \alpha_2 (Y_{i1} - Y_{i2}) + \alpha_3 (Z_{i1} - Z_{i2}) + \dots \\ &+ \alpha_k (K_{i1} - K_{i2}) + (\mu_{i1} - \mu_{i2}) \geq 0 \dots \dots \dots (5.6) \end{aligned}$$

Alternatively,

distinguishing observed binary outcome, y and underlying continuous unobservable variable, y^* , we can have latent variable model as,

$$y^* = \beta_0 + \mathbf{x}\boldsymbol{\beta} + \mu, \quad y = \begin{cases} 1 & \text{if } y^* > 0 \\ 0 & \text{if } y^* \leq 0 \end{cases} \dots \dots \dots (5.7)$$

⁶³It is because the major concern of the research is to observe the relation between poverty and choice of services.

Where, \mathbf{x} represents the all sets of explanatory variables.

Here, probability,

$$P \equiv \Pr (y=1|x) = F (\beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \dots + \beta_k x_k + \mu) = F (\beta_0 + \mathbf{x}\boldsymbol{\beta} + \mu) \dots \dots \dots (5.8)$$

Where $F [.]$ is the cumulative distribution function (c.d.f.), i.e. logistic c.d.f. for logit model and standard normal c.d.f. for probit as this ensures to satisfy the limit of value of P between zero and one ($0 < P < 1$).⁶⁴

In testing *hypothesis 2 (a)*, we have dependent variable types of school (*typescl*) which carries value 0 for private and 1 for public. Independent variables are demographic character of child - sex (*sex*), age (*age*), birth order (*border*), grade (*grade*), household size (*hhs*), household per capita income (*hhinc_pc*) or household per capita income quintile (*inc_quintile*), remittance (*remit*), total land-holdings (*tothldng*), education of household head (*edhh*) and major occupation of household head (*occup*).

For *hypothesis 2(b)*, our dependent variable is health service used (*hsu*) which takes value 0 for private and 1 for public. Explanatory variables are the demographic character of household- household size (*hhs*), household per capita income (*hhinc_pc*) or household per capita income quintile (*inc_quintile*), remittances (*remit*), total land-holding (*tothldng*), education of household head (*edhh*) and major occupation of household head (*occup*). Then our model will be, for each observation, probability

$$\Pr (typescl=1|x) = F (\beta_0 + \beta_1 sex + \beta_2 age + \beta_3 border + \beta_4 grade + \beta_5 hhs + \beta_6 hhinc_pc + \beta_7 remit + \beta_8 tothldng + \beta_9 edhh + \beta_{10} occup + \mu) = F (\beta_0 + \mathbf{x}\boldsymbol{\beta} + \mu) \dots \dots \dots (5.9)$$

$$\Pr (hsu=1|x) = F (\beta_0 + \beta_1 hhs + \beta_2 hhinc_pc + \beta_3 remit + \beta_4 tothldng + \beta_5 edhh + \beta_6 occup + \mu) = F (\beta_0 + \mathbf{x}\boldsymbol{\beta} + \mu) \dots \dots \dots (5.10)$$

For the VDC level analysis, for school choice of i child of v VDC, our equation will be,

⁶⁴ For more detail, see Woolridge (2009) and Cameron & Trivedi (2009).

$$\Pr (typescl_{iv}=1|x) = F (\beta_0+\beta_1sex_{iv}+\beta_2age_{iv}+\beta_3border_{iv}+\beta_4grade_{iv}+\beta_5hhs_{iv}+\beta_6hhinc_pc_{iv}+\beta_6remit_{iv}+\beta_7tothldng_{iv}+ \beta_8edhh_{iv}+\beta_9occup_{iv}+ \mu_{iv}) = F (\beta_0 + \mathbf{x}_{iv} \boldsymbol{\beta}+ \mu_{iv}).....(5.11)$$

Where, $i= 1, \dots, 541$ and $v = 1, 2, \dots, 6$.

Similarly, for choice of health service of i household of v VDC, our equation will be,

$$\Pr (hsu_{iv}=1|x) = F (\beta_0+\beta_1hhs_{iv}+\beta_2hhinc_pc_{iv} +\beta_3 remit_{iv} + \beta_4tothldng_{iv}+\beta_5edhh_{iv} +\beta_6occup_{iv}+\mu_{iv}) = F (\beta_0+ \mathbf{x}_{iv}\boldsymbol{\beta}+ \mu_{iv}).....(5.12)$$

Where, $i=1, \dots, 299$ and $v = 1, 2, \dots, 6$.

As discussed above, we are using a multiple regression method with OLS estimation to test **hypothesis 1**, because we have unary and continuous dependent variable and more than two independent variables. According to Wooldridge (2009), it is an important model in which we can deal with many control variables that can have simultaneous effect on the dependent variable and also with the correlated explanatory variables, handling non-experimental data. Importantly, it can accommodate fairly general functional form relationships in the estimation of the parameters of the model. Here, in testing both the hypotheses, dummies are used for the variables— education and occupation of the household head.

Similarly, the binary dependent variable with discrete characteristics in order to test **hypothesis 2** urges us to follow the logit/probit model. The dependent variables are qualitative and limited (taking value either zero or one). Here, LPM (Linear Probability Model) is not appropriate because it may generate predicted probabilities that are $0 < P > 1$ and the constant partial effect of any explanatory variable (Wooldridge, 2009).

5.3. Other Econometric Issues

During the process of estimation, we may have to deal with some econometric problems which may make our regression results biased, non-consistent or both. So, it needs to

identify and resolve those problems to get the fair estimates from our analysis. Econometricians have developed different tools to diagnose and fix the problems that arise according to the nature of the model. In this analysis, we have followed some procedures to deal with some of the problems. We have used Pearson's χ^2 or Hosmer-Lemeshow χ^2 test (according to the need) to observe the goodness of fit of the model. Again, to test the heteroskedasticity, Breusch-Pagan/Cook-Weisberg test is performed and variance inflation factor (VIF) is estimated to check the multi-collinearity among the variables. However, robust standard errors are estimated to overcome the problem of heteroskedasticity.

5.4 Introduction to Variables

Since our objective in this chapter is to examine the extent of dependency of the poor on public services, in this empirical analysis, our dependent variables are the choice of basic public services- public education and public health, for the two major analyses. In case of choice of public education, the dependent variable is the "types of school" the households have chosen for the education of their children. This is a binary variable carrying the value coded "1" for "public" or "0" for "private". However, there are very few observations for the "other" types of institutions with informal education, like, religious schools, are dropped to make the analysis simpler and easier. Similarly, in the case of analysis of choice of health services, "health service used" is the dependent variable, which also possesses dichotomy in characteristics- whether "public" or "private" coded as "1" and "0", respectively. Here, observations for "other" institutions is dropped because there are few cases found in the survey. The "public" school consists of all the government schools and community schools run the government support. However, the "private" captures the schools run on a purely private basis.⁶⁵ Similarly, in the case of health institutions, "public" consists of government hospitals, health centres/health posts/sub-health post and "private" includes to the private hospitals, clinics, institutions, practitioners and pharmacy.

⁶⁵ Government of Nepal has classified schools into two categories, namely, community schools and institutional schools. The former includes all the public schools supported by government while the latter consists of all the privately run schools.

In the analysis, "poverty" is the core independent variable. It is very difficult to get the data on poverty for VDCs. So, for simplicity, proxies for poverty - "household per capita income", "remittances", "total land-holding" are taken as core independent variables, for all three analyses. Along with these, categories of "education of the household head" and "major occupation of household head" are taken as other important independent variables for both the cases (use of education services and use of health services). However, in case of estimation of the use of education services, other variables such as sex, age, birth order and grade of the child; and the size of the household are taken as other additional control variables.

For the study of trend of spending of poor on basic services- the dependent variable is "household expenditure ratio", i.e. ratio of household expenditure on the basket of education and health to the total expenditure of household. Here, the core independent variable is household per capita income. The other explanatory variables are- remittances, total land-holding, education and occupation of the household head followed by the size of the household.

Among the variables, "household per capita income" is the most important proxy for income poverty.⁶⁶ Moreover, income satisfies the monotonicity axiom and the transfer axiom of poverty measure.⁶⁷ "Household per capita income" is the ratio of total household income to household size where household income is calculated by adding up the income of a household from different income sources after deducting the operating expenses. Here, household per capita income of i^{th} household,

$$H_{pc_i} = \frac{\sum_{j=1}^n H_{ij}}{P_i}$$

⁶⁶According to Keynes, income is the primary determinant of consumption (Mankiw, 2003). Since poverty is a situation of income falling short of basic consumption, income becomes primary determinant of poverty.

⁶⁷ Two axioms for "ethical measure of poverty" proposed by Sen (1976, 2011a):

a) Monotonicity axiom- a reduced income for a poor person should result in an increase of poverty measure, *ceteris paribus*.

b) Transfer axiom- a pure income transfer from poorer to richer person should lead to increase in the poverty measure, *ceteris paribus*. (Foster et al., 1984; Ray, 2006; Sen, 2010, 2011a, 2011b)

Where H_{ij} is the total household income from j sources ($j=1, 2, 3, \dots, n$) (less operation expenses) of i^{th} household and P_i is the size of the i^{th} household. However, income quintile is estimated from household per capita income, according to need.

Remittance has a considerable share in the National GDP of Nepal. It is one of the important sources of consumption expenditure even in the rural parts of Nepal. Furthermore, according to poverty estimation by the central statistical department of Nepal based on NLSS III (2011), both in rural and urban areas, poverty is found to decrease with the increase in the size of land-holdings except the landless (CBS, 2011c). In this research work, "remittance" is the dichotomous variable possessing the character as- household "receiving remittances" or "not receiving remittances". Next, "total land-holding" is taken as another proxy for poverty. For simplicity, total holding irrespective of the land quality is taken in consideration in this study. Here, the role of land-holding is not observed as more effective in this analysis. It is because its effect on production and income depends not only on the quantity, but also on the quality (productivity) of land which varies with the variation in the locality. For example, in hill and mountain areas, a household owns large area of land but barely productive. Here, clubbing together all types of land made the analysis easier, but devalued the possible robustness of the variable.

Through the increased level of information, "education of the household head" plays an important role in the choice of the services though there may be some influence of other members of households as well in decision making. Here, it is a discrete variable with six categories regarding the level of education- illiterate, literate only, primary, secondary, higher secondary, and graduate and above. Moreover, the variable "major occupation of the household head" is also discrete and categorical with six categories- farming, wage labour, business, service inland, foreign services and others. Here, these two variables are discrete variables and they are heterogeneous in income effect even within the categories. In the rural areas, a household head may possess multiple occupations and household income is affected by the income of the other members of the household as well. So, it is difficult to find the "major occupation of the household head" as the clear determinant of the decision for the choice of services, basically in rural areas. Among the other

independent variables, "household size" is numerical (float) variable where "birth order" (of child) and "grade" are discrete variables with values in ascending order. "sex" (of child) is a binary variable carrying value "0" for "female" and "1" for "male".

5.5 Data and Methodology

As in earlier discussions and theoretical framework presented, we need data for analysis of the relation between poverty and the use of basic services, and hence the access to local public services and poverty reduction. In other words, in this chapter, we need to study the dependence of the poor on the basic public services such as education and health. There is a dearth of local level data on poverty or its proxies and other required variables as pointed out in the analytical framework. In the survey, though data could be collected on many variables affecting the aforesaid relationships in this brief study, data on proxy variables such as household income, total land holding (those having direct effect) have been collected during field survey. Likewise, some variables covering the expenditure and use of public services such as education and health services, are collected through the survey design discussed in Chapter 1, sub-section 1.7.2.1. The questionnaire used for the survey has been given in Appendix Table V-15.

The data used in this analysis were collected from 301 households of six different VDCs of four different districts of Nepal as explained in later subsections. For the study of the use of public education, 541 samples (children) are taken. Household dataset would not work in this case. It is because; among the children from the same house, some may have been sent to public school and some to private one. But in the case of use of health services, household level dataset is used. Among the 301 sample households, full information is available only for 299. Two informants from Thabang VDC of Rolpa district were found to be enjoying collective life in Maoist Commune and they could not be covered under the household level. Since the VDC level data on poverty and other related variables for the survey period was unavailable, the survey tried to obtain the required data for the analysis.

To get the data on household income, information on the annual income were collected which is earned by households from different occupations and sources— crop production, livestock, wage labour, business (small/large), services (service within the country), remittances and other sources, like, interest from lending. The household income is the net amount after deducting the cost of operation. The reference period was from April 2011-March 2012. It is difficult to get an actual income of a household from crop production, wage labour, and business. We have to depend totally on the income reported by the respondent. There may be problem in accuracy of their report as they may not remember the actual amount they have earned from crop production in the previous year. Or some may have been reluctant to disclose [may be] due to the fear of tax authorities. But, the surveyor asked, to get a more accurate report, a number of cross questions and also by taking them into confidence.

The survey obtained information on the total number, amount and sources of remittances received by the recipient household during the reference period. Here, of the total sample only 17 percent of the households received remittances. In case of total land holding, data collected in local unit were converted to a common unit- hectare. Raw data consist of the categories of land- upland (*bari*)/lowland (*khet*), and irrigated/non irrigated. Among the categories, lowlands are more productive than the uplands, in general.

Data was collected on household expenditure on food items, and non-food items: education, health and other. Here, the expenditure on education is found to be more or less planned and the health expenditure as urgent. To get information on services used, the respondents were asked to rate the choice of different types of education and health institutions (which are run either publicly or privately or other) that the household used during the reference period. Next, to understand the rationale of choice of services, perceptions of respondents were collected on the service opted as being- "nearer" or of good "quality" or "cheaper" or "other" causes. Among these options, "quality" is defined as- prompt and good care, and better services.

Based on those survey data, the issues raised in the first section of this chapter are studied by using simple OLS and logit regression method as discussed in the theoretical section. The simple OLS regression model is used to estimate the relation between household expenditure on education and health along with the household income level and other proxy variables of poverty. However, to find the association between the choice of the services (education and health) and poverty (defined by household income and other proxy variables), logit regression model is used. Similarly, other descriptive statistics and χ^2 tests are also used according to the need of the study. Importantly, some narratives collected from interviews are used according to the need to fill the gap of statistical inferences in response to support the results.

5.6 Introduction of Study Area

Geographical, Demographic and Socio-economic Conditions

For the survey, six VDCs from different localities of Nepal are selected. Those are: Pakali, Laukahi, Chilime, Balambu, Mijhing and Thabang. Geographically, Pakali and Laukahi VDCs are in the Sunasari district of the eastern Terai region. However, Chilime and Balambu VDCs belong to Central Development Region, are from Rasuwa district of Central Mountain and Kathmandu district of Central hill respectively. Mijhing and Thabang VDCs are from the Rolpa district of Mid-western hill. Among the sample VDCs, Balambu has highest population density whereas Chilime has very low. Thabang and Chilime are the poorest VDCs in terms of poverty head count rate and Balambu is the least poor. Similar pattern prevails in the case of most socio-economic indicators as given in Appendix Table V-1

Brief Notes on Fiscal Health of Sample VDCs

Among the sample VDCs, urban Balambu is the richest VDC enjoying more the benefit of fiscal decentralisation as it collects more own source revenue and achieves more grant than other VDCs (Appendix Table V-2). Then comes Pakali VDC. Thabang and Mijhing from

NEPAL

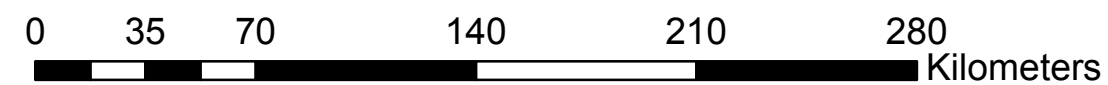
Location Map of Sample Village Development Committees (VDCs)



Legend

 Sample VDC

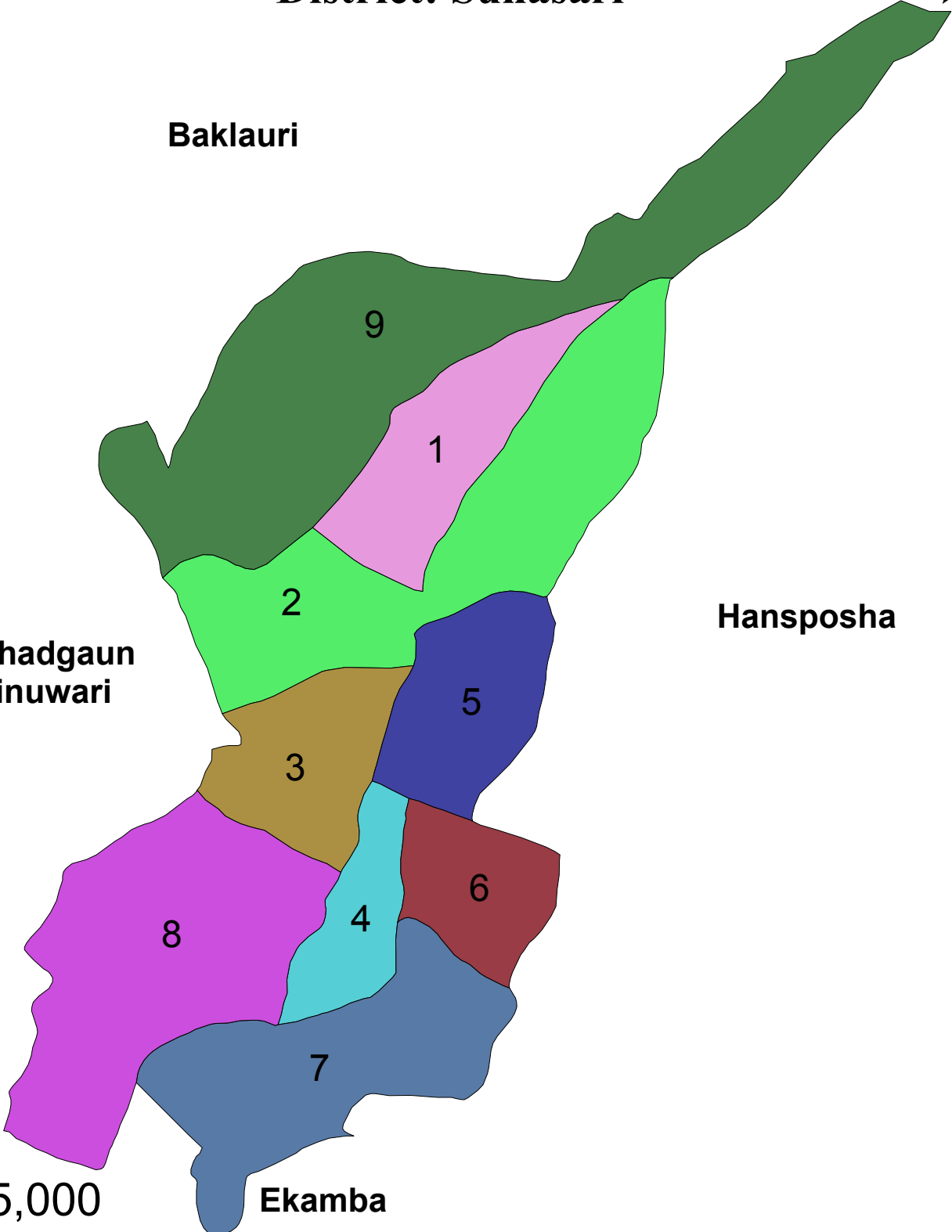
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**Pakali Village Development Committee (VDC)
(Wardwise)
District: Sunasari**



Baklauri

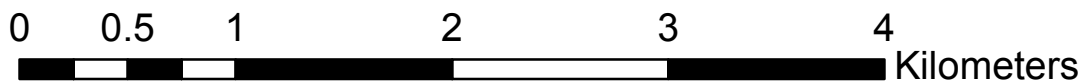


Hansposha

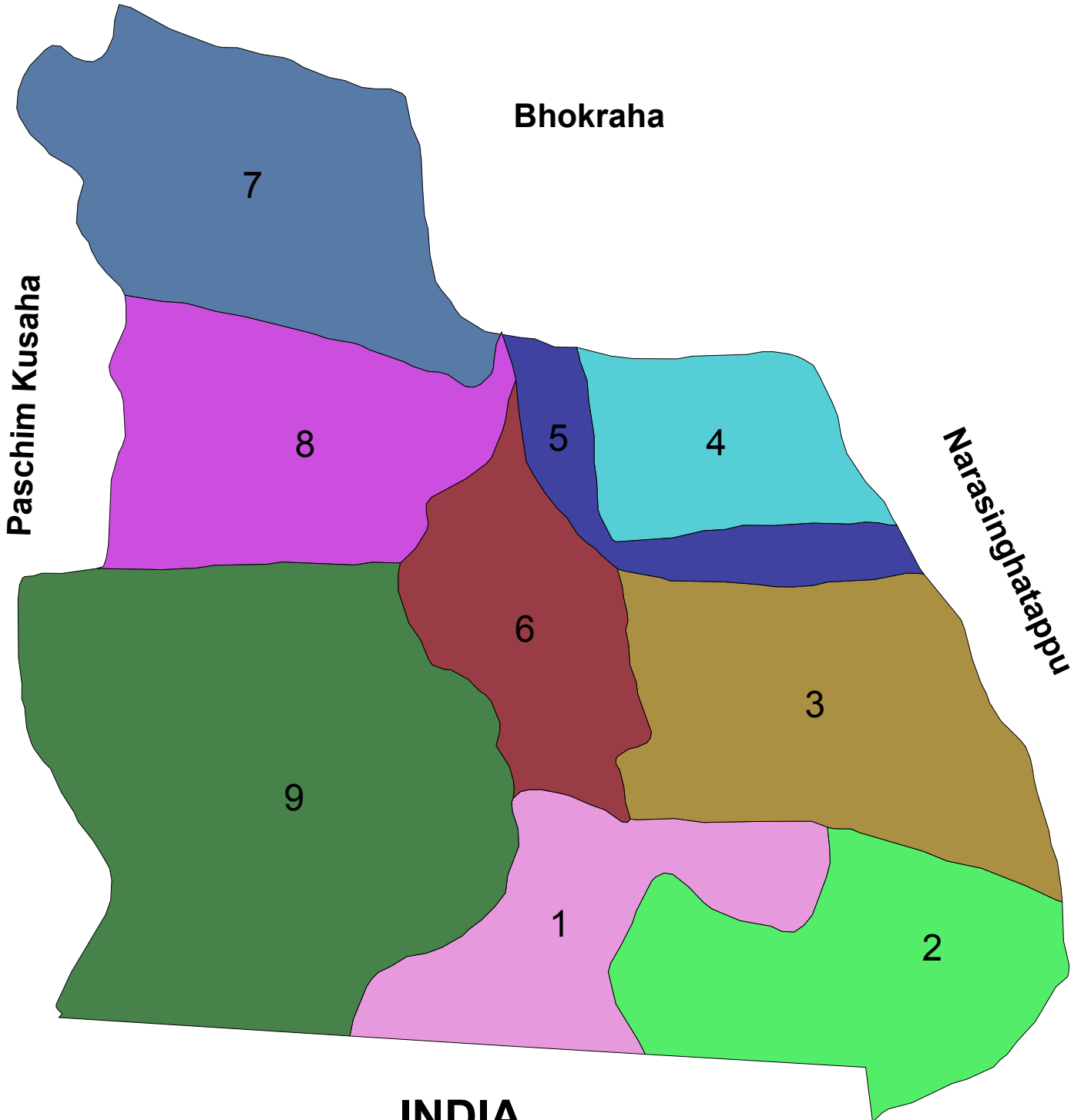
**Bhadgaun
Sinuwari**

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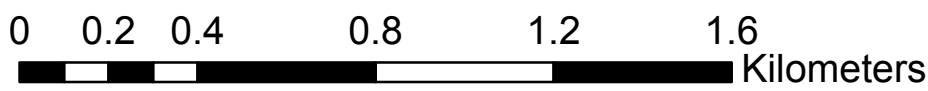
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**Laukahi Village Development Committee (VDC)
(Wardwise)
District: Sunasari**

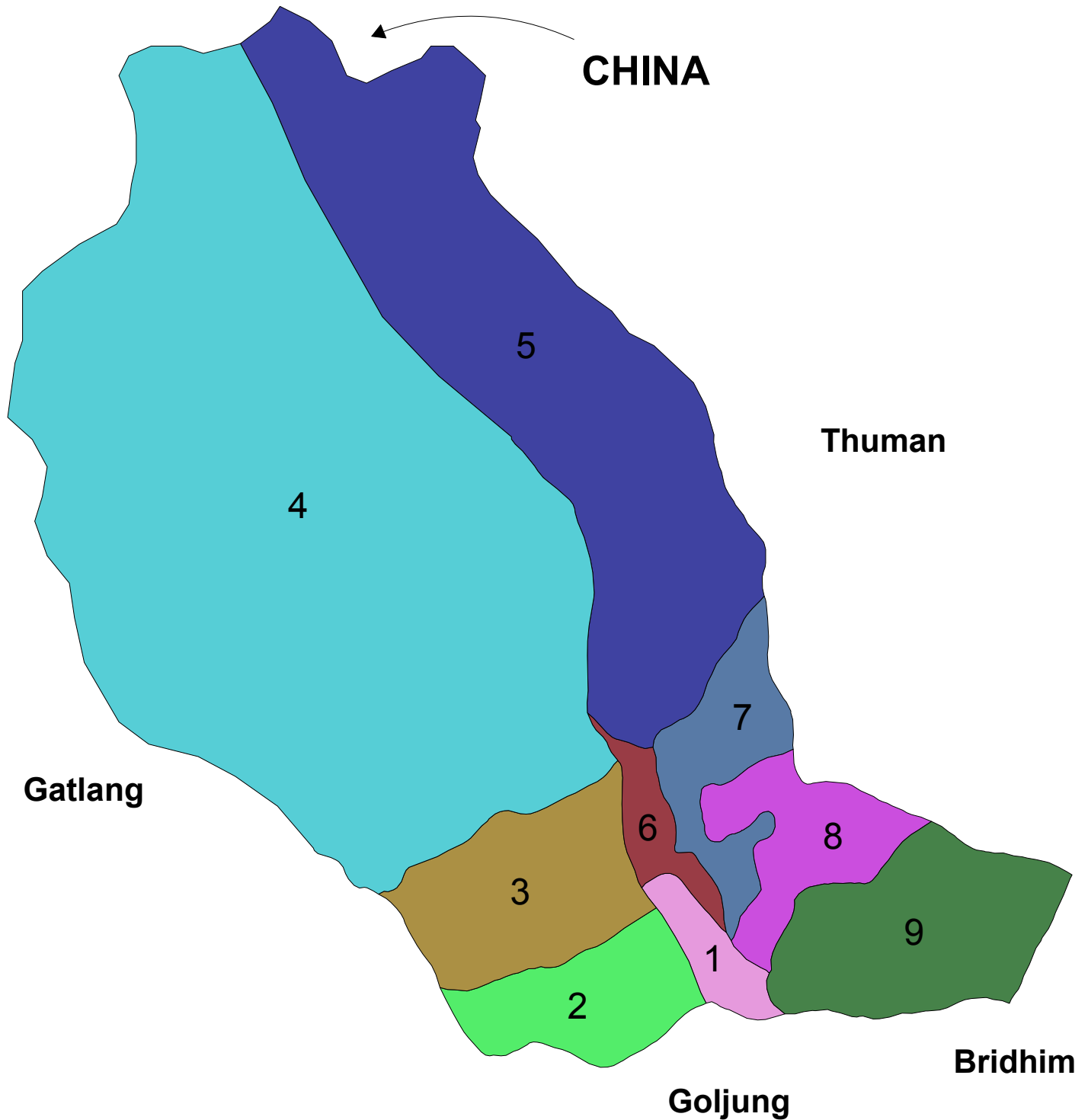


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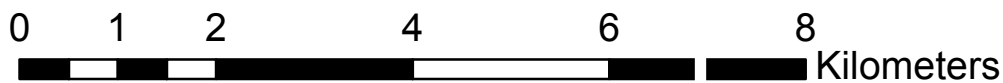


Chilime Village Development Committee (VDC) (Wardwise)

District: Rasuwa

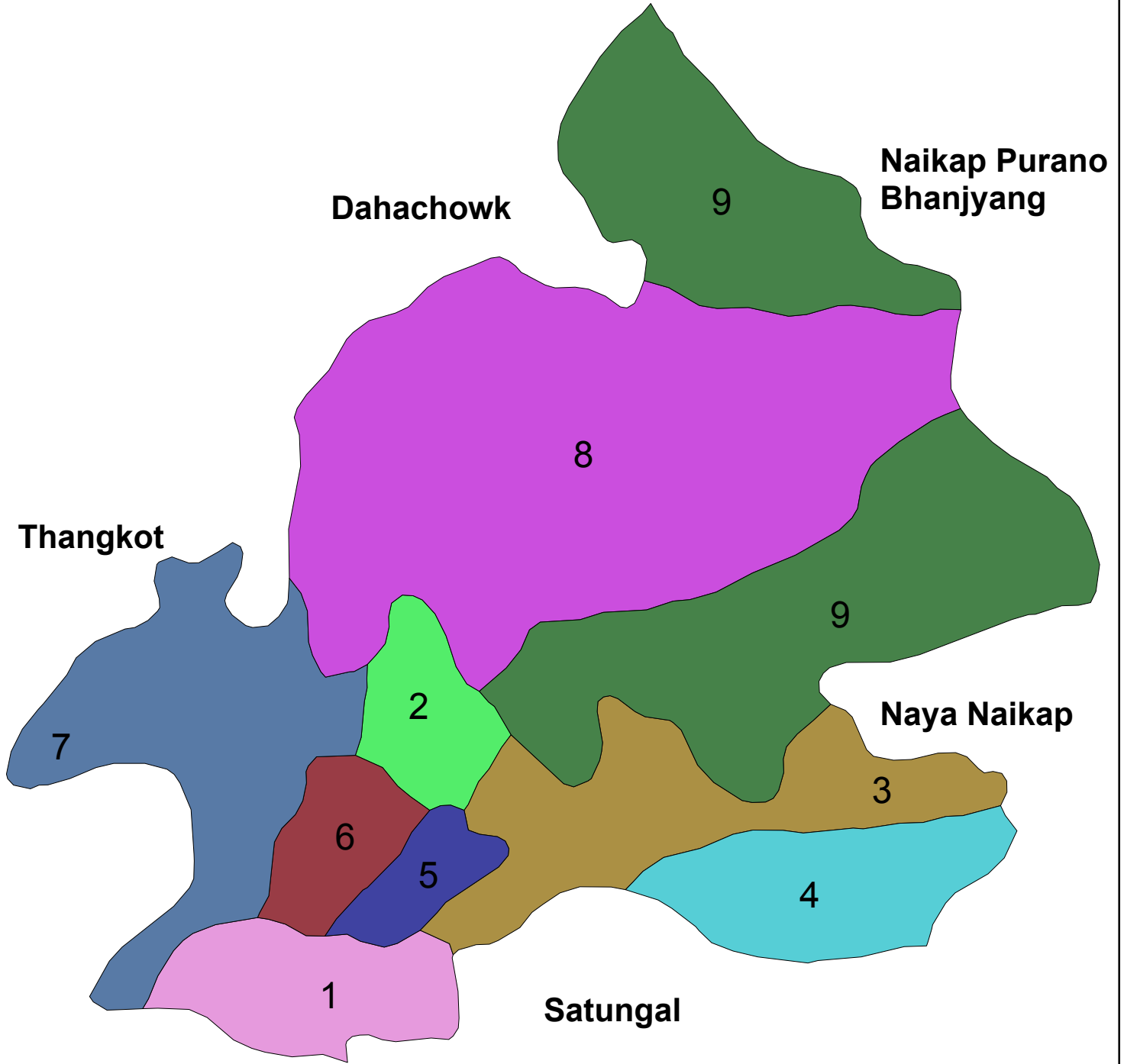


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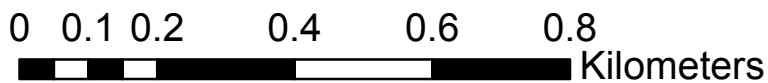
Balambu Village Development Committee (VDC) (Wardwise)

District: Kathmandu

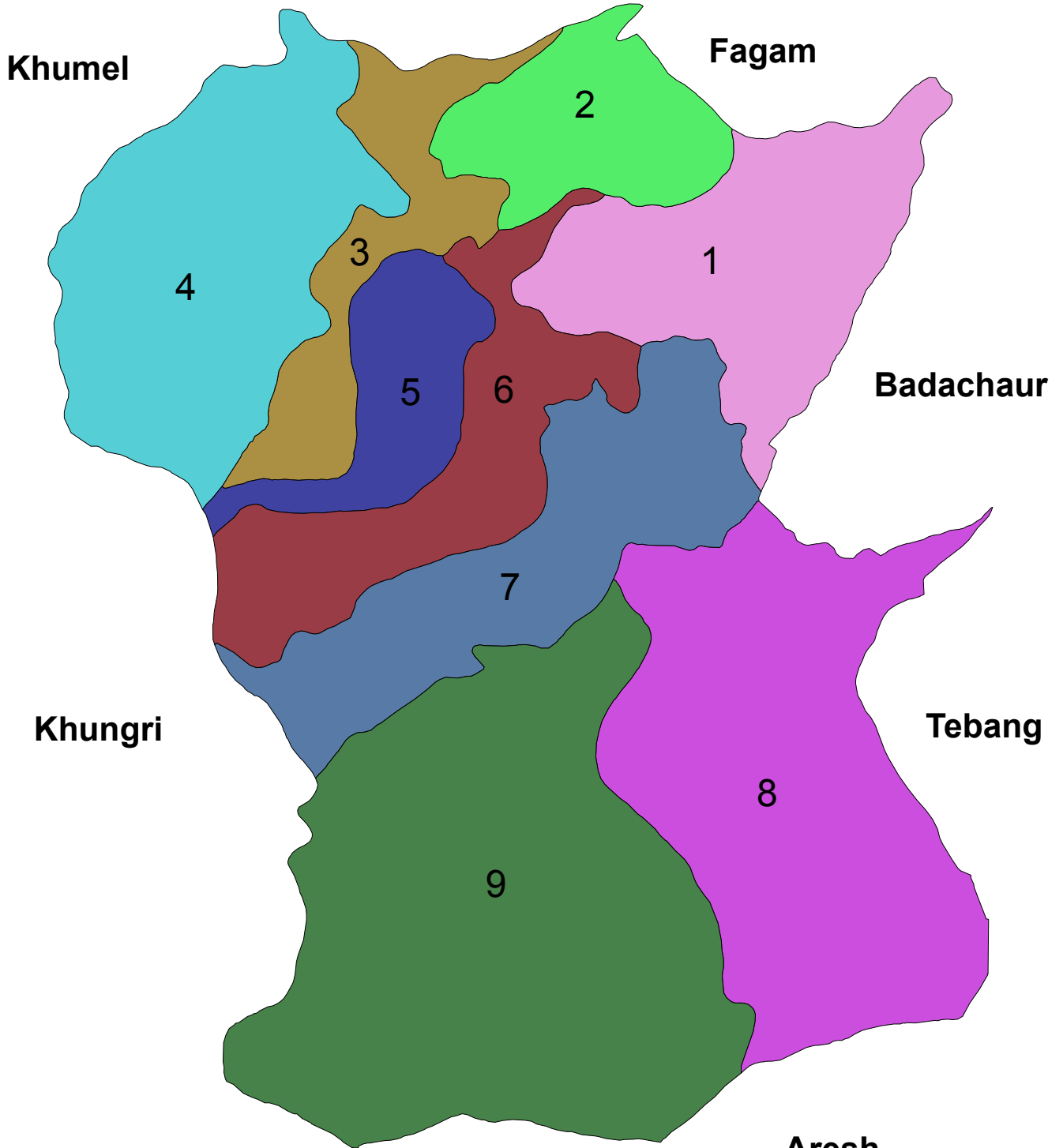


Mahadevsthan

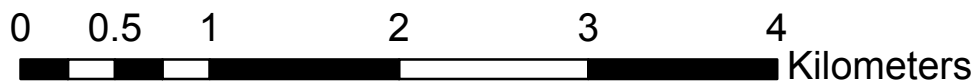
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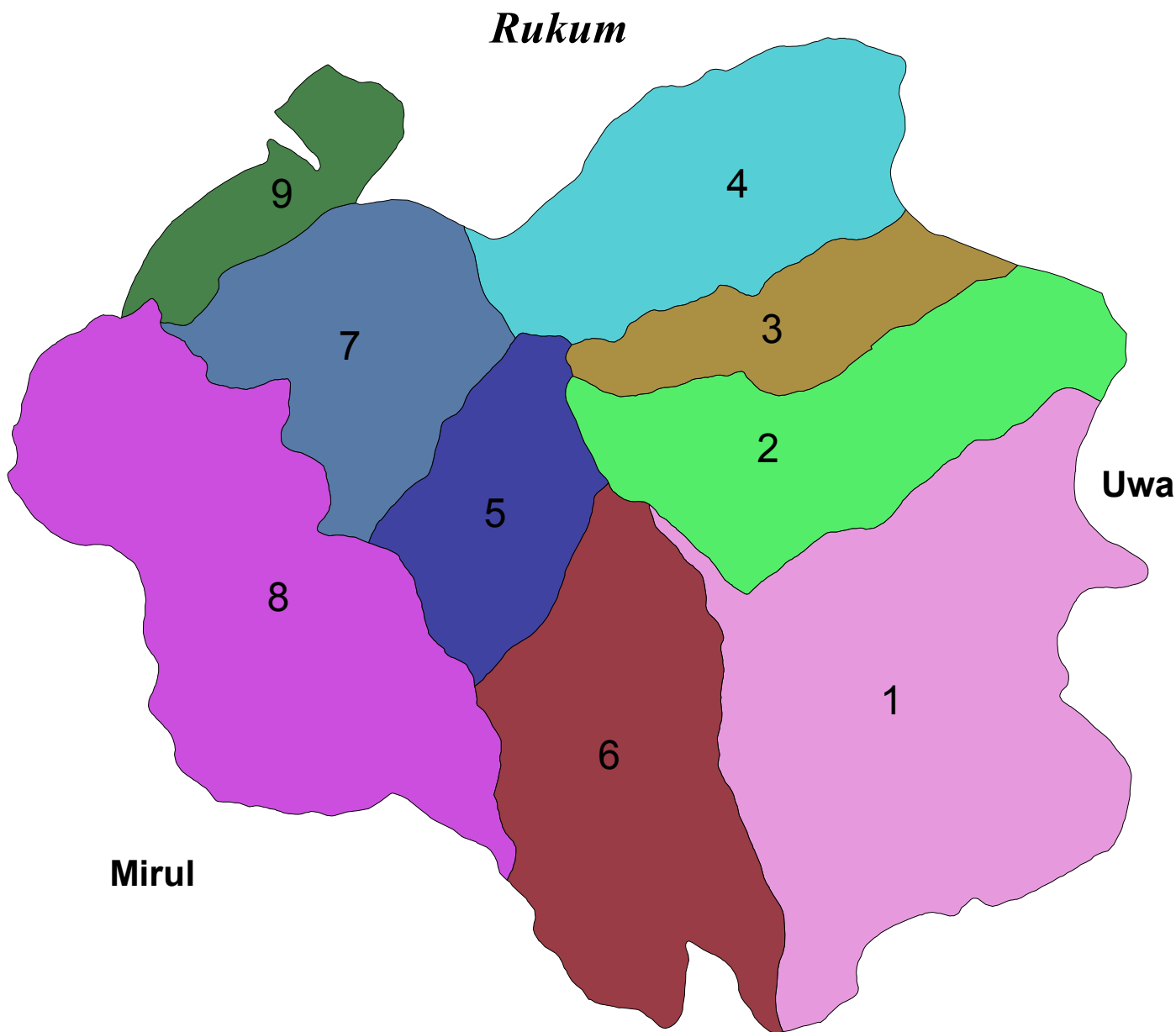
**Mijhing Village Development Committee (VDC)
(Wardwise)
District: Rolpa**



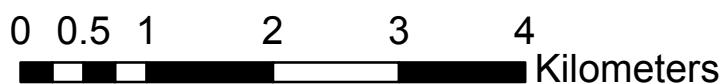
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**Thabang Village Development Committee (VDC)
(Wardwise)
District: Rolpa**



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mid-western hills and Chilime from the Central mountain are the poorest VDCs those could not enjoy the revenue raising power provided them through fiscal decentralisation as they are found to collect zero or negligible amount of own source revenue. They are more dependent on the central grant to meet their expenditure needs. Laukahi, a small VDC from Eastern Terai possesses some own source revenue, but acquires low revenue in the aggregate.

According to De Mello (2000), tax autonomy, revenue autonomy and fiscal dependency are also the measures of fiscal decentralisation. Among the sample VDCs, Mijhing and Thabang are fully dependent on grant transfer depicting 100 percent fiscal dependency (Appendix Table V-3). However, Balambu VDC is the richest one and less dependent on grant which scores 47.58 percent revenue autonomy and 52.42 percent fiscal dependency. Most of the sample VDCs are more dependent on central grant because of less revenue raising powers.

The level of total expenditure of sample VDCs is more or less the same as the level of their revenue. Appendix Table V-4 provides the scenario of nature of expenditure of sample VDCs. Here, current expenditure includes the administrative expenditure; social security allowance; and in some VDCs, other programme expenditure: expenses in literacy campaign, training programmes, etc. We can observe more share of capital expenditure in resource rich VDCs than others. In 2009/10, Balambu and Laukahi VDCs could not spend a significant share of their total budget. Almost all sample VDCs were found to have spent more on rural roads, and then education, and drinking water projects, giving less preference to health expenditure (Appendix Table V-5 & V-6). In the aggregate, sample VDCs were found to focus more on infrastructure building projects.

5.7 Local Public Services and Poverty: Empirical Results

This section describes the empirical results that came out from the analysis of two hypotheses explained earlier. Results show the nature of dependency of poor on basic services- either public or private. Here, first hypothesis- trend of household expenditure on health and education is tested by adopting standard OLS regression and second hypothesis- trend of household choice for basic services (education and health) is analysed by using

the logit regression model. In both the cases, the study focuses on the impact of poverty (basically income) on the choice among the available services. Both the analyses are based on the survey data collected from six different VDCs of Nepal.

We cannot expect a broader picture of the problem through this micro-level study. But it can give at least a narrow picture within a framework of certain cases, thereby providing a general idea about the existence of the problem. However, VDC specific results will provide some details of the effect of explanatory factors on use of the basic services given the relative characteristics of the territories. Here, the regression results along with the sign and level of significance of coefficients are provided in tabular form followed by some analytical discussions. The odds ratio in the case of *hypothesis 2* provides the direct comparison of effect of influencing factors on the choice of one (public) service in condition to another (private).

5.7.1 Poverty and Household Spending on Basic Services

As discussed in the theoretical section, the poor have little money to pay for necessary expenses such as health, education, etc. after spending on essential goods like food consumption (Bardhan & Mookherjee, 2011). Then, if the household income increases, because of available excess money, expenditure on education and health of a household will increase. In this section, we are going to test:

1. Whether this phenomenon really happens or the additional expenditure goes to headings other than education and health.
2. Whether it is affected by level of education or nature of occupation of the household head.
3. Only household income is responsible to alter the expenditure on the basket of education and health or there is the effect of other unobservable factors.

Before to the data analysis, let's start the discussion with some empirical experiences from different literature.

Some Experiences from Empirical Literature

Montalvo (2004) has analysed the household expenditure data at three points of time (year 1988, 1994, and 2000) in the case of Philippines. He observed the increase in share of educational expenditure with the increase in household income. It was positively rising with increase in level of per capita income (in deciles) and by the passage of time (year) as well. Similarly, Hotchkiss, Rous, Karmacharya, & Sangraula (1998), by using Nepal Living Standard Survey (NLSS) 1996 data of Nepal and simple descriptive static tools, found that percent of total household expenditure on health care services increased with the increase in level of household income. There, urban households were found to spend more on health care than the rural households. But, if it was decomposed to per capita income level, unexpectedly, except for second quartile, rural households were found to spend more on health care than urban households in terms of the share in total expenditure as well as in the absolute level. The study concludes that severity of illness, age, income and provider choice (availability and choice of services) accounts for the urban-rural difference in household health expenditure.

Again, Nepal Living Standard Survey 2010/11, carried by Central Bureau of Statistics, Nepal, concluded that as one comes down the income/consumption quintiles there is increase in the inadequacy of education and health expenditure. This implies the probability of an increase in such expenditure with the increase in household income in Nepalese case as well (CBS, 2011a). In USA also, a study found the rural households spending a larger share of their total expenditure on health care where total expenditure on health was slightly larger than of the urban households (Hawk, 2013). Howell & McLaughlin (1989), in an analysis using the data from BLS Survey of 12817 households of USA, observed the effect of regional variation on household health expenditure along with the household income and other explanatory variables. Moreover, Behrman & Knowles (1999) observed the greater share of school expenditure in their total household expenditure for the higher-income households to achieve the better schooling of their children, in case of a developing country Vietnam.

In the case of neighbouring country India, Tilak & National Council of Applied Economic Research (2002), carried an econometric analysis of data from household survey conducted by National Council of Applied Economic Research (NCAER) on 33230 households of 1765 VDCs of rural India of 16 major states during January to June 1994. During the analysis, a positive association of household expenditure on education with total household income was observed. In other words, there was a tendency to increase in household expenditure on education, if there was an increase in household income. Likewise, education of household head was also found to be a highly effective determinant of expenditure on education with the positive and highly significant (99 percent level) relationship. However, the occupation of the household head was found barely significant, only in some occupation categories and not all of them.

Results

The descriptive statistics given in (Appendix Table V-7) gives the idea about the statistical nature of the variables used in the analysis. Here, among the total 299 households observed, the value of our dependent variable- household education plus health expenditure ratio ranges- from 0 to 90 with an average of 35.2 and standard deviation 22.4. Similarly, our main explanatory variable household per capita income (grouped in income quintile as proxy) possesses the value from 1 to 5 with the average of 2.99 and standard deviation 1.41. As for dummy variables, all the categories of proxy explanatory variables- remittance, education and occupation of household head, carry the value of 0 or 1.

As discussed under the theoretical section, education plus health expenditure ratio is regressed on per capita household income (represented by income quintile) and other proxy variables of household characteristics to observe the relation between family expenses for the necessary titles (education and health) and the poverty characteristics. We find that- there is rise in such expenses with the rise in the level of household income measured in per capita basis. This means the poor have fewer chances to meet such necessary expenses than the richer households which leads to the need of movement of poor towards the cheaper services for those provisions. Though there may be question of errors in

accounting the income and expenditure variables as explained earlier, the result gives a general idea about the association between the explained and the explanatory variables.

According to the regression result generated from equation 5.3, there is a positive and significant relationship ($p < 0.01$) between household per capita income (represented by income quintile) and household expenditure on education and health indexed as the ratio of aggregate of family health and education expenditure to total household expenditure on food and non-food items (Table 5.1). This implies that our hypothesis is accepted by this model. Here, coefficient means the magnitude of the effect of changes in household income on change in the share of expenditure on the latter basket: education and health. With a unit level of increase in income quintile, there is 3.24 percent point increase in share of household expenditure in education and health, *ceteris paribus*. This implies that the household expenditure on that basket is sensitive (elastic) to the household income level. Normally, in their household budget, poor probably have lower fund left for such necessary expenses after the payment for essential food consumption. More or less close to the case of other countries, the result supports the theoretical proposition of Bardhan & Mookherjee, (2011) discussed earlier.

Another variable, education of the household head, which is categorical in nature, has a positive and significant impact on the basket of education and health expenditure of a household. Among the categories, households, that are having household head with secondary and higher secondary level of education, have more significant ($p < 0.01$) and positive association with the decision to allocate the expenditure on family education and health with respect to base reference group of illiterate, *ceteris paribus*. However, the household heads who have the education level of primary or graduate and above, have moderate impact on the education and health expenditure ($p < 0.05$). Here, household head, attained secondary and higher secondary level of education, are predicted to spend more on education and health out of their total household spending by 15.61 and 21.12 points respectively than the illiterate household head. The result signifies the role of information level of decision maker in tackling the education and health issues through the decision on such expenditure, remaining within the framework of available household income.

Table 5.1: Regression Estimates for Household Education plus Health Expenditure

Dependent Variable	Education plus Health Expenditure Ratio	Robust Standard Error
<i>Specification</i>	<i>(1)</i>	
Household Size	0.404	(0.644)
Income Quintile	3.234***	(1.055)
Remittances	3.852	(3.672)
Total Land-holding	-0.689	(2.106)
Illiterate		
Literate Only	7.689*	(4.434)
Primary	11.07**	(4.597)
Secondary	15.61***	(4.409)
Higher Secondary	21.12***	(5.787)
Graduate and above	15.96***	(6.063)
Farming		
Wage Labour	-3.751	(3.817)
Business	2.150	(3.262)
Service- Inland	0.729	(4.383)
Service- Foreign	-7.611	(5.007)
Others	-20.20***	(7.644)
Constant	10.39*	(6.216)
Observations	299	
R²	0.176	
Adjusted R²	0.135	
Variance Inflation Factor (VIF)	1.79	

Robust Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Occupation is the source of income of a household. So, we can take it as the proxy of income poverty. Here, among the categories of the occupation of the household head, household head having foreign services and other occupations have some (negative) effect on the spending on education and health services. But, the magnitude of the effect is less than that of the households engaged in farm activities. The survey data consist of the data from rural as well as urban areas of Nepal. Mostly in rural areas, a person may have multiple occupations, and income from those occupations may vary according to the working days/hours. So, it is difficult to derive the accurate income level of a household on the basis of a particular economic activity. It justifies the insignificant relationship between the occupation of the household head and the household expenditure on education and health.

Among the components of variable expenditure ratio, education expenditure and health expenditure are different in nature. Education expenditure may be the planned expenditure (*ex ante*) as the parent can think earlier about the schooling of their children and the possible cost incurred in it. But, health problem mostly carries the casual nature and rural people (mostly in developing countries) do not care about preventive health and spend on it. This results in the *ex-post facto* decision of a person on the health expenditure which becomes essential rather than a planned expenditure like on education. Next, the magnitude of spending on health care will depend on the severity of the health problem and the cost incurred for the services (service charges and medicines) and may not solely depend on the earning of the household. Anyway, in general, the household expenditure on the aforesaid basket is likely to move according to the level of per capita household income. In the analysis, other variables of interest – household size, remittances and total land-holding are found to have no significant association with the education plus health expenditure ratio.

The household size did not have a significant effect on the dependent variable. Normally, there should be positive relationship, but mostly health expenditure is of casual nature, irrespective of the number of members in the household, there might be higher or lower or none of the household health expenditure according to the nature of disease and cost of treatment. Because of this, both remittances and size of land-holdings were also found to have insignificant effect on health expenditure. Having insignificant coefficients, the major occupation of household head also did not show the responsiveness towards the change in household expenditure on education and health. However, occupation of “Other” category, which has very small frequency in the sample shows significant but negative relationship with the explained variable. As explained earlier, because of the unclear specialization of occupation of household heads mainly in rural areas, this variable does not explain the variation in the dependent variable- education plus health expenditure ratio. In estimation, robust standard errors are estimated to overcome the problem of heteroskedasticity. Likewise, the low mean value (1.79) of variance inflation factor (VIF) takes the model out of problem of multi-collinearity.

Table 5.2: Correlation between Some Education and Health Indicators

<i>Variable</i>	<i>Education of HH Head</i>	<i>HH Income per Capita</i>	<i>Health Expenditure Ratio</i>	<i>Education Expenditure Ratio</i>
Education of HH Head	1.000			
HH Income per Capita	0.376	1.000		
Health Expenditure Ratio	0.046	0.061	1.000	
Education Expenditure Ratio	0.325	0.236	-0.302	1.000

Let's consider the relation of household per capita income with education and health expenditure separately. From the correlation results given in Table 5.2, we can find a weak but positive association between these variables. There exists very weak relation between per capita household income and health expenditure ratio ($r = 0.061$). However, this relation is a bit strong and positive with education expenditure ratio ($r = 0.236$). It is because of the movement of people towards costly, but quality private education with the rise in their household expenditure that increases the household education expenditure. Next, health expenditure ratio is loosely, but positively related to the education of the household head. Here, two cases may happen. The richer may have greater knowledge about the precautions to take as regards the health of their family members. So, they have less chances of falling sick resulting in lower expenditure on health by the richest households. At the same time, the richer may be more careful about their health and because having more family fund for such expenditure, they go for costly but quality treatment in good private hospitals which increases the share of health expenditure on their total household expenditure. So, we could not get strong association between household health expenditure share and household per capita income, unlike the case of share of education expenditure, because of non-planned nature of health expenses.

In summary, our basic result exhibits that the level of household expenditure on education plus health (necessary entitlements) rises with the rise in income level of the household. Here, the results create the debate that unlike the non-poor, the poor have little family expenditure for education and health care. Then, they have to look for cheaper education and health services which are supposed to be the public services. This supports the idea of the importance of the provision of public services for the poverty reduction through the

human skill development of the poor. But, the quality and cost of services determine the degree of association between the per capita household income and the expenditure share on those services. The forthcoming sections will provide some details on these issues with some other empirical evidences.

5.7.2 Are the Poor Really Dependent on the Public Services?

Previous result has shown that poverty increases the dependency of a household on the public services as the poor has less family expenditure to purchase such services in the market. This subsection tries to analyse whether this hypothesis holds always or differs according to other influencing factors and conditions. As we discussed in earlier sections, other than the cost, there are other factors such as availability, quality, urgency of the services, etc., influencing the decision on selecting goods and services for consumption. Here, using logistic regression, we are going to define the association of level of household income and other factors, with the consumers' choice of services (public or private) basically for education and health care consumption. We also try to observe the rationale of such choice, by using some descriptive statistics. However, some narratives from interviews conducted by the researcher himself are also used to explain those issues that the statistical methods could not explain.

5.7.2.1 Poverty and Choice of Public Education

Obviously, education is an important factor for poverty reduction through human skill development leading to an opportunity of employment and income generation. The competency of the human skills depends on the quality of education they have achieved. Following the previous discussions, we can say that the poor have less ability to spend on education of their children. Therefore, they have to depend on cheaper or free (public) education. This subsection tries to analyse this issue as:

1. Whether the choice of schooling (public or private) depends on level of income of a household or not. In other words, with the increase in household income, whether

people move to costlier (private) schooling for their children and vice versa. It also tends to explain the possibilities of other factors such as demographic and child characteristics in affecting the parental preference of educational institution (Alderman, Orazem, & Paterno, 2001; Goldring & Phillips, 2008; Woodhead, Frost, & James, 2013).

2. Whether there is any response of geographical, economic and rural-urban variation to the effect of household income on the choice of schooling?

Let's start the discussion by sharing some experiences in the context of different countries.

International Experiences

E.B. Goldring and K.J.R. Phillips have provided an important contribution to the analysis of parental choice of schooling. They observed the factors affecting parental choice of schooling (either private or not) of their children by using school choice survey data from Metropolitan Nashville public schools in USA (Goldring & Phillips, 2008). The sample includes parents of 748 magnet school applicants in the school year 2002/03. They used some categories of parental characteristics- race, educational attainments, satisfaction with previous school, involvement in school, their priorities in school choice and their social networks. They found family income highly significance ($p < 0.001$) among the parents in choosing private schools. Next, parental involvement in schools as the significant factor ("pull" factor) to choose the private school in contrary to the "public rhetoric" of better quality of private school than the public schools. There is no "pushed" out effect of parental satisfaction found against the public school choice to drive the people towards private schooling.

By performing logistic regression with six models on the background variables- family income and race, they found that parents with higher family income and higher educational attainment choose private schools (Goldring & Phillips, 2008). However, race has no significant effect on the parental choice of schools (either private or public). Another variable, informal social network (social capital), has significant "pull" effect towards the

private school choice. Because the samples of this study are the parents of applicants to the public magnet school only (not the registered students), the result does not provide the accurate picture of the probability of school choice. Similarly, the study lacks the inclusion of the factors such as age and sex of the child and grade enrolled, household size, availability of the schools (private or public), etc., which may affect the choice of schooling.

Goldhaber (1996), through the probit regression analysis of data from National Educational Longitudinal Study of 1988 (NELS88) of USA, concludes that children from the families with higher income, higher educational attainment, more family money for educational expenses, are more likely to go to private schools. Similarly, parents having more information (sensitive) on the difference in the quality of education between private and public schools, are likely to send their children to private schools, where they find private is the better one. According to him, the attraction for private school increases with the increase in academic achievement of the children in private schools, holding public school achievement constant. But this study omits variables such as cost of schooling; the age of the child and grade enrolled; availability of schools; etc.

Alderman, Orazem, & Paterno (2001) studied the issue of school choice by using survey data of more than 1650 households (1000 in first and 650 in second) of lower-income categories and 273 different schools of Pakistan with the information about schools on fees, facilities and teachers, and costs for schooling of the children. From the logit regression analysis, they found that children having no schooling are likely to come from the households with lower income and lower level of parental education. But, children in private schools possess the highest level of household income and parental education. The elasticity is estimated to observe the response of school choice variables to the changes in household income, fees, distance, and school quality factors. The observed income elasticity implies that there is an increase in demand for private school more than proportionately with the increase in household income. In other words, with the increase in household income, there is fast shifting of choice of schooling towards private school

from no school and government school options. However, cost, fees and school distance possessed similar and (to some extent) substitution effect between the types of schooling.

An analysis from the survey conducted during 1987-1999 by Statistics Canada (2001) on the use of private education in Canada has observed that 29 percent of private school children came from the family below \$50000 and 26 percent from families possessing over \$100000. Similarly, 63 percent of the public school children have family income less than \$50000 and only 12 percent have come from the family income over \$100000 (Bosetti, 2004). This suggests the public school dependency of poorer families while private school choice for the well-off ones.

Another study revealed a different observation other than the aforementioned literatures. Woodhead, et al. (2013), in a research on the contribution of the private schooling to the campaign- "Education for All", observed the significant increase of the supply-of and demand for private schooling (Srivastava, 2006; Kingdon, 2007) along with the increasing access of children from the comparatively poorer household (especially in urban areas than in rural areas) as well. The study has used the Round 3 of Young Live's Round longitudinal data for two cohorts (2906 children) of Andhra Pradesh and binomial logistic regression analysis with the three categories of schoolings (private, public and other) and other explanatory socio-economic and household characteristics such as location, wealth, caste, education and aspirations of the parent, and sibling composition, etc. to observe the probability of the children being enrolled in private school.

The authors found in their study that the growing rural-urban difference, widening household wealth strata and difference in other aforesaid factors have a significant effect on choice of or access to private/government school. Furthermore, the probability of the urban children to attend private school was found more than the rural ones. Though choice of private school is positively associated with the rise of level of wealth tertiles, the poorest group has less access to the private school. Interestingly, the richest groups in the rural areas were less likely to attend private school than the poorest groups in urban localities. However, ability of households to pay fees for their children, heterogeneity and the quality

of school (where private schools are supposed to be of good quality) are also prominent factors affecting school choice, which are not discussed in their study.

Joanna Harma (2010) performed a research on parental choice of schooling by using VDC survey data of Uttar Pradesh in India. The study has considered a number of variables such as attendance of children in low fee private (LFP) school, poverty (proxy as assets, income and living standard) and furthermore the family properties, and parental and child characteristics. The result of multivariate regression analysis concludes that with the increase in household wealth and income, probability of choosing LFP schools moves positively and linearly (as in Kingdon, 1996). Similar result was found in the case of poverty indicator represented by living standard of the household (Harma, 2010). All these results confirm poverty as the main determinant of school choice. Importantly, the case of the poor's unaffordability of, at least, lowest fee school tells us the failure of "market-based education solution" to serve the poor as to substitute the weaknesses of government education in rural areas.

Some of the studies mentioned above cover the case of developed countries and some represent for the developing countries. We can find mostly the similar trend of the effect of the household income on the choice of schooling; that is the positive and significant association between the household income and the choice of private school, *ceteris paribus* and vice versa. Next, parental education is another important factor that affects the decision of selection of the school for their children. The researchers in their study revealed the positive relationship with the choice of private schools. There are a number of studies on the issue with the reference of different countries. In addition, some of the developing countries, India, for example, have possessed the attraction of the poor themselves towards the private school education (Woodhead, et al., 2013).

National Experiences

We can find very few studies carried on Nepal on the issue of choice of schooling. Joshee (1994), in a comparative study of public and private schools of Nepal using qualitative case

study with 16 in-depth interviews and other types of school data, observed the better quality of education in private schools than the public schools. Because of the fact, parents were found to prefer the private schools despite of high tuition fees.

Sharma (2012), in his PhD thesis, through a comparative study of 3321 SLC students and 175 schools by using Student Performance in SLC Exam (SPISE) Survey carried by Ministry of Education, Nepal, observed highly significant impact of parental education and household economic status on school choice. As a result of first-stage probit regression, parents from better off households and better parental education were found more likely to send their children to private schools, though they have to pay fees to attend the school. Likewise, gender bias also has been observed as girls were less likely to attend private schools.

Kadel (2013), in a study of language choice among people of some ethnic groups in school education of their children, observed the parental preference of private schools compared to the public schools. In an ethnographic study in Khairahani village of Chitwan district as per his PhD research work, he found the parental choice of private school guided by the schooling of English language that they perceive necessary for a competent human skill, at least for foreign employment.

Joshi (2014), in a survey study of 147 parents of sixth grade children of 30 schools (public and private) of two districts of Nepal (Kathmandu and Chitwan), observed the role of socio-economic background of parents in choice of schooling and parental involvement in the activities of the schools of their kids. According to the findings, as in other developing countries, middle class people are enjoying more the school choice environment. However, this opportunity is less possible for the parents having the less economic capacity and the lower educational status. They have to rely on public schools for schooling their children, which are supposed to be comparatively less qualified (Dreze & Sen, 2013; Joshi, 2014).

Pal & Saha (2014) performed a study on school choice and school efficiency of public and private schools using national survey data of years 2002-2004 collected by Ministry of

Education of Nepal having 5778 sample schools. After estimating polynomial logit marginal effects, the researchers observed the significantly higher probabilities of choice of private schools by the households with the higher expenditure. They came to the conclusion that children from richer (higher expenditure deciles) households are significantly likely to enrol their children in private schools (whether trust run or company run) and less likely to go to the public (fully government funded) school. However, the poor *dalit* households were found less likely to send their children to private schools and more likely to choose government schools. In this analysis, the analysts did not observe a significant effect of child age and parental education on the school choice. Moreover, tendency of boys to attend private schools implies the male bias (mind-set) of parents in the school choice. Comparatively more efficiency of socially motivated (non-profit) schools urges for more government investment to them compared to company run and government schools. However, another study from social class perspectives pointed out that the "higher status groups" being have higher cultural capital and lower market constraints are more privileged in school choice than the poor (Wells & Crain, 1997).

We can draw some ideas from the above literature. There are so many factors influencing the parental choice of schooling of their children. Among those the quality of education provided by the particular school against the other schools and the affordability of the cost of schooling are more important than the other factors. This means the household income and family educational expenditure play significant role in decision making before schooling. In most of the countries, in the competitive environment within liberalization, private schools are being more qualified and costlier than public ones, as they work hard to provide quality education to attract the market towards them. Then, the higher the household income, because of increasing affordability, the higher will be the probability of parental choice of private schools from the sets of the schools, *ceteris paribus*. On the contrary, the poor with less economic capacity and parental education has to be compelled to be far from opportunity of choice of schooling and have to depend more on comparatively unfavourable (less qualified) public schools.

Though the literature on school choice mostly consider the characteristics, which come broadly under the demographic categories such as household income, parental education and race (Coleman & Hoffer, 1987; Long & Toma, 1988; Lankford & Wyckoff, 1992; Goldring & Phillips, 2008; Muralidharan & Kremer, 2009), parental involvement, satisfaction from the previous school, educational priorities (academics, convenience, school characteristics, safety, etc.), and social networks (interpersonal and formal), etc. (Goldring & Phillips, 2008); this study considers only few factors, mostly the family background and child characteristics as explained earlier. It is because; this study focuses on the poverty characteristics that affect the use of the public services which provides the idea of effectiveness of public investments to achieve the goal of poverty reduction. During the analysis rest of the unobservable influencing variables are controlled through the disturbance terms.

Results

Data for this analysis is collected by sample survey of 541 children of 299 households of six VDCs from three ecological regions of Nepal. Among the 541 children, only 446 children of age 5-15 years were attending the school during the survey period attending pre-primary to higher secondary schools.⁶⁸ Unlike the other studies (Goldhaber, 1996; Alderman et al., 2001; Goldring & Phillips, 2008; Pal & Saha, 2014; Joshi, 2014), survey has been done at household level rather than at the school level where same parents may have children some attending public and some private school (Harma, 2010; Woodhead, et al., 2013). This could give better idea on school choice. Here, mostly, household heads are the source of information. So, given dataset represents the perception of the respondents in the case of school information. Because this study is concerned more about the relation between poverty: income and assets, and parental choice of school type; it did not go for the quantitative data on school quality and characteristics.

⁶⁸ Details of the survey have been given in the methodology section in chapter 1 and previous sections of this chapter.

In this analysis, dependent variable: types of school, and other explanatory variables: sex of children and remittance received by the household is binary variables taking the value of 0 and 1. Age and birth order of child, and grade enrolled are in ascending order. The core explanatory variable- household per capita income ranges from Rs. 4825 to 241580. Income quintile by the naming carries value 1 to 5. However, the land (asset) holding consists of the households from landless to owning 4.74 hectare of land. As explained in earlier sections, categorical variables- education level and the main occupation of household head are in the dummy form (Appendix Table V-8).

We suppose all the parents from sample households actively take part in the marketplace of school choice. In response to relation between choice of school and household income, we can observe the trend of parents' attraction towards private school with the rise in level of their family income (Goldring & Phillips, 2008), as explained by descriptive difference. According to (Appendix Table V-9), more than 65 percent parents from the poorest two deciles send their children to public schools. However, 70 percent parents from the richest two deciles sent their kids to private schools. Hence, from the descriptive framework, we can imagine the mostly decreasing trend of enrolment of children in public school with the increasing level of their household per capita income. Considering the whole sample, 54 percent of household heads preferred private school leaving rest for the public school. The figure implies the comparatively more dependence of the poor on public education than the richer families.

The χ^2 value and the p-value observed in this descriptive table suggest the good association between household per capita income and choice of school. The household income becomes the good predictor of school choice, in this case. Next, we examined the difference in choice of schooling due to the presence of other factors along with the family income. For this, we used the logistic regression method. As mentioned earlier, among a number of factors influencing the choice of schools, we could include only some more important variables with the demographic and economic flavours because of limitation of our study.

Table 5.3: Regression Estimates for Determinants of Choice of Schooling

<i>Dependent Variable/ Independent Variable</i>	<i>Types of School</i>	
	Odds Ratio	Standard Error
Sex of Child	0.454***	(0.110)
Age of Child	0.984	(0.0692)
Birth Order of Child	1.314***	(0.124)
Grade of Child	1.472***	(0.126)
Household Size	0.864***	(0.0463)
Income Quintiles	0.626***	(0.0686)
Remittances	0.720	(0.252)
Total Land-holding	0.940	(0.152)
<i>Education of Household Head</i>		
Illiterate	-	-
Literate Only	0.286**	(0.141)
Primary	0.174***	(0.0909)
Secondary	0.165***	(0.0801)
Higher Secondary	0.302**	(0.183)
Graduate and above	0.0444***	(0.0337)
<i>Major Occupation of Household Head</i>		
Farming	-	-
Wage Labour	2.640**	(1.148)
Business	0.832	(0.275)
Service- Inland	1.167	(0.490)
Service- Foreign	2.143	(2.054)
Others	0.667	(0.762)
Constant	8.060**	(6.881)
Observations	444	
Pseudo R²	0.279	
Hosmer-Lemeshow Chi² (8)	7.78	
Prob > chi²	0.455	

Exponentiated coefficients; Standard errors in parentheses

* p<0.10, ** p<0.05, *** p<0.01

According to the logistic regression result obtained from the equation 5.9 derived in theoretical sub-section 5.2, the core explanatory variable- household per capita income (represented by income quintile) is found statistically significant ($p < 0.01$) to explain the parental choice of school (Table 5.3). Here, for each unit increase in family income (explained by income quintile), the odds that a parent chooses public school is 0.626. The odds ratio, which is less than 1, means the probability of the "success" is less than the probability of "failure". This means, the probability of parental preference to the public

school decreases with the increase of household income level and vice versa. Numerically, we can say, for one unit increase in the level of household income (income quintile), there is a drop in odds of choosing a public school by 0.374 ($=1-0.626$), i.e. There is a 37.4 percent decrease in the chances of public school choice. We have another tail as the choice of “private school” because the variable is binary and discrete. Hence, contrary to the earlier case of choice of public school, we can say there is increased chances of choice of private school with the increase in the level of household per capita income, as the cases in other countries (Bauch & Goldring, 1995; Goldhaber, 1996; Alderman et al., 2001; Goldring & Phillips, 2008; Harma, 2010; Pal & Saha, 2014; Joshi, 2014).

Concluding the result, if poverty level rises (i.e. for lower household income), the parents tend to be more dependent on public school for schooling of their children. In this case our null hypothesis (i.e. choice of public school does not increase with the decrease in income level) is rejected and alternative *hypothesis 2 (a)* (i.e. choice of public education increases with the decrease in household income) is accepted. In other words, the poorer households are more likely to go to public schools than the non-poor for their children's education. This is because, the schooling directly relates to the cost incurred in it. The poor have low level of income and hence less family expenses to afford private school for education (Bardhan & Mookherjee, 2011). Next, public schooling is cheaper than the private ones. So, they are compelled to opt for public schools which are comparatively affordable for them, even if they are informed about comparatively better quality education in private schools.

Other proxy variables of poverty- remittances and total land-holding have no significant effect. In the villages, people have to spend a major part of the remittances for their debt payments and their necessary consumption. Similarly, as mentioned earlier, there, the larger holdings do not necessarily mean the higher agricultural production because of low productivity of land (especially in hill and mountain). Hence, these two variables could not show important implication in the change in school choice pattern.

Another highly significant factor affecting school choice is parental education. The regression results reveal that all the categories of education of household head have significant impact on parental choice of schooling. Among the six categories (where illiterate is the reference category), parents having educational attainment- primary, secondary and graduate and above are found statistically significant ($p < 0.01$) in explaining the school choice for their children (Muralidharan & Kremer, 2009). Statistically, the chances of the parents with primary, secondary and graduate and above to send their children to public schools are 17, 16 and 4 percent of the illiterate parents do so, respectively. This shows the attraction of parents with higher educational attainment towards private education. Here, the choice of school depends on the quality of education in the school, which again depends on the parent's level of information. As the level of education of parent goes up they think more about the education of their child and may select private schools (which is supposed to have a more quality education). This seems to be true in other countries also- Hungary, Canada, Israel, Argentina, Ireland (Avram & Dronkers, 2012) Uttar Pradesh and Andhra Pradesh of India (Harma, 2010; Woodhead, et al., 2013); and Kathmandu and Chitwan in Nepal (Joshi, 2014). The more educated the parent the more will be the parental involvement in education of child and educated parents are able to make priorities themselves for child schooling or able to draw idea from information from their social networks (Bauch & Goldring, 1995; Goldring & Phillips, 2008). More discussion about the cost and quality of education will come later.

Though parental occupation may affect the school choice through income effect, our regression result shows reluctance to have significant effect of occupation of the parent on school choice. Only wage labour shows some degree of association ($p < 0.05$). Here, odds of parents sending their children to public schools, are 2.64 times more for wage labourers than farmer. However, businessmen and service-holders (both inland and foreign) do not show the significant effect on school choice in comparison to farmers. But, if we observe descriptive statistics, these categories of parents have tendency to send their children to private schools and not to the public ones. Thus, we can point out that more privileged families opt for private schools as in some other countries like Argentina, Austria, Brazil and Portugal (Avram & Dronkers, 2012). There is multiplicity in occupation of a household

head in rural areas. A same parent may work as a teacher, farmer and small shopkeeper within the different times in a year (even within a day). This may also be the reason for insignificance of parental occupation to impact on the choice of schooling in contrary to some earlier studies (Drèze & Kingdon, 2001; Schagen & Shamsan, 2007; Harma, 2010).

The size of a household has repercussions on the household income and expenses. Households with a low dependency ratio may increase the income and results in the more amount of the family fund for educational expenses. However, having a high dependency ratio may be burdensome as it increases the essential expenditure and leaves less amount for the necessary expenses such as education and health. In this analysis, household size possesses a significant degree of association with the school choice ($p < 0.01$). Here, one percent increase in household size will likely to drop the probability of choice of public school by 13.6 percent (change in odds ratio: $1 - 0.864 = 0.136$). The result seems to be contrasting with the observation found in studies of Uttar Pradesh (Kingdon, 1996; Harma, 2010) as they separately regressed with the number of child and the number of adult. Here, the difference may be due to nature of sample as well. Next, family with higher number of children prefers to send some children of lower age to private and some of higher age to public school.

Among the child specific variables, sex, birth order and grade enrolled are found significant ($p < 0.01$ for all cases). But, the choice of school is irrespective with age of child. Here, odds of male children going to public school are only 55 percent of a female child which shows a high preference for education of boys over of the girls, i.e. gender bias in schooling in the study area. These trends tend to follow the Indian pattern (Kingdon, 1996; Srivastava, 2006; Schagen & Shamsan, 2007; Harma, 2010).

Marginal effects may give a clearer picture that how the change in a response variable is related to the changes in predictor variables which is very useful being more informative and easier to interpret. The marginal effects of all explanatory variables on the choice of the school are given in Appendix Table V-10. For example, one unit increase in household income quintile reduces the chances of choosing public school by 0.077 units. Similarly,

in case of education of household head, literate one reduces the probability of sending their children to public school by 0.207 times than the illiterate household heads.

The above figures show that most parents from a prosperous family background with higher income level, better education and better employment (at least less likely to be unemployed) are more sincere about the better schooling of their children than the parents from the comparatively low family background, as in the western industrialized countries (Bosetti, 2007).

Village-wise Result

Let's move towards different dimensions of the study, i.e. see what will happen on the effect of defined variables on the choice of schooling in the diverse locality (Table 5.4). Here, we have taken some important and significant variables (significant according to Table 5.3) and dropped some other variables so as to avoid the effect of multi-collinearity as well. It is done because, splitting the sample of the individual VDCs results in a smaller sample size for the analysis. As explained earlier, different VDCs carry different characteristics. In the case of Balambu VDC which is an urban VDC in the capital city Kathmandu lying in the central hill region of Nepal, only birth order of child, household size and parental education are found significant. Considering the descriptive statistics, irrespective of sex and income level, 85 percent of the parents of this VDC enjoying comparatively more benefits of fiscal decentralisation send their children to private school leaving only 15 percent for the public school` (Appendix Table V-11).

Among the Mijhing and Thabang VDCs which acquire comparatively less benefit of fiscal decentralisation, represent the Mid-western hill and highly conflict affected area possess different characteristics. For Mijhing which is near the district headquarter, only sex and household size matters in the choice of schooling. In case of Thabang which is largely a conflict affected and remote VDC, sex, birth order and household income show a significant relationship with the parental choice of schooling. In both cases, aggregate choice of private and public schools seems to be almost equal. In this case, contrary to the

view of Sen (1997), parents even in the case of low availability of private schools in these areas, are preferring private schools. However, the mountainous VDC, Chilime, possesses the significant relationship between choice of schooling; and household size, household income and land-holdings. In this VDC where there is only one private school, 70 percent of the children are enrolled in public school.

Table 5.4: Regression Estimates for Determinants of Choice of Schooling by VDCs

Types of School Independent Variables	(1) Balambu	(2) Mijhing	(3) Thabang	(4) Chilime	(5) Laukahi	(6) Pakali
Sex	0.458 (0.549)	0.436* (0.202)	0.205*** (0.123)	0.318 (0.238)	0.436 (0.238)	0.903 (0.552)
Birth Order	4.617** (3.393)	1.312 (0.241)	0.583** (0.141)	0.709 (0.179)	1.195 (0.239)	1.630* (0.472)
Household Size	0.125*** (0.0942)	0.814** (0.0847)	0.854 (0.161)	0.730* (0.120)	0.763*** (0.0780)	0.942 (0.158)
Income Quintile	1.637 (1.000)	0.740 (0.140)	0.462*** (0.118)	0.375*** (0.118)	0.644 (0.185)	0.738 (0.216)
Total Land-holding	3.651 (4.288)	1.181 (0.324)	0.723 (0.344)	0.432** (0.164)	0.956 (0.261)	0.0704** (0.0933)
Education of Household Head	0.429** (0.179)	0.840 (0.179)	1.427 (0.379)	0.851 (0.238)	0.722 (0.161)	0.505** (0.168)
Constant	404.302* (1392.959)	14.273** (16.513)	49.523** (84.391)	6728.678*** 14630.3	33.215*** (38.673)	(7.038) 11.180
Observations	59	94	74	72	75	70
Pseudo R²	0.462	0.103	0.245	0.349	0.201	0.260
Hosmer- Lemeshow chi²(8)	7.48	5.37	7.83	9.89	15.27	11.34
Prob > chi²	0.485	0.717	0.450	0.273	0.054	0.183

Exponentiated coefficients; Robust Standard errors in parentheses

* p<0.10, ** p<0.05, *** p<0.01

There is different trend we can observe in two VDCs from eastern Terai region- Laukahi and Pakali. More preference to private school irrespective of the family income and sex is visible in these VDCs. In Laukahi, which is small but has comparatively better effect of fiscal decentralisation than the other three VDCs from rural hill and mountain, only household size seems to be significant. But in Pakali which is collecting comparatively

more own source revenue, birth order, land-holding and parental education are found to have significant association with the school choice by the parents.

From the above result, we can make an idea that- though income plays important role in the selection of educational service as it is directly related to the cost of schooling, there is prominence of other variables according to the diversity in context and locality. The low availability of preferred types of school (private school, in this case) - the supply side will affect the parental expectation of choice option- demand side (Sen, 1997), in rural and remote areas. In urban areas, most of the people, irrespective of the gender or income level prefer the quality education which is supposed to be available in the private schools. Irrespective of the gender preference, parents of Balambu, Laukahi and Pakali VDCs send their children, mostly to private school, but in mountainous VDC Chilime, most of the children are enrolled in public schools. But, gender preference for schooling is visible in western hills- Mijhing and Thabang VDCs. Hence, rural-urban difference and geographical variation in school choice is observable in the case of Nepal. Level of effect of decentralisation also could make a difference in school choice. Though this analysis provides some patterns of the school choice, small sample size of the individual VDC may reduce the value of complete generalization of the result.

Rationale of Choice: Quality Matters?

As mentioned earlier, there are a number of family demographic, school demographic and child demographic factors affecting the choice of schooling. During the survey, we stratified the rationale of choice into four strata- nearer (distance), quality, cheaper and other. Respondents were asked to rate criteria they used to choose such option (public or private). Here, "Nearer" consists the characteristics of convenience of such school, i.e. school distance. "Quality" includes- good academic performance and achievement; peaceful environment; good care; and other school characteristics such as course, discipline, physical facilities, class size, pupil-teacher ratio, accountability, etc. In general, parents characterise these as of good quality where academic priorities are the major rationale of choice of school (Kleitz, Weither, Tedin, & Matland, 2000). The option

“Cheaper” incorporates the low cost of schooling such as tuition fees, costs of books etc. which directly relates with the household income level. “Other” category controls for the remaining issues such as- friends enrolment, brother/sister enrolment, neighbours/relatives cooperation, etc. for attending their children in the school of choice.

Table 5.5: Major Causes of School Choice by Types of School (percent)

<i>Types of School</i>	<i>Causes of Choice</i>				Total
	Nearer	Quality	Cheaper	Other	
Private	0.84	91.21	0.00	7.95	100
Public	1.45	2.9	89.86	5.8	100
Total	1.12	50.22	41.7	6.95	100

Pearson $\chi^2(3) = 388.1256$ Pr = 0.000

We found a good association between the given categories of rationality for choosing and the schools of choice as explained by probability, Pr = 0.000 (Table 5.5). According to the result, 52 percent of the households’ choice of schooling is based on the quality of education they perceive in the particular type of school. More likely, 42 percent of respondents made cheap schooling as their criterion for choice. However, among the private school choosers, 91 percent are in favour of quality education and only 8 percent carry the other causes. Similarly, 90 percent of the public school preference is due to cheap education and only 6 percent are because of other issues. From the result, we can conclude that people prefer the costlier private schools because they are supposed to provide quality education. Those who are choosing cheaper public schools said that they are unable to afford the private school, though they feel the latter provide better education. Thus, even after being aware of better academic achievement in private schools the poor have to settle for public school. This leads to the dependence of the poor on public education. In a question on school choice, a respondent- a social political worker from remote hill Mijhing VDC says,

“I did not send my children to private boarding school because of my weak economic condition. Boarding schools charge fees Rs. 1500-3500 per month per student according to school categories, which we cannot afford. Teachers in government schools are good and

trained.....state has to manage well for the better performance of government school...if the courses of private boarding school is offered in government school as well, then government school may be better than boarding schools....being a social worker, I have to encourage public education andwe have to take interest in monitoring the community school on the basis of responsibility of the three pillars- student, teacher and guardians. ...instead of managing government school well, state is encouraging private education” (Interview, 3/11/2012).

In rural areas, public school teachers get more training and better salary than the private school teachers. Because of lack of devotion, the public school teachers show low performance and it degrades the trust of people on public schools. As regards the performance of teachers of public schools, a public health staff from Pakali VDC, says,

“Government teachers have got better training than the private school teachers. But, government teachers do not teach well because of less willingness and no threats to their job due to their job security. So, their performance becomes as much as low such as the sayings- ‘sleeping and running in the same place and reaching to the same place’. This deficiency in government school teachers induces the people to go for the private education of their children and I am also sending my children to private school for good care and quality education.” (Interview, 7/7/2012)

There are different dimensions of rationale of choice of private education as against public education. The frequent strikes in the name of students’ movement in public schools reduce the trust on them. Similarly, the officials of School Management Committee don’t care about the teachers of their ideological or political proximity whether they perform their duties or not. According to a respondent, a legal worker from Laukahi VDC of Terai region, “high politicization in public schools among guardians, teachers and students; and their activities, disturbs the education of public school. So, people choose private schools which have a good schooling environment for their children” (Interview, 7/5/2012). Furthermore, even being poor and having no knowledge to test the quality of education of his children, a respondent from the same VDC, who is only literate and from *dalit* community as well, argues for the private education for his children as,

“Other neighbours say that they are sending their children in boarding school (private school) for quality education. So, following them, I am also sending my three junior kids to boarding school and the elder one to public school with extra private tuition, though it is costly” (Interview, 7/5/2012).

If we consider the diversity in location and prosperity, we can observe the “Quality” as a major criterion of school choice in urban Balambu VDC and other economically well off Terai VDC- Pakali (Table 5.6). However, remote and backward Chilime VDC observes the “Cheaper” as a main school selection criterion of its inhabitants. So, the rationale for school choice varies with the variation in the locality and characteristics of VDC; and perceptions and abilities of its inhabitants. During the field study, it is also witnessed that availability of schools in a VDC also affects the cost of schooling for any parent residing in that particular VDC. A respondent from the Tamang community of remote Chilime VDC, who came from a low economic background, explains that he sends his children to public schools, though he knows the quality education in private school because the public school is cheaper. He added- “even if we search for the cheapest private boarding school, it costs Rs. 3000-3500 per child per month, which is beyond my capacity.” He further clarifies and says- “the amount becomes more if we add transportation and accommodation cost to send them to boarding school distant from VDC” (Interview, 1/6/2012). In contrast to this, a small entrepreneur (hotel proprietor), from same VDC but with prosperous economic condition, justifies his choice of private education as,

“In spite of the distance, I send my children to private school in Kathmandu paying about Rs. 5000 per month per child (which I got cheaper in comparison to others). It is because there is no quality public school available near the VDC. Teachers are mostly absent in government school and move away from their duty. So, for quality education, I chose private school for my children.” (Interview, 2/6/2014).

If the private school is far from the VDC, it also adds the transportation and accommodation cost of the student which further distracts the willingness of poorer from comparatively costly private education. This compels the people of lower economic profile to opt for the

nearer public school, which is mostly available in the VDC. However, the well-off people intend to move to private education, though it is distant and costly. But, in the analysis, we cannot ignore the possibilities of minor variations due to the error in sampling as well.

Table 5.6: Major Causes of Parental Choice of School by VDCs (percent)

<i>VDC</i>	<i>Causes of Choice</i>				Total
	Nearer	Quality	Cheaper	Other	
Balambu	0.00	77.97	13.56	8.47	100
Mijhing	2.13	40.43	48.94	8.51	100
Thabang	2.63	48.68	46.05	2.63	100
Chilime	1.39	33.33	58.33	6.94	100
Laukahi	0.00	50.67	40.00	9.33	100
Pakali	0.00	58.57	35.71	5.71	100
Total	1.12	50.22	41.7	6.95	100

Pearson $\chi^2(15) = 42.1583$ Pr = 0.000

Estelle James has proposed three determinants of the development of private education-excess demand (need of more schools because of shortfall of public schools), differentiated demand (rationale for different types and choice of education) and supply of non-profit entrepreneurship (interest on religious types of education) (James, 1987). Like in most of the developing countries, the former two factors sound effective for development of private sector in education in Nepal but attraction to and practice of non-profit and religious education is negligible (Joshee, 1994). Next, William Jeynes agrees with Milton Friedman's idea that competition in education led to betterment in the American education system. He claims better educational outcomes from private schools than the public schools, because of the formers' emphasis on hard courses, hard work and better discipline of the students (Osborne Jr., Russo, & Cattaro, 2012). However, it does not carry the pro-poor solution of the basic education services as it is more market-based idea.

This sub-section provides us some insights about the importance of the categories of the education facilities for the categories of the people. In summary, people perceive private education better for better academic achievement of their children in comparison to public

schools (also in the case of Nepal). In the survey, most of the parents were found worried about the education of their children considering its implications for job competency led by better human skill development. But, for many parents, low income acts as the main constraint in achieving this goal. In urban areas and the plain regions, supply side effect is more visible as the availability of private school is more than in the remote mountainous areas and hills (Appendix Table V-1). People's perception, even being towards private school, most of the people of these areas cannot choose private school distant from their VDC which becomes more costly for them.

Public schools, though they provide cheap education, people rate them as less qualified as a result of their low performance. Hence, in our observation, the poor have to depend on public education having low quality because of their low level of income with little family expenses for child education. This results in discrimination against the poor in education and thus in job market, which in turn, results in low level of income.

The study points out the demand for quality public education which should be accessible to poor. Supply of this counts for poverty reduction through competent human skill development and better job opportunity. Practice of fiscal decentralisation with the delivery of quality public services (education in this case) can be the road for this. Here, parent's preference of school quality allows the role of school choice policy in school improvement through a competitive environment (Wells & Crain, 1992).

5.7.2.2 Poverty and Choice of Public Health

Considering the human development approach of poverty, health is another important factor for better human skill development following the situation of well paid jobs and then income generation, then resulting in poverty reduction. According to the theories, the poor have less family funds left to spend on necessary health care consumption because they have to spend more on essential consumption such as food (Bardhan & Mookherjee, 2011).

It results in the poor being deprived of health care due to inability to pay for it (Feldstein, 2006). Hence, they have to rely on the cheaper health services made available from public sector investment. Here, the marginal utility of public services becomes higher for the poor compared to the non-poor due to their household budget constraint that results in their inability to participate in market competition which obstructs optimum social welfare in general and welfare of the poor in particular. Hence, for policy option, improvement of public health care facilities becomes more important to enhance the living standard of the poor as a result of poverty reduction strategies. If there is quality public health provision, it will tend to minimize the discrimination among poor and non-poor in access to quality health care services leading to minimal differences in their capability.

According to the traditional approach, as like as other goods and services, the demand for health input depends on the tastes and preferences of an individual determined by an exogenous state of his/her health. Unlike this approach, Michael Grossman questions the explanatory power of economic analysis to predict the effect of changes in tastes on the demand for health services. He argues for the derivation of demand for health input from the fundamental demand for health capital (Grossman, 1972a). According to his model, there should be a positive association of demand for health care with the wage/income and age; and negative correlation with the price of health care and educational attainment, if marginal demand elasticity is less than one.

In this sub-section, we will observe the experiences from the literature and examine the patients' response to the available health care facilities by using survey data of six different VDCs of different localities of Nepal. Here, we will try to observe:

1. Whether the choice of health care services (public or private) correlates with the level of income of a household or not.
2. Is there positive and significant association between these two variables?

We are going to observe these issues through the test of our *hypothesis 2 (b)*, i.e. choice of public health will increase with the decrease in household income, *ceteris paribus*. This means, with the increase of their household income, whether people tend to opt for costlier (private) services for their health care. The segment of the study also intends to explore the other household demographic factors affecting the public choice of the categories of health institution. Moreover, we will test whether the result corroborates with the geographical, economic and rural-urban variation as well.

Public health care, being important for policy option for poverty reduction strategy, a number of literature have discussed on this issue. They have studied the factors inducing an individual to have a choice of a proper category of health care services (mostly public or private) in different country context by using the different data and tools of analysis. To get some idea on the issue, let's discuss some cases.

International Experiences

Tembon (1996) analysed the impact of a number of important factors affecting the choice of health care providers by a patient. He used household survey data of Ndop (a health district situated in North West Province of Cameroon) and multinomial logit model for analysis. The study observes the positive and significant relationship between public health and quality of health care. It means, with the increase in quality of health care, the probability of a patient choosing public health services increases. On the contrary, the choice of public health care decreases significantly with the increase in the cost of health care in the public sector. Household income and socio-economic level are positively significant with the choice of private health care. Here, the higher (lower) the household income, the higher (lower) the probability of preference for private (public) health institutions. Tembon suggests for the improvement of quality of care in government health centres to increase the people's preference and dependency on the public health services. According to him, this can be done by reducing the time taken during treatment and increasing quality of diagnostic procedures and responsiveness of the health staff. This helps poverty reduction through quality public health care which is left for the poorer sections.

In another study, in case of underdeveloped country- Morocco, the rural and the low-income households were found to use public health services more than the urban and the higher-income counterparts respectively (Hotchkiss & Gordillo, 1999). Andaleeb (2000) observed quality perceptions as the driving factor for patients towards private hospitals where a major portion of the sample respondent was found to look for private health care services rather than public ones. Using survey data of 207 sample respondents from the Dhaka city of Bangladesh, the MANOVA and discrepant analysis suggested that-responsiveness, communication and performance of discipline by service providers; and income and education of the respondent; are significant in the patients' choice of hospital (public or private). He suggests for considering the market, competitive, social, internal and regulatory incentives to improve the quality of the government hospitals to assure the patients.

Grobler & Stuart (2007) found the individuals from the richest quintile are more likely to use private health care. In this study of health service choice in South Africa they noticed more preference for private health care by government pension receiving households. Similarly, more educated household heads were found less likely to go for public health service. The choice of health service providers was also found to differ with the nature of the illness, regional variation, age of the patient, level of work participation rate. In South Africa, Coloured individuals significantly utilized public health care compared to Whites who had a high preference for private health care. Another important factor to induce the choice of health care service in South Africa was information to households about the quality of services provided by different service providers. According to these analysts, because of improvement of quality of service in public health institution, public health care dominates over the private ones. They suggest that supply side reforms of public health care according to the demands of the service users is more important than merely increasing numbers.

Another study on the KwaZulu province of South Africa observed the change in the pattern of use of public health care by blacks (who was mainly using public health care) which is decreasing because of their improved economic status through the increase in education

level. A logistic regression, with the dependent variables- public and private health care, revealed the significant impact of the poverty level and level of access to medical aid on the choice of health care services (either public or private). Here, less poor and not poor, were found less likely to go towards the public health care compared to the poor (Knight & Maharaj, 2009). The individuals without access to medical aid were more likely to depend on the public health care. However, individuals who are employed, attained higher education level, greater average monthly household expenditure and from small family size were less likely to choose public health services and more likely to opt for private health institutions compared to their counterparts.

In contrast to the above observations, the Chinese experience is found to be different. In an analysis using survey data of 46510 members of 16802 households, a very small association between consumption level and choice of healthcare providers was observed (D. Qian, Lucas, Chen, Xu, & Zhang, 2010). Here, relative to self-treatment categories, people from middle and high consumption groups are less likely to use a private clinic than the low-consumption category and more likely to use a low cost Community Health Service Centres (CHC) and a costlier city hospital (where both are government owned). This is because government owned health institutions provide better health care than the private clinics. But, demographic factors such as educational status, gender, marital status and occupational status were not found significant in deciding the health care providers, in this case. Moreover, city size, the price of the services and severity of illness were found significant for the purpose. There is choice of CHC for the first treatment for most of the Chinese patients, which is perceived as the convenient health service (Tang, Luo, Fang, & Zhang, 2013).

Mosadeghrad (2014) classified the factors affecting the patients' choice of health care providers as- quality, cost and access. He advised for "patient-led" and "evidence-based" approaches to health care services. Both in qualitative and quantitative analysis in the case of Iranian health services, it was found that people of low income level were likely to go to a public hospital. However, patients from high socio-economic status prefer more to use

private hospitals. In Iran as well, people perceive private health services as better. In their knowledge, service quality in private hospitals is better than in the public hospitals.

Users of health services (households) opt health service provider and the level of health care so as they can maximize their utility, assuming the monetary and non-monetary level of household constraints. We have discussed on the case studies of different countries on the use of health care services with response to the different demographic and environment characteristics of the users and the service providers. Let's discuss some of the available literature on the issue in the national (Nepalese) context.

National Experiences

A study, using a national survey data from Nepal Living Standard Survey of Nepal (NLSS-D), witnessed this phenomenon as the likelihood of higher income households to choose a private health institution (from which they can derive maximum utility) rather than the public clinics (Rous & Hotchkiss, 2003). Interestingly, the study observed another aspect of choice of health services. Here, the older the household head, there is less likelihood of choosing the private health care compared to other types of services. Another report, prepared by Maria Paalman for World Health Organization (WHO), points out that only 29 percent of the poor have access to health facilities within the distance of half an hour and those are of poorer quality. In this situation, mostly middle and low income groups are more likely to use public health care facilities compared to the richer sections (Paalman, 2004).

According to Nepal Living Standard Survey (NLSS III) 2010/11, most (63 percent) of the acutely ill people go to consult private health institutions for their treatment. Among the consumption quintiles, though the richest are found to prefer private health care more (71 percent) than the other groups, the report witnesses the patients (62 percent) from the poorest group also consulting private health care (CBS, 2011a). Likewise, 61 percent of rural and 73 percent of urban inhabitants were found to consult private health institutions. The use of public health institution is more (58 percent) in mountain followed by hills (46

percent) and least (28 percent) in the Terai ecological region. This implies the better perception of Nepalese people on the private health institutions for the better quality service.

Karkee & Kadariya (2013), in a cross sectional survey of 400 households of Jhapa districts of Nepal, observed the preference of public health care services because of patients' financial and physical inaccessibility rather than good care. In a regression analysis, they concluded that illiterate and low-caste people are likely to prefer public health care than the highly educated and high-caste people who like more to choose private health facilities. Peoples' perception and trust as the better facilities in the private service providers is the driving force for the private service users, in this case.

From the survey of above literature, we can understand the most important role of quality care in the selection of health care institution by a patient. Individuals engage seriously on the issue of health care and move for more quality treatment as much as of their socio-economic capacity. Next, because of some household budget constraint, people have to compromise with the quality because of their low affordability. Another effective variable in most of the cases is educational status of the household head or patient. It is because, educated person may have more information about the quality of the service of the available alternative institutions. Demographic factors such as household size, occupational status, gender, etc., are also found having some effect on the process of choice of the services.

There are country or region or locality specific differences in the preference of the health care services. Nature of illness and providers' expertise; cost of services, doctors' recommendations and health insurance programmes; are also the determinants of choice of categories of health care services. In summary, for a choice of a service provider, demography of both providers and receivers play a decisive role. These factors can be noted as ten P's of health services.⁶⁹ We can narrow down the factors affecting the choice process in three categories- quality, cost and access. In a choice process, disease is the initial

⁶⁹ Ali Mohammad Mosadeghrad has discussed the ten P's in health care services as- product, place, price, physical environment, people, processes, package, performance, position and promotion. For detail, see Mosadeghrad (2014).

important factor that the patient considers in choosing hospitals. Only after this, patients go to think of other demographic factors of service providers and of patients themselves. Next important factor is the severity of illness. Patients can be indifferent to cost, access and sometimes quality as well during the emergency stage of the patient. Irrespective of his/her existing economic position, categories of hospital (public or private) and distance, high risk patients mostly choose larger hospitals.

We can observe quite different characteristics of service providers in China and other developed and developing countries. In China, public health institutions are of better quality than the private institutions and economically well-off patients choose those public institutions. However, in other developed and developing countries where markets are more effective in health care services as well, private institutions are perceived as better service providers and the well-off people go to private care providers leaving public services for the poor. From the literature, we can conclude that better quality of public services optimizes the welfare of poor and narrows the discrimination in the health achievement between poor and non-poor. Compared to private health services, public services being more accessible to the poor, these can be the better option for poverty reduction strategy through human skill development of poor. However, this situation rarely prevails in case of developed and developing countries characterised by worsening public sector and growing private sector.

Results

Though different literature discussed above are considering the different factors affecting the choice of health care services, this study includes only some important household demographic variables as explained in Appendix Table V-7. This is one of the limitations of the study that it intends to focus on some socio-economic variables (poverty characteristics) that affect the use of health care services that can give a glance of effectiveness of the public investment in health sector which have implication for poverty reduction strategy. All other unobservable factors have been captured by error term in the analysis.

The dependent variable in this analysis is “health service used” which is binary and discrete variable taking values- “0” for private health institutions and “1” for the public health institutions, as explained in the section 5.2, 5.4 and 5.5. As it is already introduced in the Appendix Table V-7 and subsection 5.7.1, we are not going to describe here the nature of all the variables. Similar to the analysis performed in subsection 5.7.1, data from a survey of 299 households of different VDCs of different corners of Nepal are used in this estimation as well. Similar to the data used to estimate the school choice, the dataset is the value of perception and response of respondents on the practice of use of health care services for the treatment of their family members.

There is limitation that people may use multiple health institutions during their treatment and it is difficult to segregate according to the institutions and frequency of visit, which makes the analysis further complex. So, the respondents were asked about the health institution mostly they use for their health care. No search carried for quantitative data on the quality and characteristic of the health institution because this research is mostly concerned with the estimation of the relation between poverty (through proxies of income, assets, education level and nature of occupation) and health service choice. However, variables such as quality, cheaper and others as the causes of health care choice carry the perception of the respondent in this study.

Among the 299 households surveyed, 89 percent faced a health problem during the reference period of one year (Appendix Table V-12). Geographically, the mountainous VDC Chilime has the lowest (64 percent households) record of health problem. However, Laukahi, a small VDC of Terai region reports the highest (97.5 percent of households) health problem. There is higher report of acute illness in Terai and low level of illness reporting in the mountain (CBS, 2011a). Similarly, among the illness reporting households, 71 percent have mostly used private health institutions and 29 percent have gone to public health institutions (Table 5.7).

Table 5.7: Use of Health Services by Household per Capita Income (percent)

<i>Income Quintile</i>	<i>Health Service Used</i>		
	Private	Public	Total
Poorest	70.83	29.17	100.00
Second	61.54	38.46	100.00
Third	72.22	27.78	100.00
Fourth	76.36	23.64	100.00
Richest	72.55	27.45	100.00
Total	70.77	29.23	100.00

Pearson χ^2 (4) = 3.1073 Pr = 0.540

Among the 265 households reporting illness, 5 households reported using alternatives other than public and private institutions. For simplicity, this category is omitted during analysis as it is with very low frequency and value. Here, along with poorest quintile, people from all categories prefer more to choose private health institutions. Except second quintile (61.5 percent), all other income categories (more than 70 percent) households show the private health care as their preference.

We have used logistic regression models to analyse the impact of household income and other proxy variables of poverty on the choice of health institutions, using equation 5.10 derived in earlier theoretical sub-section 5.2. Here, the dependent variable is health service used and the core explanatory variable is income quintile estimated from income reported by sample household heads. During the estimation, we did not find the household income (income quintile) statistically significant in explaining its association with the health service used by the sample population (Table 5.8). This implies the possibility of other factors outside the model decisive in health care choice than the income of a household. Similarly, there is no response of other proxy variables of poverty (remittances, landholdings, education level and occupation) as well to the choice of health institution by a household. The value of Prob > χ^2 (0.653) suggests that the existing model is fit. However, pseudo R^2 value suggests that the model explains roughly 4 percent variation on dependent variable. There might be other variables beyond those included in the model to explain the variation in the dependent variable- health service used. In this case, the null

hypothesis is accepted and the alternative hypothesis that choice of public health services will increase with the decrease in household income *ceteris paribus*, is rejected.

Table 5.8: Regression Estimates for Determinants of Choice of Health Services

<i>Dependent Variable/ Independent Variable</i>	<i>Health Service Used</i>	
	Odds Ratio	Standard Error
Household Size	1.102	(0.0723)
Income Quintiles	0.883	(0.112)
Remittance	0.501	(0.237)
Total Land-holding	1.080	(0.238)
<i>Education of Household Head</i>		
Illiterate	-	-
Literate Only	1.156	(0.724)
Primary	1.132	(0.722)
Secondary	1.205	(0.726)
Higher Secondary	2.427	(1.664)
Graduate and above	1.469	(1.165)
<i>Major Occupation of Household Head</i>		
Farming	-	-
Wage Labour	1.288	(0.617)
Business	0.924	(0.371)
Service- Inland	1.532	(0.722)
Service- Foreign	.	.
Others	4.982	(7.604)
Constant	0.240*	(0.189)
Observations	257	
Pseudo R²	0.037	
Hosmer-Lemeshow chi²(8)	5.94	
Prob > chi²	0.653	

Exponentiated coefficients; Standard errors in parentheses

* p<0.10, ** p<0.05, *** p<0.01

The result of the analysis is found quite different and contrary to results from most of the studies from literature. However, the result tends to follow the pattern observed by Nepal Living Standard Survey (NLSS III) 2010/11. Irrespective of income level, people of sample area prefer to choose private health services than the public ones. The result induces us for the query of the rationale for such response. As we know from the literature, patients think about the cost of treatment, quality of services and access to the health institution during the choice of health care consumption (Mosadeghrad, 2014). Hence, there could latter two factors could be possibly more effective than the cost of the treatment that relates to the income of a household.

During the study, information on six different categories of health service used was collected and clubbed them into three categories: public, private and other. If we go to the original source of data, we can find the pattern of health service used as given in the (Appendix Table V-13). Here, government health posts include the government owned health posts and sub health posts. Private health institutions represent the private hospitals, nursing homes. Private health practitioner covers the small private health clinics, pharmacy etc. The other consists of Ayurveda clinics and shops. From the Appendix Table V-13, we can observe more concentration of people from income quintiles towards private health institutions (more than 40 percent) and private health practitioners (more than 16 percent), irrespective of the income level. However, government hospitals and health posts possess less attraction, for example, less than 16 percent and 23 percent of the sample population from different income quintile use these institutions, without considering the level of their household income.

All above figures lead to the conclusion that poverty level has an insignificant role in selecting the health service type (either public or private). Contrary to the choice of schooling, people think more seriously before going to the treatment of their illness because it directly concerns their life. If there is no better treatment or delay in treatment, then it could result to further severe health problems or even to death. Hence, people could be ready to bear higher costs for the effective services. Then, without thinking of cost and their ability to pay, poor also choose the institutions of their trust. Here, economic rationality for a patient becomes less important and the marginal utility of health care becomes more important. The patients, if they have inadequate family health expenditure, they might choose the debt option as well to meet their high health care cost in private institutions. Even within the categories of private institutions, poor may choose the cheaper one showing some income effect. This aspect is not covered by our analysis and might be the question for further study.

Besides the income related variables, educational attainments of the household also does not play an important role in opting the health institutions. Even the people from illiterate background, he/she collects the information about better health care and institutions from

different sources, and makes decision to go for better health care (which the most people perceive to come from private institutions). Similar conclusion comes in the case of insignificant coefficients of the occupational status of the household head as well. The next discussion would make us clearer on the rationale of choice of the particular health care service.

Village-wise Result

The result of general analysis corroborates with the result of locality specific analysis. Table 5.9 presents the relation between the dependent variable, health service used, with the explanatory variables along with household income (represented by income quintile) in the context of six different VDCs of three different geographical regions. The characteristics of VDCs are already described briefly in the section 5.6 of this chapter and discussed in the earlier subsection of this chapter. According to the results, only in the case of Chilime VDC, there is positive and slightly significant relationship between income quintile and health service used. Similarly, household size and total land-holdings are found slightly significant in the case of hilly Thabang VDC. However, Laukahi VDC located in the Terai region possesses somewhat significant relationship of household size with the use of public health services.

All other remaining results are not found significant. Irrespective of the level of resource richness (benefit received from fiscal decentralisation) of the VDCs, residents of each VDC mostly prefer to choose private health care provisions. Here, the income effect as argued theoretically by the Bardhan & Mookherjee (2011) and other empirical literature no more works. The result only gives some idea about the said relationships because we are working with small sample size in the VDC level analysis. The result might be more powerful if the sample size were large in each case.

Table 5.9: Regression Estimates for Determinants of Choice of Health Service by VDC

Health Service Used	(1) Balambu	(2) Mijhing	(3) Thabang	(4) Chilime	(5) Laukahi	(6) Pakali
Household Size	0.804 (0.163)	0.939 (0.165)	1.405* (0.283)	1.269 (0.330)	1.322* (0.216)	1.337 (0.297)
Income Quintile	0.908 (0.278)	0.739 (0.239)	0.727 (0.228)	3.343* (2.269)	0.846 (0.329)	0.704 (0.226)
Remittance	.	0.473 (0.402)	0.856 (0.954)	0.318 (0.557)	.	0.294 (0.431)
Total Land-holding	3.870 (3.640)	0.691 (0.497)	8.390* (9.667)	2.835 (2.209)	0.449 (0.259)	0.138 (0.214)
Education of HH Head	1.061 (0.280)	1.479 (0.602)	1.065 (0.432)	0.719 (0.394)	1.339 (0.500)	1.498 (0.551)
Constant	1.161 (1.730)	1.381 (2.171)	0.031* (0.567)	0.005* (0.013)	0.083* (0.123)	0.111 (0.195)
Observations	52	40	44	24	36	56
Pseudo R²	0.065	0.079	0.206	0.231	0.123	0.098
Hosmer-Lemeshow chi²(8)	4.07	12.15	5.19	5.29	13.41	4.63
Prob > chi²	0.851	0.144	0.737	0.726	0.100	0.796

Exponentiated coefficients; Standard errors in parentheses

* p<0.10, ** p<0.05, *** p<0.01

The descriptive statistics in Table 5.10 also supports the case of preference of private health care compared to the public one for each and every sample VDC. Among the six VDCs, there are VDC specific differences in demography of private services and the level of public care provided. Beyond this, people of Chilime and Mijhing use public services comparatively more than other VDCs and Pakali is the least in the use of public health institutions.

The overall observation implies that irrespective of the income and other proxies for poverty (those are considered in the model), households make their choice of the categories of health care services. This observation is almost viable in the case of geographical variations and resource richness of the VDCs as well. Similarly, the political economic difference among the localities (VDCs) also do not have significant difference in the poverty impact of the health service use. This is very important for policy in a country in poverty reduction through the improvement in the health indicator of the poor. People are more sensitive in their health care and need to move for a better treatment as per their

knowledge, information and trust. Like in other developed and developing countries, Nepalese people also perceive the private health institution better than the public for their treatment. This is because of market incentives in the private sector and a number of deficiencies in the public health services. The following discussion enlightens us on the reasoning of the choice of a specific category of health services by the patients during their treatment which may give some indications for the reforms of the public services to provide cheap and equitable health services to the poor.

Table 5.10: Health Service Used Patients by VDC (percent)

<i>VDC</i>	<i>Health Service Used</i>		
	Private	Public	Total
Balambu	68.4	31.6	100.0
Mijhing	60.0	40.0	100.0
Thabang	72.7	27.3	100.0
Chilime	58.3	41.7	100.0
Laukahi	74.4	25.6	100.0
Pakali	82.1	17.9	100.0
Total	70.8	29.2	100.0

Pearson $\chi^2(5) = 8.0151$ Pr = 0.155

Rationale of Choice: Quality matters?

The previous discussion informs us, there are a number of factors such as family demography, characteristics of health institutions and the nature of the health problem affecting the health care choice of an individual. In another way, we can club the standard that the patient applies in deciding the use of health service into three major groups: quality, cost and access. Patient's socio-economic characters, level of information about the service, cost and quality of services and service providers, nature of disease and severity of illness, distance of the health institutions may have influence in the choice process. But, the strength of the factors may differ in different time and context.

As in the case of a study of school choice, the rationale of choice is classified into four options- nearer, quality, cheaper and other; and interviewees were asked to rate the criteria they used to choose either public or private health service. Here, “Nearer” represents convenience to access the health institution i.e. distance. “Quality” includes- prompt treatment, skilled and responsive health staff, good environment, good care, better hospitality, medicine availability and goodwill of the health institution. “Cheaper” includes the cost factors such as- low outdoor and indoor examination fees and treatment charges. “Other” refers to the recommendations, the probability of relative’s cooperation, patients’ past experience, etc.

Table 5.11 describes the main rationale of choice of public or private services. Among the users of private health institution 95 percent said the quality as the rationale of choosing. Likewise, 90 percent of respondents who consider the quality as the basis of choice of health care opted private health institutions for their treatment. Among the users of public institutions, 45 percent were found using this because the service is cheaper, 25 percent because of quality and 21 percent due to other causes. One-fourth of patients having a choice due to other causes are found to use private institutions and three-fourth using public ones. No one perceives the private institutions as the cheaper service providers.

In the case of sample VDCs, as also from the experiences from other studies, people feel better service quality in private than in public health institutions. During the choice process, they give more importance to the dimension of effective services, easy access to better and cooperative care, available facilities and comfort. For these, patients can compromise with the cost of the care which could directly rely on their income level. In the sample case, people prefer private versus public hospitals, private clinics (mostly the small pharmacies in the rural cases) versus public health posts, irrespective of their income level. It is because, they can get prompt service, good care and necessary medicines from the private institutions easily. Because of market incentives, private health care providers display good hospitality towards patients.

Table 5.11: Rationale of Use of Categories of Health Services (percent)

<i>Health Service Used</i>	<i>Rationale of Choice</i>				Total
	Near	Quality	Cheaper	Other	
Private					
Frequency	4	175	0	5	184
Row Percent	2.17	95.11	0	2.72	100
Column Percent	36.36	90.21	0	23.81	70.77
Public					
Frequency	7	19	34	16	76
Row Percent	9.21	25.00	44.74	21.05	100
Column Percent	63.64	9.79	100	76.19	29.23
Total					
Frequency	11	194	34	21	260
Row Percent	4.23	74.62	13.08	8.08	100
Column Percent	100	100	100	100	100

Pearson chi2 (3) = 146.4270 Pr = 0.000

The trust deficit and medicine unavailability are remarkable causes of distraction of rural people towards government health institutions. So, though there are very few private health institutions in rural areas, most of the people opt for the private health institution irrespective of their level or types. A resident from Mijhing VDC of the remote Rolpa district, who is the member of the management committee of the local health centre, says about the cause of the peoples' choice of private health care as:

“I am a member of the management committee of Primary Health Centre, Sulichaur. We tried to convince the people for excessive use of public health care (by local poor) because the medicines are same in public health institution as well. But, people do not trust the free government service and medicine, they feel, that will not work well during treatment. They think that- ‘if they pay more (in private medicals where they have to pay more), the treatment will be good’. Another, in health centre, all medicines are not available as compared to the private pharmacy. So, they think it better to go directly to the private clinic / pharmacy. Till now, we found such types of thinking on local service receivers....there is no case of distribution of date expired medicines from the primary health centre” (Interview, 3/11/2012).

Similarly, in Terai VDCs also we can find almost similar causes of the peoples' choice of costly private health institutions than the free health care from the government health institutions. A legal worker from Laukahi VDC says,

“People do not go to health post generally. Extreme poor only go there for the treatment. Otherwise, people have more interest towards private health institutions as they have more trust on their quality of services. Similarly, mostly medicine is not available in the government health post because health post staffs and staffs of the District Health Office sell the medicines (those provided by the government for free distribution) to the private pharmacies creating a shortage of medicine in health posts” (Interview, 7/5/2012).

In the rural areas, government health post work only up to the first half of the working day (mostly from 10.00 am to 2.00 pm) and patients may not get the necessary medicine in the health posts. Absenteeism of senior health staffs and service provided by junior or low grade health professional in government health institutions becomes a major hurdle in public health care in remote hills and mountains. The case is observed, sometimes, in rural parts of Terai region also (Himalayan News Service, 2014b). Hence, because of these difficulties patients need to go to private health care facilities. People think better to go directly to the private health institutions without spending more time in public health posts. So, irrespective of their economic status, they opt for private services. In this connection, a former Maoist fighter, from Thabang VDC that belongs to conflict affected remote hill Rolpa district, says,

“There is no good and prompt treatment in government health institutions and need to take 2-3 days to get admission if necessary. There is no regularity of doctors in remote health institutions and no serious care to the patients. The doctors show their interest and care during treatment according to the proximity of the patient with the doctors. So, most of the people go to costly private health institutions and spend more even being in debt because of good care and treatment in those health institutions”(Interview, 31/10/2012).

Next, in these areas, health staff of the public health institutions are found to run private institutions and small pharmacies where they do not impose consulting fees to the patients. This aspect avoids the difference in the cost and the skill of health technician than that from

the public health institutions. Even in the urban cases, the patient gets better hospitality and care during the private service from the same health staff who is working in the public institution. A business worker, residing in Balambu VDC of urban Kathmandu says in this connection, “we can get prompt treatment in private hospitals. However, it takes long time to get admission at government hospitals. The doctor of government hospital also comes to the private hospital where we can get better treatment and more hospitality than in the government hospital.”

Some respondents from poor and *dalit* categories also do not have trust on government health posts. A poor, coming from highly backward Mushahar community of Pakali VDC, says that he never goes to public health posts because they are not reliable. Likewise, a health technician residing in Pakali VDC, shares his experiences on the performance of government health institutions as,

“I am working as District Project Coordinator of New-born Baby Care Programme of Saptari district. During my duty, I visited most of the government health posts of that district. I found that the health post staffs working from 10.00 am-2.00 pm on the working days and not with heartedly service motive. Medicines given by the government to the District Public Health Office for free distribution are damaged and wasted in the store. Millions of budget used for free medicines are wasteful. But, people go to private health institutions because of good hospitality and care provided, and medicine and emergency service available from them” (Interview, 7/7/2012).

From the survey, it was found that aversion of people from public health services is mainly due to the irregularities, medicine unavailability, more time consumption and lack of hospitality in those sectors. Though they are cheaper, long time taken in treatment results in more accommodation cost and sometimes, increased severity of the problem which finally adds to the cost of the treatment. Moreover, the poor who have to work hard to run their daily expenses, also think about opportunity cost of the long-time taken for treatment in public health institutions which he could use to work and earn. A farmer cum wage labour, from mountainous remote Chilime VDC, briefs on his choice of private health institution as,

“My neighbours said that- no good medicines are available in the government health institutions and it takes long time to cure. They further reminded me that- I have to be recovered very soon so as I can start my daily work again. Hence, they advised me to go to a private hospital where I will get recovered very soon. So, I went to private medical and spent 10-12 thousands in treatment” (Interview, 1/6/2012).

People club all these issues in the quality variable and perceive the private health institutions better in quality and prefer them for their health care. But, people rationalize the use of public hospitals (basically public health post) for the services as: immunization, growth monitoring, antenatal care, family planning etc.

The quality of health service in government hospitals in urban areas can be found to be comparatively better than the small public health institutions in rural areas. But, there is no consultation fee in private health institutions (such as small clinics and pharmacies) in rural areas which is costly in urban private hospitals, which causes crowding in effect in public hospitals in cities due to more choice of public health service by low income groups. This, along with the slow response of public health technicians, long queue and more time for treatment which adds more accommodation cost to the people coming from rural areas and degrades the health situation of their patient. Considering this fact, some of the people choose costly private hospitals for early and quality treatment.

Irrespective of income level, the worsening of an individual's health position demands for more health care which ultimately increases the health care outlays (Grossman, 1972b). Next, the role of private sector in health care provision is increasing in both developed and underdeveloped economies. The crux of the matter is the individual's preference for quality and efficacy of the treatment which they perceive to get from private services. During the acute illness, individuals do not care about the cost and access of the health service, they consider mostly the quality of the health care institutions. This subsection highlighted the existence of the fact that, like in most of the countries, Nepalese people also prefer private health care more than the public health care. Irrespective of income level and the geographical variation, people of sample area are found extensively to choose private health institutions (Lindelov, 2005).

Not only because of excess demand, choice of private health care over the public is due to differentiated demand as well. People are ready to pay more for the private care (considering it as normal good) for quality treatment in substitution of free or cheaper public care which they suppose as the inferior good. Then, the existing pattern of public expenditure on health has a comparatively less contribution in public health outcomes. Governments' policy to emphasize the supply side (quantitative increase) of health care rather than the demand side (qualitative enhancement) is responsible for this problem. Similarly, the poor have to pay more for the quality private health care beyond their income level. These two cases, government failure (to provide adequate and quality service) and market failure (to provide widely affordable services) should be corrected to deliver the equitable health care services that have implication for a poverty reduction strategy.

Principally, the neoliberal reforms, which suppose the market is the sole and ultimate solution, have induced government to cut the health care subsidies and to set the health care as the private good for the market, are responsible for the inequality in health attainments (McGregor, 2001). Furthermore, decentralizing only the burden of health care service from central to local government, rather devolving true rights and responsibilities has also added to this inequality. This further deteriorates human skill development of the poor. To avoid the inequality and the deregulation in the health care system, each and every benevolent government should regulate and invest more in health care reform to improve public health care institutions so as to provide quality and affordable public health services which carries implications for poverty reduction through public service delivery. Only by addressing these problems, supply of public health care services through fiscal decentralisation may have significance in achieving poverty reduction goal of the country.

5.7.2.3 Poverty, and Educational and Health Attainments

The achievement in education depends on the environment of schooling which is guided by household demographic factors. Household income also affects the educational

attainments of the children. It is because not only the cost for the quality school, higher income facilitates for the other reading materials, private tuitions and time for study as well. In case of our survey study, most of the children, those attended the final exam, were found to complete the respective grades (Table 5.12).

Table 5.12: Students Completed the Education Level by Income Level (percent)

<i>Income Quintile</i>	<i>Completed the Level Attended</i>		
	No	Yes	Total
Poorest	1.30	98.70	100.00
Second	3.17	96.83	100.00
Third	2.78	97.22	100.00
Fourth	1.39	98.61	100.00
Richest	0.00	100.00	100.00
Total	1.80	98.20	100.00

Pearson chi2 (4) = 2.1619 Pr = 0.706

But, all of the children from the richest household completed the level (grade) of their study in compared to other from lower income categories. Geographically, all of the children from richer urban hill and Terai VDCs those appeared in exam got success than the children from Central mountain and mid-western hills those also are poorly benefitted by fiscal decentralisation (Table 5.13).

Table 5.13: Students Completed the Education Level by VDC (percent)

<i>VDC</i>	<i>Completed the Level Attended</i>		
	No	Yes	Total
Balambu	0.00	100.00	100.00
Mijhing	4.17	95.83	100.00
Thabang	1.85	98.15	100.00
Chilime	3.92	96.08	100.00
Laukahi	0.00	100.00	100.00
Pakali	0.00	100.00	100.00
Total	1.80	98.20	100.00

Pearson chi2 (5) = 6.4715 Pr = 0.263

Next, during the survey, level of education attainment is found increasing with the income level. More drop out after getting a low level of education is observed among the household from the poorest quintile, where there is zero percent of household head having

the education attainment as graduate and above. However, 22 percent of the richest people are found to have such educational achievement which almost replicates the percent of the poorest who are illiterate or literate only. This scenario shows the early drop out problem in poorer and more or less late drop out among the richest ones (Table 5.14). This reveals the adverse educational environment for poorer than non-poor.

Table 5.14: Drop out of HH Heads by Income Level in Sample VDCs (percent)

<i>Income Quintile</i>	<i>Education of HH Head</i>						Total
	Illiterate	Literate Only	Primary	Secondary	Higher Secondary	Graduate & Above	
Poorest	20.00	20.00	26.67	25.00	8.33	0.00	100.00
Second	10.00	30.00	23.33	31.67	1.67	3.33	100.00
Third	13.33	23.33	10.00	40.00	10.00	3.33	100.00
Fourth	6.67	13.33	13.33	43.33	15.00	8.33	100.00
Richest	1.69	3.39	5.08	49.15	18.64	22.03	100.00
Total	10.37	18.06	15.72	37.79	10.70	7.36	100.00

Pearson chi² (20) = 76.6254 Pr = 0.000

Table 5.15: Skill Birth Attendance by Income Level (percent)

<i>Income Quintile</i>	<i>Skill Birth Attendance</i>		Total
	No	Yes	
Poorest	71.11	28.89	100.00
Second	42.11	57.89	100.00
Third	38.71	61.29	100.00
Fourth	32.00	68.00	100.00
Richest	26.67	73.33	100.00
Total	46.75	53.25	100.00

Pearson chi² (4) = 16.4770 Pr = 0.002

In the case of health attainment, we can find significant differences as per variation in income and geographical location. Table 5.15 gives a glimpse of skill birth attendance by variation of income level. Still, 47 percent cases of births in the sample are found without skilled birth attendants where the poorest households possess more (71 percent) unskilled birth than the richest (27 percent). Because of low information and the inadequate facilities, people from remote hill (Thabang) and mountain (Chilime) VDCs have mostly to adopt unskilled birth attendance.

Table 5.16: Skilled Birth Attendance by VDC (percent)

VDC	Skill Birth Attendance		
	No	Yes	Total
Balambu	0.00	100.00	100.00
Mijhing	51.43	48.57	100.00
Thabang	93.75	6.25	100.00
Chilime	82.76	17.24	100.00
Laukahi	40.63	59.38	100.00
Pakali	8.70	91.30	100.00
Total	46.75	53.25	100.00

Pearson χ^2 (5) = 60.1518 Pr = 0.000

However, comparatively richer urban (Balambu) and Terai (Pakali) VDCs, which are carrying more achievement of fiscal decentralisation, exhibit high rate of skilled birth attendance (Table 5.16). The observation makes us to conclude for the need of role of incentives and adequate public facilities for the poor and the people from less developed and remote areas to achieve the equitable health attainments and goal of poverty reduction.

5.8 Conclusion

Our analysis in this chapter points to the following conclusions. First, household expenditure on education and health rises with the rise in the level of household income. This implies that because of inadequate incomes the poor depend more on the cheaper public services supplied by benevolent governments. Statistically, we can say that with the decrease in income level of a household, there is increased dependence on basic public services as pointed by second hypothesis. Then, basic public service provision becomes important for the poverty reduction through the human skill development of the poor. This situation prevails in the case of education services in Nepal.

We can observe in case of second *hypothesis* that- as the income level rises the probability of parental choice of private education increases because people perceive private education better (in quality) that produces more competent human skills than by the public education. Trend of use of basic education services (public or private) shows variation with the diversity in the economy and geography of the localities. However, the situation contradicts

in the case of health care provision. Irrespective of income level, people choose private health care provision because of more quality service achieved than in public health care. In this case, during acute illness, people ignore the cost and accessibility, and care of only the quality component of health care characteristics. High choice of private health care services is found visible in the sample population, irrespective of geographical variation as well (Lindelov, 2005).

Second, there are other direct effects of higher education and health expenditure on poverty. One of the effects, if people opt for quality private education and health, because of its costly nature, it increases the aggregate household expenditure on education and health, and there would be a curtailment of other expenditure such as food expenditure, in the cost of quality education and health. The fund, which could be used in poverty removal, lowers the calorie intake of people through curtailment of food and aggravates the consumption poverty by pushing the additional people under the basic poverty line. The other effect is through more investment by local bodies on rural infrastructures such as road, instead of health and education as described in chapter 4. Low local investment in public education and health degrades the chances of up-gradation of quality of public education and public health. However, local investment on roads enhances the access of private investment in education and health which pushes the poor to the competitive education and health service market. This again increases the household expenditure on education and health which is against the poor and further aggravates poverty through the deficiency in the supply side of public services.

Third, we can observe the causal relationship between education and poverty. Because of poverty, people from low income level could not attain the highest level of education as they have to drop out of education at very low level. It is due to the less family funds for their education and being compelled to engage in works to earn for meeting their daily expenses. Similar case happens in the case of health service sector as well. The poor have to spend less for health care because of shortage of family health expenses that forces them to choose low quality of health services which may degrade quality of health. Thereafter, due to low quality of education and health, they lose their capability in the job market due

to which they have to depend on the low paid jobs and the low income. This further pushes them below the poverty line.

Fourth, people perceive public sector to be inefficient as compare to the private sector. It is due to the inefficient management with overstaffing and low profitability in public sector thus with slow response than the profitable and dynamic private sector (Kumar, 2002). Moreover, overall profit of public sector would not be undermined if it is not diverted, in any case, through the black economy or corruption. Hence, the private institutions are supposed to be service oriented than the public institutions. Then, the poor service of public institutions pushes the consumers towards the use of private services. However, continuously growing commercialization and privatization of education and health sector leads these services to costlier and hard for the poor to afford (Kumar, 2013). The situation may result poor either to compel to avoid the services or to curtail their food consumption which finally deteriorates their health.

Lastly, there is need of such a public policy that emphasizes not only the supply side (quantitative increase) but the demand side (qualitative enhancement) of public education and health care. It may be useful to correct the consequences of both government failure and market failure in these public service provisions. In addition, there is need of public investment and market regulation by a benevolent government to minimize inequality in education and health care sector produced as the result of arbitrary neoliberal reforms (McGregor, 2001). Moreover, supply of quality and efficient basic public services through fiscal decentralisation may have implication in achieving poverty reduction goal.

CHAPTER 6: PROBLEMS IN FISCAL DECENTRALISATION AND PUBLIC SERVICE DELIVERY IN NEPAL

6.1 Introduction

In order to achieve the benefits of fiscal decentralisation as discussed in earlier chapters, certain conditions should hold such as presence of elected local government and officials; significant taxing and spending power to local governments; significant authority of public project selection; administrative capacity of local governments for revenue collection and spending; etc. (Bahl, 1999a). The poverty effect of fiscal decentralisation and public service delivery depends on the performance of local governments and their relationship with the centre. Efficient resource allocation and implementation are the conditions for social welfare maximization from decentralised local public service delivery. Otherwise, misallocation and misappropriation of available resources will hinder pro-poor service delivery and thus prevent the goal of poverty reduction from being achieved (Keefer & Khemani, 2005; Boex et al., 2006). In addition to traditional literature, modern literature has been concerned about the chances of elite capture and corruption at local level. These phenomena are considered as significant demerits of fiscal decentralisation (Prud'Homme, 1995; Tanzi, 1996; Bardhan & Mookherjee, 2011). These are referred to as policy failure cases in Kumar (2002).

Elite capture is the possibility of capture of local resources by well-informed non-poor at the cost of the ill-informed poor. The level of elite capture may increase with “local poverty rate”, *ceteris paribus*, since the latter widens the gap of awareness between poor and non-poor (Bardhan & Mookherjee, 2011). In the same way, corruption at the local level hinders the “allocative and production efficiency” of local government via supply of services to those who pay bribe (instead of the needy poor) and the use of ineffective technology leading to waste of resources and time (Prud'Homme, 1995). Ambiguity and misuse of local resources adversely affect public service provision resulting in inefficient services in terms of both quantity and quality. Along with these aforementioned problems, the process of fiscal decentralisation and produced public service delivery may be constrained by other

flaws (both in law and practice). They will obstruct the smooth translation of the products of fiscal decentralisation to poverty reduction outcomes through local public service provision.

In this chapter, along with quantitative information, we examine the qualitative data on the performance of rural LBs (VDCs), VDC staffs and the Local Self Governance Act (LSGA), based on the perception of local people of the VDCs surveyed on these issues. Similarly, we also observe the basis of project selection, pro-poor nature of the projects and the presence of elite capture and corruption at the local level. All these factors may affect the production efficiency of the local projects which, in turn, may have implications for poverty reduction. Additionally, discussion of relevant secondary data and information on all three types of LBs is also used in the analysis to highlight the problems.

In other words, by using primary and secondary information, the study needs to get the answers to following questions-

1. Whether there are problems in local governance that impact effective delivery of local public services?
2. Are there cases of elite capture or corruption affecting the benefits of public services reaching the poor?
3. Has increased local public expenditure share led to better quality of life of poor through increased local public services?
4. Does this effect vary with the resource availability and location of LBs?

In the absence of adequate quantitative data, the study has made use of qualitative information relevant to these issues. Information was collected through a survey of 301 households of six different VDCs with various demographic and socio-economic characteristics as introduced in Chapter 5, section 5.6. First, the problems at the national level were examined using secondary information. Then, the discussion followed the cases of the sample VDCs where the survey was conducted. This chapter consists of more descriptive discussion than analytical statistical inference. Mostly, descriptive statistics

are used to discuss the aforesaid issues. In addition, narratives are also used to explain those issues that could not be explained by statistical analysis.

6.2. Limited Fiscal Assignments: Principal-Agent Problem

The term “Local Bodies” instead of “Local governments”; and naming local bodies as “Development Committees”, in the popular legal framework, i.e. LSGA 1999 and Local Self Governance Regulation 1999, reflects the partial power status of LBs as recognized by the central government. Moreover, LBs are constitutionally recognized only for the provision in the Interim Constitution 2007 and its successive amendments as emphasized in Brennan & Buchanan (2000).

Though LBs are supplied with a long list of assignments (with priority given to fiscal assignments; for details, see Appendix Table I-3), *de facto* they are seen as the instrumental institutional units of the central government to implement the centrally planned programmes and projects to achieve the central target of output (Cyan et al., 2009; Panta, 2010). In other words, LBs are not supposed to be independent entities, but the “agents” of the central government which acts as the “principal”. Therefore, contrary to the well-known “subsidiary” principle that argues for the assignment of fiscal and regulatory responsibilities to the lowest unit of government, the responsibilities of LBs in Nepal follows the “supplementary” principle in which there is dominance of central government agencies by rule, though a long list of functional assignments is legally provided to LBs (World Bank, 2014a). Hence, the Centre-local relation in Nepal basically reflects the “principal-agent” model.

Moreover, in the case of fiscal assignments which is the major concern of the study, there is a clear picture of limited revenue assignments provided to LBs as the major revenue sources (i.e. direct and indirect taxes) are collected by the central government, leaving the LBs with the fringe taxes with lower revenue productivity (e.g. land and house taxes, some forms of user charges and natural resource utilization taxes). The natural resource utilization taxes depend on their availability and are of an irregular nature. The limited

revenue raising powers lead to vertical fiscal imbalance in Centre-local fiscal relation. Second, the LBs rarely have the right to fix their tax bases and tax rates. Hence, there is “incomplete contract” between the centre and local governments in revenue assignment. To add to it, there is unclear provision due to definitional obscurity and improper accounting systems. For example, central government acquires major share of resources collected by the LBs in accordance with the revenue sharing provision (50-65 percent of defined items) where there is reflection of discretion left to the central government. In addition, complex procedure for local borrowing has led LBs (DDCs and VDCs) to be apathetic to meet their resource gap by borrowing. However, municipalities are enjoying these facilities to some extent. The limited revenue assignment to the LBs has thwarted the proper resource mobilization motive of good fiscal decentralisation (Bahl, 1999b; Boex & Martinez-Vazquez, 2006).

The revenue autonomy of DDCs, VDCs and Municipalities constitute 21 percent, 7 percent and 34 percent respectively in 2009/10 (see, Chapter 1, section 1.2). In our sample VDCs, the share of own source revenue in total VDC revenue ranges from 0 - 47 percent among six VDC (see Appendix Table V-3). This shows the low revenue autonomy and high fiscal dependency of LBs which creates remarkable vertical fiscal imbalance. In addition to this, the central government has started the practice of the performance based grant system as the “performance based contract” between central government and LBs for the provision of capital grants. Here, the “principal” (central government) is “risk neutral” and the “agents” (LBs) are “risk-averse” as additional capital grants are provided only on the basis of performance of LBs as evaluated by Minimum Condition and Minimum Performance (MCMP) criteria.⁷⁰ There is another type of contract where the central government provides the block grants to LBs by specifying the condition to allocate some budget for children, woman and *dalits* to support the central objective of inclusive development. In

⁷⁰ Since 2008/09 central government started to operate performance based grant system for DDCs and since 2009/10 for VDCs and municipalities where only Minimum Condition (MC) is applied to VDCs but Minimum Condition and Performance Measurement (MCPM) is applied to DDCs and municipalities. Score of PM has estimated by taking 62 indicators of 8 functional area and 40 indicators of 5 functional areas in case of DDCs and Municipalities respectively. MC is estimated on the basis 12, 11 and 15 indicators for DDCs, VDCs and Municipalities respectively related to the planning and budgeting, financial management, programme implementation, transparency, accountability, etc., incorporated in core functional areas of LBs. For detail see LBFC (2014).

this case, the central government is “risk averse” and the LBs are “risk neutral” as the LBs will receive the block grant without an assessment of the output of that conditional grant. This scenario makes clear the presence of “principal-agent” relation between the central government and the LBs. This problem, along with the problem of limited assignments, hinders the achievement and the objectives of effective decentralisation and proper functioning of LBs.

LBs are assigned a larger menu of expenditure assignments which they cannot undertake from their own revenue resources. But, the share of local expenditure in total central expenditure was only about 12 percent in 2010/11 (LBFC, 2012) implying the very low level of expenditure of LBs in the defined assignments. The central government spends more in the majority of public service sectors. LBs are then found to be spending on the basic public services through the micro-projects in each and every service sector. This means, unlike the “subsidiary principle”, LBs *de facto* are assigned limited expenditure assignments. If we think of major expenditures of the study of our concern, i.e. education and health, the central government spends (both on current and capital items) more through its line agencies.

Through DIP prepared in 2001, the central government has devolved basic education, basic health, and agriculture and livestock sectors (devolved to LBs in 2002) to provide incentive to LBs in their functioning to achieve the MDG targets; and poverty reduction goal and to minimize inequality in the country. But the LBs are more or less “rubber stamps” as they are supposed to be approving the sectoral plans prepared by the line agencies of the central government rather than being involved in planning and budgetary process (Kelly, Koirala, & Ghimire, 2011; World Bank, 2014a). Similarly, they have been found to be indifferent to the LSGA provision on these basic expenditures and hardly complying on one or few provisions from a long list, either due to resource scarcity or because they consider these functions as the major responsibility of line agencies (Koirala, 2011). For example, in the education sector, DDC, VDC and Municipality play only typical role as the chair of the education committee at the respective level. However, School Management Committee (SMC) and District Education Office (DEO) are performing as prime authority for the basic

education (World Bank, 2014a). Finally, constraints in fiscal assignment to the LBs and the principal-agent problem became obstacles in transferring the fruits of fiscal decentralisation to efficient public service delivery. Furthermore, “incomplete contract” between the central government authority and the LBs in expenditure assignments is obstructing the well-functioning of expenditure decentralisation and promoting the duplication of projects.

6.3 Fiscal Decentralisation, Execution Efficiency and Service Delivery

The sequence of development of fiscal decentralisation theory possesses some theoretical steps in public finance. Traditional public finance proceeds with the development of some principles in the analysis of the problems of government as a benevolent planner. Samuelson (1954) proposed the principle of “optimal expenditure” on public goods. However, Diamond & Mirrlees (1971) added the principle of “optimal tax” for production efficiency. Musgrave (1959) classified the appropriate assignment of power and responsibilities among the levels of government in a federal structure. Unlike these traditions, Tiebout (1956) challenged the need of benevolent government and proposed the principle that the selfish government also provides public goods efficiently due to fear from mobile residents—“voting their feet”. Lastly, Oates (1972) argues the need for small jurisdictions and decentralised government for “Pareto-efficient” level of output. All these principles have emphasized the need for proper decentralisation for the more “responsive and efficient government” (Rodden et al., 2003). However, efficiency in output depends on the legal provision of assignments, way of functioning and organizational management of the decentralised governments.

Theoretically, fiscal decentralisation works for economic growth and poverty reduction through efficient public service delivery because local governments due to their proximity to the local people have better information about the local problems and appropriate solutions. Local governments will be able to achieve these targets through increased efficiency, i.e. revenue raising efficiency, cost efficiency, economic efficiency and institutional efficiency, through fiscal decentralisation process. These are valued on the

basis of level of resource mobilization, resource utilization, resource allocation and organizational management of local governments, respectively (Panta, 2010). These criteria measure the performance of local governments that would decide the nature and magnitude of public service delivery to the local people, especially the poor. In this subsection, we are discussing the problems in efficiency of LBs during its daily ordinal functioning and the project implementation process with the help of information collected from both primary survey and secondary sources.

Though fiscal decentralisation is supposed to promote allocation efficiency and production efficiency, these may be limited due to some flaws in theory and practice. Prud'Homme, (1995) pointed out some problems in this regard. There are some problems with the assumption of revealed preference of locals through local election. In developing countries where infant democracy is working, the voting pattern is mostly not based on the performance in service provision, but on the personal relation, communal preference and party preference where less efficient candidate may also be elected. Next, local elections are mostly influenced by elites, money and long list of promises, and merely reflected by national party politics, rather than local tax-service composition. Achievement of allocative efficiency is obstructed by a mismatch between the level of demand for services and supply of resources. Similarly, low economies of scale, technical efficiency and narrowed frontier of public services due to growing privatization also minimize the local production efficiency.

6.3.1 Performance of Local Bodies in Revenue and Expenditure Assignments

Performance in Revenue Assignments

A major efficiency criterion according to the objective of decentralisation is the increase in revenue raising efficiency, given the power to local governments. In the case of most of the LBs, though they are supplied with some revenue assignments, most of them are not found raising their revenue according to their capacity. One of the causes could be political, i.e. unwillingness of local leaders to make their voters unhappy by imposing taxes. Thus, we can say that the causes of low tax collection are lack of incentives with local officials,

absence of simplified administrative procedure, inadequate administrative capacity and lack of awareness among the taxpayers/ service users (Kelly et al., 2011) as in the case of Pakistan (Bahl, Cyan, & Wallace, 2011). Low incentives to local governments in tax collection might also be due to the pressures of political parties who are sensitive to the people who do not want to pay tax, easy access to central grants and absence of hard budget constraint in planning and budgeting.

More dependence on grant is degrading the revenue efficiency of LBs of Nepal. Instead of trying to increase their own revenue, LBs start to lobby to get more fiscal transfers from the centre, through politicians who engage in “pork-barrel politics”, possessing *rent-seeking behaviour* (Boadway & Shah, 2007). Here, the link between pork-barrel politics and rent-seeking behaviour exists where politicians and LBs both try to maximize their benefits. The situation leads to the *flypaper effect* as the exogenous grants could have more effect on total income (expenditure) of LBs than the effect of other exogenous revenue sources (Tresch, 2002). The response of grants on local expenditure would be more in case the grants “stick where they hit” which means if it stuck on the target: as conditional grant. In other words, grants induce more spending of the local body than the equivalent fall in its tax burden, as proposed by Gramlich (Levaggi & Zanola, 2003). One interesting example of lower tax collection is in rural LBs in Nepal: people do not pay land and house tax annually. They pay if they have to sell or mortgage the land/house, because it is compulsory to clear the taxes before getting registration/mortgage.

Most of the LBs were found to be significantly dependent on central grants. There is low revenue autonomy of DDCs, VDCs and municipalities, as in the case of Bangladesh, which means, there is high fiscal dependency (over-reliance of LBs on central transfer) characterised by grants constituting 79, 93 and 66 percent of total revenue of DDCs, VDCs and municipalities, respectively (see, Chapter 1, and section.1.2). This is not only because of limited revenue assignments, but also because of the inability to collect the resources within the given legal framework. For example, Mijhing and Thabang VDCs in our sample have collected zero rupees of own source revenue in the year 2009/10. However, 47.5 percent of total revenue of Balambu VDC is covered by own source revenue, in the same

period (see Appendix Table V-3). Furthermore, replacement of the abolished taxes (Octroi, local development fee and *Kawadi*) with compensated grants also increased the fiscal dependency of municipalities.

The case of low revenue raising power of LBs compared to centre leads to the problem of vertical fiscal imbalance- resource deficit to cover the expenditure needs of LBs. However, the grant system used to overcome this imbalance is not so transparent, predictable, stable and equitable, though the formula based grant system was in practice for a few years. LBs cannot foresee the exact amount of the total grant, its conditions and exact time of disbursement which affects their effective expenditure plans. Likewise, DDCs and municipalities have more revenue raising capacity than VDCs that created HFI among the different LBs which again leads to the variation in the public service provision. In addition, existing legal procedure and the requirement of local borrowing are also the problem in fiscal assignment of LBs. However, some municipalities borrow to some extent followed by some DDCs. No local borrowing is found in the case of VDCs. Due to all these problems the local revenue assignments lose the characteristics of a good tax system, good transfer system and finally a good revenue system (Boex & Martinez-Vazquez, 2006).

Performance in Expenditure Assignments

The achievement of poverty reduction through fiscal decentralisation depends on the expenditure effectiveness of LBs – whether there is positive change in the quality of life of the poor due to local expenditure or not. This also depends on the changes in quantity and quality of the necessary services delivered. But, the nature and magnitude of services delivered is again determined by the compliance of the local expenditure with the operative framework (rules and institutional framework) set to achieve the poverty reduction goal (Ligal et al., 2005). In other words, measurement of the performance of LBs will be an indirect way to measure the level of local public service delivery and its effect on poverty reduction outcomes.

Table 6.1: Share of Balance Forwarded in Total Revenue of Sample VDCs (percent)

<i>Fiscal Year</i>	<i>Chilime</i>	<i>Balambu</i>	<i>Pakali</i>	<i>Laukahi</i>	<i>Mijhing</i>	<i>Thabang</i>
2007/08	0.0	15.2	13.7	28.6	-	0.0
2008/09	7.6	22.3	12.1	27.5	2.0	0.0
2009/10	3.1	33.9	14.5	22.8	1.9	0.0
2010/11	3.1	18.1	3.2	34.2	-	0.0

Low absorptive capacity in the case of LBs means their low expenditure efficiency. In our sample, a considerable share of unspent budget is forwarded to successive year's budget in urban Balambu, and Pakali and Laukahi VDC of Terai region. This creates a question on the absorptive capacity of these VDCs (Table 6.1). This scenario also highlights the problem of timely completion of projects in the respective VDCs. Adhikari (2006), in a study of Kavre district, also observed low absorptive capacity (continuously decreasing) of LBs than line agencies of central government over the three years-2000/01 to 2002/03.

According to the MCPM (Minimum Conditions and Performance Measures) report developed by LBFC, the average mark of performance of DDCs and municipalities is estimated to be 63 and 74 percent, that means DDCs and municipalities possess 63 and 74 percent of overall performance respectively in their functioning. However, because of failing to meet MCPM, some of the DDCs lost their opportunity to get additional grant for 2013/14 (LBFC, 2014). In the MCPM indicator, as the capacity of mobilizing financial resources, DDCs score only 63 percent in average scores. This implies the overall average (but not better) execution efficiency of DDCs in fiscal assignments. In the same year, 21 percent of VDCs could not comply the MC (Minimum Conditions) and were unable to get additional LGCDP grant.⁷¹

As discussed in Chapter 4, LBs are practicing imbalance in resource allocation. They give priority to rural infrastructure, basically rural roads and leave very small space for the sectors affecting directly the human development and inclusion (i.e. health, education and assistance for woman and other backward people, etc.). Hence, problems in prioritizing

⁷¹ For detail, see (LBFC, 2014).

during project selection may also be the hindrance in poverty reduction through public service delivery in need, in the history of fiscal decentralisation in Nepal.

LBs, in the planning process, do not have hard budget constraint, i.e. no *a priori* fixed projects and thus no feeling of pressure to collect the resources to meet those expenses. However, they ask the centre to fund the projects which they could not do on their own but do not practice overspending. They allocate the available resources and select the projects remaining within the “resource ceiling” and “guidelines” of the LSGA without bearing the risk (risk neutral). They have the option to select the project under the LSGA provision, but it is not compulsory to take up all the projects they have in their list. Contrary to Bahl’s rule of fiscal decentralisation – “finance follows the functions”, i.e. clear expenditure responsibilities before determining the revenue resources (Bahl, 1999; Oates, 2005) – LBs in Nepal are found to follow the rule: “function follows the finance”. In addition, the LBs are pressed and placed in the corner between unlimited demand of public choices and limited supply of resources. This shows the problem of imbalance between assigned functions and responsibilities, and the available resources of LBs.

The aforementioned level of performance in revenue and expenditure assignment is more important because it determines the quantity and quality of the local public services provided by the LBs. This also symbolizes the level of achievement of fiscal decentralisation which is not observed as much as expected theoretically, in the case of Nepal. The level of performance would be highly diverse if we study the MCPM of the individual local body (each and every DDC, VDC and municipality). The low performance of LBs will ignore the priority (along with quantity and quality) of basic services as well and thus may ignore the motive of improvement of quality of life of poor through specific public service provision such as health and education.

6.3.2 Institutional Efficiency and Public Service Delivery

Institutional efficiency of LBs is more important to decide their aforesaid fiscal assignments. There should be capable legal and institutional structure complying with the

political, administrative and fiscal accountability for an efficient decentralisation. Partial decentralisation, lacking any dimension or proper coordination among these three components may undermine the benefit of decentralisation (Bahl & Martinez-Vazquez, 2006). Hence, nature and magnitude of local public services rest also on the institutional efficiency of local governments through their revenue and expenditure effectiveness.

Institutional efficiency of LBs consists of legal, administrative and technical efficiency. Workforce performance of an official, measured as: availability, responsiveness, competency and productivity, also determines the institutional efficiency of the local institutions. In case of physical facilities, among the three LBs in Nepal, DDCs are comparatively better as they have their own office building and other infrastructure and functional sections. However, municipalities also possess physical infrastructure. But, VDCs are poor in this aspect as not all the VDCs are supplied with office building, some are still in rent. In case of human resources, more resourceful LBs, DDCs have additional staff recruited from their internal sources along with three officers provided by the centre. District Technical Office (DTO) is separately established in each district for the technical assistance for local infrastructure projects. Though there is the provision of technical support, sometimes, selection of the projects is dominated by local politics over the standard of technical (cost-benefit, cost-effectiveness etc.) analysis and prioritization (World Bank, 2014a).⁷²

Human resource availability in municipalities varies according to their resource richness. Newly formed municipalities are very poor in both physical and human resources. VDCs are weakest among these three types of LBs in human resources. In most of VDCs, VDC Secretary, hired by central government fund, has been providing services, whereas one technical staff (junior) and one messenger have been recruited using the local fund. DDCs are still facing scarcity of staff and those recruited themselves are not competent (Koirala, 2011). This is true in case of VDCs and municipalities as well. Thus, LBs of Nepal are

⁷² In some cases (as in the case of 22 road projects of Dhanusa district), it is observed the practice of simple division of resource pool or projects into the smaller segments to some interest groups, such as territorial or political groups, maintaining the political or geographical balance that leads to some small projects resulting in low production efficiency (World Bank, 2014a).

facing the problem of inefficiency (or less efficiency) and sometimes are not able to comply with the LSGA guidelines properly. The technicians of LBs (especially of VDCs and municipalities) are not enough both in number and the qualifications to meet the need of technical assistance for larger domain of infrastructure projects during their project implementation. Finally, this leads to low level of public service delivery to their locals. In one hand, the LBs, are in short of human resources. On the other hand, the available human resources have low proficiency and less productive due to their incompetency. The three-in-one responsibility: as the local representative, development agent and local administrator, in the absence of elected representatives, lead to over workload to local officials (especially more on VDC secretaries) and thus lowers their overall efficiency (Field observation and interviews during survey, 2012; The Carter Center, 2014).

As in the case of *Panchayati Raj Institutions* (PRIs) in most of the Indian states, VDCs of Nepal also have experienced the lack of proper compliance of principle of supply (devolution) of “3 F’s- function, fund and functionaries” necessary to have more efficient decentralisation followed by well execution efficiency of LBs. For example, in our sample, one of the VDC secretaries from mountain district, Rasuwa said: “we have to cover function of 18 VDCs by only 7 VDC secretaries – more than 2 VDCs per personnel.” He added, “Three secretaries are going to be transferred, then we four have to cover all 18 VDCs” (Interview, 113/10/2012). It is very difficult to undertake the assigned functions properly given the low capacity of human resources in remote areas which results in a low level of public services in those localities. Lack of funds and functionaries along with control over them, and an inability of VDC level institutions to local resource mobilization in their capacity, limited the role of VDCs of Nepal and PRIs of India as the development agency rather than local governments. Likewise, absenteeism of local staffs in some places is also observed to subject to poor institutional efficiency of LBs and finally to poor service delivery. The case of absenteeism can be observed in VDCs, public schools and public health institutions, mostly in remote districts.

There may exist “moral hazard problem” in the principal–agent relation between central government (principal) and LBs (agents). The central government has assigned some

responsibilities (both fiscal and administrative) to the LBs through LSGA which carries the objective of producing certain output, for e.g. efficient public service delivery to the local people. But, the “State of Nature” affects the principal-agent relationship and behaviour and the efficiency of the agents (LBs) and output produced. For example, low quality of the bureaucracy and their unwillingness to work will affect the expected output. The lower level of local economic growth will also produce similar effects. Here, due to lack of proper monitoring by central government, the problem of informational asymmetry (as the principal has less information than the agent) will exist. It leads to the *second-best situation* where there will be no fit of local needs and local cost in the public programmes during resource allocation, resulting in the loss of economic efficiency (Bardhan & Mookherjee, 2011).

LBFC, during MCPM estimation, generated “organizational structure, service delivery and asset management” as one of the functional areas of PM (Performance Measure). The MCPM Report, 2012/13 reveals that DDCs secured 82 percent in this indicator in 2011/12. Municipalities obtained 87 percent marks in PM in the indicator- “organization and human resource development”. However, 6 DDCs and 5 municipalities completely failed to comply with the PM and lost formula based grant. In the case of MC, 6 DDCs (among 75), 5 municipalities (among 58) failed to comply with given MC and could not get the formula based grant. Similarly, 831 VDCs (among 3915) also failed to comply with MC provision. MCPM report in detail, observes high variation among the LBs vertically (within three types of LBs) and horizontally (within the same group of LBs) in their performance in an institutional arrangement leading to variation in the level of public service delivery as well.

The lack of proper coordination is visible among the LBs and the central line agencies in the districts. For example, no functional relationship exists between Chief District Officer (CDO), chief of the topmost line agency in the district and Local Development Officer (LDO), chief of the DDC. However, being a district level agency with corruption control authority, CDO has always the space of intervention in the local projects as he has the authority to monitor the projects. Similarly, though there is LSGA provision and other sectoral laws to define the functional relationship between LBs and other line agencies,

they have a formal relationship than the functional. Instead of making their plans in coordination with LBs, they prepare plan themselves and propose to the DDC Assembly for approval. Likewise, they submit progress report to district assembly and related ministries just to meet the LSGA provision as a formality. But, there is a strong functional relationship of local line agencies to their respective ministries. This may sometimes lead to the duplication of the projects leaving space for irregularities.

In the case of devolved sector as well, (e.g. education), most of the administrative and financial functions such as teacher's recruitment and salary for them and major infrastructure construction works are done by DEO itself with the support of its line ministry. There is no direct link between the municipality and line agencies. On the VDC level, there is a VDC Education Committee (VEC) and the management committee of the health post/centre headed by VDC chief, but their role is nominal but not functional and SMC and health post/centre report directly to the DEO and District Public Health Office (DPHO), respectively (Koirala, 2011). These types of linkages between the LBs and the line agencies hinder the actual practice of LSGA and practice of devolved sector that may minimize the service delivery (output) by imperfect targeting of expenditure. However, most of the administrative costs for these responsibilities are being burdensome to LBs.

LBs perform administrative, legal and other public services to their locals with some ill-defined responsibilities. Furthermore, one VDC secretary has to perform all types of functions (administrative, development and judiciary) himself, which results in "more functions but less staff" problem and degrades the efficiency in the basic public service provision. Absence of elected officials in LBs since 2002 also magnified this problem and also limited the vertical relationship (Centre-local relation) to the "master-servant" relationship (Kelly et al., 2011) more hierarchical than the "patron-client" and "principal-agent" relationship.

Concerning legal efficiency, LBs also face legal problems in their functioning due to conflicting laws and by-laws and regulations. Inadequate devolution of functional power and responsibilities as in the case of *Panchayati Raj Institutions* (PRIs) of India (Ganguly

& Khan, 2009) and sub-national expenditure responsibilities in Peru and most of the Latin American countries (Ahmad & Garcia-Escribano, 2011), some unclear provisions of revenue and expenditure assignments as stated earlier are leading to overlap in fiscal responsibilities, duplication in action and confusion in the functioning of LBs. There are twenty-three laws contradictory to LSGA which are not resolved yet. Similarly, the housing rental tax, vehicle tax and presumptive income tax provisions of the central government are observed to be overlapping with the local business tax provision of LBs (Kelly et al., 2011). Moreover, new responsibilities supplied without resources and capacity enhancement have led to the low absorptive capacity of those new functions.

In case of planning and budgeting, according to LBFC (2014), more than 283 VDCs and 294 VDCs (out of 3915) are found not complying with minimum condition (MC) in the indicators- planning, programming and budgeting, and planning and budgeting for target groups. Municipalities secured only 64 percent score in the planning and programme management indicator of performance measurement (PM). However, DDCs score 54 percent and 67 percent score in the PM indicators- capacity in programme planning and management, and budget management, respectively. These figures point out the inadequate efficiency of LBs in their planning and budgeting. Though opting for the 14-step planning procedures (as LSGA provision), LBs are still lacking in participation of marginalised, minority and targeted sections of the local people in their planning procedures and to share with them benefits of their plans and projects. There exist problems of non-matching or ill coordination between the LBs and the line agencies in the local planning process. Finally, the inefficiency of LBs in planning and budgeting adversely affects the motive of efficient decentralisation for effective local public service provision and thus lowering the benefits to poor.

6.4 Accountability, Ambiguity, Black Economy and Corruption

The efficiency of public services largely depends on the accountability in delivery mechanism- accountability of government that provides the services to its locals. Absence of accountability in service provision leads to “sub-optimal utility” in different aspects

(Kumar, 2002), deteriorating the relationship between service providers and its receivers. It affects the cost, quality and quantity of public services along with inter or intra community targeting as well. The proponents of decentralisation argue that there is more accountability in decentralised (bottom-up approach) service delivery system than in the traditional centralized (top-down approach) delivery system. The main crux of the argument is less efficient service delivery in a centralized delivery system due to the indulgence of centrally appointed and authorized bureaucrats in corruption during their functioning for local service provision. On the contrary, in a decentralised delivery system, it is said that there will be no such cases as local people monitor the activities of elected officials of local government through the electoral pressure.

It is argued that local people, being able to scrutinize the case of bribery, over-costing and black marketing due to their proximity to the local officials (Bardhan & Mookherjee, 2011), can respond to these misappropriation by rejecting those alleged officials through social penalties, even by election procedure. However, these processes are viable if and only under the assumptions of well-functioning democracy and a certain level of literacy and awareness of residents, which are only idealistic in the case of developing countries, more so for poor countries. As explained in the earlier subsection, Prud'Homme (1995) pointed out that the decision of electorates during election procedures in developing countries are found to be guided by other exogenous factors: personal, political, communal, cultural factors (sometimes monetary benefits to the voters) as well, rather than endogenous capacity of candidate and his/her performance in local service provision. This provides the space for the possibility of electing a corrupt candidate as well (probably time and again).

Instead of proper accountability, developing countries are found to be suffering from the problems of elite capture and corruption at local level that minimize the positive effects of decentralisation on efficient local service delivery. Appropriators of black income lead to undermining of accountability and the functioning of various democratic institutions (Kumar, 2002) making the country a “high cost and low-quality economy” (Kumar, 2013). Extent of the welfare consequences of decentralisation in these jurisdictions, thus, rests on the extent of elite capture and level of corruption. Similarly, a number of cases of ambiguity

in legal provision and practice also exist in these countries that hinders the targeting of local expenditure and provides space for corruption.

Lamichhane et al. (2013) carried out a study under Local Governance and Accountability Facility (LGAF) that glimpsed a picture of the level of transparency in local governance.⁷³ According to the report, among the 160 sample LBs, 85 percent are found to publish their annual programmes, half of them failed to practice public hearing on their activities, 51 percent managed citizen charter and 42 percent positioned information board in their offices. Moreover, 37 percent of VDCs failed in the timely distribution of social security allowances, 76 percent failed to manage compliance box and 64 percent did not have grievance handling mechanism. In addition, among the 260 LBs, only 38 percent were found to publish financial audit reports, and 39 percent failed to address the recommendation of Ward Citizen's Forum in their annual plan. This reveals the problems in accountability of LBs in their service provision.

Another problem of fiscal decentralisation, ambiguity, can be observed both in legal provision and practices. The LSGA 1999 as a significant divergence in legal provision, which is supposed to be the milestone of decentralisation procedure, suffers from some ambiguities and insufficiency in the sharing of power and responsibilities with other government agencies (Rai & Paudel, 2011). The problem exists both in local resource management and in service provision, mostly in the natural resource use, tax collection, and expenditure assignments on the devolved sectors: basic education, basic health, rural infrastructures, agriculture, etc. There are 23 "sector laws" which are contradictory to LSGA (Kelly et al., 2011).⁷⁴ This produces confusion in revenue and expenditure assignment of the LBs and the central line agencies creating the space for misuse and corruption through the overlapping of responsibilities and duplication of the projects.

⁷³Association of District Development Committees Nepal (ADDCN), Municipal Association of Nepal (MuAN) and National Association of VDCs in Nepal (NAVIN) jointly carried a study on Local Governance and Accountability Facility (LGAF) as a part of LGCDP implemented by Ministry of Federal Affairs and Local Development Nepal. The LGAF was implemented under the coverage of 14 DDCs, 538 VDCs and 16 municipalities and through 133 Civil Society Organizations (CSOs) selected on the merit basis of their performance. To study on the public hearing and the compliance monitoring, information was collected through interview of 8565 service users of 166 LBs. For detail, see Lamichhane et al. (2013).

⁷⁴For detail list of sectoral laws contradicting with LSGA, 1999, see Koirala (2011).

According to a LDO of a mountainous DDC, “government provisioned District Technical Office (DTO) as the parallel institution to DDC, leads to the contradiction between DDC and DTO in some responsibilities of rural infrastructure development” (Interview, 14/10/2014). Likewise, unclear assignments may induce LBs to act “voluntarily” rather than “mandatorily” (World Bank, 2014a). Moreover, extra-institutional expenditures (expenditure by different institutions such as the Poverty Alleviation Fund and other NGOs/INGOs) at local level are not properly accounted in national accounts and it possesses characteristics of incomplete information. These ambiguities are not resolved yet due to the lack of local pressure through elected representatives and unwillingness of central bureaucrats for sectoral devolution.

According to OAGN (2014), contradicting the provision of LSGA, 1999 para 197, DDCs are found to demand projects equivalent to Rs. 500 million under participatory development programme without the approval of DDC councils and the MoFALD Nepal released it in the fiscal year 2012/13. Next, contrary to the provisions of the Local Body (Financial Administration) Regulation 2007, 58 DDCs overspent the administrative costs by Rs. 356 million, more than the allowed limit. Along with these cases, LBs are found to violate laws and by-laws during their functioning, unlike the norms of decentralisation. It may also provide space for further irregularities.

Measured by MCPM analysis-2011/12, DDCs of Nepal scored only 62 percent in communication and transparency sector: PM sector-6, but poor performance in social auditing. Out of 3915 VDCs, 340 VDCs could not follow the indicator 5 (MC-5) that failed to publicize last year’s income and expenditure statements. However, 314 VDCs failed to comply with the indicator 6 (MC-6) that implies timely completion of final audit of the previous fiscal year and publicizing the audit report. Municipalities score less than 50 percent in the PM indicator 11: actual income/expenditure and budget management (PM-11). In case of indicator 9: social audit and public hearing (PM-9) and indicator 26: public audit (PM-26), municipalities are found to score 68 percent and 80 percent respectively. The MCPM achievements of LBs in the accountability criteria seem to be average and needs further improvement. For example, budgeting and financial reporting systems of

Dhankuta and Dhanusa DDCs consists of only the brief list of projects and the level of financing for the projects that narrow down the accountability and the details of ordering during the selection of projects and sectors (World Bank, 2014a).

6.4.1 Elite Capture, Corruption and Black Economy

Local governments try to maximize the welfare of their citizens. However, it may be subject to local capture (by non-poor). The local officials also try to maximize the black income by syphoning and selling the goods meant for the poor to non-poor in the black market. Meanwhile, local elites (non-poor) try to maximize their benefit by increasing their share in existing local public services. For this, either they capture the decision making procedure or acquire the cheap goods by paying bribes to the local officials. Here, “the greater the extent of local capture, the greater the extent of cross-subsidization and over-delivery to non-poor” (Bardhan & Mookherjee, 2011). In addition, if the scale of supply of pro-poor goods is higher than the demand for the poor (exceeding their *first-best allocation*), then the poor themselves start to siphon out the excess goods to non-poor (where non-poor are supplied less than their *first-best allocation* or equal to market price) to get monetary gain from them, creating the black market for non-poor. Such cases are common in developing countries (as in the case of India) in public distribution system that is implemented by targeting the poor.

However, under uncertainty of local costs or needs, (especially, for high local costs and low local needs, in this situation of inferior market demand for non-poor), the non-poor try to divert funds towards the goods in favour of them which has more value, and room for misuse and corruption.⁷⁵ For example, in most cases at the local level, the local elite or local officials try to select the construction projects where they can get bribe during the

⁷⁵ If the value of market demand of the good to non-poor will not exceed the total value of local supply through untied grant, there will be case of certainty that the non-poor would equate the benefit from diverting the fund with the benefit from procurement and diversion of goods in their own favour (Bardhan & Mookherjee, 2011). So, in this case, they may not be in favour to choose first option, i.e. diverting the fund to their pocket or towards the purchase of goods of their choice, for their benefit.

procurement or get advantage by altering the scale and price of purchased equipment and materials. But, this situation prevails mostly in the case of local budget with untied grant. The capture by political elites is more visible in developing countries, most visible in Nepal due to the absence of elected representatives in LBs since 2002. Practice of all party mechanism (APM), as the interim management, under the chairmanship of the chief official since 2009, as the successor of elected local body, is found to be more corrupt and problematic in some of the local jurisdictions in Nepal. Members of the APM, though they are from diverse political backgrounds (i.e. parties), are found to come to consensus in the misappropriation of local budget and to indulge in corruption by taking over the decision making power and choosing those projects that are more feasible for misuse and corruption. Even if they are not corrupt, they try to channelize more resources to projects of their priority to achieve the political incentives, i.e. to satisfy those interest groups that helped them in their political campaign. We can also observe the capture by the elites of different target groups such as women and *dalits*. Here, the more aware of them try to divert the targeted expenditure towards the projects of their personal interest with similar objectives of other elites. Overall, 14-step local body planning process is only formal in Nepal, failing to integrating the voice of minorities and marginalised effectively in planning, budgeting and project implementation processes due to capture of local elites and APM members (Koirala, 2011; Kelly et al., 2011).

Because there is no recent possibility of local election, the treatment of these problems through voting mechanism as explained in Tiebout model of “voting with their feet” and Downsian model of “government decision making” have become impossible in Nepal. Hence, the situation led to monopoly of political leaders in local planning and allocation of resources.⁷⁶ The situation ignores the “voice” of the poor and a dominated section of the non-poor. Rather being accountable to the people, APM possessed the upward accountability in service provision violating the norms of devolution. Afterward, APM provision was withdrawn due to complaints against its corrupt practices. Even then, aforementioned situation exists in the case of local body council, managed after withdrawal of APM, which is constituted along with some officials of local line agencies under the

⁷⁶ For details of these two models, see Tiebout (1956) and Downs (1957) respectively.

chairmanship of the chief of the local body. The nature and dimension of political capture, according to Bardhan & Mookherjee (2011), move in the same direction with the local poverty rate as well as the awareness gap between the poor and non-poor, where the poor are more uninformed voters. However, this survey study observed local perception of more capture in low poverty zone as well.⁷⁷

The local officials and political elites, in the case of Nepal, are found to exhibit *rent-seeking behaviour*. Corruption and competitive lobbying are two important examples of rent seeking practice preferred by public decision-maker.⁷⁸ Corruption and elite capture in governance, especially in local governance in our case, represent the aforesaid two processes of rent seeking practices which leads to outward diversion of fund from targeted projects for the benefit of the parties involved in the rent seeking activities. These two phenomena are complementary in action and results. So, they are mostly discussed simultaneously. Mostly, elites indulge more in corruption because they are more informed about the incentives from and ways of corrupt practices. As stated earlier, most of the cases of corruption are held in the field of procurement: tender of construction projects, purchase of equipment or materials etc. In Nepal, corruption and bribery during the provision of day to day local services are rarely visible, but corruption at the local level is found mostly delineated from the programme expenditure of local government institutions.

Against the norms of decentralisation, a number of cases of corruption (though they are published or unpublished) can be observed in the local governance of Nepal, during a decade of absence of elected local representatives. For example, the price manipulation of hiring a Dozer (a machine) in case of a VDC of Khotang district (Dhakal & Bhandari, 2014).⁷⁹ Next, corruption of Rs. 22.7 million, by a District Development Officer of Bara

⁷⁷ It is discussed in subsequent sections describing the sample results.

⁷⁸ The competitive lobbying is operated through the political campaign or advertisement rather than monetary transaction as in the case of corruption. In this rent seeking practice, there will be difference between “optimal decision” and “actual decision” which lowers social welfare (Lambdsdorff, 2002) that the benevolent government (as a principal) tries to maximize through the decision of its official (as an agent).

⁷⁹ A talk with Dinesh Thapaliya, a joint secretary of MoFALD by Setopati correspondence (a newspaper article published in Nepali paper-Setopati Online on March 16, 2014).

district, from the DDC projects (Shah, 2013), irregular advance payments drawn by officials of Kathmandu Metropolitan City (KMC) (K.C., 2010), etc.

Unlike in the normal day to day service, local officials receive bribes in valuation of properties in tax and other purposes by altering the value according to the need of service receiver in Madhyapur Thimi Municipality in urban Bhaktapur district (Gyawali, 2013) and collecting the allowances beyond the local body rules and regulations by officials of Nanglebhare VDC of Kathmandu valley (Paudel, 2013). Moreover, extra-provisional (beyond the provision of guidelines) expenditure from higher to users' level is also normal in local project implementation. All these cases exemplify how the local political elites and local officials indulge in corruption, representing a number of cases left undiscussed due to the limitation of this research.

Education and health play crucial role in human development of poor that are of major concern of this research. They are much more important to upgrade the national literacy rate and life expectancy as well. The way of corruption in these sectors is slightly different from that in the other construction projects. Local officials of schools and health posts, and local elites misappropriate funds during construction of school or health post buildings and purchasing furniture through procurement. Other than this, the school teachers and health post technician mostly do not ask for bribe from the locals. However, school teachers do not teach well in the school time but seek out more private tuition and health staff run private business, focussing more on earning the extra income other than salaries they get (Widmalm, 2008; Kumar, 2013).

Another case of corruption is, collecting the salaries of teachers and scholarships for students by creating fake schools, popularly known as *Jhole School* (i.e. school in bag with fake documents) and students as witnessed in the Terai region of Nepal. There, we can observe another way of corruption in education – the practice of *Satte or Khetala Shikshyak* (replacing teacher to teach on behalf of him/her). In this practice, the permanent teacher recruits another person to teach on behalf of him/her paying minimum salary and extracting surplus salary from the recruited. In the meantime, the teacher himself/herself engages in

other businesses and earns extra income. One more example, DEO of sample district Sunasari performed Student Attendance Counting Report in 2011 to check the validity of data provided by schools for the Flash Report. As a result, a record of 28009 fake student equivalent to extra burden of Rs. 29.297 million under different facilities was observed in the district (DEO Sunasari, 2012). Similarly, 305 bogus schools were closed after the massive investigation of 737 such schools since January 2014 by CIAA.

Next, health workers provide better service in their private clinics than in the health posts/sub-health posts in order to earn extra income in addition to their secured salaries. Sometimes, they indulge in corrupt practices by charging more fee than the official rate (Widmalm, 2008) or by prescribing more medicines, and selling the free medicines of government health posts to the private pharmacies. Another case, The Carter Center (2014) observed irregularities in the case of social security allowance as well by VDC secretaries in Sindhupalchowk district and diversion of funds earmarked for disadvantaged groups to other projects (as in Kanchanpur and Sindhupalchowk district).

Somewhere, there exists an agreement among local officials and political representatives in misappropriation of fund (by producing fake approval papers) that leads to a situation where projects are never completed due to shortage of resources. The Carter Center observed that the people's perception of such cases in Dhanusha and Mahottari districts and practice of "fake receipts" or "fake public reports" in Gorkha, Kanchanpur and Bardiya districts also (The Carter Center, 2014). In addition, demand for bribes by VDC and DDC technicians as a certain share of budget while providing the final approval of the project works has been a common practice in most of the districts of Nepal. Furthermore, forceful siphoning off of funds from the projects by local gangs (or Dons) in some districts is also prevalent. A secretary of a sample VDC from Eastern Terai said, "We mostly have to switch off our mobile during budgeting and during festivals to avoid unnecessary pressure from political parties and other interest groups (sometimes armed and criminal groups, in these areas) for project selection and economic assistance" (Interview, 11/10/2012). All these irregularities lead to low quality and quantity of services produced and late completion or incompleteness of local projects.

Widmalm (2008) observed that paying bribes to teachers is uncommon in both the sample states of the study – Kerala and Madhya Pradesh of India. We also observed the same trend in the case of services provided by schools and health posts during field survey in Nepal. However, corruption in the form of absenteeism of teachers and health staff is prevalent both in India and Nepal. In the remote villages of Nepal, teachers or health workers fulfil their job responsibilities in a rotation basis. This kind of absenteeism is also regarded as an indirect form of corruption as they get salary without attending the office.

As discussed in Kumar (2002), mostly a triad exists between local political elites, local officials and contractors to complete a corruption procedure in case of local construction projects. Among them, local officials are more informed and have more authority (these days), they establish strong contact with contractors, leaving loose attachment with the local political elites as far as possible, to increase their share in corrupt benefits. At the users' committee level, a triad between the chief of the local users' committee, local officials and technicians act altogether in misappropriation of quantity and quality of work to acquire private monetary benefit by overstating the expenditure of the project.

As the negative consequences in society, black income generation from elite capture and corruption degrades the efficiency of the local public services – both by extracting out certain portions of the project cost and through inferior service provision. Contrary to the norms of decentralisation, it also adds to the transaction cost in service provision. It also leads to policy failure in social service provision such as education, health, drinking water, sanitation, and housing. The black economy then has demand-side consequences led by budgetary deficit due to tax evasion and siphoning out from the project fund; and supply-side consequences led by low quantity and quality of services hurting the poor and antipoverty programmes implemented through decentralisation. In other words, two faces of policy failure would exist: inadequate allocation and ineffective expenditure (Kumar, 2002), in the case of local governance as well. However, the developing countries are more rampant with corruption. Controlling corruption is more complex phenomenon in these countries, even the “carrot-stick model” does not work properly on curbing the elite capture and corruption as there is a lack of practice of “governance by rule.”

6.4.2 Absenteeism: A Corrupt Practice and Problem in Local Service Delivery

Absenteeism is a serious problem in service delivery as it hinders the opportunity of service receivers from availing their services provided by government through local officials. There exist two types of absenteeism in local service institutions. First, absenteeism because of vacant posts resulted by scarce financial or human resources or due to deputation or training, etc. Second, illegal absenteeism, absence of public officials in their defined duty using their position and time to produce extra income. In the second case, public officials sell their services in the private market at the cost of their public duties (Widmalm, 2008). It is taken as corruption because a government employee “accepting the salary and not being on the job is also a type of corruption” as viewed by Amartya Sen (Varadarajan, 2005; Widmalm, 2008).

In Nepal, till March 8, 2014, about 493 VDCs were facing the problem of shortage of secretaries causing additional burden to the secretaries in duty who had to serve more than two VDCs each (Himalayan News Service, 2014a). A survey of 747 health workers of 15 selected districts of Nepal found that, 21.1 percent of absenteeism was due to the deputation, 13.3 percent because of training and 30.5 percent because the employees were on leave (SOLID Nepal & Merlin Nepal, 2012). Whatever was the cause, absenteeism of health workers has seriously hindered the health services to local people who were in need. Next, most of the health in-charges serve from their clinics after 2.00 pm instead of remaining in their duty till 5 pm as defined in their job description.

Absenteeism of VDC secretaries in a number of districts constrained the access of locals to government facilities such as registration works, distribution of social security allowances, necessary recommendations and facilitation of project activities. The Carter Center (2014) observed this type of problem in 23 VDCs out of 33 VDCs of its sample. However, the problem of absenteeism is found higher in remote hills, mountains and Terai regions of Nepal. The secretaries are generally found in the district headquarters. VDC secretaries of remote hills mostly attend their local offices only during the annual meeting of VDC Council for annual planning and budgeting and selection of development projects.

In the absence of elected representatives, it has weakened the monitoring of absenteeism of VDC secretaries and instead of being accountable to locals, the latter are observed to follow upward accountability. Some VDC secretaries of the survey area defend their absenteeism showing different causes such as excess workload because of handling more than one VDC. They argued that bearing office in district headquarter would be beneficial to the locals also to accede the other district level government services at the same time. In addition, by working from district headquarter, they can avoid the unnecessary threat of pressure groups demanding money (mostly in case of Terai). But, the locals link some of their frequent transfer and absenteeism with opportunities for covering their corrupt activities and avoiding protest against their irregularities. Some VDC employees were found to be engaged in own alternate business in market centres instead of attending the remote offices regularly (Interview with some local people along with a Headmaster from a sample VDC from Terai region).

6.5 Political Economy

As in other aspects of socio-economic development, political economy affects the functioning and efficiency of service providers at local level. This affects the quality of and access to local public services to the local people. Not only on the supply side, has this phenomenon also affected the demand side of the local services. For example, the politico-economic effect on revenue raising of LBs directly affects their expenditure on local services. The following discussions will provide a short glimpse of the different aspects of this effect on local service delivery and citizen's satisfaction.

6.5.1 Absence of Elected Representatives

One of the foremost problems in local body functioning and local service delivery is perceived as the absence of elected representatives in LBs. Just over two years of promulgation of LSGA 1999 and its regulation 1999, LBs have become vacant of elected representatives since June, 2002. There has been no election to LBs in Nepal for the last

12 years. The situation dampened the downward accountability in local governance. Interim management, firstly authorizing Local Development Officer, Executive Officer and VDC secretaries appointed as the chair of DDC, municipality and VDC respectively, and then the provision of all party mechanism (APM) in 2009, and lastly, the provision of VDC council formed under the head of VDC secretary, including chief officials of local units of devolved sectors as members, also could not mitigate the existing problems. Sharing their experiences on difference in service delivery of VDC during the elected phase and no election phase, a former Chairman of Balambu VDC says:

“During this ‘no election’ phase, there is discomfort for the people in VDC services. Facilities are more, but there is less monitoring than in the ‘elected’ phase. VDC secretary is not familiar with local problems, so there is problem in day to day business in these days... These days, people’s participation in local projects is less than in the elected phase” (Interview, 31/08/2012, 03/09/2012).

Former Vice-Chairman of same VDC has also expressed similar views on the issue. Role of political parties in local governance continued, though of a different kind, even after dissolution of APM mechanism in 2012 by MoFALD, following the official directives of CIAA. APM was dissolved because of its controversial role in decision making, indulgence in corruption, nature of partisan, etc. (The Carter Center, 2014). All are being accountable towards centre (practice of upward accountability), presence of rampant corruption, irregularities and inefficient service provision became problematic in local governance, contrary to norms of decentralisation. Hence, people could not experience the *de facto* benefits of LSGA and decentralisation through DIP. More or less the same situation was observed in all the three LBs: DDCs, VDCs and municipalities. However, people were found to have a good opinion about the role played by Ward Citizen Forum (WCF) and Ward Awareness Centre (WAC) in ensuring citizens’ participation in project planning, given the absence of elected representatives (The Carter Center, 2014).

Instead of being helpful in local governance, APM became unpopular and burdensome due to local capture. Though it is not as exact as the case of trade union influence on legislation

in U.S. for economic regulation, there exists a practice of *interest group theory*, i.e. the influence of interest groups on public spending through their lobbying of local officials.⁸⁰ Political parties, in their interest, are found to pressurize VDC officials to lower the local tax base and exceed the expenditure caps leading to unnecessary expenses and failure of VDC to meet MCPM criteria (The Carter Center, 2014). Limited local participation, high degree of capture by local elites and appointed officials, and the members of APM or leader of political parties in expenditure assignment and project selection, have reduced the benefits of decentralisation and induced corrupt practice at local level (Kelly et al., 2011). Moreover, the absence of elected representatives has also led to high turnout of the local officials as the adding up of function of elected representatives as well.

The election provides room for “voice” mechanism as the practice of Tiebout’s model of “voting with their feet”. Tiebout’s model and *median voter theory*⁸¹ of public choice, both remain unpractised due to the absence of local elections for a long period. Here, in this situation, the underlying assumptions: “competition for votes” and the “income distribution” (political parties follow these assumptions targeting the success in the election) (Buracom, 2011) both lose their importance. Similarly, absence of elections has also affected the *political business cycle theory*⁸² in local level as self-interested political parties are increasing local spending pursuing more private monetary benefit rather in the view of manipulating more voters for their success in a local election. In other words, APM and local official then are found to choose upward accountability and the principal-agent relationship seems to be prevailing between central government and local bodies. But, with the voter, they assess the dominant relationship through “partisan, patron-client and pork-barrel politics”(World Bank, 2014a). Political representatives informally show their accountability, to some extent, to their locals as to gain incentives as “reputation and

⁸⁰ Robert D. McCormick and Robert E. Tollison observed the direct relationship between number of registered trade unions (interest groups) and extent of economic regulation within a state in U.S (Buracom, 2011). However, in our case, political parties act as the interest groups to alter the tax-expenditure mix to achieve their economic or electoral benefit, given the rules and regulations.

⁸¹ Anthony Downs, A.H. Meltzer, and S.F. Richard developed *median voter theory* which conceptualises that governments try to address voter’s demand, in order to win elections (Buracom, 2011).

⁸² Martin Paldam and Alberto Alesina and N. Roubini proposed the possibility of *political business cycle* created by government or election procedure between political parties where they increase government budget expenditure just before election to influence the voters in their for (Buracom, 2011).

prestige” or subject to “sanctions” by losing it rather than other political incentives such as winning or losing the election (McGee & Kroeschell, 2013).

Most of the respondents in different survey have expressed the need of prompt local election to correct the existing maladies and to establish a fair and accountable local governance. They argued for the elected political representative as the pre-requisite for efficient decentralisation with downward accountability (Koirala, 2011; Kelly et al., 2011; The Carter Center, 2014; World Bank, 2014a). Officials of six sample VDCs of this research are found also to have similar views on this issue. According to them, performing double duty as VDC secretary as well as VDC chairman is very difficult, so there should be local election as soon as possible. They further added, they are overburdened and are getting ‘single pay for double duty’ (based on interviews, different dates). Very few of the respondents argued for the advantage of the APM mechanism, in the absence of elected local body, because it overcomes the dominance of one elected party in making expenditure decision that could be produced by partisan politics as argued by the *power resources theory*⁸³ of elected representatives.

6.5.2 Late Release of Budget

Another problem in local fiscal assignment is late release of transfers from the centre to the DDCs. The transfer gets further delayed while releasing to the VDCs from the DDCs. It affects the procedure of local expenditure assignments- planning, budgeting and implementation of the projects. Grants mostly reach the LBs late, leaving less time for execution of the projects. Hence, LBs sometimes need to rearrange the projects due to unpredictable amount of fund and arrival time. The inconsistent flow of funds leads to questions of efficiency and accountability in implementation procedure, mostly difficulties in timely absorption of fund, completion of projects and leaves room for low production

⁸³ Robert Kaufman and Segura-Ubiergo and David Brown and Wendy Hunter tried to apply *power resource theory* to describe the increase in social expenditure in developing countries taking the regime type: democratic vs. authoritarian as a key factor (Buracom, 2011). However, in the view of this researcher, this can be applied to discuss on the difference in dominance in expenditure decision making during the elected party government and functioning of all party mechanism (APM), even at the local level. It can be the question for further research.

efficiency and corruption. Off-budget funds to DDCs have even more problem as it is released at the last moment of the fiscal year.

Mostly, local officials, as we observed, grab the residual budget by submitting false documents of project completion such as forged bills, receipts, monitoring reports, etc. acceding high chances of graft (The Carter Center, 2014). Late procurement and collusion among the contractor, local officials and political agents also are found to compromise for producing low quality of service and to indulge in corruption, i.e. diversion of some fund to their pocket. In summary, late release of budget from the centre and concerning offices affects planning, budgeting, implementation of projects; and efficiency, accountability and transparency of the expenditure assignment. The improper use of funds, i.e. using funds beyond the target or value-for-money purpose and improper accounting during the project implementation is found to lead to fiduciary risk (i.e. process risk and result risk) in public financial management (PFM) of LBs (MoFALD, 2012). VDC secretaries of sample VDCs of this research also consider late release of budget as an important barrier in efficient project management and implementation.

6.5.3 Political Instability and Conflicts

Nepal experienced Maoist armed conflict for ten years, even during the time of promulgation of LSGA. However, political instability in the country and frequent changes in government started even before this period. In addition, the functioning of LBs worsened further in the absence of elected representatives since 2002, as discussed earlier. Most of the rural LBs, outside the capital city were affected by the Maoist war and LBs from conflict area could not enjoy the fruits of LSGA because they were destabilised by Maoist insurgents and so called “Maoist people’s government” (Panta, 2010). During the war, according to the record of the Ministry of Peace and Reconstruction (MoPR), 1186 VDCs were burnt or damaged and 18 VDC secretaries were killed (Dhungel et al., 2011). Most of the VDC offices were shifted to district headquarters leading to difficulties in local service provision. Sixty percent of VDC secretaries were called to district headquarters (WFP/OCHA, 2007). Most of the destructed VDC offices have not been rehabilitated and

they are serving yet from the district headquarters. Similar effect has been observed in some DDCs and municipalities as well. Thus, conflict has hindered local public service delivery through deregulation of functioning of LBs. Services of other district line agencies were also affected by such conflict.

Continuous political instability has decelerated the local service delivery even after the historic people's movement and the peace agreement in 2006. This situation of long transition obstructed the proper implementation of LSGA and its rules and regulations till date. Additionally, due to a failure of political parties to come to a consensus on the issue, local election remained withheld for more than 12 years. New constitution has not yet been achieved even after eight years of peace agreement. Additionally, frequent changes of government followed by irregular and frequent transfer of Local Development Officers (LDOs), Executive Officers of municipalities and VDC secretaries are also impeding the efficient implementation of local projects (Koirala, 2011).⁸⁴

Like at the central level, conflict between local political parties also emerged as an obstacle for smooth planning, budgeting and implementation of local projects. Dispute among the political parties for the chairmanship of users' committees stalemated the execution of local projects in a number of cases. Hence, political instability and conflict in central as well as local level over the period headed towards the absence of transparent and top-down accountable local government, which is questioning the lifetime achievement of decentralisation reforms launched as widely known LSGA 1999 and its rules and regulations.

6.6 Other Problems

Problems of Monitoring and Evaluation

Other than the issues discussed above, there are a number of aspects having an effect on local body fiscal assignments and service delivery through local public expenditure.

⁸⁴ Interestingly, governments have been changed 21 times during 24 years of the democracy after 1990, almost one change per year.

Because of limitation of this study, only some other important issues are also discussed in these paragraphs. Among them, monitoring and evaluation of the local fiscal assignments are one of the foremost issues to check the accountability during project implementation. This procedure provides disincentives for the misappropriation of the project fund and incentives for effective service delivery. Monitoring and evaluation provide the knowledge on shortcomings in project implementation and room for further correction to achieve effective and efficient service delivery as targeted by the benevolent local government.

Nepalese LBs are facing problems of ineffective monitoring and evaluation of their implemented projects. Though the LBs emphasize on project implementation, they give low priority to the supervision, monitoring and follow-up of the project works (Kelly et al., 2011). There is provision of monitoring and evaluation mechanism from the central level to user's level. In the centre, Decentralisation Implementation Monitoring Committee (DMIC) is formed to induce the effective implementation of DIP 2002. District level monitoring committees in DDCs (including APM members) are authorized to monitor and evaluate the implemented programmes/projects all over the district. Similarly, VDCs and municipalities form a monitoring committee in their respective levels including local APM representatives. At the bottom, both executive and monitoring committees are formed simultaneously at the users' level in an inclusive manner. Besides these, CDO and District Administration Office (DAO) also as the district agency for CIAA, representatives of the Office of Auditor's General Nepal (OAGN) and district level agent of the National Vigilant Centre (NVC) also sometimes monitor the project activities under the LBs.

Besides these layers of monitoring mechanism, the monitoring and evaluation of local development projects is still fragile. According to a survey study, The Carter Center (2014), local monitoring committees are only formal and ineffective, in some cases. Somewhere, these are formed outside the project area and by VDC itself. However, they are found to be considered as an effective and essential mechanism in some district as they are working well followed by publishing regular monitoring reports and public hearing. Most remarkable flaws are observed that if the users' committee feels uncomfortable with monitoring mechanism, then it ignores the mechanism and tends to bribe technical staff

and get approval by creating “fake papers”. Mostly, public audit seems to be irregular and ritual in most of the LBs. MCPM results produced by LBFC gives a picture of situation of monitoring and evaluation in LBs. For instance, in this functional area of MCPM, DDCs secured 61 percent marks which is not an encouraging score and it implies weak performance of DDCs in monitoring and evaluation procedure. Here, among 75, four DDCs are failed in this criterion of MCPM (LBFC, 2014). According to field survey, it is observed the case of weak monitoring due to the pressure on monitors from users either through monetary greed or through other pressures such as threats, proximity etc.

Problems in Local Participation

Tenth Plan PRSP (2007) has focused on the local participation in decision making and governance for poverty reduction through decentralisation. Local participation implies participation in decision making and implementation process, and cash or kind contribution on the basket of funds of the projects. As the financial contribution, there is provision of certain (mostly 25-30) percent of local contribution to the total project cost either in cash or in kind. In the beginning of the concept of local self-governance, upto 200 percent (two fold of the allocated project fund) local contribution was observed during “*Afno gaun afai banaun*” (let make our village ourselves) programme first launched to all VDCs in 1995. During the passage of time, the trend is being diminished. Despite the clear guideline on the financial requirement as local contribution, VDCs and DDCs are barely practicing the norms. The contribution is accounted in paper only: the contribution is actually accounted out of the total budget of the project. The technician or the contractor cooperates with the users for this. According to a staff of Chilime VDC, “ninety five percent users’ committees do not work properly” (Interview, 03/06/2012). But, municipalities are strictly following this guideline. Besides these, citizen’s participation in users’ committees and decision making of the project is increasing. According to a former Maoist fighter from Thabang VDC, “there was more people’s participation in this VDC in local development during the war period. Nowadays, the rate of local participation is decreasing as the time has gone up” (Interview, 10/31/2012).

Mostly there is competition among the users to work as executive chair or the members of the users' committee (UC). Involvement of political parties, in this process, makes the situation further fragile. Sometimes, it takes few days to settle this problem and sometimes, no settlement at all which leads to collapse of the project as well. It is because of political or monetary incentives embedded in it. Moreover, the participation of Disadvantaged Group (DAG): women, janajatis, *dalits*, etc. is in increasing trend, but not as much decisive in the planning and implementation of the local projects. Elite capture and political capture are still visible in the participation of DAG and decision procedure. Moreover, WCF and WAC have positive impact on citizens' participation in project planning and implementation (The Carter Center, 2014). However, the quality of participation in this case is still in doubt.

Problems of Poor Database

LBs are supplied with a mandate of 14-step participatory planning procedure based on LSGA. In this requirement, MoFALD has placed the database collection as the first step of the planning procedure. Besides this, LBs are found very poor in data management. However, not only LBs, Nepal itself is poor in the database. There is no clear accounting of revenue and expenditure of LBs though they are provided with certain formats. Lump-sum record are maintained in most of the LBs, especially in VDCs. Databases of financial accounts of DDCs and municipalities are comparatively systematic than of the VDCs. But, all are very poor in maintaining the data of other socio-economic indicators. The researcher himself faced the data problem in the sample VDCs and DDCs. Though decentralisation is linked to poverty reduction strategy in the plan documents, no data are maintained according to expenditure on different service projects such as health and education.

It would be worth to mention the example of data system in the health sector. Widely known, Nepal is better off in child and maternal health indicators of the Millennium Development Goals (MDGs). However, neglecting practice was found in maintaining the data on immunization, natal and maternal care, etc. It was observed the incompletely filled sheets of monthly monitoring reports of the local health post of sample areas for those indicators. Though data in source institution is incomplete, it is found complete in the

district record. In another incident, in a *Ilaka* health post of the sample area, in-charge of the office was asking to a FCHV leader for the monthly monitoring report on Friday where he had to submit the report to the district office on Sunday and the day between was Saturday (holidays). It implies that at the end of the month, the health staff of local sub-health post updates the data haphazardly and send to the respective *Ilaka* (area) health post or District Public Health Office. This exemplifies the practice of hastening data management system in local service providers which leads to unreliable database and thus the unrealistic results for the development indicators.

We have discussed multidimensional problems of LBs and local public service delivery in Nepal. The low fiscal efficiency, institutional efficiency of LBs and contradictory provisions of sectoral laws are found to be a hindrance in efficient local public service delivery through effective decentralisation. We cannot overlook the negative impacts of low accountability with elite capture, corruption etc. in this concern. Politico-economic effect such as the late disbursement of grant transfer, political instability and multidimensional conflicts, void of elected representatives in LBs and the absence of local election has become the impact factor for weak downward accountability and irregularities in fiscal assignment of junior governments. Lastly, the questionable level of local participation in local projects, weak monitoring practice and poor recording systems could be traced as sources for underdevelopment of local self-governance and fare and exclusive decentralisation practice of service delivery.

All the aforementioned scenario implies the situation of government failure in case of local government: legislative failure, bureaucratic failure and rent seeking (Dollery & Wallis, 2001). Moving ahead, the subsequent discussion provides a glimpse of the local perception on performance of sample VDCs and the extent of their public service provision to lead the benefit of the poor. Similarly, through survey data, we can gain some knowledge of how the phenomenon varies with the income level of VDCs and the geographical, socio-economic variation of VDCs, in these discussions.

6.7 Performance of VDCs in Service Delivery: Experiences from Sample VDCs

This subsection discusses the perception of local people on the functioning of their respective VDCs in project selection, implementation, service delivery, etc. Furthermore, to link local public services with poverty reduction, issues such as pro-poor nature of projects, widely known issues of corruption and elite capture at local level, and other flaws in service provision through LBs, are also discussed. Along with tabulation of data with simple percent calculation, some narratives are used to further clarify the issues that the numerical data could not explain more. A sample of 301 households is taken into account from six different VDCs of four districts as introduced in the fifth chapter. Information on the issues studied in this analysis were collected through a survey questionnaire designed as discussed in Chapter 1, sub-section 1.7.2.1 and given in Appendix Table VI-1.

6.7.1 Performance of VDC: How Much Satisfactory Is It?

Performance of LBs is also a determinant of the nature and magnitude of local service delivery. Resources only are not enough for production of local services, but it should be facilitated by LBs through efficient resource allocation and project implementation. Then, efficient service production depends on the effective functioning of LBs. To have empirical knowledge, the interviewee were asked about their perception on the service provided by their VDC authorities during last three years. Only 64 percent of the respondent households were found to be satisfied with the services provided by their respective VDCs (Table 6.2). Our result more or less corroborates with a study performed by Lamichhane *et al.* (2013) that observed overall 35 percent of sample respondents dissatisfied with the service provided by their LBs.

In our sample, low level of satisfaction (i.e. less than 40 percent of people are satisfied) is observed in Laukahi and Pakali VDCs (which are from Terai region). However, remaining four VDCs possess higher figures (i.e. more than 73 percent are satisfied). Differently from other VDCs, 11 percent of people of urban VDC- Balambu are found highly satisfied with the performance of the VDC. The figures state that hill and mountainous VDCs are

providing services to their people more or less satisfactorily where both of the Terai VDCs: Laukahi and Pakali (though Pakali is resource rich VDC) mostly failed to satisfy their residents. This is, according to field observation, due to ambiguity, misuse of resources and corruption and thus the low quality of services in these VDCs rather than due to their resource richness. Because of honesty presented by officials and leaders of the conflict affected VDC Thabang, most of the people were found to be satisfied with the service provided by their VDC authorities, though it is comparatively poor in resources. People of Balambu highly perceive better performance of their VDC compared to its very low performance before three years.

Table 6.2: Satisfaction from Local Public Services Provided by VDCs (percent)

<i>VDC</i>	<i>Satisfaction from VDC Services</i>					Total
	Highly Satisfied	Satisfied	Unsatisfied	Highly Unsatisfied	Don't Know	
Balambu	10.94	79.69	9.38	0.00	0.00	100.00
Mijhing	2.04	73.47	24.49	0.00	0.00	100.00
Thabang	0.00	77.55	22.45	0.00	0.00	100.00
Chilime	0.00	79.49	15.38	2.56	2.56	100.00
Laukahi	0.00	40.00	57.50	2.50	0.00	100.00
Pakali	0.00	33.33	61.67	0.00	5.00	100.00
Total	2.66	63.79	31.56	0.66	1.33	100.00

Pearson chi² (20) = 95.9414 Pr = 0.000

The empirical findings support the idea that the satisfaction from the performance of LBs varies with the regional variation. The perception differs with the level of awareness of the locals. The performance and accountability of local politicians and VDC officials also determine the performance of their LBs. Moreover, a local woman leader of Balambu VDC clarifies the role of VDC secretary and local leaders in VDC development in these days, as:

“The former VDC secretary was not active and had no interest in VDC works. There was budget but no idea and eagerness to use for development. Existing secretary is more active and developmental. He felt more need of development of this VDC..... We are very happy

to work with him and more development works are running highly satisfactorily.the deadlock of land registration of the VDCs since long is now initiated under his leadership” (Interview, 01/09/2012).

6.7.2 Performance of VDCs: Is There Change in Quality of Services?

Another indicator of performance of local government is the quality of service provided. In this case, the respondents were asked whether there is change in quality of services provided by VDC during last three years. Here, the quality of the services includes the administrative service of VDC; upgrading of the roads, drinking water; facilities for agricultural promotion; improvement of school service, health service; etc. Here, no index of quality was produced, but the observed perceptions were clubbed and described. About 70 percent of respondents of sample VDCs perceived the changes in the quality of local public services, among which more than 9 percent observed great changes (Table 6.3). Perception on changes in the quality of local public services is found high in Thabang, Balambu and Mijhing VDC, i.e. 98, 95 and 92 percent of the people observed the changes in quality of services such as rural roads, drinking water projects respectively. However, most of the people of Chilime and Pakali have found no significant changes in quality of services supplied by their VDCs.

Sixty percent of the sample population of small Terai VDC, Laukahi, observed changes in quality of services after the provision of *Nagarik Wada Manch* (Citizen’s Ward Forum) active in the project selection and implementation of the projects and to some extent, public monitoring of the functioning of the VDC. This is due to the good performance of WCF as in the case of most parts of Khotang, Arghakhanchi and Pyuthan districts observed in a survey study (The Carter Center, 2014). This shows the variation in the nature and magnitude of changes in the quality of services with the variation in location, extent of regularities in VDC functioning and the state of quality before three years, etc. However, in the aforementioned LGAF survey carried out through interviews with 10,296 people, 26 percent found highly satisfied, 37 percent satisfied and 37 percent unsatisfied with the quality of services provided by their LBs (Lamichhane et al., 2013). This study also

observes the variation in peoples' perception on this issue with the variation in development regions.

Table 6.3: Perception on Change in Quality of Services by VDCs (percent)

VDC	Change in Quality					Total
	Great	Moderate	No Change	Getting Worst	Don't Know	
Balambu	34.38	59.38	4.69	1.56	0.00	100.00
Mijhing	8.16	83.67	8.16	0.00	0.00	100.00
Thabang	4.08	93.88	2.04	0.00	0.00	100.00
Chilime	0.00	41.03	53.85	0.00	5.13	100.00
Laukahi	0.00	60.00	40.00	0.00	0.00	100.00
Pakali	0.00	28.33	68.33	0.00	3.33	100.00
Total	9.30	60.47	28.57	0.33	1.33	100.00

Pearson chi² (20) = 171.9726 Pr = 0.000

6.7.3 Priority Reflection in Local Projects: How Do Poor Think?

This is an important factor for the poverty reduction through the provision of local public services. Here, the matter of concern for the study was to know- whose priority is reflected in the project selected by the local government. In the survey, only 40 percent of the people of the poorest quintile believed that their priorities were reflected in the selected projects to some extent (Table 6.4). However, the projects cover the priorities (to some extent) of 61 percent of people from the richest quintile. This means the dominant hold of the richer sections in decision-making for projects and thus creating the possibilities of projects being less beneficial to poor.

The figure shows a case of incomplete information or information failure in the poorer section. Most of the poor (more than 40 percent) don't have information on the orientation of the priorities of the projects. Likewise, 17 percent of the poorest perceive no coverage of their priorities in the local projects. Problem of intra-community targeting is perceived in the resource allocation of sample VDCs which is because of practice of *second-best allocation* (Bardhan & Mookherjee, 1998). The results indicate the less implication of the projects for poverty reduction through local public service delivery in the sample VDCs.

This seems to be far from the poverty reduction objective of fiscal decentralisation characterised by weak participation of poor in decision making during project selection.

Table 6.4: Feelings on Priority Reflection in Local Projects by Income Level (percent)

<i>Income Quintile</i>	<i>Priority Reflection in the Projects</i>				Total
	Complete	To Some Extent	Never	Don't Know	
Poorest	1.67	40.00	16.67	41.67	100.00
Second	8.33	38.33	10.00	43.33	100.00
Third	1.67	46.67	5.00	46.67	100.00
Fourth	8.33	53.33	11.67	26.67	100.00
Richest	11.86	61.02	6.78	20.34	100.00
Total	6.35	47.83	10.03	35.79	100.00

Pearson chi2 (12) = 25.9274 Pr = 0.011

6.7.4 Pro-poor Nature of the Projects: People's Perception

In a question, the majority of the respondents replied that they feel the projects launched by their VDC authorities are never pro-poor. However, less than 40 percent perceive that the projects selected serve the demands of poor to some extent. More people (more than 67 percent) from two Terai VDCs- Laukahi and Pakali have highly discouraging feelings that the local projects merely serve the poor, compared to the inhabitants of other four VDCs (Table 6.5). However, more than half of the residents of urban Balambu VDC are of the view that their VDC projects are pro-poor to some extent. However, the poor benefit along with non-poor (but not exclusively) from the project. Half of the respondents from the two remote VDCs- mountainous Chilime, and Thabang from mid-western hill think their VDC projects have no implications for the benefit of the poor.

Though these observations do not quantify the pro-poorness of the local projects, they provide at least some idea that how the local projects are not efficient to serve the highly needy people following to the poverty impact of local service delivery. It means they serve more the non-poor in the cost of poor through improper intra-community targeting (Bardhan & Mookherjee, 1998). We can observe the variation in results in the VDCs with

various geographic, socio-economic characteristics and level of awareness of the poor, etc. Terai VDCs, where there is more political capture, possess more rampant observations in this case. In the view of a woman leader from Balambu VDC of Kathmandu, “there is no welfare for poor properly. The VDC projects are useful for social development in general, but not effective for the improvement of living standard of the poor especially. Social security allowances and allowances for persons with disabilities are helpful to some extent” (Interview, 01/09/2012).

Table 6.5: Perception on Pro-Poorness of the Projects by VDCs (percent)

<i>VDC</i>	<i>Pro-poorness of the Project</i>			Total
	To Some Extent	Never	Don't Know	
Balambu	53.13	43.75	3.13	100.00
Mijhing	46.94	46.94	6.12	100.00
Thabang	38.78	57.14	4.08	100.00
Chilime	30.77	51.28	17.95	100.00
Laukahi	30.00	67.50	2.50	100.00
Pakali	18.33	76.67	5.00	100.00
Total	36.88	57.14	5.98	100.00

Pearson chi2(10) = 31.7846 Pr = 0.000

6.7.5 Corruption and Elite Capture: Two Prominent Obstacles in Service Delivery

As discussed earlier, corruption and elite capture are found more problematic in local governance in the case of sample VDCs as well. The elite capture reflects mostly in project selection. However, corruption exists mostly during the project implementation. Both of these impede the pro-poor result of local projects by obstructing the benefit reaching to the poor.

Basis of Project Selection: Is There Case of Elite Capture?

A body of literature identifies the capture of local elites as a major problem in local governance and fiscal decentralisation that hinders the efficiency of local government, and

stands in the way of achieving the objective of social welfare maximization. A study observed that the failing of LBs in proper and inclusive participation in decision making during the project implementation confirmed the role of the elite in the process (Lamichhane et al., 2013). In this issue, as in the previous case, the views of the respondents on the presence of elite capture in project selection were collected. Here, the question was asked to the respondents to point out the basis of project selection in their VDC.

Among the respondents, about 45 percent said that there is dominance of local elites (mostly through political parties) in the decisions regarding project selection and they try to divert the resources towards the project of their interests ignoring the need of the general people and the poor (Table 6.6). However, only 32 percent observe the procedure of project selection as selecting the projects among those collected from lower units of VDCs and prioritizing according to the general needs. More than 23 percent of the respondents have no knowledge on this issue.

Table 6.6: Local Observations on Basis of Project Selection (percent)

<i>VDC</i>	<i>Basis of Project Selection</i>			Total
	Interest of Elites	General Needs	Can't Say	
Balambu	18.75	51.56	29.69	100.00
Mijhing	61.22	26.53	12.24	100.00
Thabang	12.24	61.22	26.53	100.00
Chilime	61.54	20.51	17.95	100.00
Laukahi	80.00	7.50	12.50	100.00
Pakali	51.67	15.00	33.33	100.00
Total	44.85	31.89	23.26	100.00

Pearson chi2 (10) = 83.1660 Pr = 0.000

According to the response, least observation of elite capture is witnessed in urban Balambu VDC from Kathmandu and Maoist conflict affected and remote VDC Thabang located in mid-western hill. However, the highest feeling of elite capture is observed in Laukahi VDC where a considerable share of population from poor, less aware and lower caste categories resides. In our samples, the poorest VDC, Thabang, with 28.09 poverty head count rate, is

less prone to capture than the comparatively less poor VDCs- Pakali and Laukahi (with poverty head count rate: 6.23 and 16.54 respectively). The result contrasts with the argument of Bardhan & Mookherjee, (2011) that the poorer region will tend to be prone to great capture due to having the larger share of uninformed voter in it.

In the absence of elected representatives, there is a three member formal committee of the VDC secretary, the health post in-charge, and the chief of the agriculture and veterinary sub-centre in VDC for project selection, formally. Previously, there was all party mechanism (APM) under the chairmanship of the VDC secretary for this purpose. Now, VDC secretary informally consults the party representatives during the project selection for the year. Most of the people who are aware about the project selection perceive that there is less participation of people in project selection. Only the VDC secretary and some party representatives have a role in this process representing elite capture. The following perceptions of local people collected during field observation may make clear the problem of elite capture existing at the local level. A woman volunteer from Chilime VDC, elucidates the problem of elite capture in her VDC. She says:

“There is no budget for this road for three years. I heard the VDC budget has been allocated to invest in Sanjen Hydro Project.... Local elites and local officials do not call us to the meeting. They meet secretly.... We don't know about budgeting...During the past, I was invited to the meeting, this year they have not called me...But the hydro projects are supporting local development of VDC to some extent” (Interview, 01/06/2012).

But, a person who is the chief of a major political party from Laukahi VDC tries to clarify the elite capture and corruption in his VDC denying his role and objecting for not consulting fairly during planning and budgeting. He says:

“VDC secretary and staff, and representatives of some parties only, are involved in project selection. We are requested only for the approval of their decision. There is no citizen charter in VDC office and no public notice about the budget. No proper schedule and participatory style of project selection is adopted....There is leakage of fund of about 40 percent, overall in DDC, VDC and users' level. If at least 80 percent of the budget is properly used, there

will be no need for further budget after five years. It would be enough for this small VDC” (Interview, 6/10/2012).

The problem of capture is perceived in Pakali VDC as well. People accuse to party representatives to influence more on decision making and VDC secretary jointly with political representatives complete the planning and budgeting process. These two collude resulting in corruption and misuse of funds as well. However, leaders of major political parties also have complaint to the VDC secretary for favouring only some smaller parties. Additionally, there is case of capture of fund allocated for target group or disadvantaged group (DAG). In a question, a Maoist leader of Pakali VDC tries to explain the case of elite capture in his VDC. He says:

“Due to lack of elected representatives, VDC is not functioning properly. VDC is suffering from low quality of service produced, late execution of projects and freezing of budget due to problems in project implementation. VDC secretary is decisive in project selection. Sometimes, he does not provide full information to party representatives too. Political leaders, being less aware, cannot enquire more on the issue....there is elite capture and misuse of fund for target groups in co-ordination with VDC secretaries. VDC officials misuse the social security fund as well” (Interview, 07/07/2012).

Corruption: A Major Obstacle to Local Development

The researcher asked the respondents to identify the main obstacles they have felt during the local development process in their VDCs. The nature of response was found different in various VDCs. Lack of resources becomes the main obstacle for 46 percent of the respondents (Table 6.7). The secretary of Laukahi VDC coins this problem as –“minimum budget and maximum needs”. However, 33 percent of sample households think corruption is the main hindrance, and for about 11 percent, elite capture is the major hurdle for development of their VDC. Most of the residents (81 percent respondents from richer urban Balambu VDC and 61.5 percent from Chilime VDC) still believe that lack of resources as the major problem. However, people of two Terai VDCs (more than 56 percent) don’t

consider the lack of resources to be the main problem, rampant corruption existing in VDC functioning is the major barrier for them.

Table 6.7: Local Views on Obstacles in Local Development (percent)

<i>VDC</i>	<i>Major Obstacle in Development</i>					Total
	Lack of Resources	Lack of Skill Staffs	Elite Capture	Corruption	Other	
Balambu	80.95	3.17	1.59	14.29	0.00	100.00
Mijhing	51.02	14.29	14.29	14.29	6.12	100.00
Thabang	67.35	14.29	2.04	14.29	2.04	100.00
Chilime	43.59	2.56	15.38	33.33	5.13	100.00
Laukahi	5.00	0.00	22.50	72.50	0.00	100.00
Pakali	16.67	10.00	13.33	56.67	3.33	100.00
Total	46.00	7.67	10.67	33.00	2.67	100.00

Pearson chi2 (20) = 127.3562 Pr = 0.000

Among the six VDCs, the small VDC Laukahi seems also to have elite capture as the major obstacle in addition to corruption. Moreover, corruption is the main problem for one third of the respondents of Chilime VDC. More than half of interviewees from Mijhing VDC observe the problem of lack of resources in the development of their VDC. These results show the significant presence of the problem of corruption in local development activities that prevent the resources from reaching the targeted segment of people and the goal of efficient public services by local governments as well. Contrary to the view that corruption is more rampant in the high poverty zone (Bardhan & Mookherjee (2011), Laukahi and Pakali, though they possess a low poverty headcount rate than other rural VDCs, experience higher level of corruption. The result implies the probability of other factors as well, more than the poverty to affect the magnitude of corruption at the local level.

There is an exchange of blame between political leaders and the local people on the issue of misuse and corruption. Local people consider the local leaders and local officials responsible for corruption. However, political leaders and local officials blame the local users. The officials and political representatives feel the problem of pressure from users for forceful approval of local projects. A person who is the representative of a political party

from Chilime VDC, observes the leakage of funds at the users' level. He interprets the existence of corruption in his VDC:

“Development budget is not properly used. There are leakage and misuse of funds. No work is done according to estimate and budget. Only 50 percent fund is used in the project and the remaining is misused. Who will monitor? Nobody could control. People and administration blame each other. But there is no command of either leader or administrator over local people.....there is need of a permanent rule to control” (Interview, 04/06/2012)

Contrary to this, local people perceive that the local political leaders and local officials make decisions on resource allocation and indulge in corrupt practices which could not be controlled even after the protest by the local people. In their view, mostly all party mechanism (APM) and VDC secretary are problematic. They are more corrupt and take decisions themselves on project selection and implementation without taking the local people into confidence. There is no quantitative increment of services along with the magnitude of the increment in the budget. Moreover, the quality of services is poor. The researcher observed that sand was bedded in a rural road in Laukahi VDC instead of gravel as in budget estimate, manipulating the cost. To illustrate the corruption in VDC, a *dalit* wage labour (65) from Pakali VDC details on the functioning and corruption in his VDC. He briefs:

“Seven party mechanism and VDC secretary allocate resources and no information is provided to the local people...after consensus in budgeting they go to restaurant to enjoy....we are not informed about the projects decided even after they allocate funds. *dalits* are not informed on their targeted budget and there is monopoly only of *dalit* elites with the collusion of VDC secretary and all party mechanism (APM).....They manipulate not only the price, but also the quality and the quantity of materials...In the case of gravelling, if there is a purchase of 2 tractor trips of gravel @ Rs.1000 they submit the bill of 3 trips@ Rs. 1500..There is corruption at three levels: DDC, VDC and users' level...Nobody hears our voice...once, we informed the correspondent of a national daily newspaper, he came and noted all the complaints but did not publish that” (Interview, 09/07/2012).

He pointed out the absence of “voice” mechanism as there is a firm relationship between political leaders, officials and media leading to corrupt practices as in the Indian case (Kumar, 2013). Likewise, elite capture is visible even in the decision-making and implementation of projects under the targeted funding for disadvantaged groups (DAG). Another resident of the same VDC also has the similar views, he adds, “party representatives and VDC secretary approved 3 lakh (0.3 million) rupees for a culvert where the actual cost could not be more than 2 lakh (0.2 million).....they paid one lakh (0.1 million) for 140 trips of gravel.” They siphoned off the residual amount to their pockets. In another case, the officials misled even the users’ committee of the project. According to a person from Tharu community of Pakali, he was nominated as the chair of users’ committee for a small culvert construction project in his VDC. He says, “Rs. one lakh (0.1 million) was allocated for the bridge project in my ward (area). Budget was kept in a bank account. After sometime (before the end of the year) when I queried with VDC secretary, the fund was not in the account. Ultimately, “no bridge-no money situation” (Interview, 09/07/2012).

In addition, respondents observed the other obstacles to development of their localities such as lack of elected representatives and over-dominance and opaque activities of all party mechanism (APM), lack of coordination between political parties, low capability of local leaders, late release of budget, absence of proper monitoring, and awareness of the locals. In remote VDC, high unit cost of the projects is also considered as the problem of underdevelopment. People also do not consider the deficiency in efficient use of resources and limits in people’s participation in project implementation as their problems in local service provision. Lastly, a VDC secretary of a mountainous VDC observes “more misuse of funds in top-down demanded projects than in bottom-top demanded” that supports the idea of the significance of local participation in demand and positive aspect of the decentralisation.

6.7.6 Performance of Functionaries: Are They Responsive?

The role of officials and the political agents are more important for an efficient local governance and local public service delivery. Along with day to day services, it has an impact on resource mobilization, allocation, project implementation and all other for the completion of the local projects. Hence, responsiveness of the officials is an indicator of their accountability to local people that affects the performance of the LBs in service delivery. According to a study performed under Local Governance Accounting Facility (LGAF), among the 160 sample VDCs, 60 percent of VDC secretaries failed to attend their offices daily which lacks their responsiveness to the locals (Lamichhane *et al.*, 2013).

Table 6.8: Perceptions on Responsiveness of Functionaries by VDC (percent)

VDC	<i>Responsiveness of VDC Staffs</i>					Total
	Yes	No	Mostly Unresponsive	Mostly Absent	Can't Say	
Balambu	100.00	0.00	0.00	0.00	0.00	100.00
Mijhing	83.67	4.08	6.12	4.08	2.04	100.00
Thabang	16.33	2.04	22.45	38.78	20.41	100.00
Chilime	0.00	10.26	0.00	84.62	5.13	100.00
Laukahi	45.00	0.00	12.50	42.50	0.00	100.00
Pakali	88.33	0.00	6.67	0.00	5.00	100.00
Total	61.13	2.33	7.64	23.59	5.32	100.00

Pearson chi2 (20) = 244.3233 Pr = 0.000

The nature of response of officials perceived by respondents of different VDCs in our sample has been found to be different. All the respondents were found to be satisfied with the response of VDC staff in Balambu VDC (Table 6.8). In contrast, zero share of perception on responsiveness of VDC staff has been observed in the case of mountainous Chilime VDC as the staff is mostly absent. VDC officials of Mijhing and Pakali have satisfied a majority of households by their responses. But, in case of Mijhing, it is not due to the VDC secretary (where he was found mostly engaged in drinking) but due to the hard labour of the technical assistant. Moreover, the officials of Laukahi VDC deal with the problems of VDCs, even though being partly absent in their office. So, mixed reaction of

residents (responsiveness and absenteeism of staffs reflect the perceptions of 45 percent and 43 percent each of the total respondents) is observed in this VDC.

The high perception in case of absenteeism is observed in Chilime VDC (85 percent). It is followed by the Laukahi and Thabang VDC. Mostly, no absenteeism of secretary was found in urban Balambu VDC and Pakali VDC. It implies the variation of absenteeism with local variation in different aspects. The researcher is informed about the cause of the absence of local officials with different justification. The first, the offices were shifted to the district headquarters during insurgency, i.e. Maoist conflict in hills and mountain and Madhesh conflict in Terai region. Even after the peace process as well they are not shifted back and are working from the district headquarters. It created absenteeism of local officials at the VDC site.

The secretaries of remote areas justify their absenteeism in their local office as- “people have to come to district headquarter for their connective official works”, as per interaction with some VDC secretaries, “people can get VDC service as well as other official services at the same site.” Next, in remote areas, “one VDC secretary has to perform the duty of many VDCs. It also causes absenteeism.” In the Terai region, some of the VDC secretaries, to avoid the unnecessary threats from different criminal or interest groups for monetary donation or project funding, remain absent from their local offices and serve from the district headquarters.

6.7.7 Performance After LSGA: Is It Really Better?

It was needed to know about the performance of local governance and fiscal decentralisation on the perception of local residents. For this, the respondents were asked to rate the level of local development and local governance before and after the execution of LSGA 1999. All the sample population of Balambu and Thabang agreed for better performance of decentralisation and local governance after LSGA, followed by Laukahi and Pakali VDCs. However, more than 15 percent of respondents have no knowledge about

this, though more than 80 percent of respondents of Mijhing and Chilime VDC feel better after LSGA (Table 6.9).

All the respondents preferring role of LSGA emphasized more on further efficient use of LSGA (decentralisation) overthrowing the shortcomings in its implication such as elite capture and corruption at local level. This implies that decentralisation and local governance may have better implication for local public service delivery, though there are a number of shortcomings and limitations in the implementation processes.

The above observations indicate that elite capture and corruption are two major hurdles in fiscal decentralisation that degrade the efficiency of local public services and thus undermine the objective of poverty reduction by obstructing the flow of resources to the poor. These both are inter-related because most of the elites participate both in capture and corruption generating black income in the economy. The effect of these maladies can be observed at local level through the performance of VDC, its staff and locals; and procedures of project selection and implementation. In the survey, about two fifth of the respondents are found to be not satisfied with the performance of their VDCs. The case is witnessed more in two eastern Terai VDCs in comparison to the other hill and mountain VDCs.

Table 6.9: Local Perception on Performance after LSGA by VDC (percent)

VDC	<i>Difference after LSGA</i>				Total
	Better	Not Good	Not Changed	Don't Know	
Balambu	100.00	0.00	0.00	0.00	100.00
Mijhing	83.67	2.04	0.00	14.29	100.00
Thabang	100.00	0.00	0.00	0.00	100.00
Chilime	79.49	0.00	2.56	17.95	100.00
Laukahi	92.50	0.00	0.00	7.50	100.00
Pakali	93.33	0.00	1.67	5.00	100.00
Total	92.33	0.33	0.67	6.67	100.00

Pearson chi2 (15) = 30.7544 Pr = 0.009

We observe VDC specific variation in changes in quality of the local services. Urban VDC and VDC from mid-western hills are found to have changes in quality than the other three. However, rich Balambu VDC gains great changes during the last three years. Similarly, the selected projects reflect mostly the priorities of richer groups and the role of the poor in project selection is rarely witnessed in VDCs. People mostly do not find that the projects have any pro-poor character. But, urban VDCs find pro-poor nature of the projects to some extent. Most of the residents from the two Terai VDCs perceive that the projects never serve the poor. The considerable observation on the dominance of elite interest in project selection implies the significant presence of elite capture in VDC development projects. The Terai VDCs are found more prone to the effect of such capture and the urban VDCs the least.

Corruption becomes the major obstacle in the development of most of the VDCs of the two Terai VDCs and of a mountainous VDC. However, urban VDCs consider mainly the lack of resources as the major hurdle in local development. Though the role of functionaries is more important in local development, the remote VDCs have to face the absenteeism of the VDC staff that deregulates the efficiency of VDCs in local service provision. In addition, most of the participants in the survey feel better implication of fiscal decentralisation, but are worried about some flaws like elite capture, corruption and finally perceive the need of efficient use of the local resources.

In summary, we can say that unlike the theoretical understanding, the implication of local basic services has less contribution to human development of poor and poverty reduction. It is because of less focus of local governments on the projects like education, health, and social welfare as a whole. It implies, central schemes on these projects are more responsible for the achieved results in human development and poverty reduction. However, local people are benefitted by other rural projects which are given less priority by the centre, but have indirect implication on poverty reduction. But, this result varies with the variation in the localities and the needs of the local people guided by the geographic, socio-economic variations among local governments, and the pattern of spending on different sectors. For

example, the two Terai VDCs were found to be more prone to the major demerits of decentralisation, i.e. elite capture and corruption.

6.8 Conflict of Interest: A Visible Problem in Public Services

The government targets basically to maximize the public interest through its public institutions. The service users also expect fair and impartial service from the service providers through the latter's moral and devoted performance. For this, they have to be free from their private interests that affect their official decision and public management. The conflict of interest is the contradiction between the "public duty and private interests of a public official" where they apply the opportunity to take benefit of their public status for private interest (OECD, 2003, 2005). In other words, conflict of interest is a particular situation of risk where the primary (institutional) interest of the professional decision or action is unduly affected by the secondary (private) interest of a professional (Lo & Field, 2005).

The secondary interest may cover the financial or non-financial gains. It can influence and deteriorate the proper performance of the public official in their official duties and responsibilities. This may result in poor performance of the public institution that degrades the quality of and people's trust to the public services. There are a number of such practices in professional sectors like business, education, and medical. Here, this research is not going to explain the larger domain of conflict of interests. Conflict of interest was observed in service providers both in education and health care sectors in our sample field. This subsection describes briefly some observed features of conflict of interests and their consequences for public life.

Teachers and managers of the public schools were found to have some features of conflict of interest and conflict of commitment. In some cases, teachers are teaching in public schools and are also engaged in private schools. In this case, because of the expected private gain from private school in addition to salaries and facilities from public school, teachers were found to neglect their duties for better performance of public school and

think more about the quality of their private school. Here due to better care and quality of education in private schools, as discussed earlier, parents prefer them more than public schools. It enhances the profit in private schools where the particular public school teachers are associated with the earned profit. Similarly, instead of thinking of quality education in public schools where there is their public responsibility, they send their children to private schools.

Another vulnerable practice of the public school teachers is the practice of private tuitions for their monetary gain. Teachers, when they teach more seriously and soundly in private tuitions rather than in school, attract students and enhance the private tuition market, which in turn, is additionally beneficial to the particular teachers as in the Indian case (Kumar, 2013). Likewise, the managers (members of the school management committee), try to recruit their family members or relatives as teachers instead of other competent and qualified candidates. Engagement of teachers in multiple occupations, which diverts their concerns away from teaching, is also found to be problematic. Hence, though teachers are supplied with more training, there is no expected improvement in quality and trust in the public schools. The conflict of commitment of the professionals is found eroding the quality of the public schools in the remote hills and mountainous VDCs. Moreover, there is problem of absenteeism of teachers as well.

Effect of conflict of interest in the health sector is more hazardous. Most of the doctors and other paramedics use to operate or work in private clinics and hospitals. In this case, physicians play a dual role during their services. Though doctors of public hospitals are more qualified, along with frequent training as well, their low performance is leading to low quality and distrust. They reduce their performance in public health care duties, but show more hospitality in their clinic or hospital. This type of behaviour, as defined by Amartya Sen, “act of a government doctor, referring the patients to move towards himself or others in private health care rather than providing good treatment” is supposed as “corruption”, (Varadarajan, 2005; Widmalm, 2008). This creates more trust on private health institutions instead of the public ones.

Medical consultants prescribing more medicines than required and those which are available only in the pharmacy with which they have contact, is another feature of conflict of interest in the medical sector. The next is the doctor's referral for more than essential medical services (e.g. diagnostic tests) to get the commission and income from each service from service providers, especially through the self-referral, i.e. referring to the diagnostic centres which they own fully or partially. This type of conflicting role of physicians as professional-cum-businessmen, hampers the patients by forcing them to go for unnecessary services and the excess financial burden (Lo & Field, 2005). These phenomena promote the market and the business of the private health institutions (all from pharmacy to private hospitals) and decelerate the demand for public services at the cost of high financial burden to the poor for necessary health care services.

The aforesaid effects of conflict of interests are more visible in the public service sectors of Nepal as well. On the basis of field observation, it was found that the conflict of interest of professionals in public schools and health institutions has weakened the capacity of those institutions, creating a considerable difference in the service quality in compared to private institutions. Some of the important observations are given below.

A resident from Mijhing VDC of the remote Rolpa district, who is the Head-teacher of a government secondary school, and sends his children to private school, said that the reason for opting private school; was; for the cause to opt for private school,

“It is because, there is no better teaching in government schools. There are no regulation and regularities in government schooling. No attraction in public education. These are the causes of choosing private education.” (Interview, 3/11/2012).

The above statement reveals that the teacher of the government high school himself does not trust the quality of public education. Instead of trying to enhance the performance of government schools, he sends his children to private school to ensure quality education for his children. This reflects a case of conflict of interest in the education sector. Similarly, health workers of the public health institutions were found to run a clinic or a pharmacy in

a nearby village. They tried to attract the patients towards their pharmacy giving more facilities there than in the institution they were working so that they could sell their medicines easily. About the people's preference for private health institutions, a party representative, a resident of Mijhing VDC of Rolpa district said,

“Medicines are not available in the local health post. Villagers have to go to a private pharmacy to purchase the medicines prescribed by health workers. Hence, rather than going to the health post first, then to the pharmacy, they think, why not to go to the pharmacy directly. Second, health workers of the health post run their own pharmacies. So, people are feeling that they can get the same services from the same health worker, and therefore prefer to go the pharmacy for their health care where they can get the comparatively better care and hospitality” (Interview, 3/11/2012).

Even though a few regulatory guidelines exist to minimize the conflict of interest of public professionals, poor performance in execution and lack of proper monitoring have made them ineffective. So, we can argue that unless and until these problems are tackled, quantitative supply of public institutions will not have the expected effect on poverty reduction, even if there is fiscal decentralisation.

6.9 Conclusion

The level and nature of local service delivery rests on efficiency of local governments. In other words, local governments will be able to achieve the target of efficient service delivery through their increased efficiency, (i.e. revenue raising efficiency, cost efficiency, economic efficiency and institutional efficiency) by the process of fiscal decentralisation process. In turn, this depends on the functional assignments- resource mobilization, resource utilization, resource allocation and organizational management of local governments, respectively (Panta, 2010). Further, efficiency incorporates the institutional, legal and fiscal efficiency of local government.

However, the above mentioned factors are limited by flaws in local governance and fiscal decentralisation in developing countries like Nepal. Nepalese LBs face the problem of low

revenue raising power, resource deficit, and lack of functionaries, absence of elected representatives, unclear assignments, and poor accountability and transparency. These shortcomings impede the effectiveness of local public service delivery because of the weak allocation procedure and productivity.

Furthermore, the poverty effect of local services also depends on the performance of local governments. If local governments are inefficient and beset by different maladies such as elite capture, corruption, the unresponsiveness of the functionaries, imperfect targeting, etc., it degrades the efficiency of the local public services, both in quantity and quality. It further narrows down the impact of local public services on poverty reduction. LBs of Nepal also suffer from these problems. The survey results and some information from secondary sources (discussed earlier) show the existence of these maladies which are degrading the quality and quantity of local public services delivered questioning the efficiency and the poverty effect of fiscal decentralisation in Nepal. In other words, the presence of elite capture, corruption and lack of other factors which impact the pro-poor nature of the projects and lack of transparency and accountability in execution procedure have prevented the benefits of local public services from reaching the poor. Instead, they benefit the non-poor more.

Hence, increased local public expenditure did not improve the quality of life for the poor as much as it should have and reflected in low quantity and quality of local public services. Moreover, the nature and the magnitude of these problems were found to vary with the geographic, socio-economic and political variation among local governments. Hence, they need for inter-country and intra-country specific differences in the case of presence of problems and the method of their solution. Lastly, the process of decentralisation and local service provision through it is not *de novo*, but regular reforms in these sectors would better serve the goal of multi-dimensional poverty reduction by a benevolent government through decentralisation.

CHAPTER 7: SUMMARY AND CONCLUSION

7.1 Introduction

Fiscal decentralisation and poverty reduction are issues of global concern in general, but need more significant discussions in the case of developing economies. The concept of fiscal decentralisation has been invented as an effective means of efficient public service delivery in both developed and developing countries, as important policy tools for correcting government failure in centralized service provision and for improving public service delivery and poverty reduction. The main variables of concern, fiscal decentralisation and poverty, are based on two important economic themes- efficiency and redistribution, respectively. The objective of fiscal decentralisation is efficient service delivery and poverty reduction refers to the redistribution of income and wealth.

The relation between these two phenomena is based on the well-known theories: subsidiary principle of fiscal decentralisation and the capability approach of poverty. The implication of fiscal decentralisation for better service delivery rests on the assumptions that decentralisation brings decision makers closer to the local people and their needs, and reduces the information and transaction cost of service provision and helps in better matching of tastes and preferences of the local population. However, the magnitude of benefits from fiscal decentralisation depends on the transparency, accountability and institutional capacity of local government. Along with the separate studies on fiscal decentralisation and poverty, some scholarly studies on the linkage between fiscal decentralisation and poverty have been conducted which this study also follows.

There are very few studies on the linkage of fiscal decentralisation with poverty at national or sub-national (local) level. Most of the studies are worldwide or cross-country or region-specific and do not cover the analysis of intra-country socio-economic and political context. Analysis in available literature rarely brings out the politico-economic aspect. Linking and testing theoretical aspects of the need of public services to poor, the impact of fiscal decentralisation on public service delivery and finally, the impact of fiscal

decentralisation on poverty would complete the study, and bring out what seems to be lacking in the existing literature. Without analysing pro-poorness of the resource allocation and obstructions for the pro-poor benefit of public service delivery, one cannot measure the actual (not only theoretical) effect of fiscal decentralisation on poverty reduction outcomes. This study has attempted to fill these gaps in the existing literature with a broad study by testing the theoretical understandings on the linkages of fiscal decentralisation, public service delivery and poverty separately, and connecting them to achieve overall clarity on the issues. Unlike the macro-level study in available literature, it undertakes a micro- (rural and local) level study.

Though theoretically fiscal decentralisation has an impact on poverty directly and indirectly, it is difficult to conclude the possible effect of one variable on the other, since both have multidimensional character. This study has tried to explore these effects to the extent feasible. The main theme of this research is the relation between fiscal decentralisation and poverty reduction outcomes in the case of Nepal. This main research question is supported by the studies of other questions on the nature and pattern of local public expenditure, extent of dependence of poor on basic public service delivery and effect of fiscal decentralisation on poverty reduction outcomes. The study has observed the direct relationship between these prominent phenomena as well as indirect linkage through pro-poor channels such as education and health. It has also investigated for the problems regarding fiscal decentralisation and public service delivery in order to identify the obstacles in poverty reduction through local governance and fiscal decentralisation as well as discussed the causes of why benefits of public services do not reach the poor.

To have a theoretical understanding, literature on fiscal decentralisation, public service delivery and poverty was discussed. The theoretical framework was used to see the linkage of fiscal decentralisation and poverty, and possible channels of impact based on Braun & Grote (2000); Jutting et al. (2004); Steiner (2005); Boex et al. (2006); Yao (2007). The theoretical framework indicates there is negative relationship between fiscal decentralisation and extent of poverty. In other words, fiscal decentralisation, through political and economic effects, helps poverty reduction by the empowerment of the poor

via participation in decision making, enabling them access to basic public services and redistribution of income. However, these procedures require facilitation by proper accountability of local institutions to people, i.e. top-down accountability.

The theoretical propositions are tested empirically by using data from a primary survey and also using secondary sources in the case of Nepal. The empirical study suggests- what are the implications of fiscal decentralisation in poverty reduction and basic public service provision. Similarly, the study highlighted the possible drawbacks observed during the implementation of fiscal decentralisation and local public service delivery that could reduce the effect of fiscal decentralisation for poverty reduction. Different from other literature on the subject, this research work has analysed the following: examining the dependence of poor on basic public services; pattern of local government expenditure on pro-poor basic public services; scrutinizing the linkage of fiscal decentralisation with poverty reduction outcomes. Except the simple descriptive statistics, simple OLS regression and logistic regression models were used to get robust statistical conclusions. Last but not the least, narratives obtained from qualitative data collection were also produced to support the arguments that may or may not have been possible just using quantitative data.

7.2 Observations, Findings and Conclusions

7.2.1 Fiscal Decentralisation: An Effective Tool for Poverty Reduction

As introduced in section 7.1, theoretically, fiscal decentralisation through efficient resource mobilization and allocation leads to poverty reduction outcomes through efficient service delivery and empowerment of local governments in identification, formulation and implementation of pro-poor programmes. Theoretically, fiscal decentralisation is assumed to be an effective tool for poverty reduction or improving quality of life of poor by being a good means for provision of basic goods and services, facilitator of economic opportunity, and increased empowerment and security to the poor (Boex et al., 2006). However, some drawbacks of decentralisation such as elite capture, corruption, weak democracy and

accountability (which are visible in developing countries) can hamper its functioning. Chapter 3 of this thesis analyses the poverty impact of fiscal decentralisation, directly and through pro-poor service channels.

Three hypotheses were set in order to analyse the relationship between fiscal decentralisation and poverty reduction outcomes. The first hypothesis defines the positive relationship between fiscal decentralisation characterised by expenditure decentralisation and poverty reduction outcomes represented by FGT poverty indices and HDI. The second hypothesis was- the higher the fiscal autonomy of local government the higher will be the educational attainments leading to the poverty reduction or quality of life of the poor, holding other things constant. The third hypothesis was – as local government fiscal autonomy increases, the better will be the health care achievements leading to poverty reduction, other things remaining the same.

The fiscal decentralisation variable used in this work is fiscal decentralisation index developed by Vo (2008) which is in fact the expenditure ratio estimated as the geometric mean of interaction of “fiscal autonomy” (share of sub-national own source revenue in total sub-national expenditure) and “fiscal importance” as the share of total sub-national expenditure in total government expenditure minus grant to the sub-national government). In some cases, simple ratios of different forms of sub-national revenue (expenditure) and national revenue (expenditure) were also used. In case of poverty indicators, the three indices of poverty- poverty head count rate, poverty gap and square poverty gap; and human development index as the indicator of quality of life, were used. Education and health care services were accounted to represent the analysis of public service delivery throughout the study. Other control variables theoretically identified to have a possible impact on poverty, were also included during econometric analysis of the aforementioned relations. Multiple regression analysis is performed using cross sectional data of 75 districts of Nepal.

From the regression results, we can observe fiscal decentralisation (expenditure decentralisation) having a negatively significant relationship with poverty indices- poverty

head count, poverty gap and square poverty gap; and positively significant relationship with the human development index. Here, the degree of association ($p < 0.05$) is observed to be unchanged for the change of proxies of poverty. The positive and strongly significant coefficient of conflict depicts the negative role of governance factors in poverty reduction. The regression result indicates the possible redistributive role of local government as observed in other developed and developing countries (El-Zahab, 2005; Yao, 2007; Sepulveda & Martinez Vezquez, 2010; Ahmed, 2013). In other words, fiscal autonomy to local government characterised by expenditure decentralisation seems to be effective for poverty reduction through proper implementation and good governance characterised by peace, security, transparency and accountability.

Highly significant coefficient of socio-economic expenditure by central government indicates far more effect on poverty reduction from central schemes which is against the general assumption of fiscal decentralisation in case of Nepal. However, more effect of socio-economic spending could be expected if local governments focused more on social spending, which is rarely practiced in Nepal. Significant and positive coefficients of per capita GDP, and the health and education attainments in regression estimates shows the possibility of poverty reduction by improving these indicators.

Regarding the hypothesis 2 and 3, there are mixed results of the effect of fiscal decentralisation through pro-poor channels. Significant positive relationship of fiscal decentralisation is observed with overall literacy but is insignificant with school enrolment in Nepalese case. The regression result depicts the importance of quality of school facilities (student-school ratio and student-teacher ratio) rather than quantitative increase. In the case of health care provision, more effect of fiscal decentralisation is observed with increasing trained birth attendance compared to extending life expectancy. Central spending on education and health seems to be more effective for improving educational attainments and life expectancy, respectively.

In summary, from the results obtained from the multiple regression analysis using cross-section data, it can be concluded that as poverty is a multidimensional phenomenon, fiscal

decentralisation can be an effective tool for poverty reduction through efficient basic public service delivery. The effect may be locality specific as observed in this study in Nepal. However, study of empirical literature suggests us the possibility of country specific difference in the effect of fiscal decentralisation on poverty outcomes. Imperfect decentralisation could not lead to better service provision compared to a centralized provision in Nepal in the case of pro-poor service provision.⁸⁵ Accountability problems such as conflict and corruption prevail in developing countries, as also in the case of Nepal, this is found to further dilute the poverty effect of decentralisation.

7.2.2 Fiscal Decentralisation: An Efficient Device for Public Service Delivery

Theoretically, it is argued that local governments are closer to the local people and have better knowledge of the demand and the means of supply of basic public services according to the tastes and preferences of people of their jurisdictions. Fiscal decentralisation is supposed to bring the decision makers (as local governments) closer to local people and facilitate the purpose of efficient public service delivery. However, markets could fail for unrestricted distribution of such services. Local government, considered as benevolent in nature, is supposed to correct the market failure in service provision and to rank its sets of expenditure bundles towards the supply of basic services such as education, health, drinking water (these are supposed to be pro-poor in nature). Then, theoretically, it is assumed that with the increase in total local public expenditure (as determined by local revenue), its share of basic public services (basic health, education and social service as a whole) also increases, all other things remain unchanged. Chapter 4 has studied this issue empirically.

Simple graphical study of expenditure pattern of sample Village Development Committees and both graphical as well as time series regression estimation of the municipal expenditure pattern were undertaken during an empirical test of the aforesaid theoretical propositions. From the descriptive analysis and regression estimates, the result shows that the

⁸⁵Local bodies in Nepal think education and health sector as the responsibility of central government and they focus their investment more on rural roads. For detail, see Chapter 4.

aforementioned hypothesis does not always hold. The pattern of expenditure on social sectors in general, and on education and health in particular, is observed not to follow the change (increase or decrease) in total local public expenditure, in the case of sample villages of the study from different geographical regions of the country. The result is similar as in the case of Indian states (Ramakumar, 2008) and contrary to the case of OECD countries (Busemeyer, 2007). However, the strongly significant coefficient of grant transfer obtained from regression estimates of municipal expenditure pattern, suggests that the share of overall social spending is changing with the change in total municipal expenditure. Further, the insignificant coefficients imply the fact that such changes are not found in the case of share of education and health expenditure. Moreover, the change in the pattern of social sector expenditure is observed to be not due to the change in own source revenue, but only because of variation in grant transfer to municipalities.

Next, VDCs (rural local bodies) are found focussing on education comparatively more than the municipalities (urban local bodies) which seem to prioritize on health rather than education. This is similar to observations in some other studies (Adhikari, 2006; Inlogos, 2009; Koirala, 2011; World Bank, 2014b). The graphical results presented show that the pattern of local spending does not depend on the resource richness of the VDCs since all are spending even more on rural roads irrespective of their revenue level. Remote VDCs were found to focus more on rural roads. Unlike the Chinese experiences (Shen & Zou, 2008), Nepalese local governments consider education and health care services to be the role of central government rather than their own (Kelly, Koirala, & Ghimire, 2011).

On the basis of observations, we can conclude that unlike the theoretical understanding, the pro-poor expenditure pattern does not always depend on the total local public expenditure. It can be conditioned by location of local government, level of local demand for those services, types of local government, and the power and responsibilities granted to them for such service provision. The insignificant coefficients of the revenue variables (own source revenue, grant transfer and loan) of municipalities observed in different regression models suggest that there are other determinants affecting the expenditure pattern beyond these revenue variables. Those could be politico-economic factors, such as

the level of accountability, transparency, elite capture, corruption and others prevailing during the decision making and functioning of local government. Including the observations from literature survey as well, we can observe the country-specific and time specific variation in pattern of categories of expenditure of local governments (Tanzi & Schuknecht, 2000; Tridimas, 2001) following the Centre-local relation and nature and practice of allocation of local public resources. Finally, our analysis shows that “one size fits all,” does not apply regarding the pattern of expenditure of local governments with regards to social sectors or public education and health care services and therefore it also does not apply to their contribution to the human resource development and poverty reduction through capability improvement of the poor. Theoretically, fiscal decentralisation can be an efficient device for basic public service delivery, such as education, health, but it is found to be interrupted by different maladies in local governance in the case of Nepal and possibly in other developing countries as well.

7.2.3 Public Service Delivery: Basis of the Service for Poor

As discussed in the theoretical chapter, the main objective of poverty reduction strategy is to reduce deprivation of the poor caused by a dearth of basic public goods available to them. This strategy assumes that because of low income, the poor lack sufficient incomes to purchase the basic goods and services, like, education, health, drinking water in the market. They have to depend on public provision to have access to these basic services that are supposed to be cheaper than the private provisions. These assumptions are transformed to the two hypotheses in this study. The first, the family expenditure for education and health as the share of total household expenditure increases with the increase in total household income, holding other things same. The second, the poor are likely to opt for public services more than the non-poor (in the case of education and health care provisions in this study), *ceteris paribus*. Theoretically, we can say that dependence on basic public services increases with the decrease in income level of the household. It justifies the implication of basic public service provision for poverty reduction through the human resource development of the poor. Chapter 5 has addressed these hypotheses empirically.

In addressing the first hypothesis, simple OLS regression was performed using survey data of household income and expenditure of 299 households and their demographic profiles. The result shows the statistically significant and positive relationship between household income level (income quintile) and the share of expenditure on education and health in total household spending in Nepal as observed in some other studies (Hotchkiss et al., 1998; Montalvo, 2004; CBS, 2011a). The result implies that the family education and health expenditure decreases as the income of the household declines. This leads the poor to depend on public provision of education and health services that is supposed to be cheaper or free. This supports the idea that poverty can be reduced through reduced capability deprivation by increasing the access of poor to basic public services (Bardhan & Mookherjee, 2011). However, the correlation result from the survey data shows a comparatively more association of household income with education expenditure rather than with health spending, indicating more or less the planned nature of household spending for schooling of children and the health expenditure depending on the urgency of the need.

The second hypothesis consisted of two parts. The first was the relation between household income level and choice of public education. The second was a relation of household income with the choice of public health. Altogether 446 children from sample households attending school were included in the analysis of choice of public education. This is different from some other studies (Goldhaber, 1996; Alderman, Orazem, & Paterno, 2001; Goldring & Phillips, 2008; Pal & Saha, 2014; P. Joshi, 2014), where the household level rather than school level survey was carried out. This is important considering the fact that some of the children may have been attending public and some private school, though belonging to the same household (Harma, 2010; Woodhead, Frost, & James, 2013). Similarly, out of the 299 sample households, 257 households suffering from health problems during the reference period were taken into account in the analysis of the second part of the hypothesis 2. Both propositions were tested using logistic regression, some descriptive statistics and the qualitative narratives so as to make the arguments more clear.

The logistic regression result has revealed that household per capita income as represented by income quintile is statistically significant and inversely related with a choice of public education. In other words, rise in family income, in case of Nepal, leads to the increase in probability of choice of private schools rather than public ones, as in the case of some other countries (Bauch & Goldring, 1995; Goldhaber, 1996; Alderman et al., 2001; Goldring & Phillips, 2008; Harma, 2010; Pal & Saha, 2014; Joshi, 2014). More dependence of poor on public education, in this case, implies the fact that poverty can be reduced by increasing adequate access of poor to public education. In addition, choice of private education was observed to rise with the rise in level of parental education. This is because people consider private schooling better (in quality) than public ones where quality education is supposed to be the pre-condition for competent human skills. The VDC level analysis depicts the variation in the pattern of choices (public or private) with the variation in economy, i.e. resource richness and geography, i.e. locations of the jurisdictions.

In case of choice of public health, insignificant coefficients observed from logistic regression implies that there is no effective role of household income level in choice of health care provision, though the coefficient is positive. From the descriptive statistics, we can observe more than 70 percent households from poor to rich income groups were using private health care services for their treatment. Hence, contrary to the choice of schooling, people were found choosing private health care, irrespective of their income level.⁸⁶ It was observed that the choice was made due to better quality service available in private compared to the public health care. Though, household's choice of the service provision (public or private) was found to depend generally on the cost, accessibility and quality of services, during acute illness, households were found not to consider the factors of cost and easy accessibility but only look for quality treatment in spite of it being costlier or less accessible. This condition was found to prevail in all the sample VDCs of Nepal, irrespective of economic and geographic variations, as observed in other study (Lindelov,

⁸⁶ The result is unlike the finding of most of the literature in case of relationship between income level and choice of health care services observed in some other countries (Tembon, 1996; Hotchkiss & Gordillo, 1999; Grobler & Stuart, 2007; Knight & Maharaj, 2009; Mosadeghrad, 2014) and similar to the observation of some other studies (CBS, 2011a).

2005). Unlike the case of choice of public education, other household demographic characteristics were also found insignificant, in the case of health.

The following conclusions can be drawn from the above findings. First, the poor have to depend more on public services generally. However, the dependence is conditioned not only by cost and accessibility, but more importantly, by the quality of the services and urgency of the need. Unlike the proposition of Bardhan & Mookherjee (2011), people are found to consider health care service as essential goods rather than necessary entitlements. Second, the level of poverty may not always be the major factor to influence the choice of services. The result follows the arguments of Sen (1997) that the decision for choice depends on the cost-effectiveness, availability, quality, urgency of services and level of awareness of the poor. Thirdly, similar to the views of Bardhan & Mookherjee (2011) and Kumar (2013), the narratives from respondents elucidate the role of local capture, black market, corruption, etc. to limit the environment for choice of services and degradation of quality of public health care services which push the poor towards comparatively quality (but costly) private provisions.

Fourth, it can be derived a logical inference that the increased expenditure on education and health due to the purchase of costly private services, could further aggravate poverty and reduce the access of poor to quality services. Fifth, a causal relationship could be seen to have between poverty and education and health services. Low quality of education and health of poor leads to loss in job competency. They can access only low paid jobs (mostly in the agricultural sector), thus pushing them further down to the poverty line. Sixth, education and health services have become costlier due to growing commercialization and privatization making it hard for the poor to afford them (Kumar, 2013), and limiting the access of poor to these services.

Finally, we can conclude that only the quantitative increase (supply side) of education and health services will not be enough to achieve positive impact of such services on poverty reduction. Qualitative improvement (demand side) of service provision should also be taken into consideration that will address the market failure and government failure in such

service provisions. More public investment and regulation of private market of these important services are required to minimize the inequality in access to these services (McGregor, 2001). Overall, the poverty reduction goal can be achieved through fiscal decentralisation only if there is supply of quality and efficient basic public services and by minimizing the probable maladies in service provisions.

7.2.4 Nepal: Problems Faced in Fiscal Decentralisation and Service Delivery

Theoretically, the Centre-local relation and performance of local governments determine the nature and magnitude of effect of fiscal decentralisation and public service delivery on poverty reduction. Efficient service delivery by local government through fiscal decentralisation would be possible through their increased efficiency that consists mainly of revenue raising efficiency, cost efficiency, economic efficiency and institutional efficiency. These efficiencies are determined by mobilization, utilization, allocation of resources, and organizational management of local governments (Panta, 2010). Such efficiency is reflected through the institutional, legal and fiscal aspects of local governance.

Allocative efficiency and production efficiency in public service provisions are affected by a number of malaises. Misallocation and misappropriation of available resources (Keefer & Khemani, 2005; Boex et al., 2006) and particularly chances of elite capture and corruption at local level can hinder the public service delivery and poverty reduction by obstructing the benefit of the service delivered reaching the poor (Prud'Homme, 1995; Tanzi, 1996; Bardhan & Mookherjee, 2011).

Chapter 6 accounts for these problems qualitatively based on the perception of local people of sample VDCs on the performance of their local bodies. Based on the information from the survey and secondary sources, the study analysed the legal, institutional and fiscal problems faced by local governments and their service delivery including elite capture and corruption. The survey tried to explore the causes of reduced effectiveness of fiscal decentralisation and local public service delivery in lowering poverty in the country, in the

real sense. The following results were obtained based mostly on descriptive statistics and qualitative narratives.

From the study, it is observed that local bodies of Nepal are facing aforementioned problems as low allocative and production efficiency led by low revenue raising power, limited and unclear assignments, resource deficit represented by vertical fiscal imbalance and horizontal fiscal imbalance, lack of adequate and skilled functionaries, absence of elected representatives and poor accountability and transparency. In other words, the performance of local bodies in service provision is impeded by different maladies such as low performance in revenue and expenditure assignments, elite capture, corruption, the unresponsiveness of officials, imperfect targeting, etc.

Also in the case of Nepal, the limited fiscal assignments to local bodies, as observed by some other studies (Ganguly & Khan, 2009; Ahmad & Garcia-Escribano, 2011), narrows the Centre-local relation mostly to the “principle-agent” relation. Further, unclear assignments produces the situation of “incomplete contract” between the two levels of governments. High fiscal dependency of local bodies results in the existence of *rent seeking behaviour* and *flypaper effect* that proves the low performance of local bodies in their fiscal assignments which is also indicated by low Minimum Condition and Performance Measure score as estimated in LBFC (2014). Based on the survey and the secondary information, we can observe the deficit of “3 F’s- functions, funds and functionaries” in Nepal, as in the case of *Panchayati Raj Institutions* of India and moral hazard problem among officials makes the resource allocation theoretically less than the *second best optimum*.

Nepalese local bodies are facing the problems of accountability, ambiguity, black economy and corruption. There are 23 sector laws contradicting with LSGA 1999 and other unclear functional assignments and practice in resource collection and expenditure that the study observed. Elite capture and corruption lead to *second-best optimum* in service provision leading to imperfect targeting and misappropriation of the resources. Practice of bribery in local services and corruption in local bodies and local education, e.g. running fake schools, and health institutions, e.g. selling of free medicine, are prevalent in Nepal. Corruption in

construction projects is very common. Some kind of triad (Kumar, 2002) among local politician, a local official and contractor could be observed as being part of corrupt practice during local project implementation. Further, frequent absenteeism of the officials could be observed as another form of corruption in mountain, remote hill and the Terai region.

Some politico-economic maladies such as absence of elected representatives has affected the practice of *median voter theory* and *political business cycle theory* at local level and worsened the Centre-local accountability further from “principal–agent” to “master-servant” relationship instead of top-down accountability of local governments. This situation also overburdened the local officials with “single pay for double duty” as being compelled to act as representatives as well as officials. Absence of local election for more than a decade, interrupted the “voice” and “exit” mechanism of decentralisation and induced the monopoly of all party mechanism, i.e. local political elites and local officials in decision making.

Late release of funds from the Centre to local bodies are found to affect the planning and execution of local projects which also result in the room for misappropriation of funds and fiduciary risk in public financial management (MoFALD, 2012). Furthermore, there is a clear effect of ten years of armed conflict followed by inter-party conflict in local body functioning in Nepal. Improper monitoring and evaluation, decreasing trend of local participation, poor and unrealistic data system are also observed as other problems faced by local governments of Nepal. Less satisfactory Minimum Condition and Performance Measure scores obtained by DDCs, VDCs and municipalities signifies their poor performance as inherent problems in the functioning of these local bodies. Importantly, we can witness a case of “conflict of interest” in local service providers such as VDC staffs, teachers and health staffs during service provisions.

The observed problems in local governance of Nepal (indicated in both survey as well secondary information) have led to less efficient fiscal assignments, low downward accountability and irregularities in the fiscal functioning of lower level governments. These drawbacks are responsible for the deterioration of the local public service delivery both in

quantity and quality that varies among the local bodies from various locations of Nepal, as observed in the survey. We can assume these as indicators of underdevelopment of local governance, decentralisation and public service delivery in Nepal. In other words, we can observe government failure in local governance like, legislative failure, bureaucratic failure and rent seeking (Dollery & Wallis, 2001) which is preventing the benefit of public service and decentralisation reaching the poor thereby less efficacious fiscal decentralisation in poverty reduction. However, the nature and magnitude of the effect of these problems could be observed varying with space and time.

7.3 Limitation of This Study

Exploring the background linkages of fiscal decentralisation and poverty through survey data (i.e. linkage between total public expenditure and pro-poor expenditure; and dependence of poor on local public service in rural areas) would be an important contribution to the literature in this research area, though this research has some limitations as well. First, limited availability of secondary data is a serious shortcoming. Because of this, we could not analyse the long-run impact of pro-poor expenditure of VDCs with the changes in their total expenditure. Second, the study could only analyse the people's perceptions on elite capture and corruption at the local level, but could not quantify the magnitude (amount of fund) which would be more convincing to support the findings on these issues.

Third, this research bifurcates the services used into public and private only, but the choice of services varies with the variation within each category of services. This research could not address this problem. Fourth, in addition to analysis of central level and VDC/municipal level analysis of patterns of social sector expenditure, there could be the DDC level analysis as well, which is another shortcoming of this research due to data deficit. Fifth, instead of simply describing the choice of services and reason for choice (as in this research), we could analyse the impact of different reasons for the service choice. Sixth, if the sample size in survey study was larger, the research could have been more robust with more robust results.

The study could work with only limited data from limited data sources on both local government finance and poverty issues because of unsystematic record keeping and poor data storing system. Furthermore, it was difficult to get data even raw data because of poor data management due to low priority of government to research & development sector. Even when raw data were available, it was difficult to classify the financial raw data according to categories required.

Only very limited documents and literature are available on this emerging issue (i.e. linking fiscal decentralisation with poverty reduction outcomes) and this signifies the poverty of academic resources. Finally, perhaps, we cannot underestimate these limitations as they may open the door for further research.

7.4 Issues for Further Research

The issues of fiscal decentralisation and poverty being a hot topic in debates are gaining high importance worldwide. Though a relatively new topic in public economics, there is a large scope for further research. Some of them are pointed out as follows. There could be a comparative study of impact of centralized and decentralised service provision on poverty reduction outcomes. A broad topic of research may be the quantitative and qualitative study on the efficiency of the local government and its role in the local public service delivery and poverty reduction. Furthermore, developing a broader index of fiscal decentralisation accounting for the effect of efficiency of local government and the level of power and responsibilities accredited to local governments.

Another topic of research may be the study of impact of fiscal decentralisation on poverty through pro-poor channels including the agriculture services and comparing these with rural infrastructure that this research did not undertake. A panel data study of the impact of fiscal decentralisation on poverty at district level may be possible, if data for some variables can be available. This research focuses more on fiscal decentralisation, but there should be more significant research on political and administrative decentralisation by using

qualitative and quantitative techniques. In addition, some of the issues raised in previous subsections could not be discussed in this thesis (as limitation of this study) and might be the questions for further research.

7.5 Overall Conclusion

This study has examined some theoretical understandings of the impact of fiscal decentralisation on poverty reduction in Nepal by using both survey data and secondary information. The study addresses the following issues. It was found that there was a significant and positive relationship between poverty and choice of public education, but an insignificant association with the choice of public health (unlike in Bardhan & Mookherjee (1998)). It points to the more important role of quality, accessibility, and nature of the services, and urgency of need as suggested in (Sen, 1997) besides the income of the poor, in determining the dependence of poor on public services. People are found to consider health service as the good for essential consumption, unlike in the case of education. Second, the irregular pattern of expenditure of VDCs with low focus on education and health and social services as a whole, and insignificant coefficients of revenue variables of municipal expenditure on education and health suggests that the pattern of such pro-poor expenditure of local bodies are not always determined by magnitude of local revenue and local public expenditure but also by location of the jurisdiction, level of local demand, powers and responsibilities supplied to LBs, and extent of elite capture and corruption during service provision (Bardhan & Mookharjee, 2011; Kumar, 2013). There exists second-best situation of resource allocation by LBs in Nepal is experiencing and also the most of the developing countries are.

Third, negative and moderately significant relationship observed between fiscal decentralisation and poverty (FGT) indices and positive and moderately significant association between fiscal decentralisation and HDI indicate that fiscal decentralisation can be an effective tool in lowering poverty and improving the quality of life of the poor. However, different maladies such as incomplete decentralisation, low revenue raising power, weak institutional capacity, presence of elite capture and corruption observed in the

functioning of LBs in Nepal signifies that there are obstruction to pro-poor benefits reaching the poor. Rather than competition among local governments and the case of foot loose (Tiebout, 1956) regarding local revenue raising and local service provision, rent seeking behaviour and flypaper effect are experienced in case of local governance in Nepal. Next, because of traditional and cultural factors, like, family ties, inherent properties foot loose is not easier. These malaises impeded the effectiveness of fiscal decentralisation in reducing poverty in Nepal.

Finally, from the observation of survey results and secondary literature we can say that the existing theoretical understandings on the relation between fiscal decentralisation and poverty reduction outcomes may be applicable in developed countries. Though the observed results may not completely represent all of the developing countries, the intra-country specific study of Nepal indicates that we cannot completely generalise the concepts in case of developing countries as well where the local governments are institutionally weak and fiscal decentralisation phenomenon is plagued by different kinds of weaknesses.

The role of quality and urgency on choice of public services as observed in analysis depicts the need of policy to qualitative supply (demand side) rather than emphasizing on the quantitative increase (supply side) of public services to get optimum welfare of poor that Nepal lacks, and also some other developing countries as witnessed in empirical literature. The limitations of fiscal decentralisation and second best optimum of resource allocation by local governments led by elite capture, corruption and improper targeting of local expenditure urges us to consider the combining role of centralisation and decentralisation in reducing poverty as the redistribution function of the government. Public projects that need large investment and producing externalities could be provisioned by the central government. The role of equalisation grants to tackle disparities among jurisdictions where there is an absence of co-operative federalism, some role of Centre could be more effective. Hence, the concept of fifty, fifty and fifty, i.e. First fifty percent to the Centre and the balance fifty to the state and the balance fifty percent of the local governments, in the allocation of power and responsibilities between the central, state and local government (Kumar, 1994) could be the appropriate measure for effective public service delivery and poverty reduction through fiscal decentralization.

APPENDICES

Table I-1: Some Macroeconomic Indicators of Nepal During The Different Plan Period*

Item	Third Plan 1965-70	Fourth Plan 1970-75	Fifth Plan 1975-80	Sixth Plan 1980-85	Seventh Plan 1985-90	Eighth Plan 1992-97	Ninth Plan 1997-2002	Tenth Plan 2002-07	Eleventh Plan 2007-10	Twelfth Plan 2010-13
1. Real GDP Growth	2.6	1.8	2.3	4.9	4.8	4.9	3.7	3.8	4.5	4.0
Agriculture	2.7	3.0	-1.1	5.1	4.1	2.9	3.2	2.8	3.3	3.6
Non -Agriculture	2.3	-0.7	8.9	4.7	5.5	6.4	4.0	4.4	5.2	4.2
2. Inflation	5.1	10.5	5.2	9.7	11.2	9.9	6.5	5.5	10.5	9.2
3. Population Growth	2.0	2.1	2.1	2.6	2.6	2.1	2.1	2.3	2.3	1.35
4. Poverty	....	...	36.0	42.0	49.0	42.0	38.0	31.0	25.4	23.8
5. Unemployment	6.3	....	5.6	5.6	3.1	4.9	1.8	2.9	2.1	2.9
As Percent of GDP										
6. Trade Deficit	....	....	-6.9	-12.1	-13.1	-20.2	-16.3	-17.6	-15.0	-26.8
7. Current A/C Deficit	....	....	-0.2	-3.0	-6.2	-6.2	0.3	1.9	1.7	2.5
8. Balance of Payment	...	....	1.3	-0.4	1.6	1.7	2.0	-2.1	-1.6	4.3
9. Recurrent Expenditure	2.2	3.1	3.3	5.3	5.8	6.7	9.5	10.5	13.5	15.1
10. Development Expenditure	3.7	5.0	7.7	11.9	11.9	10.1	7.0	4.7	7.9	5.3
11. Social Service Expenditure	....	....	2.3	4.3	4.1	4.9	5.5	5.5	8.5	15.8
12. Revenue	...	...	7.7	8.7	9.4	10.4	11.0	11.6	15.7	14.1
13. Tax Revenue	....	...	6.0	7.1	7.0	8.2	8.6	9.1	13.0	23.5
14. Fiscal Deficit	...	...	3.0	6.6	7.5	5.7	5.3	3.4	4.2	22
15. Saving-Investment Gap	....	....	1.4	1.6	1.9	2.0	6.3	13.2	21.3	23.5
16. Remittance	...	...	4.4	8.5	10.0	10.5	9.7	15.7	28.8	22

*Data for some indicators are available only from Third Plan but data for most of the indicators are available from Fifth Plan only.

Source: MoF (2010 & 2011); Khatiwada and Sharma (2002), MoF (2010a); NRB (2010); NPC (Various Issues).

Table I-2: Social and Demographic Indicators During 50 Years (At Different Point of Time)

Item	1961/62	1985/86	1995/96	2005/06	2007/08	2009/10
Poverty (percentage)	36.2*	42.8	41.8	30.8	NA	25.4
Per Capita Food Production (Kg.)	337.0	253.0	195.7	221.5	208.9	222.0
Population Density (percentage)	71.0	116.0	146.0	174.0	197.5	199.0
Dependency Ratio(percentage)	81.0	83.0	82.0	73.0	69.0	68.0
Literacy Rate (percentage)	39.4	51.4	57.9	63.7	66.3	86.5
Life Expectancy At Birth (Year)	39.0	51.0	56.0	61.0	63.0	67.5
Fertility Rate (percentage)	6.1	5.4	4.6	3.7	3.0	2.9
Under Five Mortality Rate (Per 1000)	294.4	170.7	117.4	58.3	61.0	50.0
Urbanization (Percentage)	3.6	6.3	9.2	6.7	16.7	19.0

* 1976/77

Note: 1961/62: Starting of 2nd Plan; 1985/86: Starting of NEP; 1995/96: Starting of Maoist conflict; 2005/06: Ending of Maoist conflict; 2007/08: after conflict; 2009/10: Latest.

Source: CBS (Various years); MOF (Various years); NRB, 2010; FAO, 2007; David, 1969; Karki, 2004

Table I-3: Powers, Functions and Fiscal Responsibilities of Local Bodies

VDC Development Committee	Municipality	District Development Committee
1. Agriculture	1. Finance	1. Agriculture
2. Rural water supply	3. Physical development	4. Rural water supply and settlement
5. Works and transport	6. Water resources	7. Hydropower
8. Education and sports	9. Education and sports	10. Works and transport
11. Irrigation, soil erosion and river control	12. Culture	13. Land reform and management
14. Physical development	15. Works and transport	16. Women's development and handicapped
17. Health services	18. Health services	19. Forest and environment
20. Forest and environment	21. Social welfare	22. Education and sports
23. Language and culture	24. Industry and tourism	25. Labour wage
26. Tourism and cottage industry	27. Approval of building design	28. Irrigation, soil erosion and river control
29. Miscellaneous	30. Miscellaneous	31. Information and communication
	Optional works	32. Language and culture
		33. Cottage industries
		34. Health services
		35. Tourism
		36. Miscellaneous

Source: Local Authorities Fiscal Commission Report, 2000, LAFC, Nepal; Shrestha (2002).

Table I-4: Power and Source of Revenue of Local Bodies as per LSGA, 1999

Title	DDCs	Municipality	VDCs
Tax	Wool, solvent extraction, herbs dry grass (bankes) Kabadi (reusable solid waste) boulders, slate, sand, animal bone, horn, feather, hyde (export tax)	<ul style="list-style-type: none"> ▪ House and land tax ▪ Land revenue and tax ▪ Integrated property tax ▪ Vehicle tax - registration, renewal and lump sum ▪ Entertainment tax ▪ Bahal (rent) ▪ Advertisement tax ▪ Means of profession tax ▪ Commercial video tax 	<ul style="list-style-type: none"> ▪ House and land tax ▪ Land revenue and tax ▪ Haat bazaar tax ▪ Vehicle tax - registration, renewal and lump sum ▪ Entertainment tax ▪ Bahal Bitauri (rent) ▪ Advertisement tax and ▪ Professional tax ▪ Commercial video tax ▪ Natural resource utilization tax ▪ Other - collection and saving tax
Service Charge (in services provided by it)	<ul style="list-style-type: none"> ▪ Road, bridge, irrigation canal, pond ▪ Guest house, library, medical centre, Inn, community hall ▪ Canal, water source (irrigation), embankment ▪ Local Development Fee 	<ul style="list-style-type: none"> • Parking fee • Water supply, electricity, tap, public telephone fee • Solid waste, sanitation, sewerage fee • Public lavatories, park, bath room, swimming pool, gymnasium, guest house, tourist site, hostel, haat bazaar, slaughter house, crematorium, use of washing space, street light, road, drainage maintenance. • valuation of real estate (fixed assets) 	<ul style="list-style-type: none"> • Sanitation - use of drainage • Tourist Site Entrance fee • Park, garden, view tower • Fee for entertainment like magics, circus etc. • For recovering dues for others
Fee	<ul style="list-style-type: none"> ▪ River rafting, boat, <i>tuin</i>, fishing permission and renewal ▪ Registration and renewal fee for water bank ▪ Recommendation fee ▪ Others 	<ul style="list-style-type: none"> • Approval and recommendation fee • Approval of building design fee • Attestation of maps fee 	<ul style="list-style-type: none"> • Television, video and other equipment license fee • Approval fee • Recommendation fee
Sales	River sand, aggregates, boulders, slate, soil, swept away wood		<ul style="list-style-type: none"> • Soil from fallow govt. land • Product from public pond - orchard • VDC property • Dry wood, fire wood, branches • 'Khar' grass
Loan	Borrowing from bank or other Institutions with or without collateral with approval from District Council and on guarantee from HMG	<ul style="list-style-type: none"> • Loans from bank or other institution, with approval from Council, with or without collateral and on government guarantee 	<ul style="list-style-type: none"> • Loans from bank or other institution with approval from Council, with or without collateral and on government guarantee

Source: Local Authorities Fiscal Commission Report, 2000, LAFC, Nepal; Shrestha (2002)

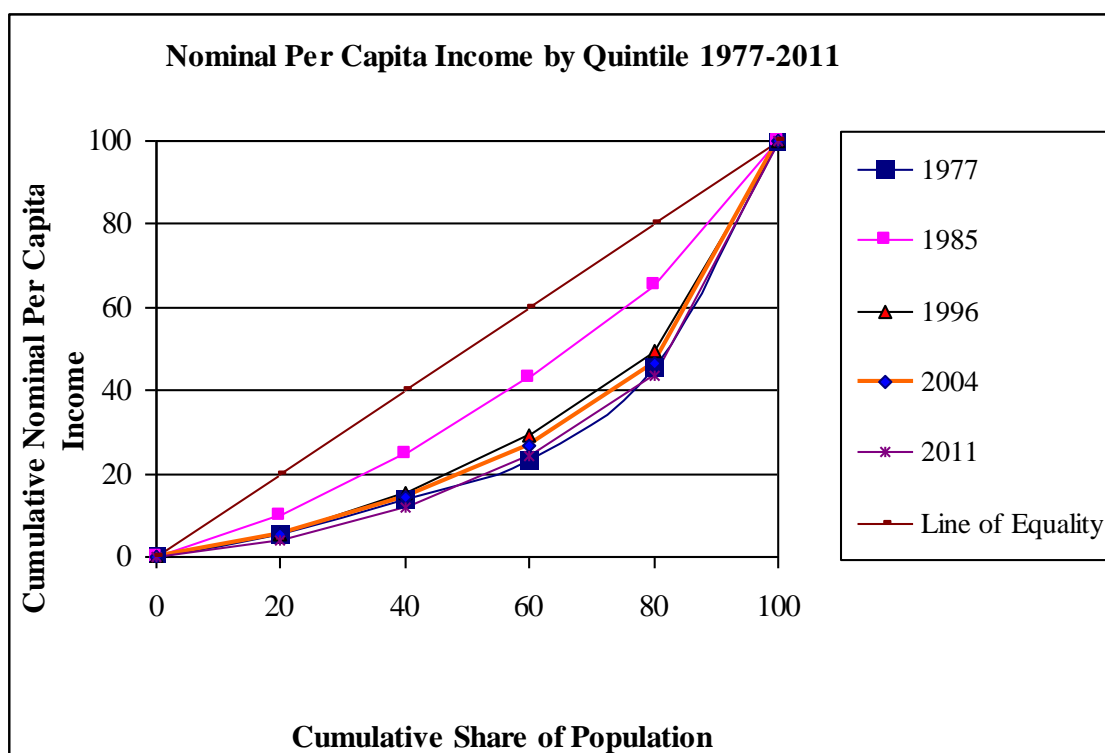
Table I-5: Incidence of Poverty in Nepal (percent)

	Poverty Headcount Rate (P0)			Poverty Gap (P1)			Squared Poverty Gap (P2)		
	1995/96	2003/04	2010/11	1995/96	2003/04	2010/11	1995/96	2003/04	2010/11
Nepal	41.76	30.85	25.16	11.75	7.55	5.43	4.67	2.7	1.81
Urban	21.55	9.55	15.46	6.54	2.18	3.19	2.65	0.71	1.01
Rural	43.27	34.62	27.43	12.14	8.50	5.96	4.83	3.05	2.00

*Data are not perfectly comparable

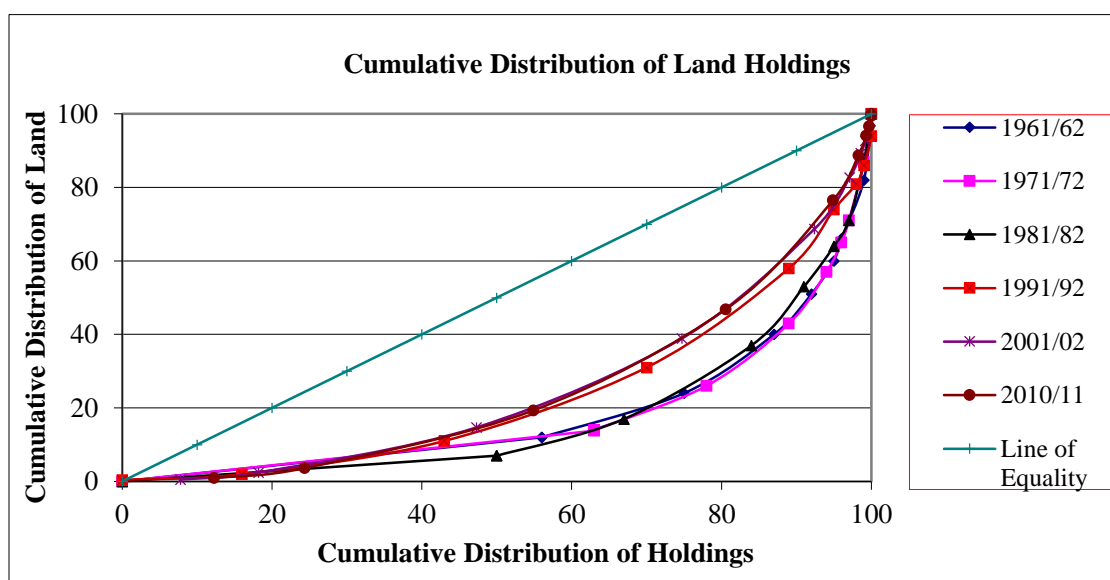
Source: CBS, 2011.

Fig. I-1: Income Distribution in Nepal by Nominal per Capita Income



Source: NPC (1977), NRB (1989); CBS (1996); CBS (2005); CBS (2011), Nepal.

Fig. I-2: Land Distribution in Nepal 1961/62 to 2010/11



Source: CBS (2006, 2013a).

Table I-6: Trends of Different Expenditure as Percent of Total Expenditure

Year	Recurrent	Capital	Social Service	Eco services	Agriculture
1989/90	29.8	66.1	23.8	43.8	15.5
1990/91	29.0	67.9	18.3	52.1	13.7
1991/92	32.9	62.5	22.9	44.0	17.0
1992/93	32.0	62.8	27.6	41.1	16.6
1993/94	31.3	63.1	25.2	43.0	19.6
1994/95	42.5	50.7	27.3	36.4	15.8
1995/96	40.2	53.7	27.9	39.8	13.3
1996/97	40.9	52.3	29.9	37.0	11.5
1997/98	41.4	51.6	30.9	35.3	10.3
1998/99	44.3	47.9	29.6	32.7	10.7
1999/00	44.2	47.9	31.3	31.5	10.2
2000/01	46.4	46.4	29.8	28.5	10.0
2001/02	61.0	30.9	31.1	24.2	9.6
2002/03	62.0	26.6	30.9	21.0	7.2
2003/04	62.1	25.8	31.2	20.8	7.1
2004/05	60.1	26.7	30.4	22.0	6.6
2005/06	60.4	26.7	32.0	20.1	6.8
2006/07	57.7	29.7	33.7	19.7	6.9
2007/08	56.7	33.2	34.3	19.4	8.7
2008/09	58.2	33.3	37.1	20.1	7.3
2009/10	71.9	15.6	38.1	22.3	7.7
2010/11	71.2	16.0	39.3	21.5	7.6
2011/12	71.8	15.2		23.7	7.8

Source: Economic Survey (Various years), MoF; NRB (2014a).

Table I-7: Share of Remittances on Income by Category in Percent

<i>Category</i>	<i>Share of Remittances on Income</i>			
	1995/96	2003/04	2010/11	Change (1995-2011) %
Sector				
Urban	24.1	39.1	32.9	36.4
Rural	26.8	34.9	30.4	13.4
Region				
Mountain	28.45	28.4	28.2	-0.9
Hill	30.43	34	32.7	7.5
Terai	22.84	37.9	29.8	30.5
Urban/ Kathmandu	27.56	42.5	38	37.9
Urban /Other	21.92	38.2	33.25	51.7
Quintiles				
Poorest	24.4	32.7	28.8	17.9
Second	23.0	33.6	22.6	-1.8
Third	29.8	33.7	31.0	4.0
Fourth	21.8	34.9	33.3	53.0
Richest	27.6	40.0	34.8	26.1
Nepal	26.6	35.4	30.9	16.0

Source: NLSS I, NLSS II and NLSS III, CBS, Nepal.

Table II- 1: Representation of Various Fiscal Relation Measures

Measure		Definition	Functional	Application	
Fiscal Decentralisation Measure	Uncombined Indicator	Revenue Decentralisation Indicator (RDI)	$\frac{\text{SNG own revenue}}{\text{CG revenue}}$	$D^r(r)=r$	Eyraud and Lusinyan (2011), Escolano et al. (2012)
		Expenditure Decentralisation Indicator (EDI)	$\frac{\text{SNG expenditure}}{\text{CG expenditure}}$	$D^e(e)=e$	Eyraud and Lusinyan (2011), Escolano et al. (2012)
		Revenue Autonomy I (RA ^I)	$\frac{\text{SNG own revenue}}{\text{SNG revenue}}$	$A^I(r, R) = \frac{r}{R}$	Stegarescu (2005)
	Composite Indicator	Revenue Autonomy II (RA ^{II})	$\frac{\text{SNG own revenue}}{\text{SNG expenditure}}$	$A^{II}(r, R) = \frac{r}{R \bar{D}}$	Martinez-Vazquez and Timofeev (2009)
		Production-Revenue Indicator	Arithmetic mean of RDI and EDI	$N(r, e) = \frac{r + e}{2}$	Akai and Sakata (2002)*
		Fiscal Decentralisation Index (FDI)	Geometric mean of fiscal autonomy and fiscal importance	$V(r, e; \bar{D}) = \left(\frac{r}{e} \times \frac{1}{\bar{D}}\right)^{1/2} = \left(r \frac{1}{\bar{D}}\right)^{1/2}$	Vo (2008)*
		Composite Ratio (CR)	$\frac{\text{RDI}}{1 - \text{EDI}}$	$C(r, e) = \frac{r}{1 - e}$	Martinez-Vazquez and Timofeev (2009)*
VFI or Transfer Dependency (TD) Measure	Uncombined Indicator	VFI ^I ≡TD ^I	$\frac{\text{Transfer}}{\text{CG revenue}}$	$T^I(r, R) = R - r$	Rao and Singh (2002)
		VFI ^{II} ≡TD ^{II}	$\frac{\text{Transfer}}{\text{CG expenditure}}$	$T^{II}(r, R, \bar{D}) = (R - r) \frac{1}{\bar{D}}$	Rao and Singh (2002)
		VFI ^{III} ≡TD ^{III}	$\frac{\text{Transfer}}{\text{CG revenue}}$	$T^{III}(r, R) = \frac{R - r}{1 - r}$	Bahl and Wallace (2007)
		VFI ^{IV} ≡TD ^{IV}	$\frac{\text{Transfer}}{\text{SNG expenditure}}$	$T^{IV}(r, R) = \frac{R - r}{e} \frac{1}{\bar{D}}$	Rodden (2002), Baskaran (2010)
		VFI ^V ≡TD ^V	$\frac{\text{Transfer}}{\text{SNG expenditure}}$	$T^V(r, R) = \frac{R - r}{e} \frac{1}{\bar{D}}$	Jin and Zou (2002), Eyraud and Lusinyan (2011)
	Composite	VFI ^{VI} ≡TD ^{VI}	(SNG expenditure - SNG own revenue)/ GG revenue	$TVI(r, e; \bar{D}) = (e\bar{D} - r)$	Bird and Tarasov (2004)

Note: The asterisk (*) indicates the original source of its fiscal decentralisation index. \bar{D} is the GG fiscal deficit defined as GG expenditure derived by GG revenue.

Source: Adapted from Gu (2012)

Table II-2: Measurement of Some Poverty Indicators

1. Some Income Based Poverty Indicators	
<ul style="list-style-type: none"> ▪ Head Count Ratio Index (HCR): Poverty Incidence $H = \frac{q}{n}$ Where q, is the number of poor and n, the total population. 	
<ul style="list-style-type: none"> ▪ Poverty Gap (PG): Depth of Poverty $PG = \frac{1}{n} \sum_{i=j}^n \left[\frac{z - \mu_i}{z} \right]$ Given $\mu_i < z$. Where μ_i is the income of i^{th} poor ranked in increased value, of income, q number of poor in the total population and z is poverty line. 	
<ul style="list-style-type: none"> ▪ Square of Poverty Gap (SPG): Severity of Poverty $SPG = \frac{1}{n} \sum_{i=j}^n \left[\frac{z - y_i}{z} \right]^2$ Where y_i is the income of i^{th} individual ranked in increased value of income, q number of poor in the total population. 	
2. Non- Income Based Poverty Indicators	
<ul style="list-style-type: none"> ▪ HDI $HDI = 1/3(\text{life expectancy index}) + 1/3(\text{educational index}) + GDP \text{ index}$ The value of HDI more than 0.5 is considered as high human development. 	
<ul style="list-style-type: none"> ▪ The Human Poverty Index (HPI) $HPI = 1/3[P_1^\alpha + P_2^\alpha + P_3^\alpha]^{1/\alpha}$ where $\alpha=3$ Where, P1= probability at birth of not surviving to age of below 40 years P2= Adult illiteracy rate(exclusion in reading and communication) P3= lack of access to basic economic provision. 	
<ul style="list-style-type: none"> ▪ Gender Related Development Index (GDI) $GDI = 1/3(\text{life expectancy index}) + 1/3(\text{educational index}) + 1/3(\text{income index})$ Here GDI is unweighted average of three components each equally distributed by gender. 	
<ul style="list-style-type: none"> • Multidimensional Poverty Index (MPI) $MPI = H * A$ Where, H is multidimensional poverty head count rates with cut off. i.e. $H = q/n$ (q= number of poor and n=number of population) and A is the intensity of poverty i.e. $A = \sum_{i=1}^q c / q \cdot d$ (c= the total number of weighted deprivations of poor and d=total number of component indicators. $c = 1/3(\text{Health dimension}) + 1/3(\text{Education dimension}) + 1/3(\text{Standard of living})$ 	

Table III-1: Data Sources of Variables Used in Calculating Fiscal Decentralisation

Variables	Data Sources
Central government Expenditure	Economic Survey 2004/05, Ministry of Finance, Government of Nepal; and Consolidated Financial Statements 2003/04, Financial Comptroller Office, Government of Nepal.
Central government Expenditure on the Districts	Data collected from Financial Comptroller Office, Government of Nepal and published in the Report-.Nepal's Choices in Fiscal Federalism, 2009 prepared by Ministry of Local Development, Government of Nepal and Asian Development Bank/Nepal
Revenue and Expenditure of DDC, and Grant-in-Aid to DDC	Forty First Annual Report of Auditor's General (2004), Office of Auditor's General of Nepal (OAGN), Government of Nepal.
Expenditure and Revenue of Municipalities, and Grant-in Aid to Municipalities	Annual Report of Detailed Revenue and Expenditure Breakdown with Budget and Key Financial Indicators of 58 Municipalities (2005), Ministry of Local development (MoLD), Government of Nepal/German Technical Assistance (GTZ), Nepal.

Table III-2: Definition and Data Sources of Other Dependent Variables and Control Variables.

Variables	Data Definition and Data Sources
Central Expenditure on Social Service in Districts	Central expenditure on social services such as education, health, drinking water etc. (as percent of total expenditure in the respective district). <i>Source:</i> Data collected from Financial Comptroller Office, Government of Nepal and published in the Report-.Nepal's Choices in Fiscal Federalism, 2009 prepared by Ministry of Local Development, Government of Nepal and Asian Development Bank/Nepal
Central Expenditure on Economic Services in Districts	Central expenditure on economic services such as agriculture, irrigation, transportation, electricity etc. (as percent of total expenditure in the respective district). <i>Source:</i> Data collected from Financial Comptroller Office, Government of Nepal and published in the Report-.Nepal's Choices in Fiscal Federalism, 2009 prepared by Ministry of Local Development, Government of Nepal and Asian Development Bank/Nepal
Per Capita Health Expenditure in Districts	Central expenditure in districts on health divided by total population of respective district. <i>Source:</i> Data collected from Financial Comptroller Office, Government of Nepal and published in the Report-.Nepal's Choices in Fiscal Federalism, 2009 prepared by Ministry of Local Development, Government of Nepal and Asian Development Bank/Nepal
Central Expenditure on Education in Districts	Central expenditure in districts on education (as percent of total central expenditure in the district). <i>Source:</i> Data collected from Financial Comptroller Office, Government of Nepal and published in the Report-.Nepal's Choices in Fiscal Federalism, 2009 prepared by Ministry of Local Development, Government of Nepal and Asian Development Bank/Nepal
District Per Capita GDP	District level gross domestic product divided by midyear population of district (at current prices). <i>Source:</i> Nepal Human Development Report, 2004, UNDP/Nepal.
Literacy Rate (Districtwise)	Percent of literate population among the age of 6 years above. <i>Source:</i> Population Monograph of Nepal 2003 Vol. 1, Central Bureau of Statistics (CBS), Government of Nepal.
Female Literacy Rate (Districtwise)	Percent of literate female population among the age of 6 years above. <i>Source:</i> Population Monograph of Nepal 2003 Vol. 1, Central Bureau of Statistics (CBS), Government of Nepal.
Agriculture Value Added (District level)	Value added in agriculture refers the output of the agricultural sector less the value of intermediate inputs. It also consists of value added from forestry, hunting, and fishing as well as cultivation of crops and livestock production. Data are in current NPR. <i>Source:</i> Nepal Human Development Report, 2004, UNDP/Nepal.
Corruption (District level)	Number of corruption cases filed in CIAA district offices. <i>Source:</i> Fourteenth Annual Report 2003/04 (in Nepali), CIAA, Nepal;

Immunization DPT3 (Districtwise)	Percent of children under 12 months those are covered by immunization DPT3. That is immunized against diphtheria with single doses of vaccine. <i>Source:</i> Annual report 2003/04, Department of Health Services, Ministry of Health and Population, Nepal.
Life Expectancy at Birth (Districtwise)	Average number of years a new born baby is expected to live if prevailing pattern of age specific mortality rates throughout the life is applied. Measured in terms of number of years. <i>Source:</i> Nepal Human Development Report, 2004, UNDP/Nepal.
Trained Birth Attendance (TBA) (Districtwise)	This implies the percent of deliveries attended by staff trained (including the traditional trained birth attendants) to give the necessary supervision, care and advice to women during pregnancy, labour and the post-partum period; and to care for new-borns. <i>Source:</i> Annual report 2003/04, Department of Health Services, Ministry of Health and Population, Nepal.
Population per Hospital Bed (Districtwise)	Ratio of total population of district to total hospital beds available in respective district. <i>Source:</i> Annual report 2003/04, Department of Health Services, Ministry of Health and Population Monograph of Nepal 2003 Vol. 1, Central Bureau of Statistics (CBS), Government of Nepal.
Primary Net Enrolment (Districtwise)	The number of children of official primary school age who are enrolled in primary education level as percent of total children of that official school age population. <i>Source:</i> Flash Report I 2003, Department of Education, Ministry of Education and Sports, Government of Nepal.
Combined Net Enrolment (Districtwise)	The number of children of all levels (primary, lower secondary and secondary) of official of school age who are enrolled in all level of school education level as percent of total children of the all level of official school age population. <i>Source:</i> Flash Report I 2003, Department of Education, Ministry of Education and Sports, Government of Nepal.
Combined Promotion Rate (Districtwise)	Percent of students of class 1-9 promoted to the next grade in the following school year. <i>Source:</i> Flash Report I 2003, Department of Education, Ministry of Education and Sports, Government of Nepal.
Student-Teacher Ratio (Districtwise)	The ratio of number of students enrolled in primary school to the number of primary school teachers (regardless of their teaching assignment), given in percent. <i>Source:</i> Flash Report I 2003, Department of Education, Ministry of Education and Sports, Government of Nepal.
Student-School Ratio (Districtwise)	The ratio of number of students enrolled in primary school to the number of primary school (regardless of their teaching assignment), given in percent. <i>Source:</i> Flash Report I 2003, Department of Education, Ministry of Education and Sports, Government of Nepal.
Conflict (Districtwise)	Number of people killed and handicapped in district during insurgency in year 2003/04. <i>Source:</i> INSEC Database, Informal Sector Service Centre (INSEC), Kathmandu, 2012.
Political Empowerment Index (Districtwise)	Index that indicates the level of democracy and political freedom. It is measured in terms weighted average of voter's turnout and degree of competition (candidates per seat), ranges from 0 to 1. <i>Source:</i> Nepal Human Development Report, 2004, UNDP/Nepal.

Table III-3: Summary Statistics of Variables Used in Analysis of Determinants of Poverty

<i>Variable</i>	<i>Obs</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Min</i>	<i>Max</i>
Combined Net Enrolment Rate	75	51.7821	10.3389	29.77	77.98
Combined Promotion Rate	75	72.9667	5.30971	61.4	88.5
Conflict (No.)	75	27.6133	23.7315	0	126
Corruption (No.)	74	9.83784	20.4189	0	131
Economic Expenditure (as % of Total)	75	18.9521	9.68931	8.03109	54.353
Education Expenditure (as % of Total)	75	30.3005	10.3893	5.38036	77.4475
Female Literacy 6 Year Above	75	39.0747	13.7081	9.2	66.4
Fiscal Decentralisation	74	0.156081	0.082708	0.04	0.41
Health Expenditure (as % of Total)	75	6.18183	1.4602	2.48346	10.1272
Human Development Index	75	0.454413	0.067776	0.304	0.652
Immunization DPT3 (% Coverage)	75	86.37849	14.8104	46.39851	146.3004
Life Expectancy at Birth (Year)	75	60.9247	5.94145	44.07	71.33
Literacy Rate 6 Year Above	75	50.9747	11.7027	26.6	77.1
Per Capita Agriculture Value Added ('000)	75	7.02577	2.12763	2.51515	15.1247
Per Capita GDP (Rs.)	75	16740.6	6270.87	9192	46511
Political Empowerment Index	75	0.608573	0.170256	0.088	0.919
Population per bed	75	10726.2	9748.58	0	56086
Poverty Gap	75	0.112787	0.044388	0.01	0.209
Poverty Incidence	75	0.382133	0.125102	0.044	0.603
Primary Net Enrolment Rate	75	86.216	9.71152	52.3	95.3
Socio-economic Expenditure (as % of Total)	75	69.2637	10.7402	30.0639	93.1981
Severity of Poverty	75	0.046493	0.020275	0.004	0.094
Trained Birth Attendance (%)	75	23.9319	13.4864	4.75831	67.8007
Social Expenditure (as % of Total)	75	50.3116	12.6669	12.6764	84.7763
Student-School Ratio-All Level	75	195.547	82.1806	35.7	406.6
Student-Teacher Ratio-All Level	75	35.9773	11.915	6.3	66

Table III- 4: Data for Estimation of Fiscal Decentralisation Variable (Rs.)

District	Total Local Revenue (LR)	Total Local Expenditure (LE)	Total Grant (GT)	Total Central Expenditure (CE)	Total Central Revenue (CR)	Total Own Source Revenue (OSR)	Fiscal Decentralization Index (FDI)
Achham	94719	59007	47056	383340	5887	1298	0.06
Arghakhanchi	55390	44383	34911	363950	30865	7133	0.14
Baglung	74841	70087	45712	444274	45954	12061	0.16
Baitadi	75614	69356	54340	372474	8052	6868	0.13
Bajhang	55267	43441	38950	342781	4346	3888	0.11
Bajura	28783	25087	21687	230498	4592	384	0.04
Banke	119628	95291	34842	1086639	1022400	41534	0.19
Bara	151000	113629	58225	653136	420056	56925	0.28
Bardiya	78848	42785	29539	513107	46194	16440	0.18
Bhaktapur	262984	184966	22359	1271678	272557	172850	0.35
Bhojpur	52216	39310	37485	382597	20842	2141	0.07
Chitawan	192766	163466	41312	927533	1641424	77428	0.27
Dadeldhura	51453	44779	22577	358965	20943	2994	0.09
Dailekh	78224	68461	46757	381535	8024	4996	0.11
Dang	128167	97201	48088	765454	113062	22107	0.16
Darchula	60172	51033	34769	404419	6246	1310	0.06
Dhading	111709	63609	36452	493684	31172	20704	0.20
Dhankuta	66767	61882	31729	498190	34966	12934	0.16
Dhanusha	153559	122332	63913	782173	923925	47119	0.24
Dolakha	92213	73709	42903	440618	17785	9139	0.14
Dolpa 202	32185	28440	26074	274645	6671	968	0.06
Doti	57259	44350	38640	590991	22291	6254	0.10
Gorkha	97269	76578	57299	565194	38931	8812	0.12
Gulmi	82148	71456	56379	419318	33323	4839	0.11
Humla 225	35753	32998	24640	232203	3963	760	0.06
Ilam	88280	67408	43213	458847	52783	18508	0.20

Jajarkot	44212	39071	27510	260764	4614	946	0.06
Jhapa	192003	153049	58675	963080	1472837	75168	0.27
Jumla 756	0	0	0	310039	6140	0	0
Kailali	123270	97596	40033	844290	464788	35999	0.20
Kalikot 714	42952	35284	28955	254642	4010	401	0.04
Kanchanpur	92950	65898	21507	535111	160520	26987	0.22
Kapilbastu	124040	96713	53435	505445	515647	5814	0.10
Kaski	230207	184281	43015	1059565	595801	84698	0.27
Kathmandu	931036	703799	61708	49095122	27273682	607136	0.11
Kavrepalanchok	327006	251367	67780	639424	66534	61891	0.27
Khotang	73121	59541	54563	403843	23016	5402	0.11
Lalitpur	209044	185504	33403	2496868	1105314	142917	0.23
Lamjung	67088	56892	45825	374349	29586	3999	0.10
Mahottari	84359	72189	55053	522111	85332	11468	0.15
Makwanpur	201234	108810	48298	952016	652817	68620	0.26
Manang	22676	19583	16346	113005	3187	184	0.04
Morang	258140	200820	48275	1096478	3678302	148434	0.34
Mugu 332	39511	32478	22683	213813	3345	490	0.05
Mustang	23470	21503	18414	214888	6299	3619	0.13
Myagdi	42032	34310	26424	298562	22126	3547	0.11
Nawalparasi	159666	114864	57011	569125	118244	24791	0.20
Nuwakot	139320	72659	43803	597431	30298	13181	0.15
Okhaldhunga	52774	46034	40400	365792	18174	2972	0.09
Palpa	92928	79597	50767	485668	49555	11540	0.15
Panchthar	59223	50088	31323	354288	28073	3449	0.10
Parbat	88282	80179	29528	402910	27056	6870	0.12
Parsa	287477	243431	55635	1119970	15370831	172819	0.36
Pyuthan	41966	36401	33885	349555	13481	3655	0.10
Ramechhap	75755	64489	41139	343444	14782	5271	0.12
Rasuwa	29215	27905	19826	227106	8273	4714	0.14
Rautahat	100087	86560	61499	432506	126887	32363	0.27
Rolpa	41623	28208	24010	347447	15695	3568	0.10

Rukum	73144	42509	33592	389439	14777	1724	0.07
Rupandehi	370798	276682	48030	965291	3601487	203256	0.41
Salyan	61273	48660	31879	352772	13240	9512	0.16
Sankhuwasabha	57623	41865	31320	331557	23692	8311	0.16
Saptari	113042	97606	76987	692465	83160	19804	0.17
Sarlahi	114680	101853	69991	784440	95116	17999	0.15
Sindhuli	86691	78966	43572	414107	26597	7594	0.13
Sindhupalchok	123408	91178	73203	481626	1236518	15553	0.18
Siraha	119494	102682	73538	572001	202131	21640	0.19
Solukhumbu	45426	32520	27968	298959	26524	2403	0.09
Sunsari	219943	180381	54806	867591	388141	94891	0.31
Surkhet	68414	51371	39713	851494	34845	11245	0.11
Syangja	99404	94492	50873	513547	49749	14736	0.16
Tanahu	101029	74779	37613	638340	51317	25604	0.19
Taplejung	63389	53241	38583	302775	18530	1236	0.06
Terhathum	40005	33974	26307	259401	16425	2745	0.10
Udayapur	76640	70043	41755	373348	110166	8594	0.15
Nepal	8508285	6676950	3100309	89476054	62824917	2600155	

Source: As given in Table III-

Table III-5: Dependent Variables Used in Regression Analysis

District	Human Development Index	Poverty Incidence Index	Poverty Gap Index	Severity of Poverty Index	Literacy Rate 6+ Year %	Combined Net Enrolment Rate %	* Trained Birth Attendance %	Life Expectancy at Birth (Years)
Achham	0.35	0.52	0.16	0.07	33.40	44.94	23.49	55.18
Arghakhanchi	0.47	0.44	0.14	0.06	55.90	57.20	23.06	62.54
Baglung	0.49	0.40	0.12	0.05	61.40	57.37	24.11	63.54
Baitadi	0.39	0.37	0.10	0.04	51.50	48.28	9.69	52.31
Bajhang	0.33	0.47	0.14	0.06	35.30	42.23	15.14	49.69
Bajura	0.31	0.48	0.15	0.06	33.70	41.21	10.19	45.67
Banke	0.48	0.41	0.12	0.05	57.40	43.43	32.65	60.38
Bara	0.47	0.27	0.06	0.02	42.40	46.59	43.07	60.72
Bardiya	0.43	0.45	0.13	0.05	45.40	48.05	37.11	60.81
Bhaktapur	0.60	0.09	0.02	0.01	70.30	69.75	17.41	71.33
Bhojpur	0.47	0.53	0.17	0.07	54.50	55.32	12.69	64.64
Chitawan	0.52	0.12	0.03	0.01	70.80	67.88	40.16	58.78

Dadeldhura	0.43	0.40	0.12	0.05	51.60	51.15	23.63	56.62
Dailekh	0.38	0.52	0.16	0.07	47.40	48.64	15.40	55.83
Dang	0.41	0.43	0.13	0.05	57.70	48.79	32.18	50.57
Darchula	0.42	0.38	0.11	0.04	49.40	53.88	7.97	56.43
Dhading	0.41	0.43	0.13	0.06	43.50	55.25	14.92	58.55
Dhankuta	0.51	0.46	0.14	0.06	64.00	60.59	24.26	64.90
Dhanusha	0.45	0.27	0.06	0.02	48.40	45.14	56.73	62.04
Dolakha	0.45	0.34	0.09	0.04	50.60	54.95	13.36	63.50
Dolpa	0.37	0.40	0.11	0.04	34.70	41.08	9.35	52.52
Doti	0.40	0.46	0.14	0.06	42.60	44.36	19.76	58.39
Gorkha	0.45	0.38	0.11	0.05	53.90	56.82	20.73	60.50
Gulmi	0.47	0.43	0.13	0.06	57.50	65.92	27.39	64.82
Humla	0.37	0.42	0.11	0.04	26.60	38.50	8.74	58.37
Ilam	0.52	0.40	0.12	0.05	66.20	65.59	20.75	64.73
Jajarkot	0.34	0.44	0.12	0.05	39.40	40.63	12.92	51.90
Jhapa	0.49	0.13	0.03	0.01	66.90	64.81	27.36	58.49
Jumla	0.35	0.34	0.09	0.03	32.40	38.81	16.34	50.82
Kailali	0.44	0.50	0.16	0.07	52.10	51.28	27.28	58.39
Kalikot	0.32	0.57	0.18	0.08	37.50	48.90	12.28	46.67
Kanchanpur	0.46	0.42	0.13	0.05	59.70	47.34	20.10	57.39
Kapilbastu	0.44	0.40	0.12	0.05	41.50	36.94	39.01	62.53
Kaski	0.59	0.11	0.03	0.01	71.90	65.40	55.09	70.76
Kathmandu	0.65	0.04	0.01	0.00	77.10	77.84	40.46	69.53
Kavrepalanchok	0.54	0.35	0.11	0.05	63.70	50.42	19.87	69.33
Khotang	0.44	0.54	0.18	0.08	49.90	61.07	14.43	61.37
Lalitpur	0.59	0.10	0.03	0.01	70.80	77.98	59.33	67.10
Lamjung	0.49	0.32	0.09	0.04	56.60	63.86	22.62	64.41
Mahottari	0.41	0.29	0.07	0.02	34.40	35.64	67.80	63.20
Makwanpur	0.48	0.43	0.14	0.06	63.20	46.82	28.14	55.75
Manang	0.50	0.21	0.05	0.02	59.90	45.04	5.88	57.03
Morang	0.53	0.17	0.04	0.02	56.70	66.75	37.12	67.28
Mugu	0.30	0.51	0.16	0.07	27.80	36.65	4.76	44.07
Mustang	0.48	0.26	0.06	0.02	51.80	46.10	10.71	57.03
Myagdi	0.50	0.35	0.10	0.04	55.70	53.34	20.88	66.62
Nawalparasi	0.48	0.36	0.11	0.05	53.00	48.56	23.61	63.68
Nuwakot	0.46	0.37	0.11	0.04	51.20	58.12	13.15	63.57
Okhaldhunga	0.48	0.43	0.13	0.05	49.10	55.58	13.81	69.39
Palpa	0.49	0.43	0.14	0.06	66.00	55.33	22.78	59.64
Panchthar	0.48	0.53	0.17	0.07	55.30	66.12	19.14	64.51
Parbat	0.50	0.34	0.10	0.04	56.80	57.90	28.54	65.76
Parsa	0.45	0.24	0.06	0.02	42.40	32.66	44.65	60.71

Pyuthan	0.42	0.52	0.16	0.07	46.60	46.84	29.41	61.69
Ramechhap	0.43	0.48	0.15	0.06	39.00	47.69	18.55	65.16
Rasuwa	0.39	0.51	0.16	0.07	34.00	46.28	17.68	54.75
Rautahat	0.41	0.30	0.07	0.03	32.50	37.42	51.00	63.51
Rolpa	0.38	0.59	0.18	0.08	37.20	40.84	13.76	58.05
Rukum	0.39	0.49	0.14	0.06	39.70	45.59	14.10	56.79
Rupandehi	0.55	0.30	0.08	0.03	66.00	49.34	35.58	68.27
Salyan	0.40	0.46	0.13	0.05	48.10	61.32	11.42	56.79
Sankhuwasabha	0.48	0.49	0.15	0.06	53.80	51.80	14.74	63.78
Saptari	0.45	0.28	0.07	0.02	49.30	29.77	48.34	63.13
Sarlahi	0.41	0.26	0.06	0.02	36.20	35.06	30.04	62.95
Sindhuli	0.47	0.60	0.21	0.09	50.10	56.33	12.51	66.05
Sindhupalchok	0.41	0.37	0.10	0.04	40.20	48.67	10.03	60.02
Siraha	0.43	0.29	0.07	0.03	40.30	45.71	37.05	63.38
Solukhumbu	0.48	0.46	0.14	0.06	45.80	54.19	12.47	65.94
Sunsari	0.50	0.21	0.05	0.02	60.40	50.01	26.88	61.86
Surkhet	0.49	0.47	0.15	0.06	62.50	54.84	25.13	62.69
Syangja	0.54	0.35	0.11	0.04	66.30	67.07	14.24	67.71
Tanahu	0.52	0.35	0.11	0.04	61.70	61.15	12.59	68.79
Taplejung	0.47	0.52	0.17	0.08	52.20	62.44	22.36	61.94
Terhathum	0.52	0.43	0.13	0.06	59.00	62.09	23.97	67.78
Udayapur	0.49	0.51	0.16	0.07	53.30	46.41	21.05	68.03

*Trained Birth Attendance is used as dependent and independent variable in different models.

Sources: As given in the Table III-2.

Table III-6: Data on Explanatory Variables of the Regression Analysis

District	Per Capita GDP Rs.	Per Capita Agriculture Value Added Rs.'000	Social Expenditure %	Economic Expenditure %	Education Expenditure %	Health Expenditure %	Female Literacy %	Primary Net Enrolment Rate	Combined Promotion Rate	Total Student School Ratio	Total Student Teacher Ratio	Immunization DPT 3 %	Population per bed No.	Cases of Corruption No.	Conflict Index No.	Political empowerment Index
Achham	10421	4.3	59.5	9.7	30.0	8.0	15.8	89.3	66.1	142.0	34.9	85.7	15419	0	38	0.45
Argha-khanchi	15281	7.9	59.5	10.7	36.9	6.2	46.7	90.8	72.2	173.0	37.7	80.7	13893	0	21	0.66
Baglung	15484	6.6	60.5	11.2	37.8	6.0	52.0	91.7	72.1	166.5	30.9	78.0	10757	0	13	0.59
Baitadi	12046	4.7	63.7	18.5	37.2	8.5	33.4	86.9	74.1	133.6	40.4	74.3	15628	0	19	0.36
Bajhang	11167	4.4	68.1	10.1	41.2	8.4	15.1	86.5	61.4	126.5	30.3	68.7	11135	1	22	0.42
Bajura	12271	5.0	68.0	12.4	39.0	7.6	17.1	90.0	64.5	120.2	28.4	69.4	13598	0	16	0.48
Banke	18537	6.8	21.7	25.7	10.8	4.3	48.9	81.2	76.1	287.0	40.3	96.6	2572	32	126	0.85
Bara	29163	8.7	45.1	25.5	27.9	6.4	29.0	73.5	80.5	302.9	42.4	101.5	22365	0	23	0.77
Bardiya	13115	7.3	38.4	39.3	25.7	4.4	35.6	92.1	71.3	406.6	59.2	88.4	25510	0	36	0.88
Bhaktapur	25189	5.8	84.8	8.4	77.4	4.4	59.4	93.1	71.2	194.9	16.1	84.8	4509	12	1	0.82
Bhojpur	13556	7.6	61.6	13.6	37.7	6.9	44.2	94.6	70.4	160.9	34.9	82.1	11942	0	21	0.53
Chitawan	23204	8.6	40.2	31.4	26.7	4.5	62.8	94.6	88.5	297.2	30.9	80.3	3065	14	30	0.72
Dadeldhura	17870	8.9	45.1	20.6	27.5	6.5	33.1	88.6	68.7	141.6	29.3	81.8	2628	0	23	0.49
Dailekh	9192	3.8	58.8	9.9	28.5	8.1	31.8	93.2	73.5	165.1	42.3	81.3	11853	2	28	0.64
Dang	14371	6.2	34.4	31.7	22.3	4.0	46.7	93.8	67.4	286.1	45.3	88.5	18495	11	120	0.78
Darchula	15901	6.2	52.9	28.9	31.1	7.1	32.4	91.0	72.0	104.5	27.4	68.1	8133	0	11	0.54
Dhading	14539	6.7	52.9	13.9	34.9	5.2	33.8	92.5	80.6	141.6	56.2	83.7	21166	0	25	0.70
Dhankuta	14904	7.1	42.1	23.2	23.8	7.1	54.1	88.5	74.8	150.4	30.5	87.6	5045	2	7	0.71
Dhanusha	13448	4.6	45.1	30.2	25.2	9.3	36.1	72.3	81.1	329.7	39.4	111.6	2514	38	33	0.78
Dolakha	13054	5.2	49.4	19.1	29.4	6.0	38.3	92.6	74.4	143.6	42.2	73.9	13615	6	30	0.55
Dolpa	17296	6.8	46.1	26.8	20.8	4.7	19.6	80.6	69.5	56.0	13.7	119.0	0	0	3	0.49
Doti	12779	5.0	39.7	26.4	21.5	5.4	25.2	91.0	70.5	141.0	33.2	76.3	6902	4	24	0.29

Gorkha	16484	7.9	56.9	9.7	36.5	6.2	45.2	93.0	70.2	186.6	38.5	73.8	3602	0	14	0.45
Gulmi	10279	4.1	70.3	10.8	44.5	8.0	47.8	94.7	61.5	184.2	32.6	89.7	19777	6	8	0.56
Humla	13724	5.5	53.1	14.2	23.9	5.9	11.5	81.1	71.9	65.3	17.6	46.4	2706	0	14	0.51
Ilam	16440	8.5	60.4	16.4	41.2	5.1	58.2	94.3	73.6	187.9	35.3	80.9	12296	0	31	0.80
Jajarkot	11351	5.1	54.6	10.1	30.6	6.5	28.9	81.1	74.0	103.8	36.4	74.6	8991	0	16	0.42
Jhapa	17617	7.4	43.9	22.7	32.9	3.9	58.6	93.4	75.9	327.0	32.9	101.4	8601	2	17	0.80
Jumla	14942	8.5	46.2	15.8	23.9	6.6	16.7	75.2	69.9	128.8	27.1	99.3	5962	0	23	0.55
Kailali	16020	8.8	30.9	24.1	18.1	5.3	40.7	93.3	77.6	359.2	66.0	79.9	8223	1	121	0.65
Kalikot	10491	6.8	50.7	11.7	30.0	6.0	17.0	79.4	65.7	124.4	33.1	59.2	0	0	26	0.44
Kanchanpur	18148	10.4	36.7	36.4	24.4	5.1	46.9	84.8	78.3	306.9	44.2	78.3	7558	13	35	0.80
Kapilbastu	15171	7.5	46.6	26.6	26.5	6.4	29.3	67.5	67.4	302.7	45.0	104.5	16066	0	33	0.83
Kaski	23088	7.2	34.1	21.0	22.7	5.3	61.5	88.6	76.8	204.4	20.8	86.9	1903	0	26	0.64
Kathmandu	46511	2.5	12.7	17.4	5.4	3.3	66.4	93.8	67.1	276.9	18.4	92.9	892	2	15	0.64
Kavre-palanchok	21262	8.9	60.9	15.0	40.6	5.4	52.5	81.2	76.7	175.6	27.0	79.5	2085	3	26	0.63
Khotang	12905	7.2	67.1	10.9	37.8	7.3	38.4	95.0	75.4	174.5	53.7	83.7	15426	3	44	0.51
Lalitpur	27857	3.7	33.3	54.4	7.1	2.5	60.3	87.1	86.2	223.3	18.0	99.4	891	0	19	0.71
Lamjung	17369	8.9	65.1	11.9	41.8	7.0	46.0	92.0	71.2	161.0	28.6	86.4	4429	4	26	0.52
Mahottari	10674	4.9	48.8	13.3	28.0	7.4	22.3	62.5	78.7	298.1	44.9	114.6	11070	4	25	0.72
Makwanpur	24843	6.8	29.3	18.5	18.9	4.5	53.7	85.2	69.4	249.4	39.6	93.7	56086	0	0	0.70
Manang	37153	15.1	54.7	18.8	22.5	8.5	52.1	86.0	70.0	41.2	6.3	71.0	383	0	32	0.09
Morang	21871	7.9	40.3	34.7	26.5	7.5	46.6	81.2	77.9	334.5	43.7	98.7	3904	11	35	0.92
Mugu	14948	7.6	49.3	29.9	26.2	6.9	9.2	62.8	69.8	61.2	16.1	60.0	0	0	3	0.48
Mustang	33365	11.9	39.9	11.0	18.8	5.8	40.7	92.6	69.0	35.7	6.8	80.3	999	0	0	0.41
Myagdi	16362	7.0	53.5	11.0	32.5	6.4	45.6	92.8	78.5	151.3	28.5	80.7	7630	0	11	0.47
Nawalparasi	17719	6.1	55.8	12.6	35.7	6.6	40.7	83.9	74.4	259.9	33.6	86.0	37525	0	28	0.84
Nuwakot	16733	7.7	39.9	24.6	23.8	4.9	40.4	93.5	75.4	156.1	45.8	69.3	11539	0	32	0.73
Okhaldhunga	12876	6.2	51.5	11.7	30.8	6.2	36.1	95.3	74.4	132.0	33.0	89.9	4897	0	14	0.57

Palpa	15792	6.9	64.2	17.4	41.4	6.1	57.6	95.2	65.0	203.3	31.5	74.6	1711	0	13	0.57
Panchthar	14504	8.1	56.3	18.9	37.9	6.3	45.5	92.1	70.0	185.9	36.6	80.6	9622	0	46	0.80
Parbat	16504	7.9	56.8	12.4	38.6	6.2	47.5	93.3	69.3	168.6	27.3	79.5	10522	1	4	0.57
Parsa	19021	6.9	23.6	13.3	12.9	4.7	28.0	81.8	71.5	257.1	28.9	98.2	2486	14	27	0.76
Pyuthan	10202	4.7	54.7	18.6	32.3	7.0	33.7	90.6	66.2	200.7	49.5	84.0	9658	0	13	0.56
Ramechhap	13646	7.3	60.9	11.5	35.1	7.0	26.4	91.9	75.8	161.3	53.8	86.7	14161	9	35	0.57
Rasuwa	24379	13.1	41.8	39.8	18.5	5.7	24.5	90.3	69.7	107.0	22.7	92.8	2982	0	8	0.66
Rautahat	11777	5.9	62.3	12.2	34.9	10.1	21.6	59.7	79.7	260.8	48.7	146.3	21805	15	69	0.64
Rolpa	11861	5.3	48.6	8.0	31.2	6.2	22.9	87.0	65.5	160.3	41.7	83.7	0	0	67	0.13
Rukum	13551	7.1	42.2	13.7	24.7	5.3	28.6	90.4	70.1	190.8	46.7	89.5	12563	0	29	0.15
Rupandehi	18373	5.9	35.1	26.4	23.0	5.6	55.7	80.2	78.3	375.2	32.4	94.1	4819	21	22	0.79
Salyan	10694	6.9	49.7	11.3	28.9	6.7	36.0	92.3	66.0	153.1	44.1	82.2	14233	8	13	0.42
Sankhuwa sabha	16999	8.9	60.8	12.7	38.6	5.7	44.7	90.8	67.5	129.9	32.4	91.6	7960	1	23	0.56
Saptari	12703	6.2	49.4	15.5	27.2	8.8	35.2	52.3	77.4	311.3	53.0	113.1	7129	0	16	0.79
Sarlahi	10850	4.7	37.1	48.4	20.4	5.7	25.1	59.4	78.6	311.7	56.9	116.2	21190	17	52	0.76
Sindhuli	14593	7.2	53.1	13.5	32.5	6.7	38.1	90.9	79.5	145.4	55.7	85.5	18655	6	7	0.51
Sindhu palchok	16147	7.8	57.3	9.0	33.1	7.2	29.1	91.2	75.4	156.5	43.0	85.0	20390	0	38	0.71
Siraha	11900	4.8	54.8	17.2	30.0	8.8	26.8	69.7	81.3	254.9	53.2	106.8	9086	16	33	0.72
Solu khumbu	19679	10.2	49.4	26.7	30.7	5.3	35.4	93.0	71.9	120.5	28.6	75.4	5983	2	31	0.60
Sunsari	18682	4.7	42.0	12.5	23.2	3.7	50.0	74.8	79.3	308.1	38.2	90.4	41709	7	24	0.79
Surkhet	14721	6.4	36.0	32.9	21.3	4.9	51.5	92.4	72.4	187.8	38.0	84.6	8244	0	45	0.72
Syangja	18037	9.3	71.1	11.8	52.6	5.5	57.3	95.3	74.0	191.7	35.3	70.7	21155	1	16	0.51
Tanahu	16071	7.7	54.0	17.3	38.8	3.8	52.7	92.5	68.7	196.0	32.3	87.9	8520	0	11	0.58
Taplejung	15814	9.5	62.3	9.3	38.5	7.7	42.3	87.3	70.0	190.9	37.4	82.1	8980	0	38	0.60
Terhathum	16861	9.7	65.5	12.8	43.3	6.9	47.8	88.4	74.6	151.8	29.2	88.7	7541	0	16	0.70
Udayapur	13196	5.2	60.8	16.0	38.1	6.6	42.2	83.7	77.0	202.6	41.8	84.5	19179	3	31	0.64

Sources: As given in Table III-2.

Table IV-1: Summary Statistics for Categories of Expenditure of VDCs

<i>Variable</i>	<i>Obs</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Min</i>	<i>Max</i>
VDC ID	18	2.444444	1.149026	1	4
Timer	18	2.777778	1.352799	1	5
<i>Per Capita Expenditure</i>					
Total	18	822.7006	569.2834	175.5829	1859.64
Social Sector	18	288.5213	278.1339	19.5293	892.7562
Education	18	45.43952	45.77153	0	142.0411
Health	18	10.02315	13.73468	0	46.66329
Rural Infrastructure	18	249.3863	205.8913	0	761.4558
<i>Expenditure Ratios</i>					
Social	18	0.3812764	0.2146513	0.0356426	0.8098013
Education	18	0.059457	0.057747	0	0.199508
Health	18	0.015255	0.019064	0	0.063337
Rural Infrastructure	18	0.336867	0.195951	0	0.6616

Table IV-2: Correlation Matrix of Selected Variables of Municipal Expenditure Analysis

<i>Expenditure and Revenue Ratios (as percent of total)</i>	<i>Expenditure and Revenue Ratios (as percent of total)</i>					
	<i>ssexp</i>	<i>edexp</i>	<i>hlthexp</i>	<i>osrr</i>	<i>gtr</i>	<i>loanr</i>
Social Expenditure (ssexp)	1.00					
Education Expenditure(edexp)	0.48	1.00				
Health Expenditure (hlthexp)	0.81	0.26	1.00			
Own Source Revenue (osrr)	-0.61	-0.09	-0.32	1.00		
Grant Transfer (gtr)	0.67	0.26	0.22	-0.78	1.00	
Local Borrowing (loanr)	-0.03	-0.12	0.09	0.06	-0.09	1.00

Table IV-3: Revenue and Expenditure of Municipalities (as percent of total)

<i>Year</i>	<i>Social Expenditure (SSEXP)</i>	<i>Education Expenditure (EDEXP)</i>	<i>Health Expenditure (HLTHEXP)</i>	<i>Own Source Revenue (OSRR)</i>	<i>Grant Transfer (GTR)</i>	<i>Loan (LOANR)</i>
1982/83	2.27	0.1	0.73	58.3	23.2	4.7
1983/84	2.8	0.86	0.38	64.0	18.6	3.6
1984/85	4.46	0.93	0.42	67.6	15.9	5.3
1985/86	3.85	1.07	0.65	73.7	15.3	3.9
1986/87	6.33	1.27	1.5	71.2	17.8	3.9
1987/88	8.01	2.62	1.08	73.1	18.8	4.5
1988/89	5.24	1.28	1.76	78.9	14.5	0.3
1989/90	4.28	1.08	1.5	73.4	10.7	0.7
1990/91	1.71	0.72	0.49	79.2	4.9	0.0
1991/92	2.33	0.89	0.95	67.4	4.5	0.6
1992/93	6.33	0.7	4.33	62.7	5.6	0.7
1993/94	8.52	1.01	4.88	62.8	8.1	2.7
1994/95	8.37	0.73	5.77	76.4	6.1	3.3
1995/96	7.61	0.63	5.31	72.4	6.7	9.6
1996/97	7.88	0.75	5.36	77.0	8.1	2.1
1997/98	3.63	0.23	0.24	70.5	16.9	1.3
1998/99	4.89	0.23	0.42	67.4	16.1	3.3
1999/00	7.54	0.51	0.38	69.7	18.8	3.0
2000/01	6.96	0.62	1.75	69.9	16.3	1.8
2001/02	6.42	0.26	2.32	74.2	15.6	0.4
2002/03	10.04	2.02	3.6	78.9	10.8	1.2
2003/04	11.3	2.42	4.15	70.1	11.5	1.0
2004/05	10.57	2.93	3.27	62.3	22.7	0.8
2005/06	12.68	2.32	4.8	65.6	23.0	1.4
2006/07	18.42	1.72	10.33	54.1	30.6	1.3
2007/08	16.96	1.3	9.98	51.7	29.4	4.6
2008/09	14.51	1.22	4.23	51.0	37.2	0.4
2009/10	12.46	0.99	1.64	34.4	37.6	1.3

Source: Revenue and Expenditure Details of All Municipalities, Various Years, GTZ/udle.

Table V-1: Geographic, Demographic and Socio-Economic Profiles of Sample VDCs*

<i>Indicators</i>	<i>Pakali</i>	<i>Laukahi</i>	<i>Chilime</i>	<i>Balambu</i>	<i>Mijhing</i>	<i>Thabang</i>
Geographical location	Terai	Terai- Boarder	Remote - Mountain	Urban Hill	Remote Hill	Remote Hill
Development region	Eastern	Eastern	Central	Central	Mid- Western	Mid- Western
Conflict effect	No	Moderate	No	No	Moderate	High
Area (km ²)	13.9	6.2	101.2	2.2	32.4	64.8
Total HH	2496	861	340	1734	1561	937
Population	11372	5038	1378	7323	7508	4398
Population density	819	813	14	3329	232	68
HH with safe drinking water (percent)	99	98	61	78	80	76
HH without toilet (percent)	21	62	69	1	63	86
Poverty (PHCR)	6.23	16.54	27.24	1.41	22.99	28.09
Literacy, all (percent)	68	56	44	79	63	57
Literacy, male (percent)	78	66	46	83	76	70
Literacy, female (percent)	60	46	42	61	52	46
SLC passed (Percentpop.)	11	13	6	13	5	4
Absenteeism (Percentpop.)	7	2	11	4	11	8
No of Public schools	4	2	5	2	8	7
No. of Private school	7	3	1	3	3	1
Student-school ratio	488	631	80	529	252	167
Student-teacher ratio	54	115	34	39	40	30
No. of Public HP	1	1	1	1	1	1
No. of Private HI	2	2	1	6	3	1
Major source of cooking fuel	Firewood+ gas+santhi	Firewood + santhi	Firewood	LP gas	Firewood	Firewood

*Data for 2010/11

Source: National Census Survey 2011, CBS Nepal.

Table V-2: Revenue Structure of Sample VDCs 2009/10 (Rs. '000)

VDCs	<i>Balance Forward</i>	<i>Own Source</i>			<i>Grant</i>			<i>Grand Total</i>
		<i>Tax</i>	<i>Non-Tax</i>	<i>Total</i>	<i>Current</i>	<i>Capital</i>	<i>Total</i>	
Chilime	82.3	3.8	0.0	3.8	1018.2	1589.1	2607.3	2693.4
Balambu	3898.3	1354.5	2254.8	3609.3	1662.7	2314.4	3977.2	11484.8
Pakali	964.7	630.5	58.8	689.3	2730.8	2259.9	4990.7	6644.6
Laukahi	791.7	22.4	34.6	57.0	1156.0	1465.4	2621.4	3470.1
Mijhing	80.4	0.0	0.0	0.0	2117.7	2148.8	4266.6	4347.0
Thabang	0.0	0.0	0.0	0.0	471.4	1937.2	2408.7	2408.7

Source: Financial Documents of Sample VDCs.

Table V-3: Tax Autonomy, Revenue Autonomy and Fiscal Dependency of Sample VDCs 2009/10

<i>VDC</i>	<i>Tax Autonomy (percent)</i>	<i>Revenue Autonomy (percent)</i>	<i>Fiscal Dependency (percent)</i>	<i>Richness Rank</i>
Chilime	0.15	0.15	99.85	V
Balambu	17.85	47.58	52.42	I
Pakali	11.10	12.14	87.86	II
Laukahi	0.84	2.13	97.87	IV
Mijhing	0.00	0.00	100.00	III
Thabang	0.00	0.00	100.00	VI

Source: Financial Documents of Sample VDCs.

Table V-4: Nature of Expenditure of Sample VDCs in 2009/10 ('000)

<i>Year</i>	<i>Current</i>	<i>Capital</i>	<i>Total</i>	<i>Balance</i>	<i>Grand Total</i>
Chilime	1061.2	1550.9	2612.1	81.3	2693.4
Balambu	3603.9	6358.4	9962.3	1522.1	11484.4
Pakali	3610.7	2823.0	6433.7	210.9	6644.6
Laukahi	1562.5	474.4	2036.9	1433.5	3470.4
Mijhing	2117.7	2148.8	4266.6	80.4	4347.0
Thabang	471.4	1937.2	2408.7	0.0	2408.7

Source: Financial Documents of Sample VDCs.

Table V-5: Expenditure on Some Social Services by Sample VDCs 2009/10*

(Amount Rs. '000)

VDCs	Education				Health				Drinking Water and Sanitation	
	Infra-structure		Salary/Scholarship		Infra-structure		Salary & Others		Infrastructure	
	No	Rs.	No	Rs	No	Rs.	No.	Rs.	No.	Rs.
Chilime	1	30.0	1	103.5	1	40.0			5	307.0
Balambu	4	181.5	3	120.0					6	290.2
Pakali	15	457.1					2	81.2		
Laukahi	1	50.0							2	37.1
Mijhing	8	1480							2	120.0
Thabang	1	85.8								

* No.=Number of project; Rs.= Total amount spent (Rs.)

Source: Financial Documents of Sample VDCs.

Table V-6: Expenditure on Some Economic Services by Sample VDCs in 2009/10*

(Amount '000)

VDCs	Rural Roads		Irrigation		Electricity		Others- Agriculture, Safety measures, etc.	
	Infrastructure		Infrastructure		Infrastructure		Infrastructure	
	No.	Rs	No.	Rs.	No.	Rs.	No.	Rs.
Chilime	4	292.3	0	0.0	0	0.0	3	86.4
Balambu	12	3301.5			0	0.0		
Pakali	15	457.1	1	15.0	0	0.0		
Laukahi	9	192.6			0	0.0		
Mijhing	1	25.0	4	190.2	0	0.0		
Thabang	1	1373.6			0	0.0		

* No. =Number of project; Rs.= Total amount spent (Rs.)

Source: Financial Documents of Sample VDCs.

Table V-7: Summary Statistics of the Variables of Interest

<i>Variable</i>	<i>Obs.</i>	<i>Mean</i>	<i>Stand. Dev.</i>	<i>Min.</i>	<i>Max.</i>
Education plus Health Expenditure Ratio	299	35.20067	22.4082	0	90
Household Size	299	5.976589	2.335053	1	17
Per Capita Income	299	34826.54	30258.11	4825	241580
Income quintile	299	2.993311	1.414198	1	5
Remittances	299	0.170569	0.376762	0	1
Total Land-holding	299	0.59	0.738148	0	4.74
<i>Education of Household Head</i>					
Illiterate	299	0.103679	0.305355	0	1
Literate Only	299	0.180602	0.385333	0	1
Primary	299	0.157191	0.364591	0	1
Secondary	299	0.377926	0.485682	0	1
Higher Secondary	299	0.107023	0.309661	0	1
Graduate and above	299	0.073579	0.261522	0	1
<i>Major Occupation of Household Head</i>					
Farming	299	0.284281	0.451828	0	1
Wage Labour	299	0.167224	0.373801	0	1
Business	299	0.341137	0.474886	0	1
Service- Inland	299	0.187291	0.390799	0	1
Service- Foreign	299	0.013378	0.115079	0	1
Others	299	0.006689	0.081649	0	1

Table V-8: Summary Statistics of the Variables

<i>Variable</i>	<i>Obs.</i>	<i>Mean</i>	<i>Stand. Dev.</i>	<i>Min.</i>	<i>Max.</i>
Types of School	446	0.464126	0.499271	0	1
Sex of Child	541	0.521257	0.50001	0	1
Age of Child	541	8.231054	4.151777	1	15
Birth order of Child	541	2.665434	1.536255	1	9
Grade of Child	446	3.654709	2.996937	0	11
Household Size	592	6.934122	2.812358	1	17
Per Capita Income	592	34826.54	30258.11	4825	241580
Income quintile	592	2.993311	1.414198	1	5
Remittances	592	0.204392	0.403598	0	1
Total Land-holding	592	0.665422	0.808499	0	4.74
<i>Education of Household Head</i>					
Illiterate	592	0.108108	0.31078	0	1
Literate Only	592	0.190878	0.393326	0	1
Primary	592	0.157095	0.364198	0	1
Secondary	592	0.388514	0.487825	0	1
Higher Secondary	592	0.094595	0.292902	0	1
Graduate and above	592	0.060811	0.239185	0	1
<i>Major Occupation of Household Head</i>					
Farming	592	0.288851	0.453612	0	1
Wage Labour	592	0.153716	0.360982	0	1
Business	592	0.347973	0.47673	0	1
Service- Inland	592	0.184122	0.387911	0	1
Service- Foreign	592	0.015203	0.122462	0	1
Others	592	0.010135	0.100247	0	1

Table V-9: Choice of School by Household Income (percent)

Income Deciles	Types of School		
	Private	Public	Total
1	26.67	73.33	100
2	42.59	57.41	100
3	50.00	50.00	100
4	48.72	51.28	100
5	58.00	42.00	100
6	45.65	54.35	100
7	78.72	21.28	100
8	60.47	39.53	100
9	72.22	27.78	100
10	77.78	22.22	100
Total	53.83	46.17	100

Pearson chi2 (9) = 46.4127 Pr = 0.000

Table V-10: Marginal Effects of Determinants of Choice of Schooling

Independent Variables	Delta-method					
	dy/dx	Std. Err.	z	P>z	[95% Conf. Interval]	
Sex of Child	-0.130	0.038	-3.410	0.001	-0.205	-0.055
Age of Child	-0.003	0.012	-0.220	0.824	-0.025	0.020
Birth Order of Child	0.045	0.015	2.990	0.003	0.016	0.075
Grade of Child	0.064	0.013	4.910	0.000	0.038	0.089
Household Size	-0.024	0.009	-2.810	0.005	-0.041	-0.007
Income Quintiles	-0.077	0.017	-4.600	0.000	-0.110	-0.044
Remittances	-0.054	0.058	-0.940	0.347	-0.167	0.059
Total Land-holding	-0.010	0.027	-0.380	0.703	-0.063	0.042
Education of Household Head						
Illiterate						
Literate Only	-0.207	0.077	-2.710	0.007	-0.357	-0.057
Primary	-0.293	0.079	-3.690	0.000	-0.449	-0.137
Secondary	-0.303	0.074	-4.080	0.000	-0.448	-0.157
Higher Secondary	-0.198	0.098	-2.010	0.045	-0.391	-0.005
Graduate and above	-0.499	0.101	-4.920	0.000	-0.698	-0.300
Major Occupation of Household Head						
Farming						
Wage Labour	0.163	0.071	2.280	0.022	0.023	0.303
Business	-0.031	0.055	-0.560	0.578	-0.139	0.078
Service- Inland	0.026	0.070	0.370	0.711	-0.112	0.164
Service- Foreign	0.129	0.159	0.810	0.417	-0.182	0.439
Others	-0.067	0.185	-0.360	0.718	-0.429	0.295

Note: dy/dx for factor levels is the discrete change from the base level.

Table V-11: Household Choice of School by VDC (percent)

<i>VDC</i>	<i>Types of School</i>		
	Private	Public	Total
Balambu	84.8	15.3	100.0
Mijhing	46.8	53.2	100.0
Thabang	50.0	50.0	100.0
Chilime	31.9	68.1	100.0
Laukahi	57.3	42.7	100.0
Pakali	58.6	41.4	100.0
Total	53.6	46.4	100.0

Pearson chi² (5) = 39.8430 Pr = 0.000**Table V-12: Household Faced with Health Problem by VDC (percent)**

<i>VDC</i>	<i>Health Problem</i>		Total
	No	Yes	
Balambu	7.81	92.19	100
Mijhing	14.29	85.71	100
Thabang	6.38	93.62	100
Chilime	35.9	64.1	100
Laukahi	2.5	97.5	100
Pakali	6.67	93.33	100
Total	11.37	88.63	100

Table V-13: Detail of Health Service Used by Income Quintile (percent)

<i>Income Quintile</i>	<i>Health Service Used</i>						Total
	Tradition Therapist	Govt. Hospital	Govt. Health Post	Pvt. Health Institution	Pvt. Health Practitioner	Other	
Poorest	0.00	12.24	16.33	48.98	20.41	2.04	100.00
Second	0.00	15.09	22.64	41.51	18.87	1.89	100.00
Third	0.00	16.07	10.71	41.07	28.57	3.57	100.00
Fourth	0.00	10.91	12.73	60.00	16.36	0.00	100.00
Richest	1.92	15.38	9.62	48.08	23.08	1.92	100.00
Total	0.38	13.96	14.34	47.92	21.51	1.89	100.00

Pearson chi² (20) = 15.7839 Pr = 0.730

Table V-14: Marginal Effects of Determinants of Choice of Health Care Provisions

	<i>Delta-method</i>					
	<i>dy/dx</i>	<i>Std. Err.</i>	<i>z</i>	<i>P>z</i>	<i>[95% Conf.</i>	<i>Interval]</i>
Household Size	0.019	0.013	1.510	0.131	-0.006	0.045
Income Quintiles	-0.025	0.025	-0.990	0.324	-0.074	0.024
Remittances	-0.137	0.093	-1.480	0.139	-0.319	0.044
Total Land-holding	0.015	0.044	0.350	0.727	-0.070	0.101
<i>Education of Household Head</i>						
Illiterate						
Literate Only	0.027	0.114	0.240	0.814	-0.197	0.251
Primary	0.023	0.117	0.200	0.844	-0.206	0.251
Secondary	0.035	0.110	0.320	0.751	-0.180	0.250
Higher Secondary	0.188	0.137	1.370	0.171	-0.081	0.457
Graduate and above	0.075	0.155	0.490	0.627	-0.228	0.378
<i>Major Occupation of Household Head</i>						
Farming						
Wage Labour	0.051	0.097	0.520	0.601	-0.140	0.241
Business	-0.015	0.076	-0.200	0.844	-0.163	0.134
Service- Inland	0.088	0.098	0.900	0.367	-0.104	0.280
Service- Foreign		(not estimable)				
Others	0.363	0.336	1.080	0.279	-0.295	1.021

C. Use of Facilities

5. Education

S. No.	Member (≥ 5 years of age)	Grade	*Type of School	Distance to travel	**Why to such school?	Last year registration? y/n	Appeared final exam last year? y/n	Passed the exam? y/n	***Reason for not completing

* School Type: 1= Government, 2= Private, 3= Community-run, 4=others

** Causes of use: 1= being nearer, 2= good quality, 3= cheaper, 4= others

*** Reasons for not completing: 1= need to work, 2= expensive fee, 3= lack of education materials,

4= school too far, 5= failed in exam, 6=married, 7= sickness, 8= others.

6. Health

6a. Health Information

S. No.	HH members	Has faced any health problem during last 12 months	Did you consult any health institution? y/n	*If consulted, from where?	**Why to there?	***If not, Why?	Has been pregnant or delivery over the last 12 months? y/n	Has received pre-natal care during the last 12 months? y/n	From whom birth attended? 1=normal 2= skilled attendant 3= Health Practitioner

* Health consultants: 1= traditional therapist, 2= Govt. Hospital, 3= Govt. health posts,

4= Private health institutions, 5= private health practitioner, 6= pharmacy, 7= others.

** Causes of use: 1= being nearer, 2= good quality, 3= cheaper, 4= others

*** Cause of not consulting: 1= not realized, 2= incapable to pay, 3=expensive service, 4= service too far, 5= no trust on medical treatment, 6= poor service, 7= others

6b. Immunization and Child Care (Under 5 Children)

S. No.	Children under 5 years of age	Age of the child	*Where was the child born?	Is child immunized against Measles, BCG, DPT, Polio y/n	How many doz of Vit. A child has taken	If any Child death of age below 12 months y/n

* Spot of birth: 1= Govt. hospital, 2= Govt. health center/post, 3= Pvt. Hospital/clinic, 4= home, 5=others.

6c. Drinking Water and Sanitation

S. No.	Facilities	*Source	Investment (Public=1 or Private=2)
	Drinking Water		
	Toilet		

*Source of drinking water: 1=Tap in house, 2=compound tap, 3=Protected well, 4= unprotected well/spring, 5=others

Use of Toilet: 1=Private, 2=common, 3=Protected, 4= unprotected, 5=others

C.Land holdings:**7. Total Holdings (Ropani / Kattha)...**

	Irrigated	Non-irrigated	Own	Rent in	Others(Unregistered)
Upland(Bari)					
Lowland(Khet)					
Others					

Table VI-1: Questionnaire on Performance of VDC

- Do you have to pay for the services provided by VDC, schools or health centres?
Yes No
- For what purpose you have to pay? 1= User Charges; 2= Extra (non-official)
- Do you get receipt for your payment? Get : 1= Always; 2= Sometimes; 3=Never
- To what extent, you are satisfied the local public services delivered in your VDC?
1=Highly Satisfied; 2= Satisfied; 3= Unsatisfied; 4= Highly Unsatisfied
- Have the quality of services improved for past three years?
1=Greatly, 2= Moderately, 3=Not Changed, 4= Getting Worse
- To what extent do you feel that projects of local government reflect your own priorities?
1= Completely; 2=To Some Extent; 3= Never; 4= Don't Know
- To what extent those decisions try to improve the life of the poor?
1= Substantially; 2=To Some Extent; 3= Never; 4= Don't Know
- In your opinion, what is the basis of project selection of your local government?
1= Needs of Poor; 2= Interests of Elites; 3= General Needs; 4= Can't say
- In your opinion, what is the most important obstacle for the effectiveness of resource use and better quality of life in your locality? 1= Lack of Resources; 2= Lack of Skilled Staffs; 3= Elite Capture; 4= Corruption; 5= Others
- Are the local functionaries responsive to your needs?
1= Yes; 2= No; 3= Mostly Unresponsive
- Do you feel any difference before and after LSGA, 1999?
1= Better, 2= No change, 3= Not good, 4= Don't know
- Is there any effect of conflict in your VDC?
Yes No

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