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An Assessment of the Causes of Conflict in Nepal

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Abstract

With the end of cold war, the nature and consequences of conflict changed significantly. Today there is conflict more between the people of a country than between countries. Thus, the reasons of conflict are changing with the lapse of time. As the number of deaths owing to conflict has been accelerating in the recent decades, it is utmost important to look into its causes. Against this backdrop the present study makes a modest attempt to find out the causes and correlates of conflict and its intensity using data of a cross section of 75 districts of Nepal.

Started from two districts of Mid-Western Development Region in 1996, the Maoist conflict in Nepal spread all over the country within a decade. All the districts but two, Manang and Mustang, reported casualties. Its cost varies widely across regions and areas of country. The direct cost in terms of number of killings was highest in Mid-Western Development Region, and lowest in Eastern Development Region. The conflict intensifies with the mobilisation of army in 2001, leading to highest casualties in 2002, and higher killing by state compared to that of Maoist rebels. Political workers were at top of the list of people killed, followed with agricultural labourers, implying that poor are more vulnerable to conflict risk.

Across the districts, a wide variation in the number of people killed exists even in Mid-Western Development Region, implying that level and intensity of conflict depend on several factors. In this study, the results of regression model with level of insecurity as dependent variable found that economic, social and natural factors such as poverty incidence, income, food security, proportion of female in non-agricultural operation, composite development index, elevation, and caste polarisation are the variables that govern level of insecurity in a district. In particular, poverty incidence and low caloric intake are found positively associated with conflict, whereas an increase in income, share of female in non-agricultural occupation, composite development index, proportion of Janjati population and elevation dampen the likelihood of insecurity.

A separate model estimated with the number of people killed as the dependent variable has found a different set of variables affecting the intensity of conflict. Literacy rate and proportion of Janjati population have been found negatively related with the number of killings, implying that as they increase, the number of killings decreases. On the other hand, it has been found that an increase in food insecurity, share of female in non-agricultural occupation and proportion of forest area increases human insecurity. It is critical to note that the study found a positive association between proportion of female in non-agricultural operation and intensity of conflict, suggesting that increase in female's proportion in non-agricultural operation also enhances intensity of conflict. This finding needs further investigation as its effect was found negative when the dependent variable was the level of insecurity in a district. However, the finding that intensity is higher in a district, with larger proportion of forest area, is plausible and does not contradict with other studies.

Unlike many other empirical studies, a significant effect of caste and ethnicity dimension has been found in the study. It has been uncovered that as the proportion of indigenous population increases, the level of insecurity decreases. As the indigenous population consists of 59 ethnic groups, this indicates that when caste and ethnicity polarisation decreases the level of insecurity also decreases. Thus, one of the important value additions of this study is that it found social factor apart from economic factors as the correlate of conflict.

The policy implications of the findings of the study are that increasing employment and income opportunities, improving food security, decreasing caste polarisation, together with bringing political progression as per the comprehensive peace accord could prevent from conflict relapse in Nepal. If the state fails to meet rising expectations of people, it is difficult to bring long lasting peace in the country. This implies that recovery and reconstruction has to consider all the three dimensions of post conflict reconstruction– political, social and economic - in order to prevent from conflict relapse and ensure long lasting peace. This also vindicates the strategies taken by the Government of Nepal in the formulation of three-year interim plan, which focuses on creation of employment with the lens of inclusion and reintegration through massive investment in rehabilitation and reconstruction, and successive progression of the state.

INTRODUCTION

The nature and geography of conflict changed towards the end of the twentieth century. Before the end of cold war, conflicts used to occur between countries. Now conflict is within a country: among its people, or between the government and people. Therefore, now most of the victims are civilians rather than security forces. Human Development Report 1994 is a pioneering study that sets out a framework and advanced two components of human security: freedom from fear and freedom from want (UNDP, 1994). Today there is conflict within poor developing countries mainly because of want. This impedes their development.

Conflicts are rising in the world today. The 20th century is reported with 109.7 million conflict-related deaths, which are more than three times as many as that of the previous four centuries combined together (UNDP, 2005). Since 1990 more than three million people have died in armed conflicts (Do and Iyer, 2007). Therefore, understanding causes of onset and continuation of conflicts is of critical significance in improving policy and institutions in developing countries today.

Nepal has experienced a decade-long Maoist conflict started in February 1996 in the name of people's war. More than 13,000 people killed, and 200,000 people displaced; properties worth millions of dollars lost. However, Nepal enters into an era of post-conflict with the signing of comprehensive peace accord (CPA) on 21 November 2006. Now, there are series of tasks before the government for the operationalisation of agreement, including holding of the constituent assembly election, on the way to long lasting peace in the country. In this process, post conflict activities are to be planned and prioritized with a short run and long run focus and implemented effectively. Projects and programmes for reconstruction and rehabilitation are to be implemented to provide immediate relief to victims of conflict, and improve service delivery. The needs of vulnerable groups including internally displaced people, children and their rights are to be ensured. This should be followed with programmes on social and economic inclusion for enhancing capacity building and promoting social inclusion and thereby contributing to the attainment of Millennium Development Goals in the long run.

The government has recently prepared a three-year interim plan, which is indeed a post conflict rehabilitation and reconstruction plan. The four strategies of the plan are: relief and rehabilitation, social justice and inclusion, rehabilitation and reconstruction of infrastructures, and provision of additional and decent employment opportunities. However, a realistic formulation and honest implementation of the policies and programmes requires investigating into the root causes of conflict in Nepal.

In order to operationalise the CPA and offer a ground for long lasting peace, an enabling environment is a must, which requires a serious effort from the development partners for post conflict recovery. Such a concern appeared in the budget of FY 2006/07 and the white paper issued by the government in May 2006, which called for donors for their generous support in the process of rehabilitation and reconstruction. The 2006/07 budget allocated larger resources for

construction of rural infrastructure, and advanced the principle of *Road as a Basis of Rural Economy,* with rural infrastructure as the focus of budget.[1]

Recently, the National Planning Commission of Nepal has prepared an approach paper of three-year interim plan with a focus on reconstruction, rehabilitation, employment and inclusion. The vision of the interim plan is prosperous, modern and just Nepal which it aims to attain through preparing the base for economic and social transformation. The main objective of the plan is to make majority of the people feel direct change in their lives through decreasing unemployment and reducing poverty. In order to attain the objective, the plan adopts six strategies: (i) give special emphasis on peace, reconstruction and rehabilitation; (ii) prepare employment oriented, broad-based and inclusive economic base; (iii) promote peace and good governance; (iv) increase investment in the development of physical infrastructure; (v) adopt development process with social inclusion; and (vi) implement targeted programmes. The plan has given a prime focus on the election of constituent assembly to be held in November 2007. However, peace building, recovery and reconstruction is a herculean task requiring serious thought for its operationalisation. Among others, its success depends on how causes of conflict are addressed in recovery and reconstruction policies and programmes. Therefore, a serious effort is needed to investigate into the reasons of conflict in Nepal.

Studies conducted in the past suggest that people's expectation is higher during post-conflict situation. If the state fails to meet expectation, then it is likely that conflict will relapse. Collier and Hoeffler (2004A) found that there is 39 percent risk of conflict relapse in the first five years and additional 32 percent risk in the next five years of post conflict situation. This risk is higher than such a risk in a normal poor country, which is just 14 percent in the first five years. In view of this, it is necessary to investigate into the reasons for conflict in Nepal and feed the findings into preparation of the upcoming peace and reconstruction policies and subsequent implementation of the three-year interim plan, especially after the election of constituent assembly in November 2007.

There is a growing body of literature which first starts with a cross-country comparison and then moves towards a within country analysis of conflicts. Collier and Hoeffler (1999 and 1998) group potential causes of conflict into two categories: the quest for 'justice' and the quest for 'loot'. According to them, conflict is most likely where economic gains from it are high, and opportunity costs are low (Collier and Hoeffler, 1998). Based on such a framework, several studies have been performed at a cross country-level. Some of the early studies favoured justice as the reason; however, recent studies have come up with economic factors as the reasons for conflict. Nepal Human Development Report 2004 held that a mismatch between political, economic and social empowerment provided a ground for disillusionment among people (UNDP/Nepal, 2004).

[1] Provision of Middle Mountain road and Karnali Lighting Programme were some other rural infrastructure programmes that were included in the FY 2006/07 budget for the poor and deprived areas of Nepal. Besides, the budget has made provision for income generating programmes, community infrastructure development programme, creative activities programme for a target beneficiaries of 50,000 of 25 districts including seven from Far-Western Development Region and 10 from Mid-Western Development region.

After the start of Maoist conflict there is popular belief that caste and ethnicity-based discrimination, oppression and social exclusion are the reasons for conflict in Nepal. The thought under current is that such exclusion can be addressed only through the change in political system. Against the findings of NHDR 2004, such a thought does not seem to be a complete solution in a country like Nepal where poverty and inequality is high and many people are in dire need of quick economic relief. Therefore, apart from political and social reconstruction, economic reconstruction also seems to be the necessity.

Based on the framework of Collier and Hoeffler and successive researchers, some empirical studies on the determinants of conflict have been performed in Nepal. However, none of them is conclusive to find out whether conflict is mainly due to political and social reasons or economic reasons. In stead, many of them found economic reasons as the major stimuli for conflict in recent years. Thapa and Sijapati (2004) attributes conflict mostly to poverty and underdevelopment, and Collier and Hoeffler (1998) states that the underlying cause of civil wars is economic and not ethnicity. In their 2001 study, Collier and Hoeffler found that out of the two groups of factors, viz, grievances and opportunities, the opportunity related variables appear to be the predominant systematic explanation of rebellion. Similarly, Gersony (2003) finds that caste and ethnic sub-divisions are not major contributors to conflict. On the other hand, empirical works by Easterly (2004) and Easterly and Levine (1997) have concluded that ethnic fractionalization is one of the major causes of civil wars.

Parwez (2006) found life expectancy, income and road density as the factors explaining conflict. Do and Iyer (2007) also included some social variables to find out additional causes of conflict in Nepal. However, they conclude that the effect of social variables is weak and generally their effect appears through poverty. These two studies are based on old data. Again, there is significant difference in their finding relating to the effect of literacy or educational attainment. Do and Iyer found negative effect of literacy, whereas Parwez found a positive effect of educational attainment on the conflict.

The difference in the effect of literacy and educational attainment of the above two studies can be attributed to their methodologies including specification of models and variables. While Do and Iyer (2007) used literacy rate based on 1991 population census, Parwez (2006) used educational attainment data based on 2001-population census. The differences in findings could be due to: (i) literacy is a component of the educational attainment; and (ii) use of a continuous conflict variable (number of killed persons per thousand) by Do and Iyer, whereas a use of dummy dependent variable of phases of insecurity by Parwez. Apart from these two studies, there are some other studies undertaken on Nepalese conflict, however, they lack empirical footings. In view of the above, a modest effort is made to look into reasons and/or correlates of conflict in Nepal in this paper.

In this paper, the level and intensity of conflict has been regressed over some economic, social and infrastructure characteristics of 72 districts taking into account the framework as defined by the Collier and Hoeffler (1999).[2] The estimates of two sets of regression models with two

[2] There are 75 districts in Nepal, however, three districts, viz Rukum, Rolpa and Kalikot, have been excluded because the number of people killed per thousand of district population of the three districts has been found more than three standard deviations from the mean. Therefore, they have been treated as outliers in this paper.

dependent variables have helped to look into differences of results relating to the level and intensity of conflicts, and to look into robustness of estimates.
Following this introductory section, the second section of the paper provides a sketch of Maoist conflict in Nepal, and the third section reviews literature to weave conceptual framework and methodology, based on which following section summarises findings and come out with conclusions.

A BRIEF SKETCH OF MAOIST CONFLICT IN NEPAL

Nepal made some progress at an aggregate level on the front of income and human poverty. The incidence of poverty declined by 11 percentage points from 42 to 31 percent, and proportion of people earning less than one dollar a day decreased from 34 to 24 percent between 1995/96 – 2003/04 (CBS, 2005). Moreover, human development index (HDI) increased from 0.451 to 0.526, and Nepal graduated from low to medium level of human development during the period (UNDP, 2003 and 2005). This trend shows that Nepal is only 7 percentage points away from the MDG target (17%) of halving the proportion of people earning less than one dollar a day, indicating that it is on track in achieving the poverty target of the MDGs.

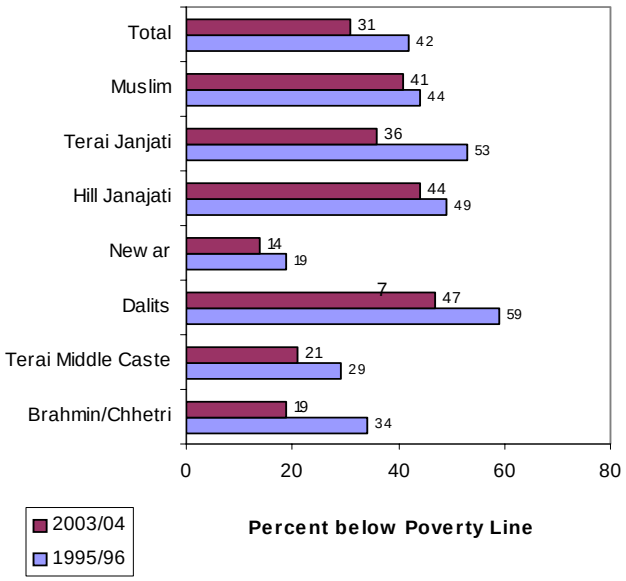
Table 1: Nepal: Poverty Measurement by Geographical Region, 1995/96 and 2003/04

Geographic Region	**Poverty Head Count rate (%)**		
Sector	**1995/96**	**2003/04**	**% Change**
Urban	21.6	9.6	-56
Rural	43.3	34.6	-20
NLSS Regions			
Kathmandu	4.3	3.3	-23
Other Urban	31.6	13.0	-59
Rural Western Hill	55.0	37.4	-32
Rural Eastern Hill	36.1	42.9	19
Rural Western Terai	46.1	38.1	-17
Rural Eastern Terai	37.2	24.9	-33
Development Region			
Eastern	38.9	29.3	-25
Central	32.5	27.1	-17
Western	38.6	27.1	-30
Mid-Western	59.9	44.8	-25
Far western	63.9	41.0	-36
Ecological Belt			
Mountain	57.0	32.6	-43
Hill	40.7	34.5	-15
Terai	40.3	27.6	-32
Nepal	41.8	30.8	-26

Source: Poverty Trends in Nepal (1995/96 – 2003/04), CBS, Sept 2005

However, inequality in Nepal increased by region, caste, gender and occupations during the period of 1995/96 – 2003/04 (Table 1, Figure 1 and Annex A). Although incidence of poverty decreased at national level, and in all the regions except the Eastern Hills during 1995/96 – 2003/04, there are wide variations between different parts of the country - from 3 percent in urban Kathmandu, 13 percent in other urban areas to 45 percent in the Mid-Western Development Region (CBS, 2005).

Figure 1: Trend of Poverty Incidence by Caste/Ethnicity, 1995/96 and 2003/04



Inequality is severe among economic groups ranging from 2 to 54 percent with major incidence on agricultural wage earners (53.8%) and self-employed agriculture operators (32.9%), consisting of about 87 percent of the poor. People from Janajati, Dalit, Madhesi and Muslim have a smaller share in technical, administrative and clerical occupations as compared to their share in the total economically active population (Annex A, Table 2). Thus, the Gini Coefficient, a measure of inequality, increased from 0.34 to 0.41.

Moreover, caste and ethnicity has been found as a significant factor influencing poverty (DFID and World Bank, 2005).[3] Variation in poverty by caste ranged from 19 percent among Brahmins and Chhetris to as high as 47 percent among Dalits (Figure 1). Households with larger dependency ratio or larger number of children, with smaller land holding, or with uneducated or less educated household heads, have also been found to be poorer. Apart from the incidence, the depth and severity of poverty is also highest among Dalits and certain Janjatis.

At the intra household level, the brunt of poverty is especially felt by women and children. Gender related differentials exacerbate the intensity and depth of poverty for the affected groups. NLSS data show that, on the average, female-headed households had only 0.5 hectare compared to 0.8 hectare of farmland with male-headed households. In terms of purchasing power parity, women's earned income is only half of that of men (PPP $ 949 vs. 1,868). Moreover, females of less than one percent of households own all the three assets - house, land and livestock (CBS, 2001). This has clear ramifications across all the goals of MDGs and calls for the need to engender the MDGs to arrest the inter-generational transmission of poverty.

Because of such an inequity among others, Maoist launched people's war since 13 February 1996. More than 13,000 people have been killed under the conflict, most of them were civilians. To address the issue of exclusion, social inclusion and targeted programmes appeared as one of the four basic strategic pillars of the 10th plan. However, implementation of the plan remains weak, as most development works could not take place at local level because the plan started with the intensification of conflict in 2002.

Consequently, average growth rate of the first four years of the 10th plan was low – about 3.4 percent. In fact, per capita income of the Nepalese people hardly increased in the last two fiscal years, 2005/06 and 2006/07, as the average growth rate for the two years was about 2.65 percent, a little more than population growth rate of 2.25 percent. Thus, restoring economic growth with equity and ensuring social inclusion has come forward as important development challenges for Nepal.

Maoist conflict in Nepal was started at a time when the economy was picking up with the effective implementation of economic reform measures. However, the growth was not a quality growth as it was not pro-poor. It could not sustain for a longer time because of lack of security – freedom from want. This boiled down to violent conflict and lack of personal security, leading to frustration and pessimism among people. This hints that economic growth is not the end of

[3] Poverty was deepest and the most severe among Dalits in 1996, whereas it was so in Hill Janjatis in 2004. Even for correcting the effects of some influencing factors, including land ownership, receipt of remittances, etc., the average real per capita consumption in Dalit, Janjati and Muslim households remain significantly lower than that of the Brahmin/Chhetri households.

development. In stead, it is one of the means to the well being of people. Thus, making growth pro-poor and promoting human development is the next development challenge for Nepal.

Maoist insurgency starts with a 40-point demand related to different aspects. Maoist believed that the existing structural problems of the country including semi-feudal structure, regional disparity, and oppression of nationalities can not be solved through reforms under the existing political system, and therefore they wedged People's War for establishing a new democratic system by overthrowing the semi-feudal structure of the state. Of the 40-point demand, seven were related to nationalism, 13 political, 13 economic, and seven socio-cultural (Annex B). Among them five demands, viz, ethnic autonomy, devolution, secular state, end of ethnic oppression and equality of languages, are in consonance with the Janjatis agenda (Gurung, 2004). These are also reflected in the current movement of Madhesi organisation and splinter groups demanding for their proportional inclusion.

During the ceasefire in April 2003, the Maoist presented a 24-point agenda based on their earlier 40-point demand which consisted of different aspects as follows: economic (11), socio-cultural (8), nationalism (3), and political (2). The procedure for the formulation of new constitution suggested were: (i) round-table conference; (ii) an interim government; and (iii) election to a constituent assembly. The CPN (Maoist) ideologue Babu Ram Bhattarai noted that the Nepalese society at the beginning of 21st century is passing through the greatest upheavals in the entire history in the form of revolutionary people's war of the oppressed classes, regions, nationalities, gender and communities against the outmoded semi-feudal and semi-colonial social order (cited from Gurung, 2004).

The present king of Nepal came to power following a palace massacre on 1 June 2001. With this tragic event, several other events followed including peace talks without any resolution; declaration of state emergency in November 2001 when Maoist started their attack on security forces and government facilities; and sacking of elected government on 4 October 2002 after dissolving parliament four months before, on 22 May 2002.[4] Since then, the king handpicked three governments, and dissolved the last one on 1 February 2005. Later he formed a new government under his chairmanship and ruled the country directly for a period of about 14 months until 24 April 2006.

Four rounds of peace negotiations between the government and Maoists held during August 2001 and May 2003, but all ended in a deadlock. Later with the seven- party alliance (SPA) people's movement continued for 19 days in April 2006, ultimately making the king restore House of Representative on 24 April 2006. With this historic move, several milestones are on the way to the peace process, and some have already been past. Chief among them include: formation of a SPA government headed by Mr. Girija P. Koirala, depriving king's privileges and declaring House of Representative as supreme, scrapping provision of Supreme Commander in Chief of Royal Nepal Army being held by the king, dissolving king's advisory council, and holding a summit level talks between SPA and Maoist on 16 June 2006.

[4] Before the peace negotiations between the seven party alliance and Maoist, three peace talks were held during August – November 2001, and one in 2003.

At the first summit talk, both SPA and Maoists agreed to an eight point agenda which included framing an interim statute, forming an interim government, declaring the date for an election to constituent assembly, dissolving House of Representatives, making people's government, and requesting United Nations for management and monitoring of armed forces of both sides to ensure a free and fair election to the constituent assembly. Since then a series of talks held, three talks within a week of October 2006, which ultimately concluded to the signing of the comprehensive peace accord on 21 November 2006.

With the signing of peace accord, some other significant achievements that have been made include enactment of interim constitution on 15 January 2007, formation of interim legislature including CPN/Maoist under the new Interim Constitution of Nepal.[5] On 1 April 2007 the SPA and Maoist together formed an interim government. The government was mandated to hold the constituent assembly (CA) election earlier scheduled in June 2007. But constituent assembly elections could not take place because of the lack of security and delay in the verification of people's liberation army. Now, a new date, 22 November 2007, has been declared for the CA election. The purpose of the CA election is to draft a new constitution and to decide the fate of monarchy in Nepal.

Within last few months, some organizations and splinter groups, like Madheshi Forum, Terai Jan Mukti Morcha and National Foundation for Development of Indigenous Nationalities have come forward demanding for inclusion, which is natural at the context of democratic process, however, it has also affected the election of constituent assembly. The most pressing issue is the inclusion that came forward by the Madhesi and Janjati. The Madhesi movement demanded the end of discrimination against the Madhesi people and has later become violent because of the birth of different rival groups. Thousands of Madhesi people came for protest, in which more than 40 people have already died. The government has held talks with the representatives of the Madhesis groups and Janjatis, but the progress is little. Thus, the tasks ahead are enormous and the government and all the constituents of society have to pay their due attention in the make up of a new Nepal with peace and prosperity.

REVIEW OF LITERATURE

Introduction

This section tailors a background for conceptual framework of study by reviewing relevant literature. This will help guide specification of model for explaining onset and intensity of conflict in Nepal. This section mainly builds on review of some relevant literatures, which identify causes and/or correlates of conflict.

Two approaches advanced for conflict in the current literature are justice seeking and loot seeking behaviour of people, which build on people's introspection. Also known as grievance and greed approaches, these two concepts offer a framework that embraces a multitude of factors, giving rise to conflict. For example, people can be dissatisfied and express their grievances because of a number of reasons ranging from political structure to social factors and

[5] However, within a period of less than three months the interim constitution has been amended three times.

discrimination. However, the greed approach has mainly economic footing and advances that people enter into conflict because of economic reasons. Initially, grievance approach has found much space in conflict literature; however, in recent years economic reasons have been gaining much popularity in explaining conflict.

Sustaining peace would require a correct understanding of the root causes of conflict and identity. There are two schools of thought each supported through empirical work on the causes of civil wars. Empirical works by William Easterly (2004) and Easterly and Levine (1997) have concluded that ethnic fractionalization is one of the major causes of civil wars, while Collier and Hoeffler (1998) have arrived at a different finding, which states that the underlying cause of civil wars is economic and not ethnicity. However, their successive studies give recognition to social factors as well.

Because the two approaches could embrace a number of factors, various researchers have given their different interpretations. Collier and Hoeffler (2004B), and Fearon and Laitin (2003) found that poorer countries face greater risk of conflict; however, their interpretation is different. For example, Collier and Hoeffler have advanced two reasons for conflict under the grievance and greed approaches: (i) low opportunity cost of rebels; and (ii) large stock of easily expropriated natural resources or primary commodities in an area. Fearon and Laitin (2003) advanced that conflict is there because poor countries lack capacity. This is also evident from the fact that security is poor in rural and remote areas compared to city and accessible areas of developing poor countries. This hints that root cause of conflict is not economic stimuli but weak governance owing to lack of resources, among others in poor developing countries. This view is also taken by Deng (2004), who held that violent conflict is largely associated with bad governance.[6]

The two reasons advanced by Collier and Hoeffler, low opportunity cost and easily available primary commodities seem contradictory each other as the concept of opportunity cost of rebels is also implicit in other causes such as easy availability of natural resources. Thus, when there is easy availability of primary commodities, it is less likely that people join rebels.

A cross-country analyses conduced in the past have established that poor countries have higher conflict intensity than richer ones. While such a finding increased the significance of economic factors including poverty, one should not forget root causes of poverty that ultimately affect human security. The cross-country analysis of conflict does not provide an in-depth analysis of conflict and ignores the specificity of a particular country. In fact, as advanced by the Human Development Report 1994, security has two dimensions: freedom from fear and freedom from want. The root causes of fear and want could be different across the countries of world.

Therefore, in order to address causes of conflict, an exploration of reasons within a country is necessary. At individual country level, only limited number of studies has been performed, and many of them are focused only on a small part of a country. Moreover, such micro studies

[6] A comprehensive definition of governance is given by Daniel Kaufmann, Aart Kraay, and Massimo Mastruzzi (2003) as: the traditions and institutions by which authority in a country is exercised. This includes (1) the process by which governments are selected, monitored and replaced, (2) the capacity of the government to effectively formulate and implement sound policies, and (3) the respect of citizens and the state for the institutions that govern economic and social interactions among them.

provide qualitative information and therefore could not give empirical basis for reaching at a conclusion. However, they can enrich the empirical analysis.

Review of Literature on the Maoist Conflict in Nepal

Some studies have already been conducted on the conflict of Nepal. Most of them lack empiricism; lately some studies have been conducted using some facts and figures. There is some diversity of findings regarding the causes of conflict in Nepal.

Some studies have suggested that Maoist conflict has found support from oppressed lower castes, portraying the insurgency as stemming from rage against a long legacy of oppression based on caste and ethnicity. Other studies report economic factors, such as inequality, landlessness, and a general lack of opportunity reinforced by complex systems of caste and related discriminatory patterns, which have provided sufficient motivation and support for the Maoist cause (Bray et. al, 2003; and Sengupta, 2005 as cited in Do and Iyer, 2007). Some researchers found a significant correlation between landlessness and number of fatalities in the conflict. Some others attribute conflict mostly to poverty and underdevelopment of country, and that caste and ethnic divisions are not a major contributor to conflict (Thapa and Sijapati, 2004 and Gersony, 2003 as cited in Do and Iyer, 2007). There is also the possibility that government repression might have generated further grievances, which led to greater support for Maoist rebels (Do and Iyer, 2007).

Collier and Hoeffler (1999) advanced a framework based on grievances and loot approaches. Mahat (2005) acknowledges the relevance of grievance theory as the explanatory framework for Maoist people's war in Nepal. According to Pandey (2005) political instability, corruption, unemployment and bad governance developed a wider dissatisfaction with the democratic political class at the centre. The socio-economic marginalization of western people coupled with fighting spirit of local ethnic communities - especially the Magar clan – triggered the arm uprising. He held that ethnic factor is an important element of the Maoist movement as the 1990 change gave to Janajati a new sense of identity and legal ground to appeal for their demands. The pro-poor approach of the Maoist has also been a magnet for the deprived groups (Pandey, 2005).

Karki and Bhattarai (2004) observe that conflict is manifestation of complex social and economic demands, intertwined with ideology and a history of discrimination on which the Maoists were able to capitalise. According to them, democracy and subsequent unfulfilled aspirations are believed to be an important factor behind the outbreak of insurgency. Besides, they also identify poverty, unemployment, ethnic discrimination and illiteracy as primary causes of Maoist conflict.

Murshed and Gates (2003) examine root causes of conflict. They suggest that grievances rather than greed are main motivating force. In particular, horizontal and inter-group inequality is central in explaining the Nepalese strife. This has both caste and ethnic dimensions. Besides, the spatial aspect contributes to causes of conflict whose intensity is considerably higher in mid and far western development regions where human development and land assets are extensive sources of internal inequality and international concern. According to them, ethnicity mobilises groups to fight each other, and that ethnicity, whether based on language, religion or some other form, is a powerful organising principle and superior to social class. The authors held that

grievance is rooted in deep inter-group disparities encompassing: (i) asset inequality, (ii) unequal access to public employment and public services, (iii) over-taxation, and (iv) economic mis-management. Thus, they inferred that development strategies failed to meet the challenges of poverty and reduction of horizontal inequality, and related strategies are to be understood as complementary rather than competing.

While Murshed and Gates (2003) found that grievance is the motivating factor for conflict, and that Nepal's conflict has ethnic and caste dimensions, Gurung (2004) concluded that no correlation exists between density of socially excluded population and intensity of insurgency, but that there is correspondence between area of insurgency and level of poverty.

Bohara et al (2006) advanced that both democracy and conflict increased during past decades. What explains the state's use of violence? How does it relate to the thrust posed by the opposition? How does the violence spread? What role does democracy play? What is the role of international system - are some of the questions that have been explored by the authors. Using district level data and drawing on theoretical insight from conflict and human rights literatures, the authors found an exchange of violence between government and opposition forces that depends on the political and geographical opportunities for violence. This study adds geography as the additional dimension in the conflict; however, it also suggests that democracy and social capital influence the selection of violence by both government and opposition.

Zartman (2005) has argued that while initiation of conflicts requires presence of political entrepreneur, the continuation of conflict requires successful mobilisation of population subgroup. His paper advanced that differences in welfare among different socio-economic groups, i.e. relative deprivation rather than absolute deprivation, can help explain the seemingly puzzling coinciding trends of poverty reduction and conflict perseverance during the 1990s.

Parwez (2006) made an attempt to find out the determinants of conflict using a logit model, where the dependent variable is a binary one showing presence or absence of conflict in a district. The independent variables are life expectancy index, educational attainment index, income index, human poverty index and human empowerment index. As expected, at the five percent level of significance, the study found a negative effect of three variables including life expectancy index, income index and road density, whereas a positive effect of human poverty index. However, the effect of educational attainment has been found positive; pointing that increase in level of education also increases conflict. This is somewhat in congruence with the NHDR 2004 finding that higher political awareness or empowerment compared to other dimensions of empowerment (social and economic), provides the ground for breeding conflict. However, this does not match with the study of Do and Iyer (2007) which found a negative effect of literacy. A DFID (2003) study indicated that higher level of education with high unemployment, and increased political awareness with the introduction of democracy contributed to the conflict in Nepal. However, the human empowerment index was not found statistically significant in the Parwez's study.

Do and Iyer (2007) investigated proximate correlates of the Maoist conflict in Nepal by running a linear regression. In this regression, conflict is a measure of the intensity of conflict in a district. The explanatory variables included in the model are elevation, proportion of forest area,

poverty incidence, literacy rate, road length, proportion of advantaged castes, caste and language polarisation. Geographical factors including elevation and presence of forest areas were found explaining the variation in intensity of conflict. The coefficient of poverty rate is always found significant and fairly stable across the specifications. Areas with higher literacy rate have been found with low intensity of conflict. Moreover, caste polarisation was found statistically significant, whereas proportion of advantaged castes is found marginally significant. However, the relationship with caste polarisation disappears when the authors control for poverty measures. One possibility as explained by the authors is that the effect of social divisions works through poverty, i.e., all other things being equal, an area with greater social divisions has greater poverty. The authors found that economic factors such as poverty or lack of economic opportunity are significantly correlated with intensity of conflict, and that the relationship of conflict intensity with measure of social diversity is much less significant and robust.

Caveats of the Past Empirical Studies

Parwez (2006) and Do and Iyer (2007) conducted empirical based investigations. There are some caveats of these two empirical studies. While both studies have some policy implications, there is room for further improvement in explaining conflict, and digging into deeper differences in their findings. The main difference is on the effect of literacy and education. While the study by Parwez found a positive relationship of conflict with the educational attainment, the study by Do and Iyer found a negative relationship. However, there are differences in the dependent variables used in those two studies and the specification of Model: number of killed persons in districts is used by Do and Iyer, whereas security phases of districts by Parwez. Moreover, one uses logistic regression and the other uses simple and probabilistic regression models. The data used by Parwez generally comes from standard source like Nepal Human Development Report, whereas the other study also uses data from district profile. Moreover, Parwez does not look into the effect of exclusion. Thus, there are some caveats of the above two empirical studies. This study, therefore, makes an attempt to fulfil the gap in the conflict analysis and addresses those differences.

METHODOLOGY

Conceptual Framework

The conceptual framework of this study is guided by the framework of Collier and Hoeffler (1999), which frames the causes of conflicts into two approaches: grievance approach and greed approach. While grievance approach is related with political and social factors, greed approach is concerned with economic factors. There are various studies conducted at cross-country level using data that are often incomparable across countries because of differences in methodology. Therefore, a study of causes of conflict within a country provides a more in-depth analysis compared to cross-country analysis. However, most of the studies conducted so far are generally based on secondary data and therefore generally regression model is framed based on availability of data. The regression model fit in this paper is not an exception.

Specification of Models

Based on the experience of past studies, linear regression model has been fit for estimating the effect of different variables on the likelihood and intensity of conflict. In order to observe effect, examine robustness of estimates, and explain differences in findings of past studies, two dependent variables have been used alternatively in the regression models of the study: level of insecurity as a dummy dependent variable, and proportion of population killed as a continuous dependent variable. The model with the dummy dependent variable primarily helps in finding out factors causing likelihood of conflict; the other model with proportion of killed people as dependent variable will help in explaining the intensity of conflict. In case of dummy dependent variable, a logistic regression model has been used, whereas for the other dependent variable a simple regression model has been fit. In order to estimate the two models, data of 2001 population census and 2003/04 Nepal Living Standard Survey have been used rather than data of 1991 census and 1996/96 Nepal Living Standard Survey, so as to make data comparable and look into reasons why conflict was intensified after 2002.

The inclusion of independent variables is guided by the framework of justice and loot seeking behaviour, past studies and more importantly availability of data. Both social and economic factors have been taken as independent variables. The variables included in the models are given below.

Dependent Variables and Their Measurement

Level of insecurity: UN classifies districts according to security situation. Level of insecurity has been converted to a dummy dependent variable, with security phase 'Three' has been given value "One", and security phases 'One and Two' as "Zero", implying that there is insecurity when a district is declared as phase three by UN. As of 2 December 2004, UN classified 75 districts of Nepal as follows: 38 districts in phase one; one district in phase two; and 36 districts in phase three. The details of the security phases and their implications are given in Annex C1. The source of data is: www.unnepal.org.np

Number of people killed per thousand: The number people killed either by Maoist or by security personnel was normalised by dividing with total district population. However, it has been expressed in terms of thousand as the number of people killed highly varies across districts. The source of data is Informal Sector Service Centre (INSEC), Kathmandu, website: www.inseconline.com

Independent Variables and Their Measurement

Altogether 21 independent variables have been used. They are broadly categorised into the following groups/themes: development index and infrastructures, economic factors, literacy and education, health and nutrition, social and natural factors. These independent variables by sources of information are given in Table 2. Their detail specification and/or definition are given in Annex C2.

Table 2: Sources of Information by Variables

CBS, ICIMOD & SNV (2003) - **6**	UNDP/Nepal (2004) - **5**	CBS, WFP and World Bank (2006) - **5**	Harka Gurung, ed., (2006) - **3**	CBS (2006) - **2**
Overall Composite index Infrastructure development index Road density Overall literacy rate Share of females in non-agricultural occupation Broad occupational structure	Life expectancy index Educational attainment index (EAI) Income index (II) Human poverty index (HPI) Human empowerment index (HEI)	Stunting Wasting Underweight Caloric intake prevalence Poverty incidence	Proportion of Dalit population Proportion of Janajati population Proportion of Hindu population	Proportion of forest area District elevation

Note: The sources of data for two dependent variables are as follows: Number of people killed by 2006 - INSEC; and for the level/phases of insecurity as of 2004 - United Nations, as mentioned above.

The sources of data are mainly the following:

(i) Informal Sector Service Centre (INSEC), Kathmandu, website: www.inseconline.com

(ii) United Nations, Kathmandu, Nepal. Website: www.unnepal.org.np

(iii) CBS, ICIMOD/MENRIS and SNV-Nepal (2003), *Districts of Nepal: Indicators of Development, update 2003*, Kathmandu, December 2003.

(iv) UNDP (2004), *Nepal Human Development Report 2004: Empowerment and Poverty Reduction*, United Nations Development Programme, Kathmandu, Nepal.

(v) CBS, WFP and the World Bank (2006), *Small Area Estimation of Poverty, Caloric Intake and Malnutrition in Nepal*, Central Bureau of Statistics, Government of Nepal, United Nations World Food Programme and the World Bank, Kathmandu, Nepal.

(vi) Gurung, Harka, ed, (2006), *Nepal Atlas and Statistics*, Himal Books for Tony Hagen Foundation, 2006.

Estimation of the Model

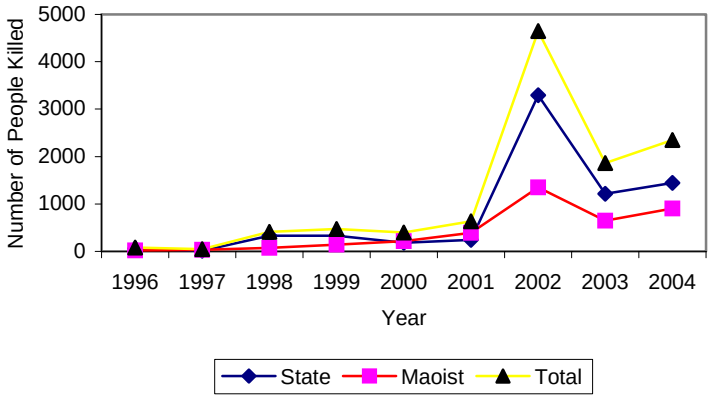
A zero order correlation has been computed for all the dependent and independent variables. The correlation matrix is given in Annex F. It has been found that there was high correlation (0.80 and over) between following variables:

- Overall composite index and overall literacy rate/educational attainment index/human poverty index/under weight of children
- Road density and occupational structure
- Overall literacy and educational attainment index/human poverty index
- Stunting of children and HPI/HEI
- Underweight and proportion of Janjati population
- Educational attainment index and HPI
- HPI and HEI
- Proportion of Hindu and proportion of Janjati population

Therefore, first a model with all variables has been estimated alternatively for either of the two dependent variables: level of insecurity and number of persons killed in a district. Later, these models have been estimated excluding following variables, which have high correlation of the order of +/-0.8 or more:

- Overall composite index
- Occupational structure
- Stunting of children
- Underweight of children
- Human poverty index
- Educational attainment index
- Proportion of Hindu population

Figure 2: Number of People Killed, Nepal, 1996 - 2004



The models were estimated with SPSS package version 12. The results of the models with limited number of variables (excluding the above correlated variables) are not much different from those of the models that included all variables. Moreover, sensitivity of coefficients has also been examined as the backward estimation method eliminates insignificant variable one by one. In such a process of computation, there was not change in sign or significant difference in the magnitude of coefficients, suggesting for robustness of the estimated coefficients.[7] Therefore, it has been decided to estimate the models including all variables.

ANALYSIS OF EFFECTS OF CONFLICT

Direct Cost of Conflict

Conflict has economic, social and cultural costs. The damages that it causes are enormous and wide- ranging. Apart from direct cost, there are indirect costs, which are difficult to measure, such as psychological effect on the affected population. In terms of direct cost, conflict in Nepal has claimed more than 13,000 lives and damaged infrastructures worth million of dollars.

Table 3: Number of Persons Killed by State and Maoist during 1996 - 2004

Year	No. of Persons Killed by: State No.	State %	Maoist No.	Maoist %	Total No.	Total %
1996	59	0.8	22	0.6	81	0.7
1997	16	0.2	32	0.8	48	0.4
1998	334	4.7	75	2.0	409	3.8
1999	328	4.6	141	3.7	469	4.3
2000	180	2.5	219	5.8	399	3.7
2001	243	3.4	390	10.3	633	5.8
2002	3296	46.3	1351	35.8	4647	42.7
2003	1217	17.1	646	17.1	1863	17.1
2004	1444	20.3	902	23.9	2346	21.5
Total	7117	100.0	3778	100.0	10895	100.0

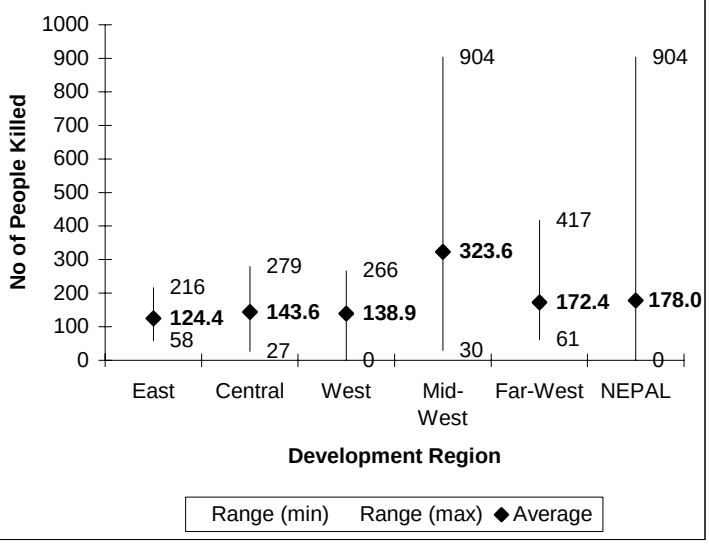
Source: Human Rights in Nepal, Situation Update, Nepal Coalition of Human Right Defenders, 22 March 2005.

[7] However, in one occasion, the coefficient of literacy rate appears positive rather than negative when overall composite index is excluded.

The number of people killed by the end of 2004 was 10,895, of which about two third (65.3%) were killed by state and rest by Maoist. The number of killings increased since 2002. In fact, it was highest in 2002, consisting of as high as about 43 percent of total killings. The range of killings by state ranges from 0.2 percent in 1997 to 46.3 percent in 2002. The corresponding figures for the killings by Maoist are 0.6 percent in 1996 to 36 percent in 2002 (Table 3 and Figure 2). Thus, this hints that with the declaration of state emergency in 2001 the number of killings increased both by state and Maoist.

The number of persons killed by end December 2006 is more than 13,000 persons.[8] There is wide variation across districts, ranging from zero in districts like Mustang and Manang even by end 2006 to as high as 904 persons killed in Rukum district of the Far-Western development region of the country. Within a development region, the range is widest in Mid-Western development region, ranging from 30 persons in Humla to 904 persons in Rukum, and narrowest in East Development Region, with a range of 58 to 216 persons (Dhankutta vs Morang). The average number of persons killed in five development regions also varies by more than two and half times, from 124 persons in the districts of East Development Region to 324 persons in the districts of Mid-West Development Region (Figure 3).

Figure 3: Range and Average Number of People Killed per District, Nepal, 2006



On the whole, the average number of persons killed in a district of Nepal is 178 persons. Excluding Mid-Western Development Region all other regions have the average less than national average. This implies that it is the Mid-West, which is the worst affected region. In fact, three of the 75 districts, viz. Rukum, Rolpa and Dang, which fall in the Mid-West development region, share nearly 15 percent of all the causalities. The situation becomes further worse when the number of killed persons are normalised by dividing it with district populations as most of the districts of Mid-Western development region have fewer population. For example, the average number of killed persons per thousand of district population is less than one when computed for all districts at national level, whereas it is about two persons in the districts of the Mid-West Development Region (Annex E)

Political workers, agricultural workers and police personnel are major victims. In fact, these three share about 72 percent of the killings. The share of army personnel and civil servants is a little more than four percent each (Table 4). This signifies that nature of conflict is also a

[8] However, because of lack of information on the breakdown by state and Maoist, the preceding table 2 refers the number of persons killed as 10,895 by 2004.

political one. However, this has also claimed lives of many rural poor people and agricultural labourers.

Empirical Analysis of Causes of Conflict

As mentioned in the preceding section, the causes and/or correlates of conflict have been observed by estimating following logistics regression model:

$$Y_i = a + bX_i + e_i \quad \text{.....1}$$

Where:

Y_i = a dummy variable for level of insecurity in district i; (high insecurity = 1; low or no insecurity = 0)

X_i = a vector of characteristics which influence conflict or insecurity

e_i = error term

i = 1 to 72 districts

In order to add richness in the analysis of above model, another model has been estimated with a continuous dependent variable, the number of people killed per thousand of a district population. Although there are 75 districts, three districts have been excluded from all estimations because of outliers: the number of persons killed was too high in those districts – more than three standard deviations above the mean. These three districts are: Rukum, Rolpa and Kalikot.[9] As dependent variables use data for the year 2004 (level of insecurity) and 2006 (number of persons killed), and the independent variables are measured for the year 2001 and 2003 from 2001 population census and NLSS 2003, this analysis mainly explains the intensity and spread of conflict.

Table 4: Number of Persons of Different Occupations Killed by State and Maoist during 1996 - March 2005

Occupation	Number of Persons Killed		Total	
	State	Maoist	No	Percent
Agricultural workers	1130	540	1670	14.7
Teachers	52	74	126	1.1
Political workers	4917	366	5283	46.3
Police personnel	9	1236	1245	10.9
General people	221	407	628	5.5
Students	166	124	290	2.5
Civil servants	34	451	485	4.3
Social workers	6	6	12	0.1
Business persons	39	78	117	1.0
Workers	98	49	147	1.3
Health workers	1	3	4	0.0
Army personnel	5	497	502	4.4
Photographers	1	3	4	0.0
Journalists	11	4	15	0.1
Law professionals	0	2	2	0.0
Prisoners	1	3	4	0.0
Dacoits	0	3	3	0.0
Engineer	0	1	1	0.0
Unidentified persons	752	109	861	7.6
Total	7443	3956	11399	100.0

Source: Human Rights in Nepal, Situation Update, Nepal Coalition of Human Right Defenders, 22 March 2005

The two models, each with a separate dependent variable, were estimated using all five methods of regression model of the

[9] Do and Iyer (2006) excluded only two districts, Rukum and Rolpa. This could be due to the fact that they have used data only up to the year 2004.

SPSS package: viz, Enter, Stepwise, Remove, Backward and Forward. According to the estimated results, following information is derived:

(i) It has been found that Enter and Remove methods produce same results; similarly, estimated results of Stepwise and Forward methods are the same. However, Backward method stands alone, but comes out with larger number of statistically significant coefficients.

(ii) Stepwise or Forward methods found three variables significant (in case of logistic regression) and only two in case of simple regression. However, the Backward method produced eight variables statistically significant in case of dummy dependent variable, and only five in case of continuous dependent variable model.

(iii) As the Enter and Remove methods undertake the estimation at one time, it could not come out with the significance of larger number of coefficients which could be due to the fact that some of the variables are highly correlated. But the Backward method removes the insignificant variables one by one which reduces the chance of multi-collinearity of variables. Moreover, all the significant coefficients estimated from the backward method have expected signs.

(iv) In order to take into account the multi-collinearity problem, most of the variables which have correlation of the order of 0.8 and more have been excluded and it has been found that the estimated results are the similar to the one when all the variables are included in the Backward method.

In view of the objective of the study to find out causes and/or correlates of conflict and the findings of the past studies, and in order to understand dynamics of exclusion of insignificant variables step by step, the estimates of backward method have been chosen. Moreover, as the expected signs and estimates of variables in the model with all 21 variables were same as those of the model, which excluded the collinear variables, the estimates of the model with all the variables have been chosen for analysis.

Effects of Conflict: Results of Logistic Regression Model

Out of the 21 variables included in the model, eight are found statistically significant at five or less percent level of significance. The overall explanatory power of the model (adjusted R^2) improves from 0.187 under the stepwise method to 0.505 in case of backward method. The

Table 5: Estimation of Regression Models with Level of Insecurity as Dependent Variable

	Unstandardized Coefficients		Standardized Coefficients	t-statistic	Level of Significance
	B	Std. Error	Beta		
(Constant)	3.572	1.018		3.509	.001
Composite Index	-.011	.005	-.469	-2.274	.026
Female in Non Agri Occupation (%)	-.028	.014	-.386	-2.069	.043
Poverty Incidence	1.557	.572	.380	2.725	.008
Caloric Intake Prevalence	1.957	1.007	.279	1.944	.056
Wasting of Children	-13.132	3.639	-1.044	-3.608	.001
Income index	-3.625	1.494	-.375	-2.426	.018
Proportion of Janajati Population (%)	-.012	.003	-.556	-3.456	.001
District Dummy	-.805	.250	-.724	-3.217	.002

a Dependent Variable: Insecurity_04

model as a whole is statistically significant in explaining the variation in level of conflict or insecurity.

The estimates are given in Table 5. According to the estimates, an increase in poverty incidence and prevalence of population below minimum level of dietary energy consumption (caloric intake prevalence) increases the level of insecurity. On the other hand, an increase in female's share in non-agricultural occupation and income decreases the level of insecurity. Moreover, as expected an increase in overall composite index of development also decreases the level of insecurity in a district.

The negative coefficient of dummy dependent variable for district ecology or altitude suggests that the level of insecurity is low in hills and mountains compared to Terai in the latter half of the decade long conflict. This adds to the fact that while the onset was high in the hills in the beginning, the spread of conflict moves fast in Terai district in the latter half of the decade-long conflict.

One important value addition of this paper is that it has found a negative relationship between the proportion of Janajati population and level of insecurity or insurgency, which implies that as the proportion of Janjati population increases the level of insecurity decreases. As the number of ethnic groups in Janajati is as large as 59, it implies less caste polarisation. This accepts the hypothesis that as the caste polarisation increases the level of insecurity decreases. The finding is in conformity with the finding of Gurung (2004), who found a reverse relation between the proportion of Janjati population and number of insurgency-related deaths. In particular, he found that Western Hill with highest insurgency related deaths has the second lowest proportion of Janjati population, while Central Mountain, with lowest insurgency related deaths, has the highest proportion of Janjatis.

Table 6: Number of People Killed during Insurgency by Social Groups, 1996 - 2004

	Total Killed		Percent Killed by:	
Social Group	**No.**	**%**	**State**	**Maoist**
Indigenous people	1,763	21.3	13.8	7.6
Chhetri/Thakuri	1,551	18.8	8.2	10.6
Brahmin	905	10.9	5.2	5.8
Dalit	400	4.8	3.5	1.3
Terai Caste	186	2.3	0.8	1.4
Others	90	1.1	0.6	0.5
Unidentified	3,370	40.8	33.9	6.9
Total	8,265	100.0	66	34

Source: INSEC, Human Rights Year Book 2004, p. 135

Although geographically an inverse relation holds between the proportion of Janajati population and number of insurgency deaths, the proportion of the people killed from Janajati is not low as shown in Table 6. However, compared to the proportion of their share in total population, the proportion of victims is low. This becomes further low in case of the people killed by Maoist.

However, such a clear negative relation does not appear in case of Dalit population. While exploring the relation between Dalit and insurgency, Gurung (2004) found three geographic regions showing convergence and another three near convergence out of the 13 regions in his analysis. The rest does not have much relation. Central Terai has low insurgency deaths and low Dalit population. The regions with near convergence were eastern terai, central terai and central

mountain. Out of the 13 regions, six appear with relation between number of Dalit population and number of people killed, whereas the other seven does not have such a relation. Thus, as one half has relation and the other half does not, the relation gets blurred on the average.

Effect of Conflict: Results from Linear Regression Model

When the dependent variable is the number of killed persons, the independent variables that are found statistically significant at less than five percent level of significance are the following: overall literacy rate, proportion of female in non-agricultural operation, caloric intake prevalence, proportion of Janjati population and proportion of forest area (Table 7). When this is compared with the results of regression model with level of insecurity as the dependent variable, following notable points emerge for discussion:

(i) Both models have following three variables statistically significant: share of female in non-agricultural operation, caloric intake prevalence and proportion of Janajati population.

(ii) Unlike in the model with level of insecurity as dependent variable, literacy rate and proportion of forest area have been found statistically significant in case of number of people killed as the dependent variable. The negative coefficient of literacy indicates that as literacy rate increases, intensity of insecurity decreases or the number of people killed decreases. On other hand, an increase in forest coverage increases the intensity of conflict.

Table 7: Estimation of Regression Models with Population Killed (Per Thousand) as Dependent Variable

	Unstandardized Coefficients		Standardized Coefficients	t-statistic	Significance Level
	B	Std. Error	Beta		
(Constant)	-.466	.502		-.929	.356
Literacy Rate (%)	-.022	.006	-.475	-3.911	.000
Female in Non Agri Occupation (%)	.055	.012	.698	4.473	.000
Caloric Intake Prevalence	2.761	.787	.366	3.509	.001
Proportion of Janajati Population (%)	-.010	.003	-.424	-2.847	.006
Forest Area (%)	.009	.003	.277	2.851	.006

a Dependent Variable: Population Killed per Thousand

(iii) The model with the level of insecurity as the dependent variable comes up with the economic indices such as poverty incidence and income index as the variables for explaining the variation, whereas such economic factors disappear in case of the model with number of people killed. The only economic variable that appears significant in this variant of the model is the proportion of female in non-agricultural operation. The implication of this finding is that while economic factors explain the level of insecurity, the intensity of conflict depends more on other non-economic factors like literacy rate and proportion of forest area. This also hints that it was primarily the economic reason for the dissatisfaction and conflict in the beginning

which ultimately boiled down to violent conflict; and that the intensity of conflict increases with the differences in social and other natural characteristics. This result corroborates the finding of NHDR 2004 that low level of economic empowerment compared to the level of political empowerment has given an opportune moment to the Maoist to intensify the conflict.

Comparison of Results with Previous Studies

This section mainly compares the findings of this study with previous studies, especially with those of Parwez (2006) and Do and Iyer (2007).

Comparison with Do and Iyer (2006)

Only three variables were found significant in case of Do and Iyer study that used number of people killed as the dependent variable. They are: elevation, proportion of forest area and literacy rate. Out of the three variables, proportion of forest area and literacy rate appear statistically significant in the model with the number of people killed as the dependent variable of the present study. The elevation has not been included in this study but a dummy of the three ecological regions has been included with Terai as zero and hills and mountain with value one.[10] Besides, three other variables are also statistically significant in this study: proportion of Janjati population, proportion of female in non-agriculture operation and caloric intake prevalence. Out of these only the caste polarisation variable was included in Do and Iyer, which was found significant when poverty incidence, proportion of advantaged castes and literacy rate are included. As a measure of caste polarisation, proportion of Janjati population was included in the current study, which is statistically significant. Thus, the result is in conformity with those of the Do and Iyer. However, the conclusion of Do and Iyer that caste factor does not have critical role in conflict is not supported by the result of the current study. If we support the Do and Iyer's findings then even the economic variables like poverty rate also does not appear significant when all the variables are included. It appears significant when only four variables are included.

Comparison with Parwez (2006)

Of the six variables included in the model with dummy dependent variable by Parwez, following five was reported statistically significant: life expectancy index, educational attainment index, income index, road density and human poverty index. The human empowerment index did not appear significant. In case of the current study with dummy dependent variable, eight out of 21 variables have been found statistically significant. The variables that are in common to both studies are income index. It is the overall composite index rather than road density that appears significant in the present study. As road forms part of the overall composite index, which is found significant in the present study, it can be inferred that there is only little similarity in the in the results of the two studies.

[10] This variable has been found statistically significant in case of the model with the dummy dependent variable of the present study, and can be compared with the level of elevation.

The one significant difference between this study and that by Parwez is that life expectancy does not appear significant in this study whereas it does in case of Parwez. The discrepancies in the results could be due to following: (i) lack of proper consideration of multi-co linearity problem; and (ii) no exclusion of outliers.

SUMMARY AND CONCLUSIONS

The major findings of the present study are that it is the Mid-Western Development Region, which is the most affected from conflict; however, the incidence of conflict in terms of human loss widely varies across the districts in this region, implying that there are a number of factors that influence conflict or insecurity at sub-national level. The intensity of conflict increases from 2002 after the mobilisation of army in 2001. The number of casualties increased with larger number of killings by the state than Maoist. Political workers top the list of killings, which is followed with agricultural workers. This signifies that conflict is due to political reason apart from other reasons, and that it has rural character as most of the victims are from rural area.

Based on the estimates of regression model, it has been found that political, economic and social factors have caused conflict. The increase in political empowerment is not matched with economic and social empowerment that has offered an opportunity to rebels to intensify the conflict.

The results of the study are comparable with those of previous studies. However, this study has value addition in terms of the following two aspects: (i) conflict is not only due to economic reasons but also due to social and ethnic reasons. This is evident from a negative relationship of level of insecurity and proportion of Janajati population. When the proportion of Janajati population increases, the level of insecurity decreases; and (ii) the conflict is a result of mismatch between political and economic empowerment. With the growing political empowerment, people did not economically empowered and thus boiling down to conflict. This has significant policy implications, in terms of improving the service delivery, and providing employment and income earning opportunities. Thus, the overall conclusion of the present study is that there is a need for recovery and reconstruction in all the three dimensions – political, economic and social – and that over emphasis on any one dimension such as the political dimension could further jeopardise the post conflict situation and obstruct the way to long lasting peace.

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ANNEX A
Selected indicators
Table 1: Selected Comparative Indicators of NLSS I and NLSS II

Activities	NLSS I 1995/96	NLSS II 2003/04	% Change
A. Agriculture			
1. Households with land (% of total households)	83.1	77.5	-5.6
2. Avg. size of agriculture land (ha.)	1.1	0.8	-0.327.2
3. % of irrigated land	39.6	54.3	14.7
B. Consumption (Rs)			
1. Nominal per capita consumption			
All Nepal	6802	15848	133.0
Poorest 20%	2571	4913	91.1
Richest 20%	1524334	42236	177.1
2. Share of nominal per capita consumption			
Poorest 20%	7.6	6.2	-1.4
Richest 20%	44.9	53.3	8.4
C. Income (Rs)			
1. National avg HH income	43732	80111	83.2
2. National avg per capita income			
All Nepal	7690	15162	97.2
Poorest 20%	2020	4003	98.2
Richest 20%	19325	40486	109.5
3. Share of farm income in household income (%)	61	47.8	-13.2
4. Share of Non-farm income in household income (%)	39	52.2	5.613.2
D. Employment Status			
1. Percentage employed	67.2	74.3	7.1
2. Labour force participation rate	70.6	77.2	6.8
3. Unemployment rate	4.9	3.8	-1.1
Aged 10-14	7.9	3.4	-4.5
Age 15-24	7.3	6.0	-1.3
E. Remittances & Transfers			
1. Percentage of all households receiving remittances	23.4	31.9	8.5
2. Avg. amount of remittances per receiving households	15,160	34,698	129.0
3. Share of remittances received by households	44.7	23.5	-21.2
4. Share of remittances in total household income among recipients	26.6	35.4	8.8

Source: NLSS I and NLSS II,CBS, 1996 and 2004

ANNEX A

Table 2: Major Occupations by Ethnicity / Caste, 2001

Ethnic / Caste Group	Total Economically Active	Prof/ Technical	Legislative/ Admin	Clerical	Sales/ Service	Forestry / Farm/ Fishery	Production Labour	Of which Elementary
Upper caste	35.4	62.2	58.3	53.6	42.2	37.1	21.2	19.1
Middle caste (Tarai only)	10.0	6.6	5.1	7.2	12.8	8.8	8.8	14.9
Dalit	11.9	1.6	1.3	3.9	4.0	10.9	20.3	22.6
Janajati	38.7	27.6	33.2	33.3	35.5	40.5	38.1	36.1
- Hill janajati	23.6	10.7	10.3	14.4	14.3	28.6	18.1	16.5
- Newar/Thakali	7.5	13.8	20.8	12.7	16.8	5.0	8.7	4.8
- Tarai Janajati	7.5	3.1	2.1	6.2	4.4	6.9	11.4	14.9
Muslim/Sikh	3.1	1.2	1.1	1.1	4.5	2.0	6.0	5.7
Others	0.9	0.8	1.1	0.9	1.1	0.7	1.3	1.5
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Acharya & others, 2004, Draft, Table 3.21. ; Cited from Gurung, Harka, Social Exclusion and Maoist Insurgency, Paper presented at National Dialogue on the ILO Convention 169 on Indigenous and Tribal People, Kathmandu, Nepal, 19-20 January 2005.

ANNEX B
Maoist Demand, February 1996

Nationalism (7)	Political (13)	Economic (13)	Socio-cultural (7)
1. Abrogation of 1950 Treaty	10. Republican constitution	6. End capital aggrandizement	18. Secular state
2. Abrogation of Mahakali Treaty	11. End royal privileges	7. Self-reliant economy	19. Equality to women
3. Border regulation	12. Civil authority over army	27. Land to the tiller	20. End ethnic oppression
4. Discontinue Gurkha Recruitment	13. Repeal repressive regulations	28. Nationalization of dubious property	21. Abolish untouchability
5. Introduce work permit system	14. Release prisoners	29. Employment generation	22. Equality of languages
6. End cultural invasion	15. End state terrorism	30. Set minimum wage	35. Access to education and health services
7. Stop imperial elements (INGO)	16. Enquiry on actions against Maoists	31. Resettle squatters	40. Protection of the disabled
	17. Recognition on martyrs and penalty to perpetrators	32. Debt relief, credit provision	
	20. Ethnic autonomy	33. Cheap inputs, fair price for agriculture products	
	23. Freedom of speech	36. Control price	
	24. Freedom of though	37. Provide road, electricity, water supply to rural areas	
	25. Regional devolution	38. Promote cottage industries	
	26. Local governance	39. Control corruption	

Gurung, Harka , *Social Exclusion and Maoist Insurgency*, Paper presented at National Dialogue on the ILO Convention 169 on Indigenous and Tribal People, Kathmandu, Nepal, 19-20 January 2005.

ANNEX C
Specification of Variables

C1. Classification of Districts by Security Phases

UN classifies districts according to security situation. There are four phases of security, starting with phase one with the lowest insecurity and four with the highest insecurity. Security phase four implies a situation of evacuation. As of 2 December 2004, UN classified districts within three phases: 38 districts in phase one; one district in phase two; and 36 districts in phase three. A dummy has been defined with value zero for all the district falling in phase one; and with value one for the districts falling in phase three. As there was only one district in phase two it has been submerged into phase one while determining the value for the dummy variable.

The level of security is being updated by the UN. It has significantly changed after 2004. The updated figure as of 6 February 2007, includes 45 districts in phase three and 30 districts in phase two. A simple correlation between the dependent variables and the two sets of dependent variables have been computed, and it has been found that in majority cases it is the level of security of 2004 which is better correlated than the level of security of 2007. Moreover, conflict formally ends in 2006 with the signing of the comprehensive peace accord. Therefore, the security phase of 2004 rather than that of 2006 has been used for measuring the dummy dependent variable.

Security Phase Implications:

Security Phase 1:
Warning (Operations continue but staff require a security clearance prior to moving into a Phase 1; area, homes and offices have emergency supplies ready, wardens brief staff regarding evacuation procedures, all international staff have VHF walkie talkies, a central radio room running on 24/7 basis to communicate with all agencies). FSO approves travel for Phase 1.

Security Phase 2:
Restricted Movement (Clearance required to travel for essential business and communications between traveller and agency security focal point required when travelling to notify of safe arrival, delays, etc, field offices must have radio room, vehicles have radio communications). FSO approves travel for Phase 2.

Security Phase 3:
Relocation (staff may be relocated out of the area, non-essential staff and dependants are relocated). Travel clearance required to be approved by the Resident Coordinator.

Security Phase 4 - *Emergency Operations*

Security Phase 5 - *Evacuation*

Source: www.unnepal.org.np

C2. **Specification of Independent Variables**

Composite Development Index and Infrastructures

Overall composite index: this is an aggregate of five sets of indices: child deprivation index, gender discrimination index, health development index, primary sector development index, and infrastructure development index. These five sets of indices have been computed based on 29 indicators.

Infrastructure development index: As a sub-set of overall composite index, this index has been computed including 8 indictors: density of roads, banks, cooperatives, health institutions, post office, percentage of forest user households, and per capita regular and development budget expenditure.

Road density: It is the sum of different categories of road, and is expressed in per 100 square km of total surface area of a district.

Economic Factors

Broad occupational structure: Ratio of labour force (economically active population aged 15+ years) engaged in non-agricultural occupations to those engaged in agriculture as a major occupation.

Share of females in non-agricultural occupation: it is defined as the female population aged 15 years and above engaged in non-agricultural occupations as a percentage of total population in the same age group engaged in the same activities.

Poverty incidence: it is the proportion of population below national poverty line of Rs 7,696 per year in average 2003 Nepalese rupees.

Life expectancy index: it is one of the three components of human development index, and is computed using standard methodology.

Income index: it is also one of the three components of human development index of Nepal.

Human poverty index: it is computed using standard methodology as given in NHDR 2004.

Literacy and Education

Overall literacy rate: it is the literate population six years and above as a percent of total population of the same age group.
Educational attainment index: it is one of the three components of human development index and is computed using standard methodology. It consists of both adult literacy and school enrolment of children. However, Nepal Human Development Report 2004 has used adult literacy rate, and mean year of schooling in stead of enrolment rate because enrolment is over-inflated, whereas mean years of schooling also takes into account quality of education.

Human empowerment index: it is computed using standard methodology as given in NHDR 2004.

Health and Nutrition Related Factors

Caloric intake prevalence: it is the estimates of prevalence of caloric intake below the threshold predicted on the basis of Small Area Estimation (SAE) methodology (for details see: CBS, WFP and World Bank, 2006).

Proportion of stunted children: it is the proportion of children between 6 – 59 months who are with short height against their age.

Proportion of wasted children: it is the proportion of children between 6- 59 months who are short of weight against their age.

Proportion of underweight children: it is the proportion of children between 6 - 59 months who are short of weight against their height.

Social Factors

Proportion of Dalit population: it is the total Dalit population as a ratio of total population of a district. It consists of three castes: Kami (blacksmith), Damai (tailor) and Sarki (cobbler).

Proportion of Janajati population: it is the total janajati population as a ratio of total population. The janajati consists of about 59 ethnicity from four different groups as given in Annex D.

Proportion of Hindu population: it is the total Hindu population divided by the total population of a district.

Natural Factors

Proportion of forest: it is the area under forest divided by total area of a district.

District Dummy: it is used for approximating the effect of elevation or topography, and is expressed as dummy variable with the values as follows: Terai = 0; Hills and Mountain = 1 at the increasing order of altitude.

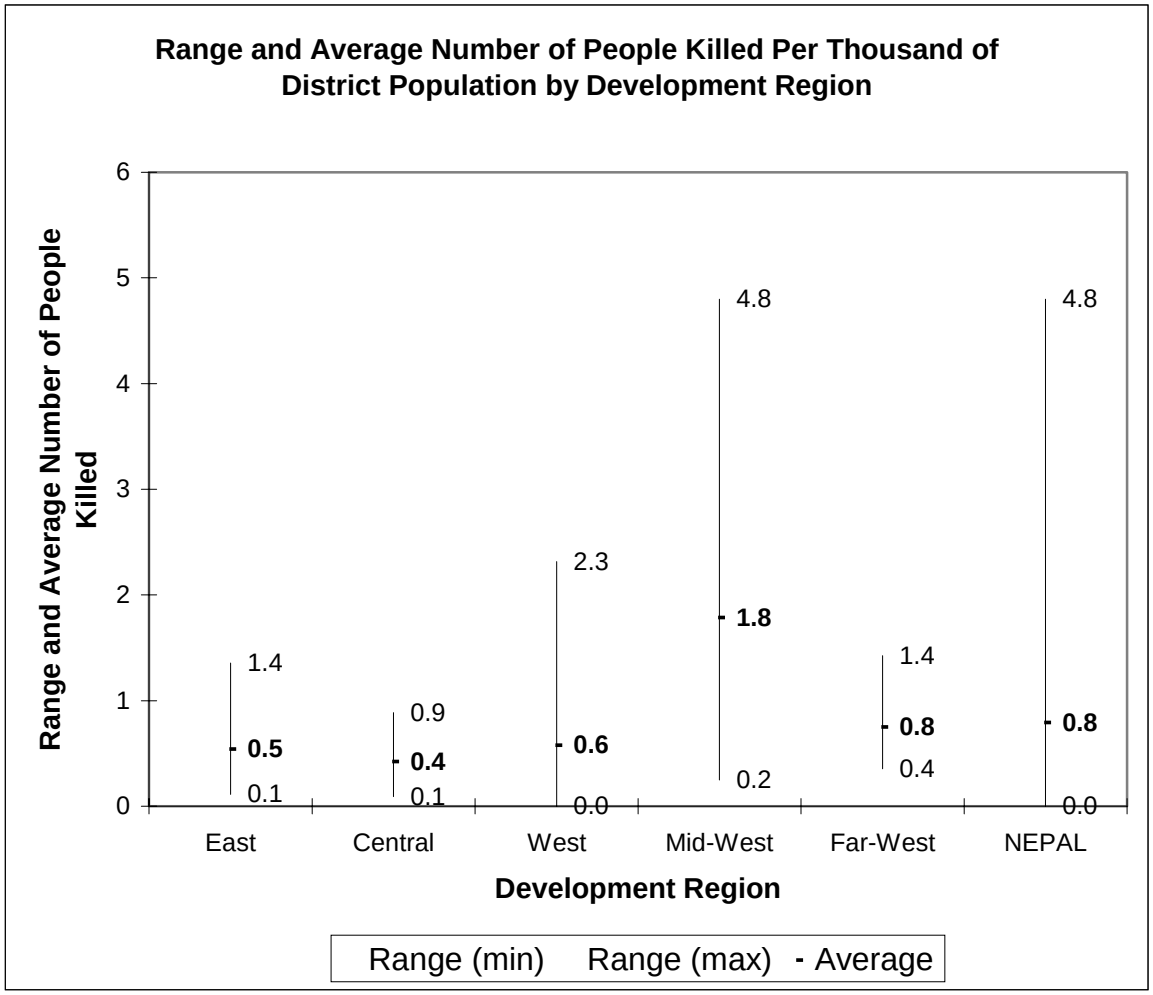
ANNEX D
Categories of Indigenous Nationalities of Nepal

Endangered Group		Highly Marginalized Group		Marginalized Group		Disadvantaged Group		Advanced Group	
SN	Indigenous Peoples	SN	Indigenous Peoples	SN	Indigenous Nationalities	SN	Indigenous Nationalities	SN	Indigenous Nationalities
1.	Kusunda	1.	Majhi	1.	Sunuwar	1.	Chhairotan	1.	Newar
2.	Bankariya	2.	Siyar	2.	Tharu	2.	Tangbe	2.	Thakali
3.	Raute	3.	Lohmi	3.	Tamang	3.	Tingaunle Thakali		
4.	Surel	4.	Thudam	4.	Bhujel				
5.	Hayu	5.	Dhanuk	5.	Kumal	4.	Baragaunle		
6.	Raji	6.	Chepang	6.	Rajbangshi	5.	Marphali Thakali		
7.	Kisan	7.	Santhal	7.	Gangai				
8.	Lepcha	8.	Jhangad	8.	Dhimal	6.	Gurung		
9.	Meche	9.	Thami	9.	Bhote	7.	Magar		
10.	Kuswadiya	10.	Bote	10	Darai	8.	Rai		
		11.	Danuwar	11.	Tajpuriya	9.	Limbu		
		12.	Baramu	12.	Pahari	10.	Sherpa		
				13.	Topkegola	11.	Yakkha		
				14.	Dolpo	12.	Chhantyal		
				15.	Fri	13.	Jirel		
				16.	Mugal	14.	Byansi		
				17.	Larke	15.	Yolmo		
				18.	Lohpa				
				19.	Dura				
				20.	Walung				

Source: NFDIN

ANNEX E

Range and Average Number of People Killed Per Thousand of District Population



ANNEX F
Zero Order Correlation

		Insecurity_04	Composite Index	Infrastructure Index	Road Density	Literacy Rate (%)	Occupation Structure	Female in Non Agri Occupation (%)	Poverty Incidence	Caloric Intake Prevalence	Stunting of Children	Underweight of Children	Wasting of Children	Life Expectancy Index	Education Index	Income index	HPI	HEI	Population Killed per Thousand	Proportion Dalit Population (%)	Proportion of Janajati Population (%)	Hindu Population (%)	District Dummy	Forest Area (%)
Insecurity_04	Pearson Correlation	1	.318(**)	.369(**)	-.269(*)	-.214	-.272(*)	-.290(*)	.445(**)	.404(**)	.288(*)	.281(*)	-.123	-.439(**)	-.252(*)	-.352(**)	.332(**)	-.338(**)	.336(**)	.152	-.276(*)	.246(*)	.135	.282(*)
	Sig. (2-tailed)	.	.007	.001	.022	.071	.021	.014	.000	.000	.014	.017	.304	.000	.033	.002	.004	.004	.004	.202	.019	.038	.259	.016
Composite Index	Pearson Correlation	.318(**)	1	.115	-.375(**)	-.917(**)	-.446(**)	-.776(**)	.445(**)	.347(**)	.686(**)	.799(**)	.353(**)	-.581(**)	-.888(**)	-.574(**)	.899(**)	-.743(**)	.329(**)	.423(**)	-.658(**)	.378(**)	-.012	.072
	Sig. (2-tailed)	.007	.	.335	.001	.000	.000	.000	.000	.003	.000	.000	.002	.000	.000	.000	.000	.000	.005	.000	.000	.001	.921	.549
Infrastructure Index	Pearson Correlation	.369(**)	.115	1	-.278(*)	-.118	-.121	-.116	.176	.169	-.087	.173	.189	-.296(*)	-.102	-.104	.083	-.037	.168	.037	-.114	.161	-.397(**)	.178
	Sig. (2-tailed)	.001	.335	.	.018	.324	.311	.331	.139	.155	.467	.146	.113	.011	.392	.385	.486	.758	.157	.756	.338	.177	.001	.135
Road Density	Pearson Correlation	-.269(*)	-.375(**)	-.278(*)	1	.436(**)	.875(**)	.003	-.654(**)	-.109	-.618(**)	-.443(**)	.072	.350(**)	.482(**)	.463(**)	-.468(**)	.568(**)	-.369(**)	-.326(**)	.095	.105	-.144	-.199
	Sig. (2-tailed)	.022	.001	.018	.	.000	.000	.980	.000	.362	.000	.000	.548	.003	.000	.000	.000	.000	.001	.005	.426	.381	.228	.094
Literacy Rate (%)	Pearson Correlation	-.214	-.917(**)	-.118	.436(**)	1	.517(**)	.601(**)	-.421(**)	-.331(**)	-.698(**)	-.713(**)	-.307(**)	.544(**)	.956(**)	.503(**)	-.927(**)	.703(**)	-.347(**)	-.288(*)	.468(**)	-.161	.045	.105
	Sig. (2-tailed)	.071	.000	.324	.000	.	.000	.000	.000	.004	.000	.000	.009	.000	.000	.000	.000	.000	.003	.014	.000	.177	.708	.379
Occupation Structure	Pearson Correlation	-.272(*)	-.446(**)	-.121	.875(**)	.517(**)	1	.020	-.674(**)	-.113	-.661(**)	-.446(**)	.123	.299(*)	.563(**)	.581(**)	-.564(**)	.625(**)	-.379(**)	-.298(*)	.094	.049	-.265(*)	-.172
	Sig. (2-tailed)	.021	.000	.311	.000	.000	.	.866	.000	.344	.000	.000	.304	.011	.000	.000	.000	.000	.001	.011	.432	.685	.025	.148
Female in Non Agri Occupation (%)	Pearson Correlation	-.290(*)	-.776(**)	-.116	.003	.601(**)	.020	1	-.068	-.240(*)	-.271(*)	-.681(**)	-.571(**)	.466(**)	.563(**)	.322(**)	-.543(**)	.348(**)	.017	-.299(*)	.728(**)	-.519(**)	.339(**)	.008
	Sig. (2-tailed)	.014	.000	.331	.980	.000	.866	.	.568	.042	.021	.000	.000	.000	.000	.006	.000	.003	.885	.011	.000	.000	.004	.950
Poverty Incidence	Pearson Correlation	.445(**)	.445(**)	.176	-.654(**)	-.421(**)	-.674(**)	-.068	1	.300(*)	.582(**)	.405(**)	-.189	-.310(**)	-.483(**)	-.574(**)	.535(**)	-.612(**)	.403(**)	.255(*)	-.012	-.041	.353(**)	.421(**)
	Sig. (2-tailed)	.000	.000	.139	.000	.000	.000	.568	.	.010	.000	.000	.112	.008	.000	.000	.000	.000	.000	.030	.921	.732	.002	.000
Caloric Intake Prevalence	Pearson Correlation	.404(**)	.347(**)	.169	-.109	-.331(**)	-.113	-.240(*)	.300(*)	1	.495(**)	-.021	-.414(**)	-.525(**)	-.319(**)	.159	.438(**)	-.469(**)	.306(**)	-.210	.035	-.180	.376(**)	-.128
	Sig. (2-tailed)	.000	.003	.155	.362	.004	.344	.042	.010	.	.000	.860	.000	.000	.006	.183	.000	.000	.009	.077	.773	.130	.001	.283
Stunting of Children	Pearson Correlation	.288(*)	.686(**)	-.087	-.618(**)	-.698(**)	-.661(**)	-.271(*)	.582(**)	.495(**)	1	.515(**)	-.210	-.538(**)	-.718(**)	-.410(**)	.803(**)	-.871(**)	.471(**)	.291(*)	-.298(*)	-.053	.504(**)	.006
	Sig. (2-tailed)	.014	.000	.467	.000	.000	.000	.021	.000	.000	.	.000	.076	.000	.000	.000	.000	.000	.000	.013	.011	.657	.000	.957
Underweight of Children	Pearson Correlation	.281(*)	.799(**)	.173	-.443(**)	-.713(**)	-.446(**)	-.681(**)	.405(**)	-.021	.515(**)	1	.642(**)	-.466(**)	-.709(**)	-.723(**)	.669(**)	-.563(**)	.259(*)	.612(**)	-.787(**)	.549(**)	-.296(*)	.174
	Sig. (2-tailed)	.017	.000	.146	.000	.000	.000	.000	.000	.860	.000	.	.000	.000	.000	.000	.000	.000	.028	.000	.000	.000	.012	.144
Wasting of Children	Pearson Correlation	-.123	.353(**)	.189	.072	-.307(**)	.123	-.571(**)	-.189	-.414(**)	-.210	.642(**)	1	-.049	-.262(*)	-.312(**)	.106	.104	-.217	.335(**)	-.588(**)	.489(**)	-.843(**)	-.055
	Sig. (2-tailed)	.304	.002	.113	.548	.009	.304	.000	.112	.000	.076	.000	.	.684	.026	.008	.375	.385	.068	.004	.000	.000	.000	.644
Life Expectancy Index	Pearson Correlation	-.439(**)	-.581(**)	-.296(*)	.350(**)	.544(**)	.299(*)	.466(**)	-.310(**)	-.525(**)	-.538(**)	-.466(**)	-.049	1	.563(**)	.197	-.598(**)	.558(**)	-.370(**)	-.191	.423(**)	-.241(*)	-.007	-.127
	Sig. (2-tailed)	.000	.000	.011	.003	.000	.011	.000	.008	.000	.000	.000	.684	.	.000	.096	.000	.000	.001	.108	.000	.041	.955	.290

		Insecurity_04	Composite Index	Infrastructure Index	Road Density	Literacy Rate (%)	Occupation Structure	Female in Non Agri Occupation (%)	Poverty Incidence	Caloric Intake Prevalence	Stunting of Children	Underweight of Children	Wasting of Children	Life Expectancy Index	Education Index	Income index	HPI	HEI	Population Killed per Thousand	Proportion Dalit Population (%)	Proportion of Janajati Population (%)	Hindu Population (%)	District Dummy	Forest Area (%)
Education Index	Pearson Correlation	-.252(*)	-.888(**)	-.102	.482(**)	.956(**)	.563(**)	.563(**)	-.483(**)	-.319(**)	-.718(**)	-.709(**)	-.262(*)	.563(**)	1	.493(**)	-.912(**)	.687(**)	-.355(**)	-.299(*)	.443(**)	-.163	.008	.010
	Sig. (2-tailed)	.033	.000	.392	.000	.000	.000	.000	.000	.006	.000	.000	.026	.000	.	.000	.000	.000	.002	.011	.000	.172	.945	.935
Income index	Pearson Correlation	-.352(**)	-.574(**)	-.104	.463(**)	.503(**)	.581(**)	.322(**)	-.574(**)	.159	-.410(**)	-.723(**)	-.312(**)	.197	.493(**)	1	-.530(**)	.550(**)	-.285(*)	-.544(**)	.501(**)	-.456(**)	-.006	-.282(*)
	Sig. (2-tailed)	.002	.000	.385	.000	.000	.000	.006	.000	.183	.000	.000	.008	.096	.000	.	.000	.000	.015	.000	.000	.000	.963	.016
HPI	Pearson Correlation	.332(**)	.899(**)	.083	-.468(**)	-.927(**)	-.564(**)	-.543(**)	.535(**)	.438(**)	.803(**)	.669(**)	.106	-.598(**)	-.912(**)	-.530(**)	1	-.815(**)	.450(**)	.349(**)	-.444(**)	.175	.174	.007
	Sig. (2-tailed)	.004	.000	.486	.000	.000	.000	.000	.000	.000	.000	.000	.375	.000	.000	.000	.	.000	.000	.003	.000	.141	.143	.954
HEI	Pearson Correlation	-.338(**)	-.743(**)	-.037	.568(**)	.703(**)	.625(**)	.348(**)	-.612(**)	-.469(**)	-.871(**)	-.563(**)	.104	.558(**)	.687(**)	.550(**)	-.815(**)	1	-.479(**)	-.379(**)	.367(**)	-.113	-.406(**)	-.091
	Sig. (2-tailed)	.004	.000	.758	.000	.000	.000	.003	.000	.000	.000	.000	.385	.000	.000	.000	.000	.	.000	.001	.002	.343	.000	.446
Population Killed per Thousand	Pearson Correlation	.336(**)	.329(**)	.168	-.369(**)	-.347(**)	-.379(**)	.017	.403(**)	.306(**)	.471(**)	.259(*)	-.217	-.370(**)	-.355(**)	-.285(*)	.450(**)	-.479(**)	1	.238(*)	-.176	.110	.304(**)	.262(*)
	Sig. (2-tailed)	.004	.005	.157	.001	.003	.001	.885	.000	.009	.000	.028	.068	.001	.002	.015	.000	.000	.	.044	.139	.357	.009	.026
Proportion Dalit Population (%)	Pearson Correlation	.152	.423(**)	.037	-.326(**)	-.288(*)	-.298(*)	-.299(*)	.255(*)	-.210	.291(*)	.612(**)	.335(**)	-.191	-.299(*)	-.544(**)	.349(**)	-.379(**)	.238(*)	1	-.622(**)	.590(**)	-.026	.376(**)
	Sig. (2-tailed)	.202	.000	.756	.005	.014	.011	.011	.030	.077	.013	.000	.004	.108	.011	.000	.003	.001	.044	.	.000	.000	.826	.001
Proportion of Janajati Population (%)	Pearson Correlation	-.276(*)	-.658(**)	-.114	.095	.468(**)	.094	.728(**)	-.012	.035	-.298(*)	-.787(**)	-.588(**)	.423(**)	.443(**)	.501(**)	-.444(**)	.367(**)	-.176	-.622(**)	1	-.785(**)	.248(*)	-.181
	Sig. (2-tailed)	.019	.000	.338	.426	.000	.432	.000	.921	.773	.011	.000	.000	.000	.000	.000	.000	.002	.139	.000	.	.000	.036	.128
Hindu Population (%)	Pearson Correlation	.246(*)	.378(**)	.161	.105	-.161	.049	-.519(**)	-.041	-.180	-.053	.549(**)	.489(**)	-.241(*)	-.163	-.456(**)	.175	-.113	.110	.590(**)	-.785(**)	1	-.283(*)	.356(**)
	Sig. (2-tailed)	.038	.001	.177	.381	.177	.685	.000	.732	.130	.657	.000	.000	.041	.172	.000	.141	.343	.357	.000	.000	.	.016	.002
District Dummy	Pearson Correlation	.135	-.012	-.397(**)	-.144	.045	-.265(*)	.339(**)	.353(**)	.376(**)	.504(**)	-.296(*)	-.843(**)	-.007	.008	-.006	.174	-.406(**)	.304(**)	-.026	.248(*)	-.283(*)	1	.176
	Sig. (2-tailed)	.259	.921	.001	.228	.708	.025	.004	.002	.001	.000	.012	.000	.955	.945	.963	.143	.000	.009	.826	.036	.016	.	.139
Forest Area (%)	Pearson Correlation	.282(*)	.072	.178	-.199	.105	-.172	.008	.421(**)	-.128	.006	.174	-.055	-.127	.010	-.282(*)	.007	-.091	.262(*)	.376(**)	-.181	.356(**)	.176	1
	Sig. (2-tailed)	.016	.549	.135	.094	.379	.148	.950	.000	.283	.957	.144	.644	.290	.935	.016	.954	.446	.026	.001	.128	.002	.139	.
	N	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72

** Correlation is significant at the 0.01 level (2-tailed). Number of Observation = 72 (72 districts; out of total 75 districts, three districts, viz, Rukum, Rolpa and Kalikot were excluded as outliers)
* Correlation is significant at the 0.05 level (2-tailed).