



Student Paper Series

**Barriers to Equity in Education:
An Exploratory Case Study on Nepal**
By Ann-Kathrin Scheuermann, MPP 2013
With a foreword by Prof. Dr. Markus Jachtenfuchs

Academic Advisor: Prof. Dr. Markus Jachtenfuchs,
Professor of European and Global Governance

Foreword by Markus Jachtenfuchs.

Education is widely believed to be a key to the development of individuals and society. However, it is also clear that core global political commitments aiming at universality as included in the Millennium Development Goals and the right to education can only be achieved if policy efforts start addressing systematically disadvantaged parts of society. This is the topic of the present paper on sociodemographic barriers to equity in education in Nepal.

So far, many policy efforts to enhance educational opportunities are based on a one-dimensional assessments of the most disadvantaged population groups. They assume, for instance, that girls are generally more disadvantaged than boys or that people living in rural areas are more disadvantaged than those living in urban areas. In her paper, Ann-Kathrin Scheuermann goes further and explores which combinations of sociodemographic attributes impede equity in education in Nepal in terms of access to education and attainment. She is able to use unique data, the Nepal Living Standards Survey 2010/11 compiled by the World Bank and the Nepalese Central Bureau of Statistics as well as qualitative participatory assessments in the field.

She finds that the most influential attributes established in the literature – wealth, geography and gender – do matter, but that culture-specific group characteristics are at least as relevant. Poverty remains a major barrier to equity in education. The effect of geography is two-dimensional, impeding equity in both rural and urban areas, but for different reasons. In rural areas disadvantages are related to infrastructural aspects, e.g. distance to the nearest school, whereas in urban areas income generation alternatives impede educational opportunities. Gender differences have decreased with regard to access over time, but girls remain disadvantaged when it comes to higher attainment. When looking at inequity regarding geography, gender and wealth jointly, poor boys (not girls!) in urban are among the most disadvantaged.

These findings have great policy-relevance. In order to reach the most marginalized population groups policy analysis must go beyond a one-dimensional analysis of attributes but look at them in combination. Moreover, socio-cultural barriers related to caste, religion and disability can be highly impeding factors which need to be addressed explicitly when designing policies in Nepal. More generally, policies can be tailored more effectively by identifying the most marginalized population groups in order to improve their educational opportunities and achieve universal political commitments and true equity in education.

BARRIERS TO EQUITY IN EDUCATION

- AN EXPLORATORY CASE STUDY ON NEPAL -

Hertie School of Governance
Master Thesis
Thesis Advisor: Prof. Dr. Markus Jachtenfuchs
Practice Institution: UNICEF Nepal

Ann-Kathrin Scheuermann
Master of Public Policy Candidate 2013
Student-ID: 105272

TABLE OF CONTENTS

<i>List of Tables</i>	iii
<i>List of Figures</i>	iii
EXECUTIVE SUMMARY	iv
CHAPTER I INTRODUCTION	1
I.1 Definition: Equity in Education	2
I.2 The Case: Nepal	3
CHAPTER II LITERATURE REVIEW SOCIODEMOGRAPHIC ATTRIBUTES IMPEDING EQUITY IN EDUCATION	6
II.1 A Typology of Sociodemographic Determinants of Inequity in Education	6
II.2 Wealth	7
II.3 Geography	8
II.4 Group Characteristics	9
CHAPTER III METHODOLOGY	13
III.1 Introduction to the Mixed-Methods Design	13
III.2. Quantitative Analysis	13
<i>III.2.1 Operationalization of the Concepts</i>	14
<i>III.2.2 The Data</i>	15
<i>III.2.3 Hypotheses</i>	17
III.3 Qualitative Analysis	17
<i>III.3.1 Qualitative Research Tools</i>	17
<i>III.3.2 Operationalization of the Concepts</i>	19
<i>III.3.3 Site Selection and Sampling</i>	20
III.4 Constraints	21
CHAPTER IV QUANTITATIVE EMPIRICAL ANALYSIS	23
IV.1 Barriers to Equity in Access	23
<i>IV.1.1 Bivariate Analysis</i>	23
<i>IV.1.2 Interactions</i>	25
<i>IV.1.3 Regression Analysis</i>	29
IV. 2 Barriers to Equity in Attainment	31
<i>IV.1.1 Bivariate Analysis</i>	31
<i>IV.1.2 Interactions</i>	33
<i>IV.1.3 Regression Analysis</i>	38

CHAPTER V	QUALITATIVE EMPIRICAL ANALYSIS	41
V.1	Barriers to Equity in Access	41
V.2	Barriers to Equity in Attainment	41
V.2.1	<i>Focus Groups: Students</i>	42
V.2.2	<i>Focus Groups: Parents</i>	44
CHAPTER VI	CONCLUSION AND RECOMMENDATIONS	47
VI.1	Policy Recommendations	47
VI.1.1	<i>Reform Government Scholarship Scheme</i>	47
VI.1.2	<i>Introduce Awareness-Raising Program</i>	48
VI.1.3	<i>Increase Efforts to Decrease Physical Barriers</i>	50
VI.1.4	<i>Complement Findings with Research on Educational Quality</i>	50
VI.2	Conclusion	51
REFERENCES		53
APPENDIX		58
STATEMENT OF AUTHORSHIP		61

TABLES

Table 1: The Nepalese Education System	5
Table 2: Overview Independent Variables	15
Table 3: Summary Statistics	16
Table 4: Access Regression Analysis	29
Table 5: Attainment Regression Analysis	38

FIGURES

Figure 1: Epstein's Typology	6
Figure 2: Access by Wealth; Access by Geography	23
Figure 3: Access by Group Characteristics	24
Figure 4: Access by Wealth and Geography; Access by Wealth and Gender; Access by Wealth and Caste	26
Figure 5: Access by Geography and Gender; Access by Geography and Caste; Access by Gender and Caste	27
Figure 6: Access by Wealth, Geography and Gender	28
Figure 7: Attainment by Wealth; Attainment by Geography	31
Figure 8: Attainment by Group Characteristics	32
Figure 9: Attainment by Wealth and Geography; Attainment by Wealth and Gender; Attainment by Wealth and Caste	34
Figure 10: Attainment by Geography and Gender; Attainment by Geography and Caste; Attainment by Gender and Caste	36
Figure 11: Attainment by Wealth, Geography and Gender	37

EXECUTIVE SUMMARY

Significant progress has been made towards achieving global political commitments which aim at making the universal human right to education a reality. However, the overall success is misleading: gains have been largely based on improvements in national averages, but progress in many countries excludes systematically disadvantaged parts of society. Nepal is such a country: since social stratification happens along many different dimensions, equity in education is a decisive policy challenge. In order to achieve equity in education, evidence on these various dimensions is needed, particularly taking account of multiple and interconnected factors which contribute to disparities in education. By identifying marginalized population groups, policies can be tailored more efficiently to improve their educational opportunities. Therefore, this paper explores which sociodemographic factors impede equity in education in Nepal.

Building on a consensus in empirical research and public policy that wealth, geography and gender are the most influential sociodemographic impediments to equity in education, I assess their respective influence while also testing additional culture-specific group characteristics, most importantly caste, language and religion. The relation between sociodemographic attributes and equity regarding access and attainment is analyzed applying a mixed-method research design comprising a quantitative data analysis using the Nepal Living Standards Survey 2010/11 and qualitative participatory assessments in the field.

I find that wealth, geography and gender do matter, but culture-specific attributes are at least as relevant. Poverty remains a major barrier to equity in education. The effect of geography is two-dimensional, impeding equity in rural and urban areas but for different reasons. Whereas gender differences have decreased with regard to access, girls remain disadvantaged when it comes to higher attainment. The impeding effects of the established attribute trilogy increase significantly when cross-cutting with further group characteristics. Increased attention should thus particularly be paid to marginalized population groups who hold multiple disadvantaged characteristics, facing socio-cultural, physical as well as financial barriers, often reinforcing each other. These findings support UNICEF in their efforts to develop a strategy to increase equity in education in Nepal.

CHAPTER I INTRODUCTION

Equity is at the heart of international human rights norms and standards. A core foundational principle of human rights is that “[a]ll human beings are born free and equal in dignity and rights” (UDHR 1948, Art.1). In line with this, there is a human rights imperative for all people to be able to develop their capacities through a right to education¹, underlined by global political commitments, such as the Education for All (EFA) goals and the Millennium Development Goals (MDGs) (UNESCO 2000; UN 2000). Since 1990 significant progress has been made towards achieving the MDGs and EFA goals with regard to education. However, the overall success story is misleading: the gains made have been largely based on improvements in national averages. Progress in many countries excludes systematically disadvantaged parts of society (UNICEF 2010a, 2010b; Epstein 2010, 2).

Nepal is such a country: achieving equity in education is a decisive policy challenge. This is due to the fact that social stratification happens along many different dimensions. In order to enhance equity in education through policy measures, a nuanced analytical foundation, based on robust data and evidence on these various dimensions is needed, particularly taking account of multiple and interconnected factors which contribute to disparities in education (UNICEF 2012, 2). Therefore, this paper asks *which sociodemographic factors impede equity in education in Nepal?*

This question is answered by a mixed-method approach combining a quantitative analysis using the Nepal Living Standards Survey (NLSS) 2010/11 with a qualitative assessment of the perceived impediments to equity in education. The results and derived recommendations are used to support the United Nations Children's Fund (UNICEF) Nepal in their efforts to develop a strategy to increase equity in education in Nepal.

The remainder of the paper is organized as follows: Section two reviews the literature and highlights the most relevant established findings for Nepal. Section three describes the research design of this study. The subsequent empirical analysis in sections four and five is divided into a quantitative and a qualitative part. Based on the findings, I derive two major

¹ The right to education is enshrined in numerous international agreements, e.g. the Universal Declaration of Human Rights, the International Covenant on Economic, Social and Cultural Rights, the Convention on the Rights of the Child, the International Convention on the Elimination of All Forms of Racial Discrimination, the Convention on the Elimination of All Forms of Discrimination against Women, the Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families, the Convention on the Rights of Persons with Disabilities and the UNESCO Convention against Discrimination in Education.

policy options to improve equitable educational access and attainment in Nepal. The remaining introduction specifies the concept of equity in education and introduces the case.

I.1 DEFINITION: EQUITY IN EDUCATION

There are multiple understandings of the concept ‘equity in education’. A common notion goes back to Roemer (1998) who focuses on access to education, but accepts inequality in educational outcomes. Others conceptualize equity in education to also include educational outcomes such as attainment or achievement (Lucas/Beresford 2010; Breen/Jonsson 2005; Field et al. 2007).

Field et al. (2007, 11; emphasis in original) define equity in education along two dimensions: First, “*fairness*, which implies ensuring that personal and social circumstances [...] should not be an obstacle to achieving educational potential. The second is *inclusion*, which implies ensuring a basic minimum standard of education for all”. The two dimensions are intertwined: “tackling access to and failure to achieve school outcomes helps to overcome the effects of social deprivation which often causes lack of access and quality outcomes” (Field et al. 2007, 11). Perfect equity thus means access to education as well as outcomes being independent of factors other than ability and effort. Beyond universal access, a student’s educational performance is a function only of his/her effort and ability, but not of any other factors that are beyond his/her control, such as ethnicity, gender, family background or religion (Woessmann/Schuetz 2006, 3; Levin 2003, 5).

Equity should not be confused with equality. “There is general agreement that the aim of public policy cannot and should not be equality in the sense that everyone is the same or achieves the same outcomes [...]. Rather, a commitment to equity suggests that differences in outcomes should not be attributable to differences in areas such as wealth, income, power or possessions” (Levin 2003, 5). Equity is thus achieved when only personal effort, preferences, and intelligence account for the differences among people’s achievements. Similar understandings are adopted by UNICEF (2010c) and the World Bank (2005).

The understanding underlying this paper is that in a situation of perfect equity, there is universal access to education and educational outcomes are distributed randomly over sociodemographic attributes, meaning that there ought to be no significant relation between factors other than a student’s effort and ability and their educational outcome.

I.2 THE CASE: NEPAL

Located geographically between the most populous countries worldwide, China and India, Nepal is a small buffer state with a population of 26 million (CBS 2011). Despite its small size, Nepal is an extremely diverse country. The country is geographically divided into three regions: Mountains, Hills, and Terai. Politically, it is divided into five development regions and multiple lower levels of government (Lohani et al. 2010). It is marked by an extreme topography and climate with eight peaks above 8,000 meters in the Himalayas and the lowest point in the Terai at only 70 meters above sea level.

The 2011 Census reports 125 caste/ethnic groups which socially segment the 26 million of people of Nepal as well as 123 different languages (CBS 2011)². Moreover, 10 different religious groups are reported, with a majority of 81.3% being Hindu³. All these factors presumably affect equity in education, particularly in a country of limited financial resources and relatively low levels of economic growth and overall development. Nepal is currently the poorest country in South Asia and the 13th poorest in the world with a Gross National Income of 540 USD per capita (World Bank 2011). Moreover, the child mortality rate of 48 out of 1,000 under-five-year-olds is more than twice the East-Asian average (World Bank 2011). Ranked 157th out of 186 countries, Nepal has the lowest Human Development Index in South Asia and the Asia Pacific region (UNDP 2012). The Gender Inequality Index ranks Nepal 113th out of 141 countries (UNDP 2011).

Moreover, formal education in Nepal has only a short history (Acharya 2007, 1). As argued by Acharya (2007, 1), “education has traditionally been seen more as a development tool than a right of an individual, reinforcing existing caste- and gender-based discrimination, rather than challenging them”. Nevertheless, Nepal has signed all major international commitments to equitable education, committing itself to the EFA goals as well as the MDGs. Complementing the EFA goals, Nepal has also developed its own National Action Plan (2001-2015), adding an additional goal with particular relevancy to equity in education, namely “[e]nsuring the rights

² Chhetri is the largest caste/ethnic group comprising 16.6% of the total population, followed by Brahman-Hill (12.2%), Magar (7.1%), Tharu (6.6%), Tamang (5.8%), Newar (5.0%), Kami (4.8%), Muslims (4.4%), Yadav (4.0%) and Rai (2.3%). Regarding language, Nepali is spoken as mother tongue by 44.6% the total population followed by Maithili (11.7%), Bhojpuri (6.0%), Tharu, (5.8%), Tamang (5.1%), Newar (3.2%), Bajjika (3.0%), Magar (3.0%), Doteli (3.0%) and Urdu (2.6%) (CBS 2011).

³ Buddhism (9.0%), Islam (4.4%), Kirat (3.1%), Christianity (1.4%), Prakriti (0.5%) as well as few Bon, Jain, Bahai and Sikhs (CBS 2011).

of indigenous people and linguistic minorities to quality basic and primary education through their mother tongues” (FBC 2009, 10). The Interim Constitution manifests basic education as fundamental right of all people and the corresponding Three Year Interim Plan emphasizes social inclusion in education (GoN 2007; SMA 2011; FBC 2009). The current Annual Strategic Implementation Plan (ASIP) (MoE 2012a, 3) acknowledges the Nepalese government’s commitment to equity in education further: For the fiscal year 2012/13 “[a]ccess, quality, equity and social inclusion in the school education are the overall strategic priorities [...]”. With regard to basic and secondary education this implies “[e]nsuring equitable access to children deprived of attending schools due to geographical, socio-economic-cultural reasons including disability [...]” (MoE 2012a, 9). The government denotes that, “[w]hile there has been remarkable increase in enrollments, significant improvement is needed especially in the quality and equity dimensions [...]. On the equity front, the success so far is fragmented. It is imperative (i) to consolidate equity interventions into a comprehensive equity strategy (with a pro-poor focus), and (ii) identify and bring the hard-to-reach out-of-school children into basic education schools” (MoE 2012a, 25). This paper provides empirical evidence as well as policy recommendations to support the development of an UNICEF equity-in-education-strategy, which ultimately serves to support the mentioned government strategy.

The education system in Nepal consists of primary, lower secondary, secondary and higher secondary education. Formal schooling starts at the age of five. Primary schools offer five years of education and are followed by lower secondary schools providing further three years of education. Secondary schools offer two more years of education and conclude with the School Leaving Certificate (SLC) Examination. Intermediate or higher secondary schools offer two more years of education after the SLC to prepare students for university. Since 2009, the government of Nepal has been implementing the School Sector Reform Plan, which aims to restructure the system to only comprise basic education (consisting of grades 1-8) and secondary education (consisting of grades 9-12) (MoE 2009). Currently, a mixture of the old and the reformed model is operating, dependent on the individual school (MoE 2012b). Table 1 illustrates the formal education system in Nepal:

Age	Grade	Education System	
		Old System	New System
16	12	Higher Secondary Education/Intermediate Level (Grades 11-12)	Secondary Education (Grades 9-12)
15	11		
14	10	Secondary Education (Grades 9-10)	
13	9		
12	8	Lower Secondary Education (Grades 6-8)	Basic Education (Grades 1-8)
11	7		
10	6		
9	5	Primary Education (Grades 1-5)	
8	4		
7	3		
6	2		
5	1		

Table 1: The Nepalese Education System (MoE 2012b)

CHAPTER II LITERATURE REVIEW

SOCIODEMOGRAPHIC ATTRIBUTES IMPEDING EQUITY IN EDUCATION

The academic literature analyses determinants of inequity in education from different angles. Two broad perspectives stand out: first, the influence of factors related to the *education system*, such as educational institutions and quality (e.g. Glewwe et al. 2011; Galiano/Perez-Truglia 2011; Horn 2008; Pfeffer 2008) and second, disadvantages related to *persons' sociodemographic attributes*. They can be mitigated or reinforced by the education system. This paper will focus on the analysis of the latter. Sociodemographic attributes are characteristics that one is born with, that are impossible to influence and beyond a person's control.

II. 1 A TYPOLOGY OF SOCIODEMOGRAPHIC DETERMINANTS OF INEQUITY IN EDUCATION

In the following, I firstly introduce a conceptual framework to capture core categories of sociodemographic attributes impeding equity in education. Then, I review the existing literature on sociodemographic factors impeding educational equity along these broader categories. A specific focus is put on South Asia. The aim of this chapter thus is to derive a general concept of sociodemographic attributes impeding equity in education and to subsequently identify and operationalize the set of variables which are presumably most influential in Nepal and hence tested empirically.

While a research and policy consensus has evolved around the need to focus on equity in education, there is no exhaustive list on possible determinants of inequity in education so far. Only in 2005 Breen and Jonsson (2005, 236) called to develop such a list and to assess the relative importance of different factors across societies. So far, a consensus on three major influential sociodemographic categories has emerged:

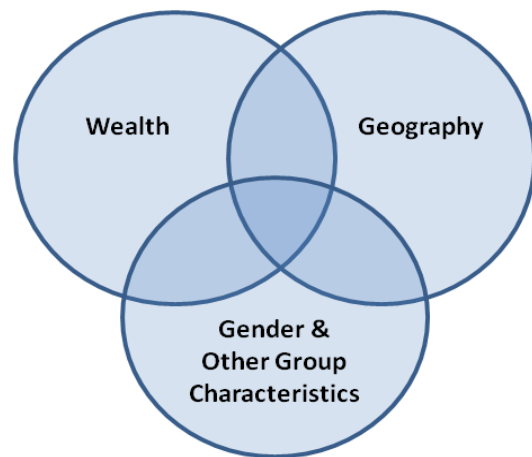


Figure 1: Epstein's Typology (2010)

wealth, geography, gender and other group characteristics. Epstein (2010, 9) develops an analogous typology to account for different barriers to educational equity on a sub-national

level. He distinguishes geography, wealth and group characteristics, such as gender, from school-based determinants of inequity. The EFA Global Monitoring Report (UNESCO 2009) and the United Nations Special Rapporteur on the Right to Education (Singh 2011, 13), establish similar lists of sociodemographic determinants of educational inequity which include socioeconomic background, location, gender and belonging to a minority group.

II.2 WEALTH

Household Wealth - Parents' Education Background⁴

There is broad consensus in theoretical as well as empirical literature that household wealth is a, if not the, most important factor determining a child's educational opportunities. Beyond financial wealth, many studies also consider parents' educational wealth as influential.

Breen and Jonsson (2005) review large-N comparative research on the effect of parental socioeconomic circumstances on educational attainment underscoring that socioeconomic background constitutes a core barrier to equitable educational opportunities. However, they mostly focus on developed countries and the Western hemisphere. Hanushek and Luque⁵ (2003) underline the importance of family background and show empirically how its effects on equity in education in less developed countries resemble those in the developed countries. Students from disadvantaged backgrounds and from families where the parents themselves have less education tend to systematically perform worse than students who do not have these barriers (Hanushek/Luque 2003, 495). The Consortium for Research on Educational Access, Transitions and Equity (CREATE 2011, 24) finds that “[p]articipation and progression remains strongly associated with household wealth [...]” but emphasizes the need to consider interactions of wealth with other factors such as gender, location, social group affiliation and disability (CREATE 2011, 63). Filmer and Pritchett (1999) analyze the effect of household wealth on students' educational attainment in developing countries. In South Asia, they identify significant attainment gaps between poor and rich households: the difference in median grade attainment of adolescents from poor and rich households is large (10 years in

⁴ Due to the limited availability of quantitative data on “parents' education background” in the NLSS this variable is excluded from the quantitative analysis. Parents' impact is however assessed qualitatively.

⁵ Hanushek and Luque (2003) assess educational outcomes in terms of achievement, i.e. test scores. The outcome operationalization in this paper is attainment.

India, 9 years in Pakistan) compared to other developing regions such as Eastern and Southern Africa (1 to 3 years). They conclude that “[t]he bigger the wealth gap, the bigger the role that increasing educational attainment of the poor will play in universalizing basic education” (Filmer/Pritchett 1999, 86). Congruent with Epstein’s (2010) categorization, Porta et al. (2011) analyze the influence of household poverty, location, and gender on equity in education. They show that that poverty is the most significant barrier to educational equity in most countries. Kabeer and Mahmud (2009) assess the influence of household poverty and parents’ education background on children’s educational access in Bangladesh. The authors identify household hardships due to poverty to play an important role in determining whether children go to school. Also, parents’ education matters: parents with no education are more likely to have school-aged children who are out of school. Hossain and Zeitlyn (2010) also find a systematical pattern of poverty-related inequitable access in Bangladesh.

Summing up, Vaish and Gupta (2008, 213) highlight that “[i]n common with other countries around the world, higher income levels translate into access to better-quality education, but in South Asia additional factors act as barriers to education”. They particularly emphasize the urban-rural divide, gender, caste, different religious groups and the multiplicity of languages as influential sociodemographic factors determining equity in education (Vaish/Gupta 2008, 214).

II.3 GEOGRAPHY

Urban-Rural Differences – Regional Differences

One aspect which distinguishes the literature regarding developed and developing countries is the emphasis put on geographical determinants. Whereas in developed countries access due to infrastructural deficiencies is no longer a challenge, according to the literature, this still significantly impedes children’s educational opportunities in developing countries. Glewwe et al. (2011, 2) find ample empirical evidence that enrolment increases significantly when the distance to the nearest school decreases. Singh (2011, 14-15) emphasizes discrepancies between rural and urban areas as well as a lack of relevant infrastructure. Bertini (2011) particularly highlights the challenges faced by adolescent girls in rural areas in developing countries, thus looking at the intersecting effects of geography and gender. Her report identifies pervasive poverty, reliance on agriculture and changing household structures in rural

areas to impede girls' ability to attend school. Burde and Linden (2012) evaluate the effect of village-based schools on children's educational performance in rural Afghanistan. They find that locally available, village-based schools significantly increase educational access and achievement, while also reducing performance disparities (Burde/Linden 2012, 1). In Bangladesh, Cameron (2010) finds urban rather than rural poor to be among the most disadvantaged groups with regard to equitable educational opportunities. Shields and Rappleye (2008, 267) highlight a significant urban-rural divide in overall development in Nepal, confirmed also by Lohani et al. (2010, 359), who find that 99% of urban areas are covered by schools compared to only 90% in rural areas.

Beyond urban and rural differences, education opportunities are generally determined by whether children live in disadvantaged regions or not. "In most cases, the disadvantaged regions are rural, but they can also be economically backward regions within an economy, and also the income poor within urban areas" (Lee 2003, 4). In the case of Nepal, one should thus also control for regional differences due to the topographical, ecological and developmental heterogeneity across regions (Acharya 2007, 24).

II. 4 GROUP CHARACTERISTICS

Gender – Caste – Language – Religion – Disability

The third category referred to by Epstein (2010) is what he terms "group characteristics". First and foremost he refers to gender as a core sociodemographic attribute related to inequitable educational opportunities. International policy priorities emphasize the aim of achieving gender justice in the educational sphere: both EFA goals and MDGs focus on decreasing gender differences in access to education (UNESCO 2000, UN 2000). UNICEF (2010c, 19) also sees gender discrimination as a key driver of inequity in education: "While it varies in form and severity, gender discrimination is among the most pervasive forms of discrimination". UNICEF (2010c) furthermore emphasizes the need to contextualize gender discrimination by considering intersections with other attributes.

There is a large literature body on gender inequity in education. In many countries worldwide and particularly in South Asia, girls still confront tremendous barriers to education with regard to access and attainment (Chisamya et al. 2012; Ramachandran 2012; Halai 2011; Bandyopadhyay/Subrahmanian 2008; Subrahmanian 2005). For India, Bandyopadhyay and

Subrahmanian (2008) find that although female enrolment has increased since the 1990s, there is still a substantial gap in upper primary and secondary schooling. Moreover, they underline the need to consider interacting effects of gender with caste and religion. Ramachandran (2012, 233), also investigating gender inequity in education in India, “argues for a nuanced and textured analysis of gender and social equity issues that influence educational outcomes as well as frame educational opportunities available to girls and to children from socially disadvantaged groups”. Looking at Nepal, Vogel and Korinek (2012) focus on girls’ educational opportunities examining the utilization of remittances for children’s education. They find that overall households are more willing to invest in boys’ education, although the willingness to invest in girls’ schooling increases with higher socio-economic status. Interestingly, this paper contradicts the findings of Kabeer and Mahmud (2009) and Ahmed and Ray (2011) on Bangladesh, regarding parents’ preference to support girls’ education, as they find that boys are preferably sent to work.

Apart from gender, caste is an influential, culture-specific group characteristic impeding equitable educational opportunities in Nepal (Bhattachan et al. 2009). Hanna and Linden (2009) and Jacoby and Mansuri (2011) investigate interacting patterns of gender and caste-based discrimination in India and Pakistan. They find caste to be a decisive factor influencing children’s educational opportunities. Bennett (2006) examines gender, caste and ethnic exclusion in Nepal. Her statistical analysis reveals that “[c]aste and gender together account for a third of the variation in empowerment and inclusion levels. Caste is a more powerful predictor of empowerment/inclusion than gender” (Bennett 2006, 11). Since the Nepalese caste system combines ethnic, linguistic and religious characteristics into a hierarchical system, it is likely to be a very powerful impediment to equitable educational opportunities (Bennett 2006; Acharya 2007). Pivovarova (2011) looks at educational opportunities of low caste girls in rural Nepal. Using NLSS data, she finds that girls from low castes are most likely to be out of school. However, if they live in villages with more upper caste households, the likelihood of their school access increases.

Singh (2011, 14) flags language as influential determinant, denoting that the “lack of education in mother-tongue or native languages is often a source of exclusion”. United Nations Educational, Scientific and Cultural Organization (UNESCO 2012) correspondingly emphasizes the need to consider language when developing policies to achieve the MDGs. Given that in Nepal, there are 123 languages and dialects spoken and only 45% of the

population report the official language Nepali as their mother tongue, language is likely to affect education for those speaking minority languages (CBS 2011; Acharya 2007). A study on language inequity and mother tongue teaching finds that “children with mother tongues other than Nepali cannot compete with Nepali speaking children who have acquired it as their mother tongue” denoting that “they feel inferior, isolated, or incompetent and are forced to remain as (sic!) a disadvantaged group” (CRED 2005, i).

Different religious beliefs may also influence equity in education. Religion in Nepal is closely intertwined with the caste system (Acharya 2007; Bennett 2006). On the one hand, Brahmins, the Hindu priest caste, are on top of the hierarchy. On the other hand, minority religious groups such as Christians and Muslims are placed low in the hierarchy, just above the Dalits, the untouchable caste (Acharya 2007, 28). Nichols (2012, 19), examining the role of religion in the Nepalese education system, denotes accordingly that in Nepal “the Muslim community continues to be amongst the most marginalised, excluded and economically deprived groups, especially in terms of education”.

Finally, persons with disabilities remain a structurally disadvantaged group (Singh 2011). Croft (2013) highlights far-ranging inequitable educational opportunities of persons with disabilities in low-income countries. Barriga (2011), exploring educational barriers for children with disabilities in Nepal, identifies cross-cutting inequitable opportunities regarding access and attainment for numerous reasons, including geography and poverty as well as social stigmatization. As a consequence, children with disabilities in mainstream schools repeatedly fail and are more likely to repeat a class (Barriga 2011, 4). Kadel and Mahat (2011, 6) also criticize highly inequitable educational access for children with disabilities in Nepal. Lamichhane (2012, 583) underlines the importance of equitable educational attainment for Nepalese with disabilities: “Irrespective of the type of impairments, all interviewees said that their level of education was a key to their employment”.

In sum, in line with Epstein’s (2010) typology, the literature assesses the relation of core sociodemographic variables with equity in education, while also highlighting their mutually reinforcing effects. CREATE (2011) emphasizes that characteristics such as ethnicity, caste, language, disability, and religion interact with poverty and geography. In line with this, Acharya (2007) emphasizes that in the case of Nepal, multiple factors cause inequity in education. She outlines the role of poverty, geography, gender, ethnicity and caste, disability,

religion and language, yet only highlights their individual influence without exploring their interacting effects. However, inequity in Nepal is characterized by a combination of these factors (UNICEF 2012).

The contribution of this study is to provide an extensive analysis of the numerous sociodemographic attributes outlined above, including their joint effect on educational opportunities in Nepal. Drawing on the rich body of literature, in my empirical analysis I will focus on the effects of household wealth, geography in terms of urban-rural differences, gender and caste in determining equity in education. Further variables outlined here are considered as control variables. A focus on caste as group characteristic beyond gender is reasonable since the Nepalese caste system comprises ethnic, religious as well as linguistic groups which are not mutually exclusive, meaning that in some cases certain ethnic groups have certain religions and mother tongues, but in other cases some ethnicities share a language or religion (Bennett 2006; Acharya 2007; appendix 1).

CHAPTER III METHODOLOGY

III.1 INTRODUCTION TO THE MIXED-METHODS DESIGN

This thesis applies a mixed-methods research design comprising qualitative and quantitative empirical research in order to explore the impact of sociodemographic attributes on equity in education in Nepal. According to Bamberger (2000) mixed-methods designs are particularly useful for equity-focused assessments, where it is necessary to obtain quantitative estimates of the numbers and distribution of each factor impeding equity, but where it is also important to understand the lived-through experience of marginalized groups and the mechanisms and processes of exclusion to which they are subjected. The integrated approach broadens the conceptual and analytical framework since it captures not only the statistical significance of influential attributes, but also the underlying cultural perceptions and social norms. The mixed-methods design used in this paper thus strengthens validity and contextualizes the findings.

Through the quantitative data analysis I investigate in how far the sociodemographic variables identified in the literature review are statistically significant barriers to equity in education in Nepal. This serves to draw generalizable conclusions from a representative sample to the total Nepalese population. The qualitative analysis serves to identify culture- and context-specific issues, causal channels of how the variables impede equity in education and also how multiple variables interact. It explores factors affecting demand for education and observes social, cultural and psychological barriers to participation. It thus supplements and “zooms in” on the quantitative analysis to understand the context within which access and attainment in education are determined, to identify the variables which are perceived to matter most by core stakeholders and to analyze how these interact and mutually reinforce each other.

III.2 QUANTITATIVE ANALYSIS

The quantitative analysis of this paper comprises two parts: first, a descriptive data analysis, which serves to identify significant sociodemographic determinants in the sample; secondly, an inferential multivariate regression analysis which allows drawing conclusions for the whole population controlling for all factors identified.

III.2.1 Operationalization of the Concepts

a) Dependent Variables: Equity in Education

Equity in education is operationalized along two dimensions: access and attainment. In the quantitative analysis, the variables are coded as follows:

- Access (dichotomous), children, ages 5-14
- Attainment (ordinal), youths, ages 15-24

The access variable I analyze is based on the following question:

- Has [name] ever been to school?

For example, a ten-year-old out-of-school child who has attended primary school will count as having access, regardless of if s/he left school without a formal degree. The access variable serves to identify major barriers to education, which make it impossible for children to enjoy their basic and universal right to education. Thus, only children who have never entered a school-building are coded as 0, whereas current as well as former students are coded as 1.

Attainment is an ordinal variable that accounts for the different educational degree levels students obtain before leaving school thus measuring educational outcomes. It is commonly measured as the highest degree attained (Lucas/Beresford 2010, 53). The respective question to assess attainment is:

- What was the highest class that [name] completed?

I use the responses to this question to construct an “attainment variable” for youths according to the highest grade the respondent completed before leaving school. The attainment levels comprise “no formal education”, “primary education”, “secondary education” and “higher education”. Youths who are still in school are recorded as “still in school”, since their attainment level is not finite yet. For example, an adolescent who attended secondary school, but did not pass the SLC would only have “primary education” as the highest level attained, even though he attended (but did not complete) secondary education. The attainment variable serves to assess equity beyond mere access to education.

b) Independent Variables

Table 2 summarizes the independent variables and their expected relation with equity.

Category	Variable	Scale	Expected relation with access and attainment if equity violated
Wealth	Household wealth (Consumption Quintiles)	Ordinal	+
Geography	Urban-Rural	Dichotomous	- (for rural)
	Region	Nominal	- (for Eastern and Western regions)
Group Characteristics	Gender	Dichotomous	+ (Male)
	Caste	Ordinal	+
	Language	Nominal	- (for minority languages)
	Religion	Nominal	- (for minority religions)
	Disability	Dichotomous	- (for persons with disabilities)

Table 2: Overview Independent Variables

The caste variable is coded by creating an ordinal variable of low castes, middle castes and high castes out of a nominal variable measured in the NLSS (CBS/World Bank 2010). The NLSS provides a list of 103 ethnic groups living in Nepal. The coding is adopted from Pivovarova (2011, 35). She uses a classification of caste as described in Bista (1972) to construct an ordinal caste variable.

The language and religion variables are recoded based on the original NLSS variable to comprise fewer categories. The NLSS provides a list of 93 different languages spoken in Nepal. I coded all languages with less than 1,000 of respondents as “other”. Similarly, the NLSS provides a list of nine religions and I coded all religions which were chosen by less than 100 respondents as “other”.

The disability variable is based on an item in the questionnaire asking whether the respondent suffers from any of a list of six different disabilities. I recoded the data to a dichotomous variable.

III.2.2 The Data

The quantitative empirical analysis in this paper is based on cross-sectional data from the NLSS 2010/11 (CBS/World Bank 2010). The NLSS is a nationally representative survey of households and communities conducted by the Nepalese Central Bureau of Statistics with assistance of and sponsoring by the World Bank. The survey collects data on household welfare (measured by food and nonfood consumption), health, and education. The emphasis in

the education section is on educational expenditures by households, along with information on school attendance by each household member of school age. Information is also collected on school-age household members not attending school. School attainment can be derived from the NLSS, based on an item assessing the last grade of education successfully completed by the survey respondent.

The unit of analysis in this paper is the individual level. Only the wealth variable is measured at the household level. The total sample size is 26,808. For the access variable, I limit the sample to children aged 5 to 14 years in order to assess the current barriers faced by children at primary and secondary education age according to the Nepalese school system (MoE 2012b). The sample then includes 7,194 children, of whom 3,558 are boys and 3,636 are girls. With regard to the attainment variable, I limit the sample to youths who are aged 15 to 24, since the aim is to get insight into the current situation of students' final attainment level and presumably most persons younger than 15 are still in school and rising on the attainment level. The attainment sample then comprises 5,429 individuals, of whom 3,089 are female and 2,340 are male. Table 3 gives summary statistics for the variables used in the analysis.

	Variable	Minimum Value	Maximum Value	Full Sample			Ages 5-14			Ages 15-24		
				Obs.	Mean	Std. Dev.	Obs.	Mean	Std. Dev.	Obs.	Mean	Std. Dev.
Dep. Var.	Access	0	1	26,808	0.68	0.47	7,194	0.94	0.24	5,429	0.89	0.31
	Attainment	0	4	26,808	1.88	1.81	7,194	3.69	1.06	5,429	2.58	1.69
Epstein	Wealth	1	5	28,670	3.19	1.45	7,227	2.86	1.43	5,509	3.37	1.41
	Rural	0	1	28,670	0.68	0.47	7,227	0.74	0.44	5,509	0.64	0.48
	Female	0	1	28,670	0.53	0.50	7,227	0.50	0.50	5,509	0.57	0.50
Caste	Low Caste	0	1	28,670	0.16	0.37	7,227	0.20	0.40	5,509	0.15	0.36
	Mid Caste	0	1	28,670	0.40	0.49	7,227	0.41	0.49	5,509	0.39	0.49
	High Caste	0	1	28,670	0.43	0.49	7,227	0.38	0.49	5,509	0.44	0.50
Language	Nepali	0	1	28,670	0.57	0.49	7,227	0.57	0.50	5,509	0.59	0.49
	Maithili	0	1	28,670	0.11	0.31	7,227	0.11	0.32	5,509	0.10	0.30
	Bhojpuri	0	1	28,670	0.08	0.26	7,227	0.09	0.28	5,509	0.07	0.25
	Tharu	0	1	28,670	0.04	0.20	7,227	0.05	0.21	5,509	0.05	0.21
	Tamang	0	1	28,670	0.04	0.19	7,227	0.04	0.19	5,509	0.04	0.19
	Newar	0	1	28,670	0.06	0.23	7,227	0.03	0.18	5,509	0.05	0.23
	Other	0	1	28,670	0.11	0.31	7,227	0.11	0.32	5,509	0.10	0.30
Religion	Hinduism	0	1	28,670	0.84	0.37	7,227	0.83	0.37	5,509	0.84	0.36
	Buddhism	0	1	28,670	0.08	0.27	7,227	0.07	0.26	5,509	0.08	0.27
	Islam	0	1	28,670	0.04	0.19	7,227	0.05	0.21	5,509	0.04	0.19
	Other	0	1	28,670	0.04	0.21	7,227	0.05	0.21	5,509	0.04	0.20
PwD	Disability	0	1	28,474	0.03	0.18	7,194	0.02	0.14	5,429	0.02	0.14
Region	Eastern	0	1	28,670	0.21	0.41	7,227	0.22	0.42	5,509	0.20	0.40
	Central	0	1	28,670	0.37	0.48	7,227	0.32	0.47	5,509	0.38	0.49
	Western	0	1	28,670	0.19	0.39	7,227	0.20	0.40	5,509	0.18	0.38
	Mid West	0	1	28,670	0.13	0.34	7,227	0.16	0.36	5,509	0.14	0.34
	Far West	0	1	28,670	0.09	0.29	7,227	0.11	0.31	5,509	0.10	0.30

Table 3: Summary Statistics

III.2.3 Hypotheses

Theoretically, under perfect equity, sociodemographic attributes should not influence educational access and attainment. Beyond universal access to education, a student's educational attainment should only depend on his/her ability and effort. Hence, the null hypothesis is:

H₀: Under perfect equity, there is no statistically significant relation between any sociodemographic attribute and a child's access to education and the attainment level of a student.

I evaluate this hypothesis by estimating the following equation:

$$\text{Equity} = \beta_1 \text{Wealth} + \beta_2 \text{UrbRur} + \beta_3 \text{Gender} + \beta_4 \text{Caste} + \beta_5 \text{Language} + \beta_6 \text{Religion} \\ + \beta_7 \text{Disability} + \beta_8 \text{Region}$$

However, if the factors outlined above do affect the two equity dimensions, I reject the null hypothesis. Rejecting the null hypothesis and accepting the alternative hypothesis would therefore imply finding statistically significant values for the estimated β 's.

H₁: There is a statistically significant relation between sociodemographic attributes and a child's access to education and the attainment level of a student.

Note that not *all* factors must play a significant role. The analysis could well establish that only a subset of the variables considered affect equity, which would be reflected in the respective results.

III.3 QUALITATIVE ANALYSIS

III.3.1 Qualitative Research Tools

To complement the quantitative analysis, the impact of the independent variables has also been assessed qualitatively. I used two different methodological tools: open focus group discussions and more structured participatory assessments.

a) Focus Group Discussions

Focus group discussions were conducted with groups of (i) out-of-school children, (ii) students and (iii) parents in order to collect insights pertaining to their subjective experiences regarding impediments to equity in education. The discussions were moderated along previously specified guidelines which have been adapted to fit the specific groups' situation and to measure the concepts adequately. The open discussions served to learn about causal channels, interactions of factors, views and perceptions, why and how certain variables matter and how exactly they act as barriers. As Litosseliti (2003, 16) puts it "focus groups can provide insight on multiple and different views and on the dynamics of interaction within a group context, such as consensus, disagreement and power differences among participants". Thus, I can trace patterns of discrimination among the participants who combine numerous different sociodemographic attributes. Moreover, "focus groups are an appropriate method for obtaining information from illiterate communities" (Litosseliti 2003, 16).

b) Participatory Assessment: "Weighing of Variables"-Exercise

The open focus group discussions were complemented with a structured participatory exercise, to assess more precisely how influential the participants perceive the established sociodemographic variables to be. Therefore, participants were introduced to the established factors, and asked to weigh the relative importance of the different variables according to their experience. Cards or posters each stating one of the independent variables identified were displayed in the room. They were given three stickers and asked to place them on the posters/cards with the variables they felt mattered most (table 2). Participants could pick three different factors or pin numerous stickers onto one poster/card if they perceived this variable as very influential. The assessment is based on a common participatory mapping tool (Geilfus 2008, 36; Rekha et al. 1998; Kapila/Lyon 1994).

c) Validation of the Tools

In order to create reliable and valid tools given time and budget constraints, the discussion guidelines were checked by the UNICEF Education Specialist and the Education Program Officer to ensure that the moderation guidelines not only measure the concept but that the questions are sensitive to the respective participant groups and contexts. Special consideration

was given to the concept of equity in education and how to introduce its meaning to stakeholders, who have never before been confronted with such a social scientific concept. Illiteracy of many of the participants, primarily of parents, as well as language barriers were also taken into account. The participatory “weighing of variables”-exercise was developed in a way to work with repetitive explanations, assistance and visual learning to allow all participants to take part.

The assessments were conducted together with the Nepalese UNICEF Education Program Officer, who translated the discussions and had been briefed extensively beforehand on this research project, particularly on the concept of equity in education and established sociodemographic impediments. The Education Program Officer was well aware of the overall contents and core concepts of this study before the assessments were conducted. Therefore, during the assessment process she was able to moderate the sessions without the author having to intervene continuously, allowing the development of a discussion and flow of thoughts among the participants.

III.3.2 Operationalization of the Concepts

a) Dependent Variables: Equity in Education

As in the quantitative analysis, equity in education is operationalized along two dimensions: access and attainment. In order to assess sociodemographic barriers regarding equity in access to education in more detail, focus group discussions with children aged 8 to 16, who have never had access to schooling were conducted (access = 0).

With respect to educational attainment, focus group discussions with current students aged 10 to 23 were conducted and complemented by discussions with mothers and fathers of in-school children.

b) Independent Variables

To assess sociodemographic barriers regarding access, the out-of-school youths were asked the following questions:

- Why have you never been to school?
- What are the main influential factors why you never went?

To assess barriers regarding attainment, the students were asked the following question:

- What do you think influences your success at school in terms of how long you stay in school/which degree level you will attain?

Respectively, the parents were asked the following:

- What do you think influences your child's success at school in terms of which level of education your child will attain?
- Which are the most difficult challenges you face in sending your child to school?

In a second step following the open discussion, the “weighing of variables”-exercise was conducted, where out-of-school children, students and parents weighed the perceived influence of the established variables: Wealth, Parents (Parents' education), Urban-Rural, Region, Gender, Caste, Language, Religion and Disability.

III.3.3 Site Selection and Sampling

The qualitative research was conducted in the Central and Eastern regions in the Terai districts Parsa and Saptari. The population living there combines numerous attributes which potentially act as barriers to equity in education, including caste/ethnic, lingual and religious heterogeneity. Moreover, gender parity was a goal in the selection of participants. All focus groups were conducted in rather poor, rural areas.

In sum, seven focus group discussions were conducted. Two discussions were conducted with out-of-school youths, who have never had any access to education in order to assess which factors they find to be the most prominent barriers to educational access⁶. Two further discussions were conducted with students between grades five and seven, which in the Nepalese system is an important transition point between primary and secondary education⁷. The students were mixed in characteristics and performance. A third student focus group discussion was conducted with exclusively low caste students⁸. The discussions with students served to assess which variables they identify to be most influential, acting as barriers to

⁶ Conducted on January 31, 2013 in Khojpur Village Development Committee (VDC), Saptari.

⁷ Conducted on January 29, 2013 in Bagwana VDC, Parsa at N.R. Lower Secondary School and on January 31, 2013 at Janata Lower Secondary School in Ranjitpur VDC, Saptari.

⁸ Conducted on January 29, 2013 in Bagwana VDC, Parsa at N.R. Lower Secondary School.

higher attainment. Furthermore, two focus group discussions were conducted with parents of school children⁹.

III.4 CONSTRAINTS

It is impossible to include all potentially relevant variables in the quantitative analysis. Firstly, although according to the literature parents' education matters for children's access and attainment, there are only very few observations for the respective variables in the NLSS¹⁰. Since the goal of the quantitative analysis is to draw generalizable conclusions, I therefore exclude the variables on parents' education background from the data analysis. This could cause an omitted variable bias. However, the effect of parents' education should be captured to some extent by household wealth. Further, in order to still learn about the impact parents have on their children's educational opportunities, the role of parents has been explored in the qualitative analysis.

Apart from excluding parents' education from the data analysis, not all interactions have been analyzed for all independent variables. Given space constraints of this paper, the interaction analyses focused on the most influential variables according to the Epstein (2010) typology, plus caste. However, since language and religion are strongly interlinked with caste, the effect of these variables is presumably alike, with children from minority languages and religions being disadvantaged as are lower caste children. Moreover, I control for all variables in the regression analyses.

With respect to the qualitative analysis, it should be considered that the results are not representative of the whole Nepalese population and that there is a selection bias on the dependent and on some of the independent variables. Regarding the dependent variable, barriers to access were discussed with out-of-school children only. Barriers to attainment were only discussed with students "still at school". The independent variables are biased regarding geographic location and wealth status. However, the selection was conducted on purpose: the aim of the qualitative analysis is to explore additional information on the presumably most

⁹ Mothers: Conducted on January 29, 2013 in Bagwana VDC, Parsa; Fathers: Conducted on January 31, 2013 in Ranjitpur VDC, Saptari.

¹⁰ Access: data regarding mothers' and fathers' education level is only available for less than 30% of the subjects (Father's education for ages 5-14: 2,237; Mother's education for ages 5-14: 557). Attainment: data is only available for 40% of the subjects (Father's education for ages 15-24: 2,473; Mother's education for ages 15-24: 1,878).

significant sociodemographic characteristics to complement the representative quantitative analysis and to learn particularly about the reality as perceived by those groups who are among the most marginalized. Also, due to the availability of participants some amendments in the age groups were necessary. Moreover, the discussion guidelines have not been pre-tested.

Arguably the most unfortunate pitfall of my analysis is the fact that the influence of quality aspects of the Nepalese education system on students' educational opportunities remains a black box. Resources including infrastructure, teachers (both in numbers and qualification) and funds are likely not allocated equitably which also impacts equity in access and attainment. However, this assessment was beyond the scope of this study.

CHAPTER IV QUANTITATIVE EMPIRICAL ANALYSIS

In the following, I test the sociodemographic variables which are assumed to be influential impediments to equity in education regarding their statistical relation with access. I report the descriptive bivariate results first and then continue with interactions and an inferential regression analysis. For each operationalization of the dependent variable, I look at the main impeding factors outlined above: wealth, geography, and gender plus further potentially influential group characteristics. After the analysis of the relationship between the variables and access, the same analysis follows with regard to attainment.

IV.1 BARRIERS TO EQUITY IN ACCESS

IV.1.1 Bivariate Analysis

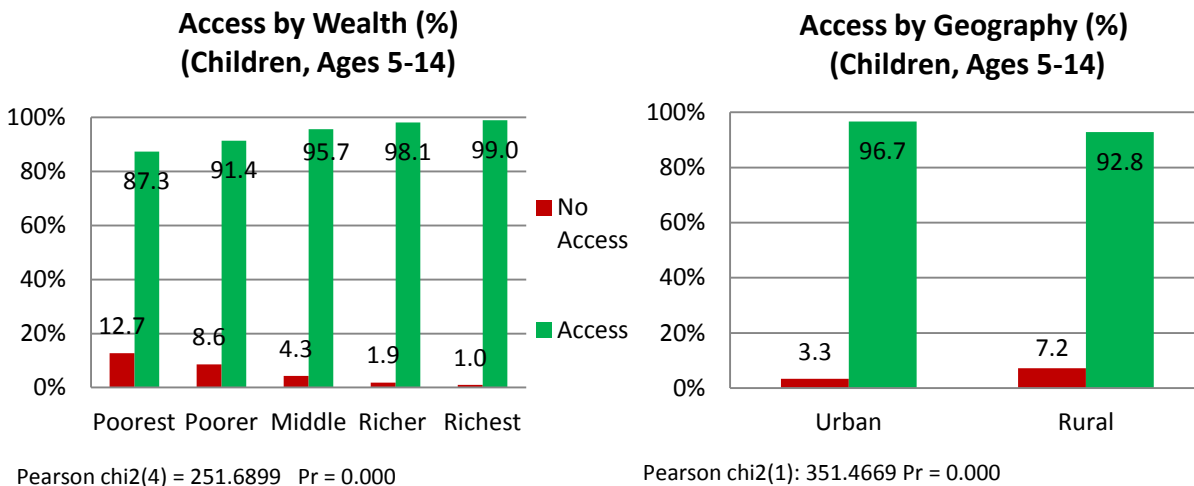


Figure 2: Access by Wealth; Access by Geography

Access to education differs strongly along the wealth of a child's family (figure 2). Whereas access to education within the richest quintile is almost universal, the poorer the household, the less universal access to education becomes. The difference in access to education between children from the poorest households and children from the richest households amounts to almost 13 percentage points.

Differences in access due to location are smaller. Children living in urban areas have an about four percentage points higher access rate than rural children. Thus, there is a larger gap in access due to differences in household wealth than due to a child's residential location.

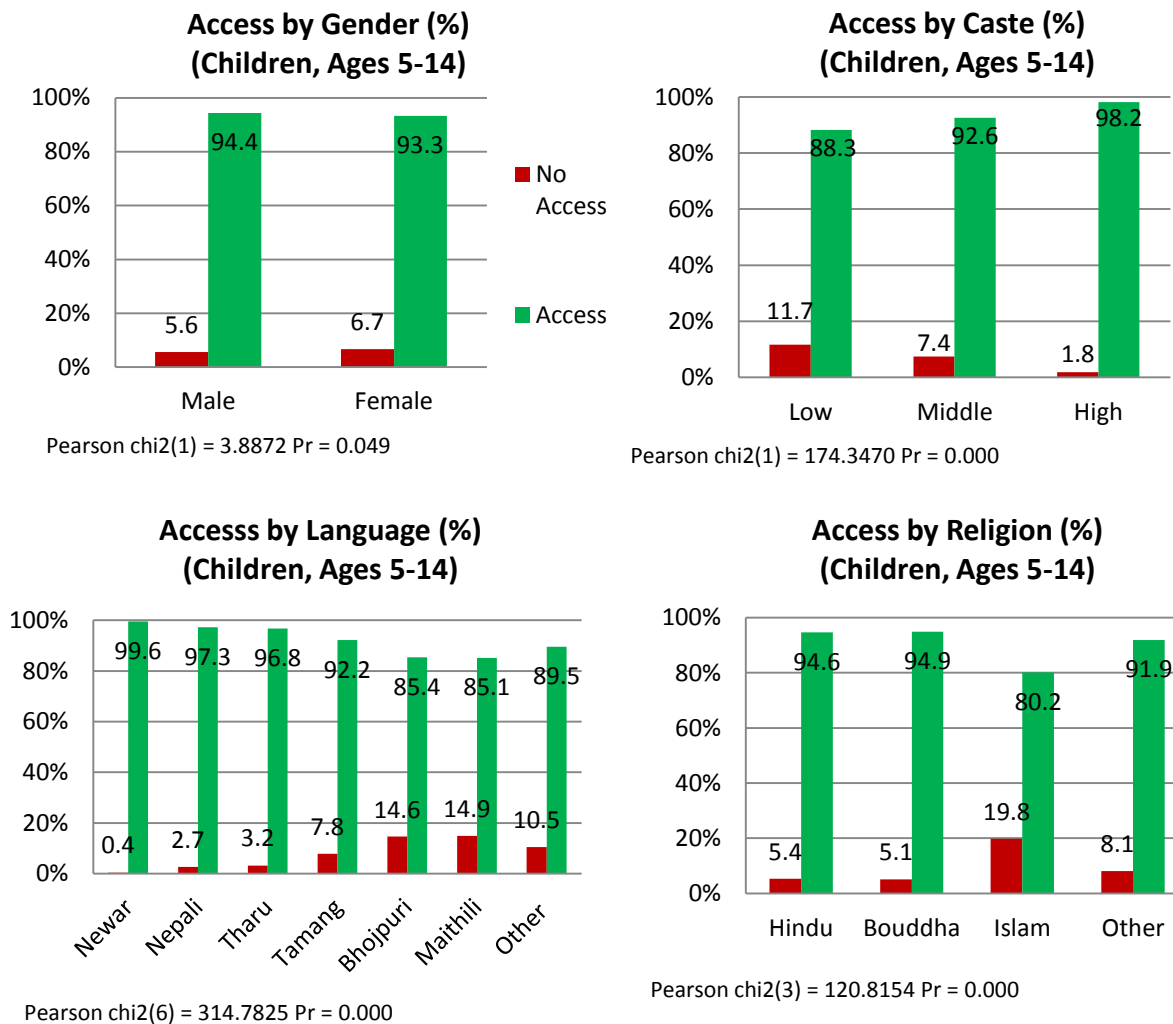


Figure 3: Access by Group Characteristics

Yet, both sociodemographic variables do systematically influence children's access at a very high level of statistical confidence (99% level).

Turning to group characteristics, gender seems to be a surprisingly weak barrier to educational access (figure 3). Girls' access is only about one percentage point below boys' access and the relation is only significant at a 5% level. On the contrary, caste, language and religion are all statistically significant at a confidence level of 99% and the percentage point differences in access are much larger. Children from low castes have a 10 percentage point lower chance of access to education than children from high castes whose access to education is almost universal. The situation looks similar for language. Access is quasi-universal among Newari and Nepali speaking households. While Nepali is the official language, Newaris belong to the highest caste group. However, the situation looks different for children speaking minority

languages which are predominant among lower castes, such as Maithili and Bhojpuri. Only around 85% of children from these households have access to education. Looking at religion, the low access rate of Muslims, which is almost 15 percentage points below Hindus, is noteworthy.

IV.1.2 Interactions

The previous section looked at the impact of the main socio-demographic variables individually. In the following, I aim at uncovering potentially interacting effects. I report results for combinations of the three main barriers identified by Epstein (2010): wealth and geography, wealth and group characteristics, and geography and group characteristics.

The interactions reveal a number of further insights. The effect of household wealth on access to education is similarly relevant in both rural and urban areas (figure 4). The difference between the wealth quintiles is strongly significant irrespective of where a child lives. Interestingly, access is lowest for children from the poorest households in urban areas. In middle class urban households, access is also below those in rural areas. Yet, when looking at the richest households in urban and rural areas, one finds that access in urban areas is almost universal whereas in rural areas within the richest households 2.4% of the school-aged children have never had access to education. Overall, the difference in access between the richest and the poorest quintile is thus considerably larger for urban children (15 percentage points) than for rural children (10 percentage points). This might reflect the fact that poor children in urban areas have more incentives to participate in income generation rather than schooling and is in line with Cameron's (2010) finding that urban poor children are particularly disadvantaged.

Turning to the effect of wealth conditional on group characteristics, it is apparent that for both gender and caste the richer the household the higher the access to education (figure 4). Girls have slightly lower access to education up until the richest quintile. Between the poorest and the richest quintile the difference in access is quite large: about 13 percentage points for girls and 11 percentage points for boys. However, gender differences in access across wealth quintiles are relatively small suggesting that overall gender discrimination does not depend on household wealth. Similarly, wealth has a significant impact within all castes. Across all wealth quintiles, children from high castes have higher educational access than children from

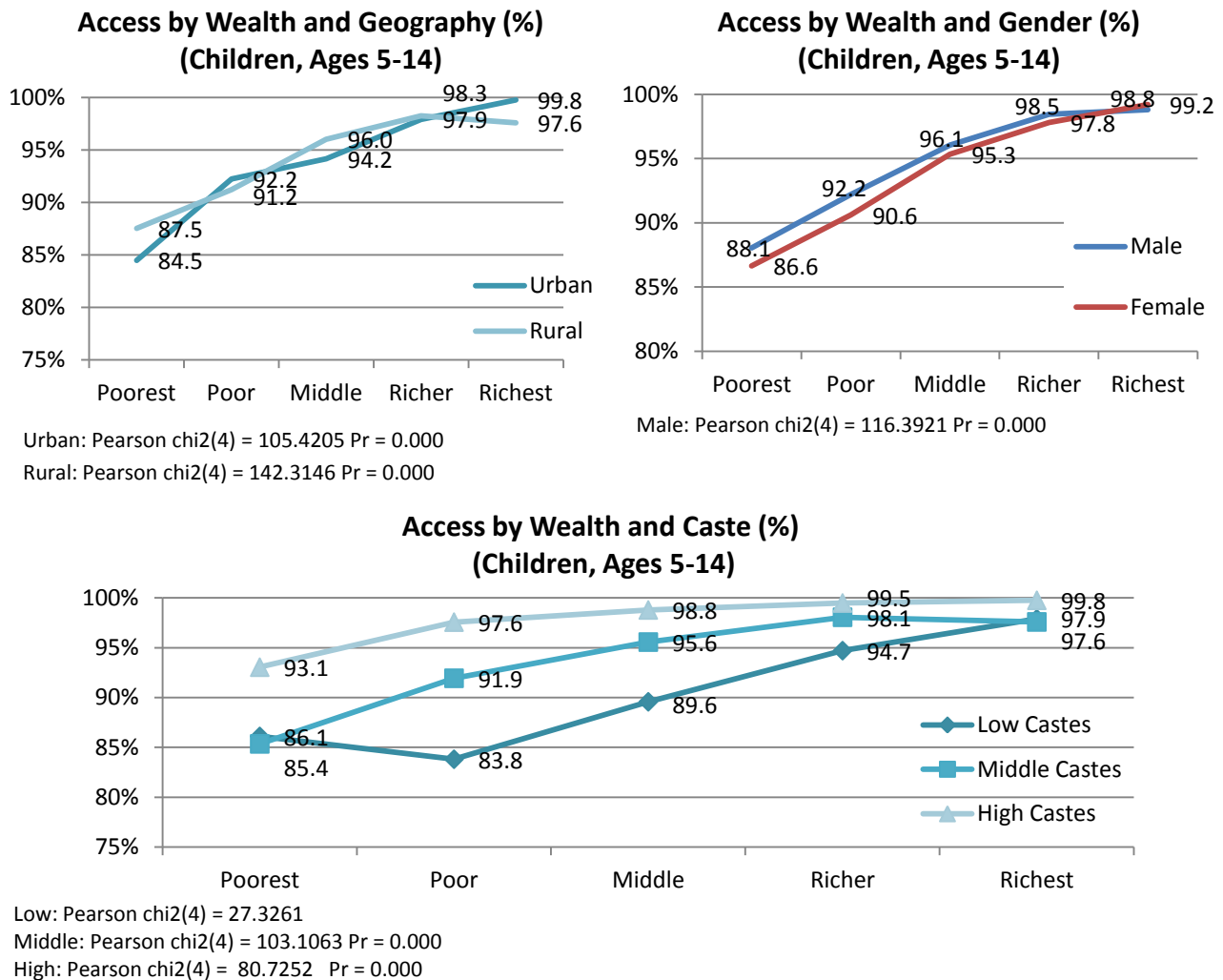
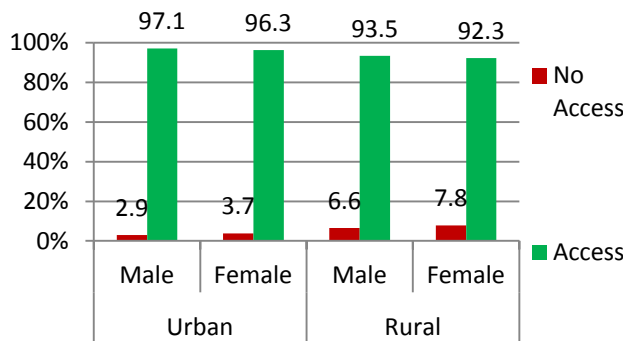


Figure 4: Access by Wealth and Geography; Access by Wealth and Gender; Access by Wealth and Caste

low castes. The difference in access between castes decreases with increasing levels of household wealth. When looking at rich households the difference is only about two percentage points between the low and middle castes and the highest castes. However, while the difference between children from the richest and poorest quintile only amounts to six percentage points for high caste children, the same difference is about twice as large for children from low and middle castes. This suggests that the effect of wealth on access to education is mitigated for members of the high castes, while it remains strong for middle and low caste households.

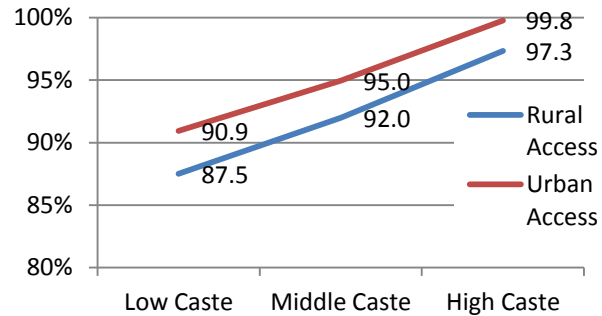
The effect of geography conditional on group characteristics reveals inequity in access between boys and girls when comparing urban and rural households (figure 5). While there is no significant difference in access to education in urban areas (Pr = 0.32), the difference in rural areas is significant at the 10% level.

**Access by Geography and Gender (%)
(Children, Ages 5-14)**



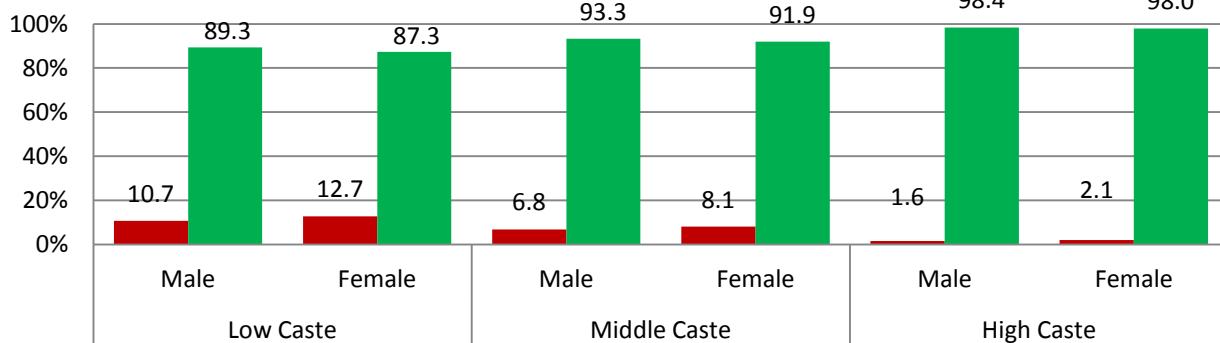
Urban: Pearson chi2(1) = 0.9981 Pr = 0.318
 Rural: Pearson chi2(1) = 2.8934 Pr = 0.089

**Access by Geography and Caste (%)
(Children, Ages 5-14)**



Urban: Pearson chi2(2) = 67.2601 Pr = 0.000
 Rural: Pearson chi2(2) = 105.3056 Pr = 0.000

**Access by Gender and Caste (%)
(Children, Ages 5-14)**

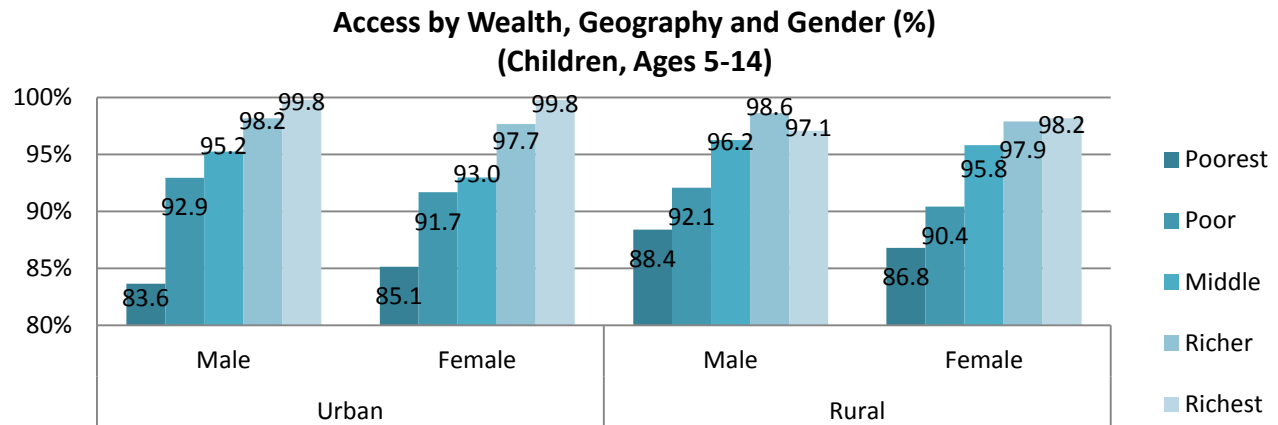


Male: Pearson chi2(2) = 79.3809 Pr = 0.000
 Female: Pearson chi2(2) = 95.6073 Pr = 0.000

Figure 5: Access by Geography and Gender; Access by Geography and Caste; Access by Gender and Caste

This implies that the small gender difference identified in the bivariate relationship applies to rural areas, while there is no statistically significant gender difference in urban areas. The impact of caste is highly significant in both locations. While high caste children in both areas have almost universal access, low caste children are about 10 percentage points less likely to enter school. Within castes but between urban and rural settlements, the access rate differs only slightly: Urban children have an approximately three percentage point higher chance of entering school than their rural peers.

These results suggest that while wealth, geography and caste play an independent significant role even when interacting with each other, gender is mostly a barrier in rural areas. Put differently, wealth affects access to education in urban and rural areas, for all castes and gender; likewise, caste is important in both locations and across all wealth quintiles. Gender, on the other hand, remains a constraint in rural areas, but is less so in urban areas.



Urban male: Pearson chi2(4) = 54.9781 Pr = 0.000, Urban female: Pearson chi2(4) = 51.5079 Pr = 0.000
 Rural male: Pearson chi2(4) = 64.1739 Pr = 0.000, Rural female: Pearson chi2(4) = 77.7488 Pr = 0.000

Figure 6: Access by Wealth, Geography and Gender

The effect of gender and caste is statistically significant at a 99% level of confidence, but the interacting effect is small, with percentage point differences in access between genders within castes being slightly smaller than comparing the same gender across castes (figure 5).

Combining the three core variables I find that firstly, when comparing urban and rural areas, differences with regard to access to education increase with decreasing wealth quintiles (figure 6). In urban areas there is gender parity and almost universal access to education in the richest households. The situation also looks promising in the richest households in rural areas, with access rates beyond 98% and near gender parity. Yet, when looking at the poorest households in urban and rural areas, access for boys and girls is not quite universal. Here the situation looks slightly better in rural than in urban areas across both sexes, with 88.4% of rural boys and 86.8% of rural girls having access to education, compared to only 83.6% of urban boys and 85.1% of urban girls. Overall, boys from the poorest urban households have the lowest access to education. Access gaps are most severe in urban areas between income groups for both gender with a difference of more than 16 percentage points for boys and 14 percentage points for girls. Although gender gaps are evident as is the difference in access due to geography, of the three most established sociodemographic variables, wealth appears to be the most influential barrier to equitable access in education.

IV.1.3 Regression Analysis

Table 4 reports the results from combining the identified variables in a multivariate setting.

Variable		Dependent Variable: Access									
		Wealth	Rural	Gender	Epstein	Caste	Language	Religion	Disability	Region	Full Model
Standard Variables	Wealth	0.031*** (0.002)			0.031*** (0.002)	0.026*** (0.002)	0.027*** (0.002)	0.030*** (0.002)	0.031*** (0.002)	0.036*** (0.002)	0.027*** (0.002)
	Rural		-0.038*** (0.005)		0.005 (0.006)	0.005 (0.006)	0.005 (0.006)	0.003 (0.006)	0.006 (0.006)	-0.003 (0.006)	0.000 (0.006)
	Female			-0.011** (0.006)	-0.009 (0.006)	-0.010* (0.006)	-0.009 (0.005)	-0.009* (0.006)	-0.010* (0.006)	-0.008 (0.006)	-0.010* (0.005)
Caste	Mid Caste					0.036*** (0.010)					0.021* (0.011)
	High Caste					0.074*** (0.009)					0.020** (0.009)
Language	Maithili						-0.111*** (0.013)				-0.102*** (0.014)
	Bhojpuri						-0.105*** (0.014)				-0.072*** (0.015)
	Tharu						0.009 (0.010)				-0.003 (0.012)
	Tamang						-0.040** (0.016)				-0.024 (0.018)
	Newar						-0.010* (0.006)				0.012* (0.007)
	Other Language						-0.064*** (0.011)				-0.059*** (0.012)
Religion	Buddhist						-0.003 (0.010)				0.009 (0.010)
	Muslim						-0.140*** (0.021)				-0.073*** (0.024)
	Other Religion						-0.020 (0.015)				-0.024 (0.015)
PwD	With Disability								-0.161*** (0.035)		-0.163*** (0.035)
Region	Eastern									0.052*** (0.008)	0.061*** (0.009)
	Western									0.053*** (0.008)	0.044*** (0.009)
	Mid-Western									0.058*** (0.010)	0.022** (0.010)
	Far-Western									0.091*** (0.010)	0.046*** (0.010)
Constant		0.851*** (0.008)	0.967*** (0.004)	0.944*** (0.004)	0.850*** (0.011)	0.823*** (0.013)	0.893*** (0.011)	0.862*** (0.011)	0.853*** (0.011)	0.801*** (0.013)	0.851*** (0.014)
Observations		7194	7194	7194	7194	7194	7194	7194	7194	7194	7194
R2		0.03	0.00	0.00	0.03	0.05	0.07	0.05	0.04	0.05	0.09
F		243.802	49.993	3.895	82.802	65.802	39.779	47.590	67.121	40.128	22.154

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

Table 4: Access Regression Analysis

The table shows the estimated coefficients from a linear probability model¹¹, which implies that a one-unit increase in the independent variable implies a change in the probability of

¹¹ The coefficients from a linear probability model can be interpreted as marginal effects of the sociodemographic variables on access similar to a non-linear probability model (Angrist/Pischke 2008). The results from a probit model are very similar, see appendix 2.

access by (100*coefficient) percentage points. I introduce the main variables in turn and finally estimate the full model containing all major determinants.

Wealth has a statistically significant positive relationship with access at a 99% level of confidence. However, the effect of wealth is rather weak (3.1%). Geography in terms of urban-rural differences is also highly significant, with rural areas negatively influencing educational access. The effect is also rather weak (3.8%). Congruent with the descriptive findings, gender is only significant at a 95% level of confidence and the impeding effect for girls is weak (1.1%).

Looking at the Epstein (2010) variables jointly, the effect of wealth holds, while geography and gender are not significant anymore and the magnitude of the effect becomes weak. This could be due to the fact that children from poor families are more likely not to attend school in urban areas, since more alternative employment opportunities are available. The result is in line with the descriptive findings that the poorest children in urban areas have the lowest access rate.

Adding caste to the equation confirms the important role of this attribute. At a 99% level of confidence caste strongly influences access with an effect of 3.6% of middle castes as compared to low castes and 7.4% for high castes compared to low castes.

Looking at language, speakers of Maithili, Bhojpuri and other minority languages have less access to education than Nepali speakers (the reference category). The effect for Maithili and Bhojpuri speakers is strong (more than 10%) and significant at the 99% level. Other minority language speakers and Tamang speaking children also have less access to education than Nepali speakers, although the effect is less strong.

The most disadvantaged children with regard to access are Muslims and children with disabilities. Compared to Hindu children, Muslim children have a significant 14 percentage points lower chance of going to school than Hindu children. Children with disabilities are even more disadvantaged. Compared to children without disabilities, they have a 16 percentage points lower chance of access to education.

Controlling for geographic region reveals significant heterogeneity across Nepal, although the effect is not intuitive at first sight. Whereas children from the far-western region face the least barriers to access, children from the central region face the biggest ones. Given that the central region is the most developed one, this result coincides however with urban poor children having the lowest access rates, presumably because of income generation alternatives.

Looking at the full model, wealth remains influential at the 99% level with an effect of approximately 3%. Urban-rural on the contrary loses any effect when controlling for all other sociodemographic attributes, and appears to be only marginally influential. The disadvantageous effect for girls is very small and weakly significant. Of the other group characteristics, caste loses in influence when controlling for additional attributes which are correlated, such as religion and language. Muslims and Bhojpuri and Maithili speakers are still among the most disadvantaged groups. However, by far the most disadvantaged children are those with disabilities.

While the R² is relatively low, meaning that only 9% of the overall variation in access can be explained by the above variables in the model, this is not unusual for cross-sectional survey data (Wooldridge 2002). However, it raises the question which other factors beyond sociodemographic attributes impede children’s access to education.

IV.2 BARRIERS TO EQUITY IN ATTAINMENT

IV.2.1 Bivariate Analysis

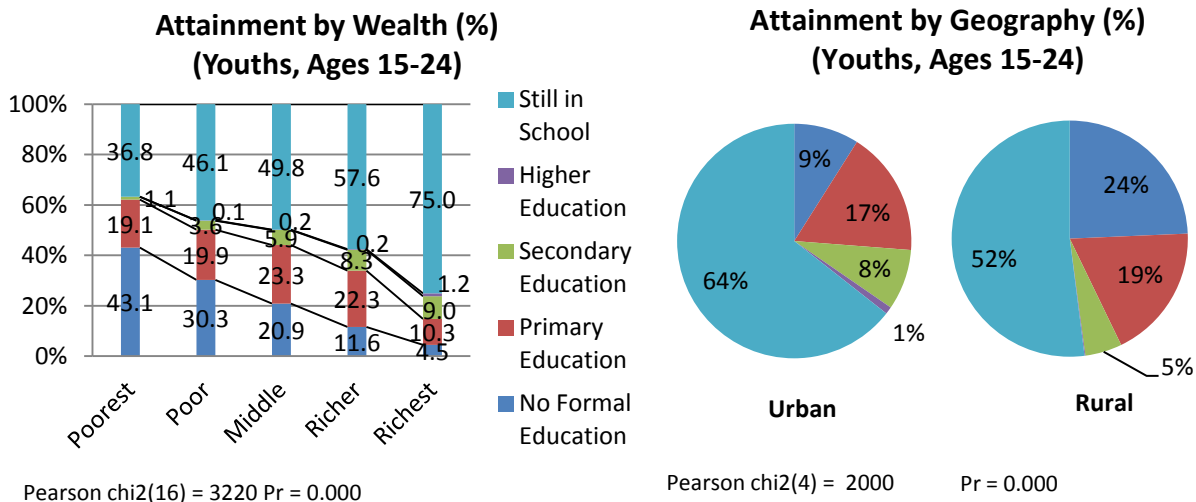
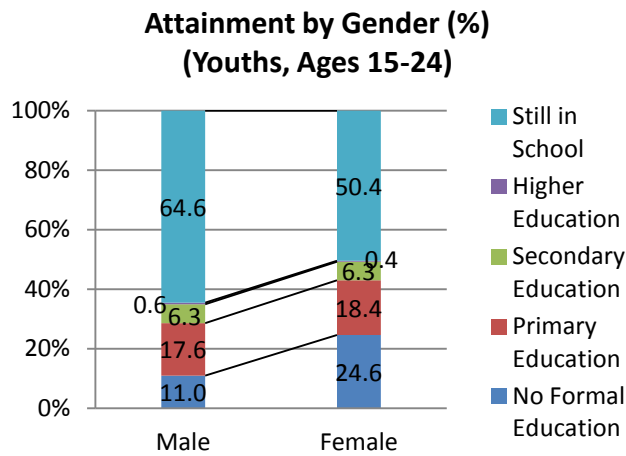
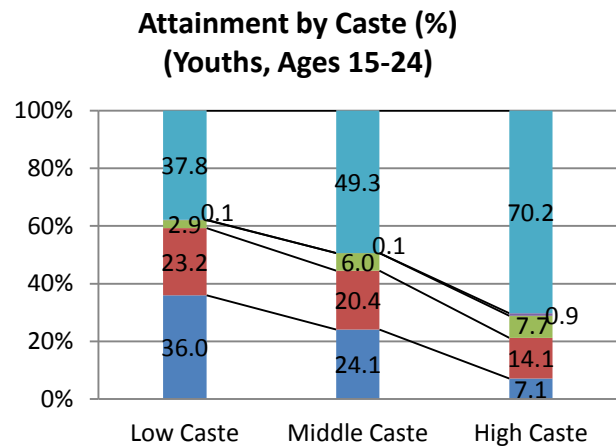


Figure 7: Attainment by Wealth; Attainment by Geography

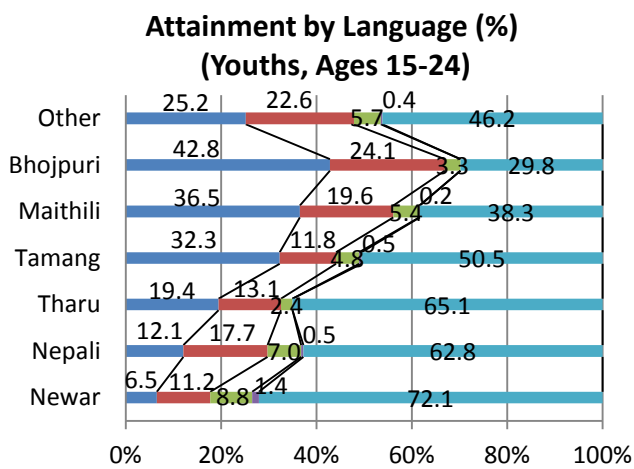
Equity with regard to attainment is statistically significantly related with wealth at a confidence level of 99% (figure 7): The richer the household, the higher the level of education students attain.



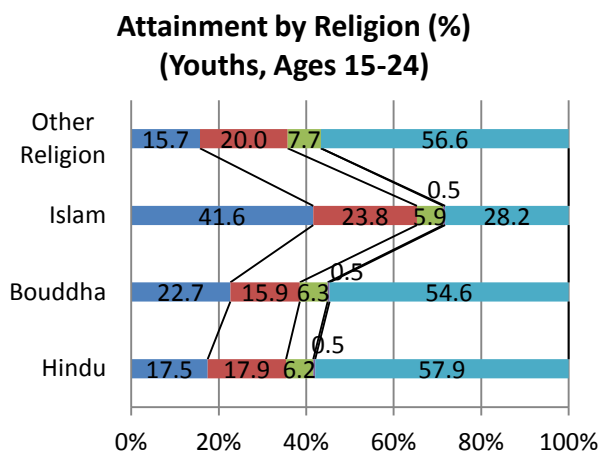
Pearson chi2(4) = 961.259 Pr = 0.000



Pearson chi2(8) = 1500 Pr = 0.000



Pearson chi2(24) = 1400 Pr = 0.000



Pearson chi2(12) = 147.3513 Pr = 0.000

Figure 8: Attainment by Group Characteristics

Whereas less than 5% of the richest households' youths do not have any formal degree, 43% of the poorest youths fall into this category. This includes the 13% who have no access to education at all as well as students who drop out before finishing primary education. Less than 50% of 15-24-years-olds in the lower quintiles attend an educational institution, while three quarters of their peers from the richest quintile are still enrolled. Yet, overall higher education degrees are rare across all wealth quintiles.

Whether students live in urban or rural areas also influences their attainment level significantly, hinting towards disadvantages for rural students (figure 7). Whereas 64% of youths are still at school in urban areas, rural youths leave school earlier, with only about half of them still going to school. Also, 24 out of 100 youths in rural areas have no formal degree, whereas this is only the case for nine out of 100 urban youths.

Contrary to the relatively weak relation between gender and access and in line with Bandyopadhyay and Subrahman's (2008) findings gender influences students' educational attainment strongly once they have made it beyond mere access (figure 8). Whereas almost 65% of boys are still at school, this only applies to half of the girls. Vice versa, almost one out of four girls has no formal degree whereas this is only the case for 11 out of 100 boys. Interestingly, attainment between boys and girls differs most strongly at the higher and at the lower end of attainment levels.

Likewise, caste, language and religion are statistically significantly related with attainment at a confidence level of 99% (figure 8). Looking at caste, 70 out of 100 high-caste youths are still at school. This only applies to 38 out of 100 low caste youths and only to about half of the youths from middle castes. As expected, "no formal degree" and "primary education" as final attainment level are the most common educational outcomes in the low castes. The percentage point differences between the caste, language and religious groups are quite large, particularly with regard to how many youths are still at school and how many have no formal education degree at all, thus indicating structural inequity. Hence, low caste students, minority language speakers and Muslims are also systematically disadvantaged when it comes to attainment.

IV.2.2 Interactions

As in the analysis of access to education, I report results for the interactions of the variables according to the structure suggested by Epstein (2010): wealth and geography, wealth and group characteristics and geography and group characteristics; finally, I look at the intersection of the three main variables.

Equity in attainment is clearly influenced by the effects of wealth and geography, although the interaction effect is not very large (figure 9). The percentage point differences are similar when comparing the same wealth groups in urban and rural households. This indicates that while wealth is a strongly significant predictor for educational outcomes, it does so to a similar degree in urban and rural areas. Across all wealth quintiles, more youths leave school with primary education as highest degree in urban areas. Secondary education degrees are distributed similarly across wealth quintiles in urban and rural areas and higher education degrees are similarly rare in both locations.

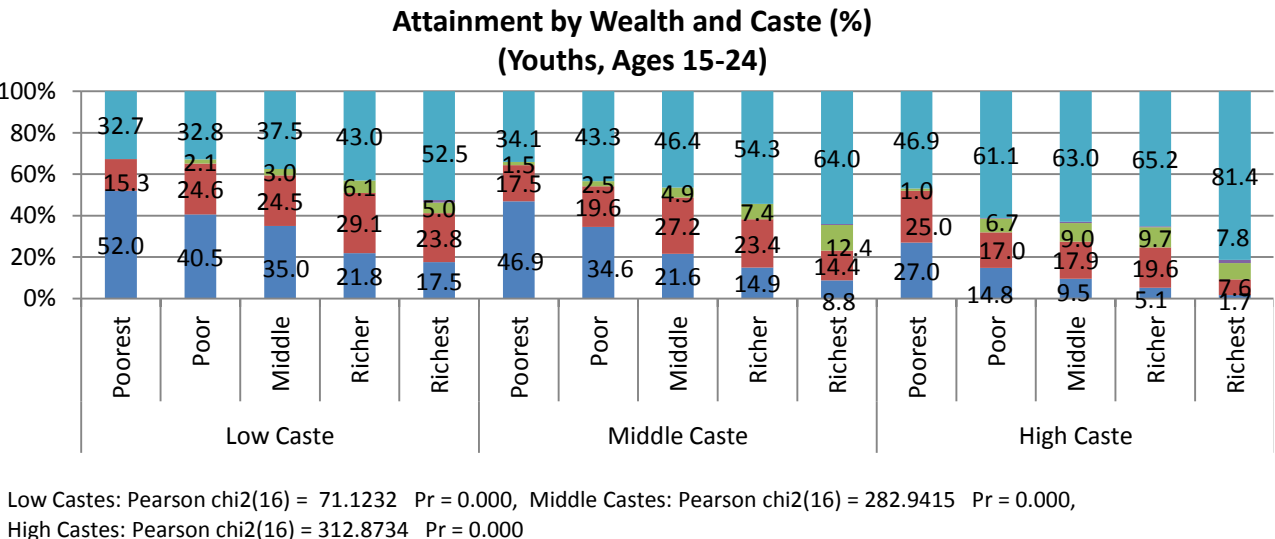
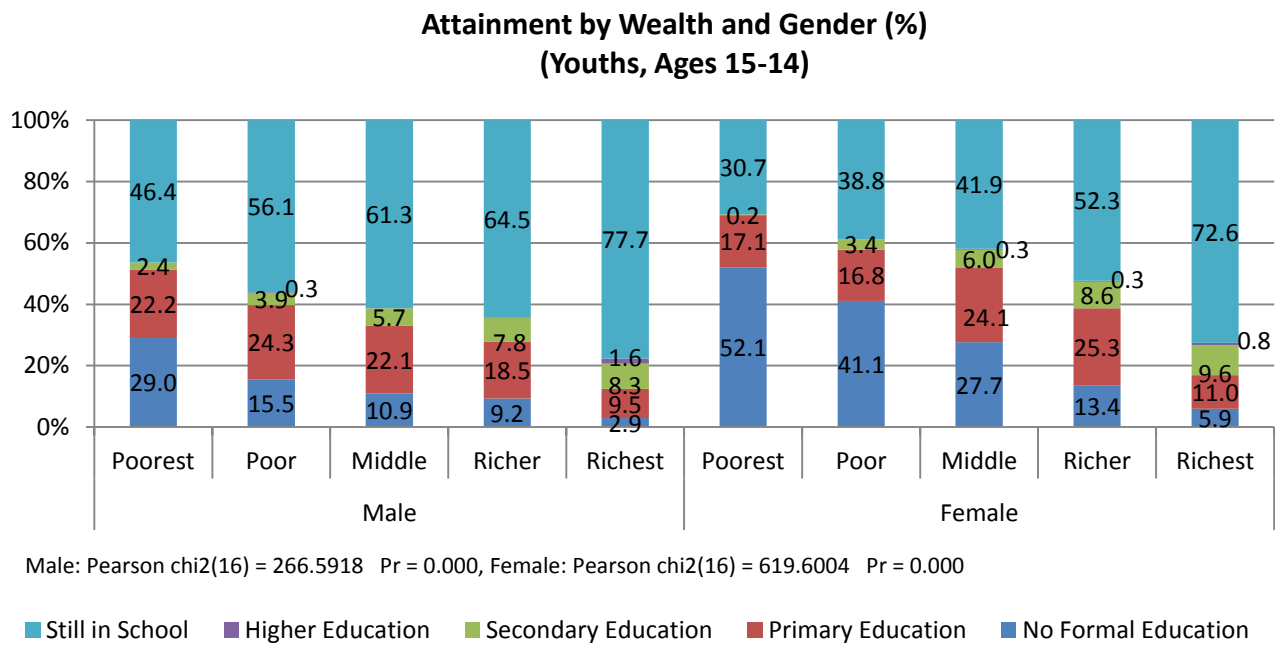
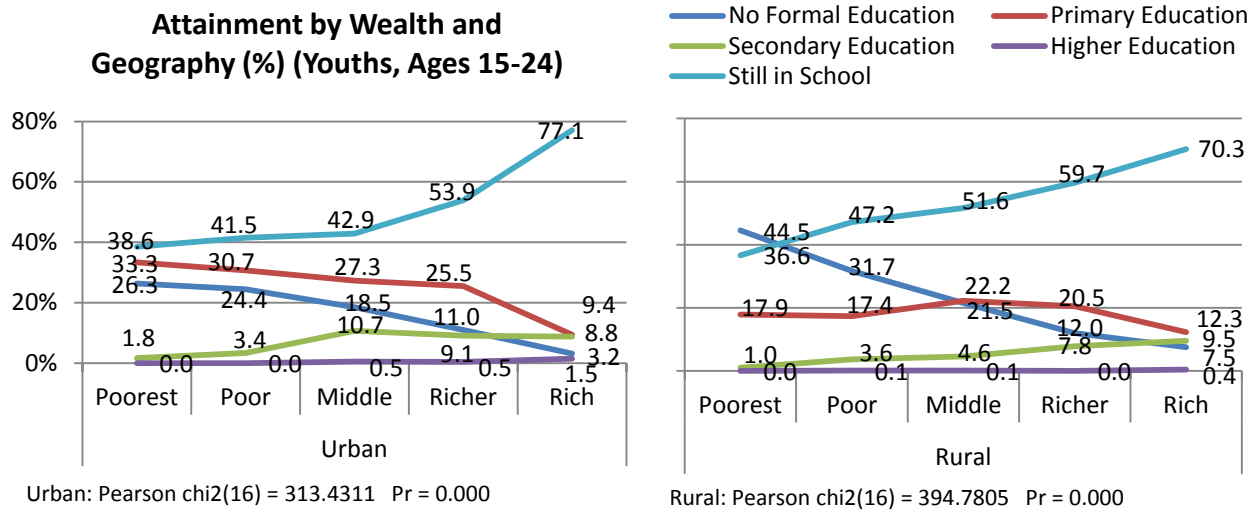


Figure 9: Attainment by Wealth and Geography; Attainment by Wealth and Gender; Attainment by Wealth and Caste

Looking at the interaction of group characteristics and wealth, the effects are highly significant (figure 9). While wealth influences the attainment distribution for both gender, the differences between the wealth quintiles are much stronger for girls. This becomes apparent when comparing the share of children who are still in school. The difference between the richest and the poorest quintile is about 30 percentage points for boys; however, the difference is more than 42 percentage points for girls. Thus, wealth has a stronger impact on attainment for female students than for male students. A similarly strong interaction effect emerges regarding caste. High caste youths from rich households are obtaining the highest attainment levels with more than 80% still attending school. This only applies to about two thirds of the rich middle caste youths and to only about half of the richest low caste youths. Thus, household wealth has a much stronger effect on the attainment distribution for high caste families than for middle and low caste families.

Turning to interactions of geography with group characteristics, I find strong effects (figure 10). Unlike with respect to access, there is a significant interaction effect of gender and geography in both locations. Yet, as is the case regarding access, the difference in attainment between male and female students is stronger in rural than in urban areas. This becomes particularly visible looking at the number of uneducated youths. While the difference between boys and girls in urban settlements is only six percentage points, this amounts to almost 17 percentage points in rural areas. The picture looks alike regarding the share of youths still in formal education. The difference between rural girls and boys still attending school amounts to 18 percentage points; in urban areas, the difference is much smaller at only six percentage points. Similarly, caste and geography combined influence equity in attainment. In urban areas, more than three out of four high caste youths are still going to school, whereas this only applies to about half of the urban middle caste youths and to only 37.7% of the low castes in urban areas. The relation between caste and attainment also exists in rural areas, but differs in at least two ways from urban settlements. While less rural youths from the highest castes are still at school than is the case in urban areas, almost the same number of low caste youths is still at school in urban and rural areas (38%). This implies that for the continuation of formal education through ages 15-24, caste is more important in urban areas than in rural areas.

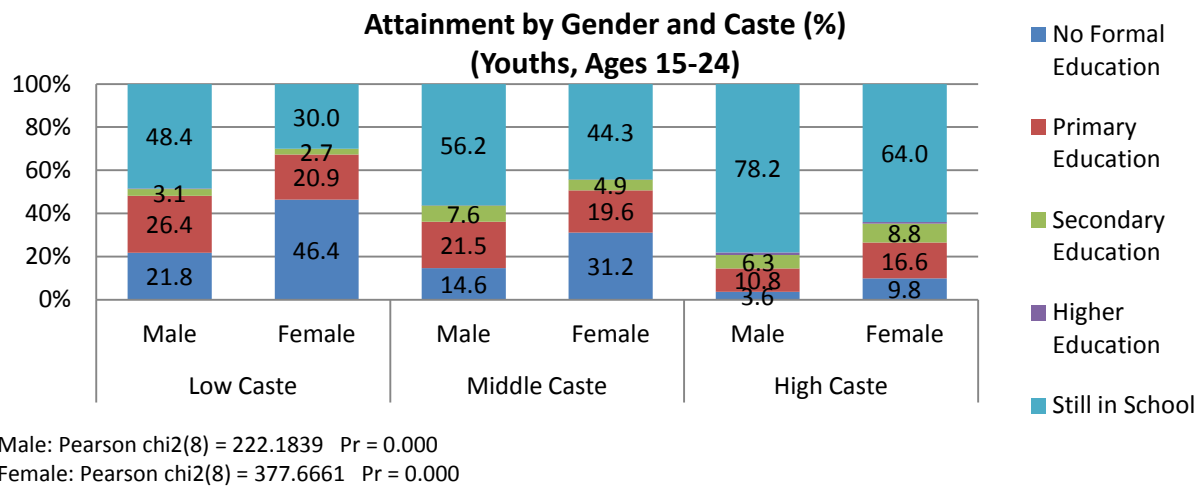
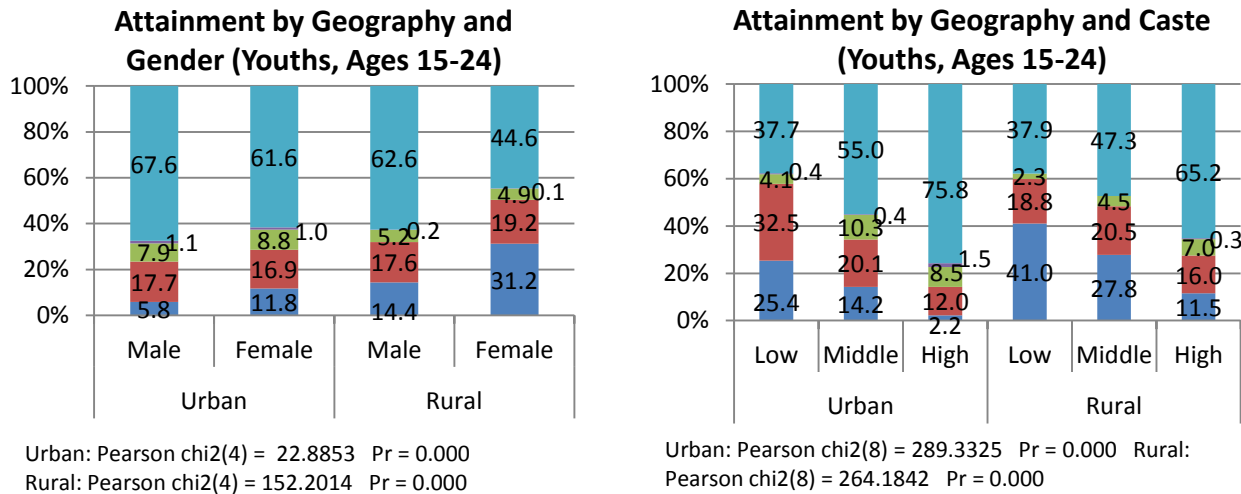
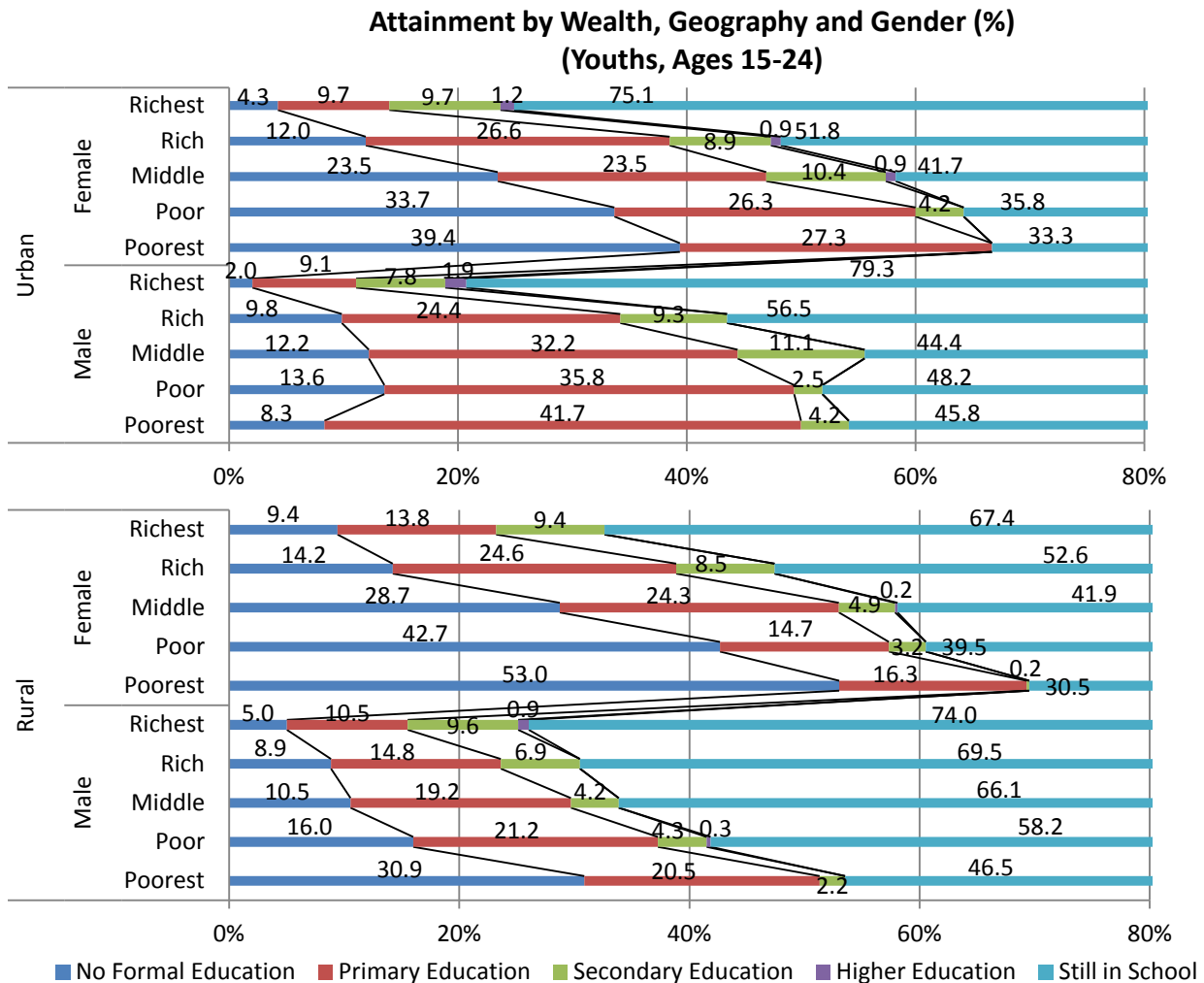


Figure 10: Attainment by Geography and Gender; Attainment by Geography and Caste; Attainment by Gender and Caste

As is the case regarding access, there is rather little evidence of an interaction between caste and gender (figure 10). Looking at high castes, one finds that 78.6% of male youths are still at school compared to only 64.04% of the girls. Middle and low caste children display similar differences of 12 and 18 percentage points, respectively. This means that while the attainment distribution differs between castes, gender differences within these castes appear similar.



Urban Male: Pearson $\chi^2(16) = 128.2112$ Pr = 0.000, Urban Female: Pearson $\chi^2(16) = 297.8441$ Pr = 0.000
 Rural Male: Pearson $\chi^2(16) = 134.8599$ Pr = 0.000, Rural Female: Pearson $\chi^2(16) = 192.5688$ Pr = 0.000

Figure 11: Attainment by Wealth, Geography and Gender

The threefold interaction of wealth, geography and gender is rather weak (figure 11). Contrary to access, where the poorest urban boys are most disadvantaged, girls from the poorest quintile are the most marginalized in urban and rural areas regarding attainment. Comparing youths' attainment and children's educational access, girls are more disadvantaged regarding the former. In rural areas more than half of the poorest girls do not have any formal education degree as well as 39.4% of the same group in urban areas. The gender difference here is also evident: 30% of the poorest rural male youths have no formal education while this is the case for 8.3% of the poorest urban males. Secondary education is more common in urban than in rural areas across wealth quintiles and gender, but overall the number of students attaining higher education is very low.

IV.2.3 Regression Analysis

Table 5 reports the results obtained from an ordinary least squares regression.

Variables		Dependent Variable: Attainment									
		Wealth	Rural	Gender	Epstein	Caste	Language	Religion	Disability	Region	Full Model
Standard Variables	Wealth	0.133*** (0.009)			0.139*** (0.010)	0.111*** (0.010)	0.118*** (0.009)	0.136*** (0.010)	0.139*** (0.010)	0.163*** (0.011)	0.120*** (0.010)
	Rural		-0.139*** (0.025)		0.054* (0.029)	0.054* (0.029)	0.054* (0.028)	0.046 (0.029)	0.059** (0.029)	0.023 (0.029)	0.035 (0.029)
	Female			-0.052** (0.025)	-0.041* (0.025)	-0.046* (0.024)	-0.042* (0.024)	-0.044* (0.024)	-0.046* (0.024)	-0.036 (0.024)	-0.049** (0.024)
Caste	Mid Caste					0.182*** (0.042)					0.118** (0.049)
	High Caste					0.382*** (0.038)					0.139*** (0.039)
Language	Maithili						-0.525*** (0.054)				-0.464*** (0.061)
	Bhojpuri						-0.498*** (0.061)				-0.324*** (0.067)
	Tharu						0.037 (0.045)				-0.004 (0.054)
	Tamang						-0.256*** (0.074)				-0.203** (0.084)
	Newar						-0.093** (0.045)				-0.018 (0.049)
	Other Language						-0.299*** (0.046)				-0.263*** (0.053)
Religion	Buddhist							-0.045 (0.047)			0.061 (0.047)
	Muslim							-0.639*** (0.090)			-0.301*** (0.103)
	Other Religion							-0.041 (0.060)			-0.047 (0.063)
PwD	With Disability							-0.705*** (0.148)			-0.714*** (0.146)
Region	Eastern								0.226*** (0.036)	0.244*** (0.040)	
	Western								0.193*** (0.038)	0.140*** (0.039)	
	Mid-Western								0.287*** (0.042)	0.107** (0.043)	
	Far-Western								0.441*** (0.042)	0.214*** (0.043)	
Constant		3.313*** (0.033)	3.796*** (0.020)	3.719*** (0.017)	3.275*** (0.050)	3.136*** (0.058)	3.484*** (0.048)	3.328*** (0.050)	3.288*** (0.050)	3.049*** (0.058)	3.269*** (0.064)
Observations		7194	7194	7194	7194	7194	7194	7194	7194	7194	7194
R2		0.03	0.00	0.00	0.03	0.05	0.07	0.05	0.04	0.05	0.09
F		237.544	30.224	4.377	79.443	72.371	41.086	47.231	65.663	41.849	24.540

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

Table 5: Attainment Regression Analysis

The dependent variable is the ordinal attainment variable as specified above. The implicit assumption made is that attainment can validly be interpreted as an interval variable. While

this assumption is certainly debatable, I report these results as my benchmark results since it makes the interpretation more tractable¹².

Wealth has a positive effect on attainment at a 99% level of confidence, albeit rather small in substantial terms. The coefficient can be interpreted that for an increase in the household wealth by one quintile, the expected attainment level rises by 0.13. In other words, a child from the highest wealth quintile achieves an approximately 0.65 higher attainment level than a child with the same characteristics from the lowest wealth quintile. A similar effect can be attributed to the difference between rural and urban settlements. Again, gender stands out as only marginally significant at a 95% level of confidence, with a smaller substantial impact than wealth or geography.

Combining Epstein's (2010) three core variables, wealth remains the most influential barrier to attainment. As with access, urban-rural changes signs and decreases in effect and significance. Again, this might be due to the fact that when controlling for wealth, urban youths rather than rural youths trade education off against income generation opportunities.

Caste is an influential and statistically significant barrier also with regard to attainment. At a 99% level of confidence youths from the middle castes have 0.2 higher attainment compared to low caste youths. This effect is even larger when comparing low and high castes with high castes having almost 0.4 higher attainment levels than low castes.

Looking at language, minority language speakers are even more disadvantaged once they have made it beyond mere access. Maithili and Bhojpuri speakers are still significantly disadvantaged. Also, Tamang and other minority language speakers face significantly more impediments to higher attainment levels. Muslims and youths with disabilities are also the most disadvantaged students regarding attainment, when comparing the marginal effects of all variables.

Controlling for geographic development region reveals significant heterogeneity across Nepal also regarding attainment. As is the case with access, the effect of being a youth from the low-developed western regions on attainment is large and positive.

When looking at the Epstein (2010) variables in the full model, wealth remains significant at a high level, although its effect decreases slightly. Urban-rural differences are not significant

¹²The coefficients can be interpreted as marginal effects of a change in the independent variable on the attainment level, which would also be the preferred interpretation when running a more complex ordered probit model. The results from an ordered probit model are very similar, see appendix 3.

anymore. Gender remains significant at a confidence level of 95% when taking all variables into account, thus being more influential regarding attainment than access. As is the case in the access model, the influence of caste on attainment decreases marginally when taking all sociodemographic variables into account. Language remains among the most influential barriers to equity in attainment. In fact, when looking at the full model, language is a more powerful barrier to equity in attainment than caste. The negative effect of Islam decreases in the full model but remains strongly negative and significant. However, the only variable in the model which increases in negative effect in the full model is disability. Disability has the strongest negative significant effect on attainment of all variables. Contrary to the urban-rural dummy, the geographic region variable remains significant.

Overall, the results reinforce and strengthen the insights gained from the descriptive analysis. Youths from poor households, low castes, minority language speakers, Muslims and those with disabilities are most affected by attainment inequity. Adolescents holding multiple of these characteristics face even stronger hindrance to advancing to higher educational levels.

The R^2 is at a similar level as in the analysis of access. 9% of the overall variation in attainment can be explained by the sociodemographic variables in the model. Thus, also for attainment the question which factors beyond sociodemographic attributes impede children's educational opportunities arises and thus gives reason to take the results from the qualitative research serious.

CHAPTER V QUALITATIVE EMPIRICAL ANALYSIS

V. 1 BARRIERS TO EQUITY IN ACCESS

In order to learn more about the factors impeding access to education, about their relative influence and to identify causal channels, focus group discussions and a participatory “weighing-of-variables” exercise were conducted with two groups of out-of-school children.

During the open discussion, both groups emphasized household poverty as the dominant reason why they have never had access to schooling. Quotes such as: “We need to eat first” and “we are poor, we don’t have land, so then how can we read?” highlight substantive poverty as perceived by the participants. Poverty as a barrier was always raised in connection with duties such as household chores and income generation activities. Participants particularly emphasized the interacting effect of parents and poverty. Parents force children to work in order to contribute to household income. One girl quoted her mother saying: “If you work you can feed me; if you read, can you feed me?” All out-of-school children raised the point that their parents argue that with work children directly and immediately contribute to the well-being of the household whereas with schooling the returns to education are unclear, insecure and may only incur in the far future, if at all. Thus, parents clearly prefer the short-term positive effect of income generation as compared to uncertain future returns to education. Besides, children whose parents did not strictly reject education raised the point that due to work they are too exhausted to go to school and study. Gender related-barriers were raised by girls only, for instance the need to work in order to be able to earn the necessary dowry for marriage.

The participatory weighing exercise confirmed the impressions from the discussion. Poverty was highlighted as a primary factor impeding access to education, followed by parents and gender – although gender as determinant was only chosen by girls. All in all, poverty was perceived as the single major barrier to equity in education with regard to access, interacting with parents and gender, but being the fundamental cause to impede access.

V.2 BARRIERS TO EQUITY IN ATTAINMENT

In order to find out more about the relative influence and causal channels of factors impeding equitable educational attainment, focus group discussions and participatory “weighing-of-

variables” exercises were conducted with three groups of students, one of which was composed of solely Dalit students, i.e. students from the lowest caste. Additionally, two focus group discussions were conducted with parents to also obtain their perspective.

V.2.1 Focus Groups: Students

In the open discussion poverty was raised as an impediment to attaining higher education degrees. Although basic education is free in Nepal, exam and stationery fees apply from lower secondary level and increase with higher education levels. Poor families feel unable to afford these costs, ultimately forcing students to leave school. Also, students raised a deficient learning environment as a consequence of poverty at home. Particularly Dalit students emphasized poverty as important impediment to staying in school longer and also reported the most cases of child labor causing seasonal school absenteeism due to day labor, thus showing the interacting effect of caste and wealth. The students also mentioned the role of parents, particularly the fact that parents require their children to do household chores and perceive these to be more important than studying. Students raised the struggle they have convincing their parents of the advantages of education, arguing that parents do not give priority to education. One boy quoted a common phrase of his father: “What is the value of education? Go goat raising!” Similar to the experiences reported by out-of-school children, parents of children attending school often prefer immediate income generation over uncertain returns to education in the future.

Girls appeared particularly affected. They repeatedly raised the point that boys generally are allowed to join public life whereas girls are requested to stay at home, which results in the fact that at school, boys are more self-confident, outspoken and eloquent while girls feel insecure and less intelligent, which results in lower performance at school, since they are afraid to ask questions and participate in class. Many girls mentioned that their parents perceive their education as wasted investment since education increases the marriage dowry while decreasing the girls’ knowledge of household chores they have to do as wives. This lowers the reputation of educated girls in the community. Also, girls’ education is perceived as a waste of money since they are married at an early age and sent away to the husband’s household. Thus the family does not benefit from the returns to the financial investment in education. Boys, on the contrary, are sent to school since they will have to sustain the household. The interaction

between poverty and parents is thus further aggravated by gender effects. Particularly the role of social norms influencing gender perceptions among parents became evident during the discussions. One girl reported that her parents had been told by neighbors that, “if a girl gets higher education she will run away with a boy”. For that reason, the neighbors apparently do not like girls to have an education and put pressure on the parents to not let her attain higher education. An example of a Dalit girl shows the interaction of poverty, parents, gender and caste very well: When asked which job she would like to have in the future, she said “nurse”. When asked why she will not be able to make it, she mentioned three reasons: her family’s poverty, their lack of education, and because she is a girl.

Furthermore, students raised language and geography as obstacles to attaining higher education levels. These factors did not arise in the assessment of factors influencing access. Apparently, educational facilities in rural areas and the quality of teaching are poor compared to urban areas. Thus, when rural students want to obtain higher education they feel less qualified compared to their urban peers. Moreover, post-basic education institutions are rather far away and students lack transportation to get there. Thus, they not only feel less qualified than their urban peers, but they also lack the physical infrastructure to attain higher education. In addition, languages used in the villages differ from those used in urban areas, where Nepali is the language most commonly used. Language interacts with urban-rural differences, since minority language-speaking students ought to acquire Nepali, the primary language of instruction. Often students have a different mother tongue than their teachers which complicates learning Nepali. In addition, students also need to study English. English is necessary if aspiring to attain higher levels of education. Yet, students from rural areas with minority mother tongues struggle already to learn Nepali. Caste-based challenges were raised within the homogenous Dalit group but remained unmentioned in focus groups with mixed castes. This highlights that caste is a sensitive social issue and only reluctantly pointed out by the affected, marginalized population groups.

The participatory weighing exercise among the student groups emphasized the same sociodemographic barriers to equity in education with regard to attainment which were also raised in the open discussion: Gender, poverty and parents are seen to be the three major factors impeding attaining higher education, followed by language, urban-rural discrepancies and caste. Caste was chosen most often within the Dalit group, thus manifesting the latent discrimination which low castes still experience in Nepal.

In sum, the student groups raised the impeding role of a variety of the established variables. Beyond the three major determinants of inequity as perceived by the students, i.e. gender, poverty and parents, additional established variables were always chosen by some students. This distinguishes the student focus groups from those with out-of-school children, who raised poverty as sole major barrier to access.

V.2.2 Focus Groups: Parents

The focus group discussions and participatory assessments with mothers and fathers differed from the discussions with students in that they emphasized poverty as a major barrier to higher education. Low socio-economic status including poverty and a lack of parents' education played a role with regard to the material challenges of affording higher education, but also with regard to parents' perceived inability to support children adequately due to their own lack of knowledge. Some parents admitted not understanding the importance of education, wondering what difference it makes to a child's life. On the contrary, few parents mentioned that they want their children to be educated, because they themselves are not and therefore had to struggle in life and do not want their children to face the same challenges. With regard to the influence of parents on higher attainment, fathers put much emphasis on the guardian role of parents, stressing the need to support children not only financially but also through moral leadership.

In line with the children's comments, parents also raised that children need to contribute to household income generation and mentioned the increasing costs of education once children proceed to higher education levels. Financial insecurity was commonly perceived to threaten regular attendance and higher attainment. Furthermore, both mothers and fathers raised the challenge to afford additional necessary tutoring in order to compensate for the low performance of their children. Thus children are likely to fail and to drop out in the future.

Yet, although most emphasis was put on poverty-related challenges, parents also mentioned urban-rural discrepancies. Mothers perceived urban schools to be of higher quality, which makes it difficult for rural children to attain higher levels of education, since they cannot compete with better-educated urban students. In addition, distance to post-basic education institutions together with a lack of transportation was mentioned as impediment.

Also, as perceived by the students, language acts as a barrier to higher attainment. Whereas at home students speak minority languages, at the local school they have to use and learn Nepali. Yet, for higher education, the language of instruction in most cases is English, which many children are unable to understand fully.

Gender differences were mentioned by mothers and fathers, particularly with regard to early marriage and social norms and expectations of girls. Yet, overall parents appeared less critical of gender discrepancies than students. Parents raised gender-related barriers to higher education but seemed to accept them as social norms. Both mothers and fathers mentioned the social norm to marry girls at an early age (mostly before the age of 12). This is a common pattern among lower castes and also closely related to religion. In line with marriage comes the idea that girls then leave school and only have to dedicate themselves to household chores. Parents argued that due to social norms, once married, educational opportunities end. Some fathers and mothers consequently raised challenges to motivate their children to go to school. One mother quoted her daughter, arguing: “Why should I care about education? I will have to do household chores anyway when I grow up; why should I bother to learn to read? I will not need it!” This perception of life paths due to gender roles highlights the strong influence of social norms.

Another mother quoted her child wondering: “Why should I study, I won’t have any job opportunities afterwards anyway?” This indicates also a perceived lack of employment opportunities as impediment to attaining higher degrees.

Beyond sociodemographic attributes, fathers also raised the role of discipline and ability as factors influencing attainment. Thus, despite significant barriers to equity due to sociodemographic factors, the two variables which should influence educational success were still seen to be important.

Contrary to the students who emphasized the interaction of poverty, parents and gender in the weighing-of-variables-exercise, the most influential factor identified by the parents was clearly poverty. Poverty received more than three times the number of votes compared to the subsequent variables, language and parents.

In conclusion, the qualitative research via focus group discussions and participatory “weighing-of-variables”-exercises confirms Epstein (2010) regarding barriers to equity in education due to wealth, geography and gender. It also highlights the relevance of further

group characteristics. In line with Epstein (2010), poverty seems to be a major impediment for equity in education both with regard to access and attainment. However, while poverty was perceived the single most influential determinant regarding access, barriers confronted by students seem to be more diversified. Geography matters for attainment. Distance to post-primary education institutions, the lack of available transport as well as insufficient quality of rural facilities were perceived to cause inequitable opportunities. Gender-related social norms such as early marriage also clearly and severely impede educational equity regarding access and attainment. In addition to these three variables, further group characteristics negatively affect higher attainment, the most important ones being caste and language.

Whereas the causal channels of the negative impact of material poverty and rural remoteness on educational equity are straightforward, some questions arose during the qualitative assessment. Firstly, the influence of parents beyond their wealth status and own education background seems very powerful. Parents seem to transmit social norms across generations to their children, which impede their educational opportunities. In fact, often the discussion brought to light that it seemed like communities and neighbors influence each other via peer pressure with resentments against educating children, particularly girls. Subjective perceptions and social norms appeared very influential, sometimes hinting towards self-fulfilling prophecies, for instance with respect to gender expectations or caste hierarchies. Secondly, the issue of the role of education for Nepali society arose. Education and its long-term return are commonly weighed against immediate returns to income generation. Ideas of inter-generational social upward mobility and increasing opportunities do not appear to be common ideas held within the parts of society discussed with.

The discussions proved the need to consider interacting determinants of inequity. Poverty, parents and gender were in almost all cases connected and inseparable in influence. Participants from marginalized communities, first and foremost from low castes, also perceived gender roles as major barriers as well as material poverty in addition to speaking minority mother tongues, living in remote villages and having uneducated parents who perceive education to be of low-value. Thus, equity analyses must consider mutually reinforcing and cross-cutting barriers to equitable education due to persons' holding numerous sociodemographic attributes.

CHAPTER VI CONCLUSION AND RECOMMENDATIONS

VI.1 POLICY RECOMMENDATIONS

The data analysis provides factual information which children in Nepal face inequity in education. The qualitative part identified causal channels for the quantitative findings which should be targeted to alleviate these disparities. Policies should address three major barriers identified, which correlate with certain sociodemographic attributes: Financial barriers, socio-cultural barriers and physical barriers.

VI.1.1 Reform Government Scholarship Scheme

In order to address financial barriers whilst being sensitive to mutually reinforcing effects of various sociodemographic attributes, I recommend reforming the current scholarship scheme towards better targeting of scarce resources. The scheme consists of multiple parallel programs which include scholarships for Dalits, girls and students with disabilities as well as scholarships “for children from marginalized groups” (MoE 2012a, 30-31). Evaluations have shown that the current scheme yields deficiencies, although its overall impact is positive and desirable (Acharya 2012; ERDCN 2011; CEIR 2007). One weakness particularly impeding equity in education is that in practice, funds are commonly distributed *equally* among students. Schools tend to give money to or buy things on behalf of all children. Thus, students receive a small payment, which is inadequate to cover the applicable costs for a poor student, particularly if s/he holds multiple disadvantaged attributes. The program lacks sophisticated targeting to meet the most marginalized students. Further, school-level stakeholders are not informed enough on how to identify these groups and distribute the financial aid. I therefore recommend implementing the following reform:

1. Change the program structure:

- Merge the parallel scholarship schemes. Introduce one scheme, where targeting is sensitive to multiple sociodemographic characteristics.
- Distribute scholarships equitably instead of equally. Focus should be put on: household wealth, girls especially beyond basic education, Muslim children, children with disabilities and children from low castes. The overall financial support should reflect if a child combines multiple characteristics – instead of lump sum payments, multiply

disadvantaged children should receive higher scholarships than less disadvantaged groups (e.g. poor Dalit girl with disability compared to poor girl).

- Based on available household data, marginalized population groups can be identified by the Ministry of Education. The budget for the scheme can then be planned accordingly.
- Request schools to establish a database documenting their students with all sociodemographic and performance indicators. Target and distribute scholarships accordingly. Regularly updated, this also helps monitoring potentially eligible and actually receiving students.
- Develop clear targeting and implementation guidelines including a manual for selection of scholars and distribution of funds.
- Monitor that scholarships are distributed equitably and according to the guidelines.

2. Broaden the scheme

- Complement financial support by immaterial support. The scheme should include skill development trainings e.g. on small enterprise development as well as empowerment workshops for marginalized student groups e.g. for girls and low caste students. These could be implemented in cooperation with local non-governmental organizations (NGOs). Thus, e.g. also girls from richer households not receiving any financial aid could participate in workshops on gender since they also face socio-cultural barriers.
- Provide an annual award for outstanding students to encourage effort and ability independent of sociodemographic characteristics and need. The assessment criteria should take performance into account as well as role model functions and moral leadership skills. Students should be involved in the selection process, e.g. by voting on a “team player” criterion.

VI.1.2 Introduce Awareness-Raising Program

Many quantitatively detected correlations between group characteristics and inequity are based on socio-cultural norms and practices, particularly concerning girls, low caste children, Muslim children and children with disabilities. Households see little value in investing in education for these groups for reasons mentioned above – low access and attainment rates are

based on parents' and communities' perceptions of the low value of education for these children. It is therefore important to address the low priority given to schooling and perceptions of low returns to education shared among communities and imposed by parents upon their children. I recommend developing a parent and community awareness-raising program in order to increase equitable access and attainment by reducing socio-cultural barriers.

- Target this campaign at those groups with the lowest access rate: Muslims, minority language speakers, low castes, parents of children with disabilities, and poor households to encourage them to invest in long-term returns to education.
- Conduct the program in collaboration with local NGOs, since knowledge about local social norms and specific community contexts is required. Local leaders, who are recognized moral authorities, should be mobilized to support this program. Similarly, mobilizers such as UNICEF Young Champions should be engaged.
- Include information on advantages of education, such as social upward mobility, as well as cost-free ways how parents can support their children's education. Provide information and ideas to families how to help students at home with homework and other curriculum-related activities, decisions and planning. Communicate the importance of motivation, encouragement and praise, interest in and follow up on assignments and demonstration of interest in school activities. This not only increases children's motivation but also parents' sense of ownership and responsibility for their children's education.
- Activities should include the increased use of media to spread information. Further, community leaders, Young Champions and other stakeholders, e.g. teachers, should visit households and community meetings to raise awareness and social acceptance for sending marginalized children to school, to support parents and counsel them.
- Design structured school-to-home and home-to-school communication with all families each year about school programs and children's progress. Since many parents are illiterate, an interactive approach is necessary. However, institutionalized, regular personal exchange increases a sense of responsibility and ownership among all stakeholders.

- Combine the already existing ‘Welcome to School’-campaign with respective information as well as information on available support structures once children are enrolled, e.g. the scholarship program.

VI.1.3 Increase Efforts to Decrease Physical Barriers

Physical barriers related to sociodemographic attributes particularly concern children from minority language speaking households, children with disabilities and children in rural areas. I recommend the following measures:

- Further extend the development, distribution and application of multilingual teaching and learning materials, including free multilingual textbook provision beyond basic education.
- Construct accessibly. The 2012-2013 ASIP directs large sums to school construction (MoE 2012a). Any new school building should be built accessibly for children with disabilities.
- Provide easy means of public transport (in road-accessible areas): Consider the provision of bicycles for children, who face a long distance to secondary school but attempt to attend post-basic education. Bicycles could be let by schools as well as VDCs.

VI.1.4 Complement Findings with Research on Educational Quality

This paper has focused on the analysis of the relation between sociodemographic variables and equity in education in Nepal. To obtain a comprehensive foundation for the UNICEF strategy, further research should explore what happens inside school, i.e. educational quality aspects including inequitable treatment. Unless there is an affirmative attitude among teachers towards equity and inclusion in education, measures to increase demand for education will only meet those children who are not being disadvantaged at school, since discriminated against students will most likely drop out. In fact, disadvantaged children and their parents are likely to be more sensitive to the quality of education. Parents already face a trade-off between sending children to school and income generation but this is even more so if teaching quality is poor and they feel that children are mistreated.

- Therefore, I recommend assessing teacher training curricula and their implementation for their contents on equity and inclusion.
- Based on this assessment, a teacher training component to sensitize teachers on contents such as inclusive education, gender mainstreaming, different religions and diversity management techniques should be developed. This strengthens teachers' knowledge and increases trust of parents and communities in the education system, if they feel schools are treating their children equitably while being sensitive to culture-specific issues, e.g. relating to Muslim girls.

VI.2 CONCLUSION

This paper explored which sociodemographic attributes impede equity in education in Nepal. Using Epstein's (2010) typology as analytical framework, the role of wealth, geography, gender and further group characteristics has been assessed using the NLSS 2010/11 and supplementary qualitative assessments.

The major hypothesis underlying this paper could be confirmed: In Nepal, sociodemographic characteristics are strongly and significantly related with educational access and attainment. While wealth, geography and gender do matter, further culture-specific attributes must be added to the equation. Poverty remains a, if not the, major barrier to equity in education. Geography does matter, but its effect is two-dimensional: Children in rural and urban areas suffer from educational inequity. Whereas infrastructure is insufficient in rural areas, urban poor children trade off education against income generation. Although gender differences have decreased with regard to access, girls are still significantly disadvantaged when it comes to higher attainment. The impeding effects of the established attribute trilogy increase further when cross-cutting with additional disadvantaged group characteristics. In Nepal, "bad luck" quite literally "comes in threes" regarding impediments to equity in education due to sociodemographic attributes. Increased attention should thus particularly be paid to marginalized population groups, who face socio-cultural (particularly low castes and Muslims), physical (rural students, minority language speakers and children with disabilities) as well as financial barriers, in most cases mutually reinforcing each other (e.g. Muslims are in low castes speaking minority language). Caste, although abolished officially, still strongly pervades Nepalese society and impedes equitable educational opportunities.

Nepalese policy-makers should take into account comprehensive data on all relevant sociodemographic attributes to tailor policies so that they also reach marginalized children. Besides, norms-based socio-cultural barriers to equity in education and perceptions of a low-value of education should be addressed. Otherwise it will be hard to achieve core international commitments and adhere to international human rights standards.

REFERENCES

- Acharya, Sushan. 2007. *Social inclusion. Gender and equity in education SWAp in South Asia*. Kathmandu: UNICEF.
- Ahmed, Salma; Ray, Ranjan. 2011. 'Trade-off between Child Labour and Schooling in Bangladesh: Role of Parental Education.' *Monash Economics Working Papers* 21 (11), Victoria: Monash University.
- Angrist, Joshua D.; Pischke, Jörn-Steffen. 2008. *Mostly Harmless Econometrics. An Empiricist's Companion*. Princeton, N.J.: Princeton University Press.
- Bamberger, Michael. 2000. *Integrating Quantitative and Qualitative Research in Development Projects*. Washington, D.C: World Bank.
- Bandyopadhyay, Madhumita; Subrahmanian, Ramya. 2008. *Gender Equity in Education. A Review of Trends and Factors*. Brighton: Consortium for Research on Educational Access, Transitions and Equity; University of Sussex.
- Barriga, Shantha Rau. 2011. *Futures stolen. Barriers to Education for Children with Disabilities in Nepal*. New York, N.Y: Human Rights Watch.
- Bennett, Lynn. 2006. *Unequal Citizens. Gender, Caste and Ethnic Exclusion in Nepal*. Kathmandu: Department for International Development; World Bank.
- Bertini, Catherine. 2011. *Girls Grow. A Vital Force in Rural Economies. A Girls Count Report on Adolescent Girls*. Chicago, IL: The Chicago Council on Global Affairs.
- Bhattachan, Krishna B.; Sunar, Tej B.; Bhattachan (Gauchan), Yasso K. 2009. 'Caste-based Discrimination in Nepal.' *Working Paper Series Indian Institute of Dalit Studies* 3 (8), New Delhi: Indian Institute of Dalit Studies.
- Bista, Dor Bahadur. 1972. *People of Nepal*. Kathmandu: Ratna Pustak Bhandar.
- Breen, Richard; Jonsson, Jan O. 2005. 'Inequality of Opportunity in Comparative Perspective. Recent Research on Educational Attainment and Social Mobility.' *Annual Review of Sociology* 31 (1): 223-243.
- Burde, Dana; Linden, Leigh. 2012. 'The Effect of Village-Based Schools. Evidence from a randomized controlled trial in Afghanistan.' *NBER Working Paper Series* (18039), Cambridge, MA: The National Bureau of Economic Research.
- Cameron, Stuart. 2010. *Access to and Exclusion from Primary Education in Slums of Dhaka, Bangladesh*. Brighton: Consortium for Research on Educational Access, Transitions and Equity; University of Sussex.
- Central Bureau of Statistics (CBS). 2011. *National Population and Housing Census 2011*. Kathmandu: Government of Nepal.
- Central Bureau of Statistics (CBS); World Bank. 2010. *Nepal Living Standards Survey 2010-2011*. NPL-CBS-NLSS-2010-11-v01. Kathmandu: Government of Nepal.
<http://www.cbs.gov.np/nada/index.php/catalog/37> (accessed 1 March 2013).

- Centre for Educational Innovations and Research (CEIR). 2007. *The Effectiveness of the School Level Scholarship and Incentive Programs of the Government of Nepal*. Report prepared for the Department of Education. Kathmandu: Department of Education.
- Centre for Research, Education and Development (CRED). 2005. *Mother Tongue Intervention at Primary Level*. Report prepared for the Department of Education. Kathmandu: Department of Education.
- Chisamya, Grace; DeJaeghere, Joan; Kendall, Nancy; Khan, Marufa Aziz. 2012. 'Gender and Education for All. Progress and Problems in achieving Gender Equity.' *International Journal of Educational Development* 32 (6): 743-755.
- Consortium for Research on Educational Access, Transitions and Equity (CREATE). 2011. *Making Rights Realities. Researching Educational Access, Transitions and Equity*. Brighton: University of Sussex.
- Croft, Alison. 2013. 'Promoting access to education for disabled children in low-income countries. Do we need to know how many disabled children there are?' *International Journal of Educational Development* 33(3): 233-243.
- Educational Resource and Development Centre Nepal (ERDCN). 2011. *A Study on Effectiveness of Girls' Scholarship Program*. Report prepared for the Department of Education. Kathmandu: Department of Education.
- Epstein, Andrew (2010): *Making the Case for an Equity Focus in Education*. New York, N.Y.: UNICEF.
- Field, Simon; Kuczera, Malgorzata; Pont, Beatriz. 2007. *No More Failures. Ten Steps to Equity in Education*. Paris: OECD Publishing.
- Filmer, Deon; Pritchett, Lant. 1999. 'The Effect of Household Wealth on Educational Attainment. Evidence from 35 Countries.' *Population and Development Review* 25 (1): 85-120.
- Full Bright Consultancy (FBC). 2009. *A Study on the Identification of Out of School Children and Possible Measures for bringing them into Formal and Non-Formal Education System*. Report prepared for the Department of Education. Kathmandu: Department of Education.
- Galiani, Sebastian; Perez-Truglia, Ricardo. 2011. 'School Management in Developing Countries.' *Working Paper*. <http://ssrn.com/abstract=1972459> (accessed 1 March 2013).
- Geilfus, Frans. 2008. *80 Tools for Participatory Development. Appraisal, Planning, Follow-up and Evaluation*. San Jose: Inter-American Institute for Cooperation on Agriculture.
- Glewwe, Paul; Hanushek, Eric A.; Humpage Sarah D.; Ravina Renato. 2011. 'School Resources and Educational Outcomes in Developing Countries. A Review of the Literature from 1990 to 2010.' *NBER Working Paper Series* (17554), Cambridge, MA: The National Bureau of Economic Research.
- Government of Nepal (GoN). 2007. *Interim Constitution of Nepal*. http://www.worldstatesmen.org/Nepal_Interim_Constitution2007.pdf (accessed 20 November 2012).

- Halai, Anjum. 2011. 'Equality or Equity: Gender awareness issues in secondary schools in Pakistan.' *International Journal of Educational Development* 31 (1): 44-49.
- Hanna, Rema; Linden, Leigh. 2009. 'Measuring Discrimination in Education.' *NBER Working Paper Series* (15507). Cambridge, MA: The National Bureau of Economic Research.
- Hanushek, Eric A.; Luque, Javier A. 2003. 'Efficiency and Equity in Schools around the World.' *Economics of Education Review* 22 (5): 481-502.
- Horn, Daniel. 2008. 'Age of Selection Counts. A Cross-Country Comparison of Educational Institutions.' *MZES Working Papers* (107). Mannheim: Mannheimer Zentrum für Europäische Sozialforschung.
- Hossain, Altaf; Zeitlyn, Benjamin. 2010. *Poverty, Equity and Access to Education in Bangladesh*. Brighton: Consortium for Research on Educational Access, Transitions and Equity; University of Sussex.
- Jacoby, Hanan G.; Mansuri, Ghazala. 2011. 'Crossing Boundaries. Gender, Caste and Schooling in Rural Pakistan.' *World Bank Policy Research Working Paper* (5710). Washington, D.C.: World Bank.
- Kabeer, Naila; Mahmud, Simeen. 2009. 'Imagining the Future: Children, Education and Intergenerational Transmission of Poverty in Urban Bangladesh.' *IDS Bulletin* 40 (1): 10-21.
- Kadel, Sadananda; Mahat, Bal Mukunda. 2011. *Scaling Up Early Child Development in Nepal. Scaling Up Community- and School-Based Early Childhood Development Centers in Nepal*. Kathmandu: UNICEF.
- Kapila, Sachin; Lyon, Fergus. 1994. *People oriented research*. London: Expedition Advisory Centre.
- Lamichhane, Kamal. 2012. 'Employment situation and life changes for people with disabilities: evidence from Nepal.' *Disability & Society* 27 (4): 471-485.
- Lee, Wing On. 2003. 'Equity and Access to Education: Themes, Tensions and Policies.' In *Education in Developing Asia*, ed. David Chapman, Don Adams. Vol. 4. Manila; Hong Kong: Asian Development Bank; Comparative Education Research Centre.
- Levin, Ben. 2003. *Approaches to Equity in Policy for Lifelong Learning*. Paper prepared for the OECD Education and Training Policy Division. Paris: OECD.
<http://www.oecd.org/edu/preschoolandschool/38692676.pdf> (accessed 15 October 2012).
- Litosseliti, Lia. 2003. *Using Focus Groups in Research*. London; New York: Continuum.
- Lohani, Shiva; Singh, Ram Balak; Lohani, Jeevan. 2010. 'Universal primary education in Nepal. Fulfilling the right to education.' *Prospects* 40 (3): 355-374.
- Lucas, Samuel R.; Beresford, Lauren. 2010. 'Naming and Classifying. Theory, Evidence, and Equity in Education.' *Review of Research in Education* 34 (1): 25-84.
- Ministry of Education (MoE). 2009. *School Sector Reform Plan 2009-2015*. Kathmandu: Government of Nepal.
http://planipolis.iiep.unesco.org/upload/Nepal/Nepal_School_Sector_Reform_2009.pdf (accessed 1 March 2013).

- Ministry of Education (MoE). 2012a. *Annual Strategic Implementation Plan 2012-2013*. ASIP. revised Final Draft 13 June 2012. Kathmandu: Government of Nepal.
- Ministry of Education (MoE). 2012b. *School Level Educational Statistics of Nepal. Flash Report 2068-2069*. Kathmandu: Government of Nepal.
http://www.doe.gov.np/files/Files/Consolidated%20Report%202068%20%28%202011%29_1346397795.pdf (accessed 1 March 2013).
- Nichols, Ann-Marie. 2012. *Situational Analysis of Religious School Education in Nepal*. Kathmandu: European Union, UK AID.
- Pfeffer, Fabian T. 2008. 'Persistent Inequality in Educational Attainment and its Institutional Context.' *European Sociological Review* 24 (5): 543-565.
- Pivovarova, Margarita. 2011. 'Caste, Gender and School Enrollment. Evidence from the Nepalese Living Standard Survey.' *Working Paper*.
http://individual.utoronto.ca/pivovarova/caste_june11.pdf (accessed 10 October 2012).
- Porta, Emilio; Arcia, Gustavo; Macdonald, Kevin; Radyakin, Sergiy; Lokshin, Michael. 2011. *Assessing Sector Performance and Inequality in Education*. Washington, D.C: World Bank.
- Ramachandran, Vimala. 2012. 'Evaluating Gender and Equity in Elementary Education: Reflections on Methodologies, Processes and Outcomes.' *Indian Journal of Gender Studies* 19 (2): 233-258.
- Rekha, Dayal; van Wijk, Christine; Mukherjee, Nilanjana. 1998. *Methodology for Participatory Assessments with Communities, Institutions and Policy Makers. Linking Sustainability with Demand, Gender and Poverty*. Metguide. Washington, D.C: World Bank.
- Roemer, John E. 1998. *Equality of Opportunity*. Cambridge, MA: Harvard University Press.
- Santwona Memorial Academy (SMA). 2011. *A Study on Identifying Targeted Interventions for Ensuring Students Retention in the Classroom*. Report prepared for the Department of Education. Kathmandu: Department of Education.
- Shields, Robin; Rappleeye, Jeremy. 2008. 'Uneven Terrain. Educational Policy and Equity in Nepal.' *Asia Pacific Journal of Education* 28 (3): 265-276.
- Singh, Kishore. 2011. 'The Promotion of Equality of Opportunity in Education.' *Report of the Special Rapporteur on the Right to Education*. United Nations General Assembly, 18 April 2011 (A/HRC/17/29).
- Subrahmanian, Ramya. 2005. 'Gender Equality in Education: Definitions and Measurements.' *International Journal of Educational Development* 25 (4): 395-407.
- United Nations (UN). 1948. *Universal Declaration of Human Rights*. UDHR.
<http://www.un.org/en/documents/udhr/index.shtml> (accessed 21 September 2012).
- United Nations (UN). 2000. *United Nations Millennium Declaration*. MDGs.
<http://www.un.org/millenniumgoals/education.shtml> (accessed 21 September 2012).
- United Nations Children's Fund (UNICEF). 2010a. *Narrowing the Gaps to meet the Goals*. New York, N.Y.: UNICEF.

- United Nations Children's Fund (UNICEF). 2010b. 'Achieving the MDGs with Equity.' *Progress for Children* (9). New York, N.Y.: UNICEF.
- United Nations Children's Fund (UNICEF). 2010c. *Re-focusing on Equity. Questions and Answers*. New York, N.Y.: UNICEF.
- United Nations Children's Fund (UNICEF) (2012): *Annual Report for Nepal 2011*. Kathmandu: UNICEF.
- United Nations Development Program (UNDP). 2011. *Gender Inequality Index and related Indicators*. <http://data.un.org/DocumentData.aspx?q=HDI&id=273#15> (accessed 10 January 2013).
- United Nations Development Program (UNDP). 2012. *Human Development Index. 2012 Rankings*. <http://hdr.undp.org/en/statistics/> (accessed 10 January 2013).
- United Nations Educational, Scientific and Cultural Organization (UNESCO), ed. 2000. *Education for All Goals*. Paris: UNESCO. <http://www.unesco.org/new/en/education/themes/leading-the-international-agenda/education-for-all/efa-goals/> (accessed 21 September 2012).
- United Nations Educational, Scientific and Cultural Organization (UNESCO). 2009. 'Overcoming Inequality. Why Governance Matters.' *Education for All Global Monitoring Report*. Paris: UNESCO.
- United Nations Educational, Scientific and Cultural Organization (UNESCO). 2012. *Why Language Matters for the Millenium Development Goals*. Bangkok: UNESCO.
- Vaish, Viniti; Gupta, Renu. 2008. 'Education in South Asia. Equity, Policy, Pedagogy.' *Asia Pacific Journal of Education* 28 (3): 213-215.
- Vogel, Ann; Korinek, Kim. 2012. 'Passing by the Girls. Remittance Allocation for Educational Expenditures and Social Inequality in Nepal's Households 2003-2004.' *International Migration Review* 46 (1): 61-100.
- Woessmann, Ludger; Schuetz, Gabriele. 2006. 'Efficiency and Equity in European Education and Training Systems'. *EENEE Analytical Report* (1). European Expert Network on Economics of Education.
- Wooldridge, Jeffrey M. 2002. *Introductory Econometrics. A Modern Approach*. 2nd ed. Cincinnati, OH: South-Western College Publications.
- World Bank. 2005. 'Equity and Development.' *World Development Report 2006*. http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2005/09/20/000112742_20050920110826/Rendered/PDF/322040World0Development0Report02006.pdf (accessed 3 September 2012).
- World Bank. 2011. *Country Data Nepal*. <http://data.worldbank.org/country/nepal> (accessed 10 October 2012).

APPENDIX

APPENDIX 1: Relation between Caste, Language and Religion

Language	Caste			Total
	Low Caste	Middle Caste	High Caste	
Nepali	2,549 15.5%	3,585 21.9%	10,273 62.6%	16,407 100.0%
Maithili	884 30.0%	1,913 65.0%	146 5.0%	2,943 100.0%
Bhojpuri	734 36.1%	1,248 61.4%	51 2.5%	2,033 100.0%
Tharu (Dagaura)	12 1.0%	1,166 98.4%	7 0.6%	1,185 100.0%
Tamang	0 0.0%	1,107 99.6%	4 0.4%	1,111 100.0%
Newar	1 0.1%	14 0.9%	1,578 99.1%	1,593 100.0%
Other	525 17.3%	2,318 76.5%	189 6.2%	3,032 100.0%
Total	4,705 16.6%	11,351 40.1%	12,248 43.3%	28,304 100.0%

Religion	Caste			Total
	Low Caste	Middle Caste	High Caste	
Hindu	3,523 14.9%	8,370 35.3%	11,812 49.8%	23,705 100.0%
Bouddha	13 0.6%	1,900 84.6%	332 14.8%	2,245 100.0%
Islam	1,056 96.2%	26 2.4%	16 1.5%	1,098 100.0%
Other	113 9.0%	1,055 84.0%	88 7.0%	1,256 100.0%
Total	4,705 16.6%	11,351 40.1%	12,248 43.3%	28,304 100.0%

APPENDIX 2: Access Results obtained from Probit Model

Variable		Dependent Variable: Access									
		Wealth	Rural	Gender	Epstein	Caste	Language	Religion	Disability	Region	Full Model
Standard Variables	Wealth	0.303*** (0.020)			0.300*** (0.022)	0.265*** (0.023)	0.287*** (0.024)	0.307*** (0.023)	0.306*** (0.022)	0.342*** (0.024)	0.300*** (0.027)
	Rural		-0.373*** (0.062)		-0.023 (0.071)	-0.050 (0.072)	-0.072 (0.073)	-0.057 (0.073)	-0.012 (0.072)	-0.050 (0.075)	-0.084 (0.076)
	Female			-0.092** (0.047)	-0.073 (0.049)	-0.089* (0.050)	-0.082 (0.051)	-0.084* (0.050)	-0.082* (0.050)	-0.064 (0.050)	-0.108** (0.053)
Caste	Mid Caste					0.222*** (0.057)					0.123 (0.077)
	High Caste					0.748*** (0.075)					0.314*** (0.092)
Language	Maithili						-0.873*** (0.071)				-0.868*** (0.108)
	Bhojpuri						-0.817*** (0.077)				-0.650*** (0.104)
	Tharu						0.003 (0.145)				-0.012 (0.164)
	Tamang						-0.434*** (0.122)				-0.474** (0.240)
	Newar						0.251 (0.371)				0.227 (0.391)
	Other Language						-0.585*** (0.074)				-0.604*** (0.098)
Religion	Buddhist							-0.015 (0.104)			0.219 (0.214)
	Muslim							-0.820*** (0.085)			-0.376*** (0.110)
	Other Religion							-0.150 (0.104)			-0.126 (0.128)
PwD	With Disability								-0.864*** (0.130)		-0.995*** (0.139)
Region	Eastern									0.418*** (0.069)	0.498*** (0.084)
	Western									0.452*** (0.074)	0.406*** (0.086)
	Mid-Western									0.434*** (0.077)	-0.005 (0.099)
	Far-Western									0.780*** (0.101)	0.178 (0.124)
Constant		0.812*** (0.049)	1.837*** (0.056)	1.590*** (0.034)	0.876*** (0.097)	0.708*** (0.101)	1.328*** (0.102)	0.972*** (0.099)	0.888*** (0.097)	0.482*** (0.110)	1.047*** (0.132)
Observations		7194	7194	7194	7194	7194	7194	7194	7194	7194	7194
PseudeR2		0.08	0.01	0.00	0.08	0.11	0.15	0.11	0.09	0.11	0.20
LogLikelihood		-1530.624	-1643.882	-1661.957	-1529.486	-1473.630	-1414.217	-1486.434	-1508.408	-1481.271	-1339.396

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

APPENDIX 3: Attainment Results obtained from Ordered Probit Model

Variables		Dependent Variable: Attainment									
		Wealth	Rural	Gender	Epstein	Caste	Language	Religion	Disability	Region	Full Model
Standard Variables	Wealth	0.262*** (0.018)			0.269*** (0.019)	0.227*** (0.020)	0.248*** (0.021)	0.272*** (0.020)	0.273*** (0.019)	0.314*** (0.021)	0.254*** (0.023)
	Rural		-0.268*** (0.054)		0.066 (0.062)	0.052 (0.063)	0.031 (0.063)	0.044 (0.063)	0.075 (0.062)	0.044 (0.065)	0.028 (0.066)
	Female			-0.091** (0.043)	-0.069 (0.045)	-0.085* (0.046)	-0.070 (0.047)	-0.077* (0.046)	-0.078* (0.045)	-0.064 (0.046)	-0.093* (0.048)
Caste	Mid Caste					0.229*** (0.053)					0.140** (0.070)
	High Caste					0.774*** (0.068)					0.412*** (0.084)
Language	Maithili						-0.846*** (0.065)				-0.740*** (0.095)
	Bhojpuri						-0.803*** (0.071)				-0.515*** (0.093)
	Tharu						0.016 (0.133)				0.037 (0.147)
	Tamang						-0.514*** (0.107)				-0.511*** (0.197)
	Newar						-0.239 (0.189)				-0.253 (0.201)
	Other Language						-0.564*** (0.068)				-0.485*** (0.086)
Religion	Buddhist							-0.080 (0.090)			0.249 (0.174)
	Muslim							-0.787*** (0.080)			-0.323*** (0.101)
	Other Religion							-0.070 (0.101)			-0.032 (0.120)
PwD	With Disability							-0.828*** (0.125)			-0.945*** (0.131)
Region	Eastern									0.382*** (0.063)	0.438*** (0.076)
	Western									0.330*** (0.066)	0.263*** (0.078)
	Mid-Western									0.470*** (0.073)	0.083 (0.091)
	Far-Western									0.828*** (0.096)	0.285** (0.115)
	Cut Point 1	-0.790*** (0.047)	-1.651*** (0.048)	-1.490*** (0.032)	-0.758*** (0.087)	-0.580*** (0.090)	-1.197*** (0.092)	-0.843*** (0.088)	-0.773*** (0.087)	-0.373*** (0.099)	-0.824*** (0.121)
	Cut Point 2	-0.767*** (0.046)	-1.629*** (0.048)	-1.469*** (0.032)	-0.736*** (0.086)	-0.556*** (0.090)	-1.173*** (0.091)	-0.819*** (0.088)	-0.750*** (0.087)	-0.350*** (0.098)	-0.799*** (0.120)
	Observations	7194	7194	7194	7194	7194	7194	7194	7194	7194	7194
	Pseudo R2	0.06	0.01	0.00	0.06	0.10	0.12	0.08	0.07	0.09	0.16
	Log Likelihood	-1930.542	-2042.155	-2052.904	-1928.751	-1856.179	-1801.352	-1884.396	-1907.609	-1873.052	-1728.145

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

Statement of Authorship

I hereby confirm and certify that this master thesis is my own work. All ideas and language of others are acknowledged in the text. All references and verbatim extracts are properly quoted and all other sources of information are specifically and clearly designated.

DATE:

NAME:

SIGNATURE: