Bhutan's Case: Social Capital, Household Welfare and Happiness

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PREFACE

I am happy to present the second stage analysis report on social capital prepared by our research team with support from the Asian Development Bank. The successful completion of the study has produced a unique body of evidence on the importance of social capital for the socioeconomic development. As far as I know, the study of such nature is done for the first time in our country. Through this study, we want to show that social capital can be an important tool for the Gross National Happiness (GNH) -based development. Recognising social capital as a policy tool requires us to go beyond the economic thinking to draw insights from the social domain. Integrating the social and economic components of development is expected to help us better understand and realise the GNH Vision.

As this study marks the beginning of an in-depth inquiry into the social capital concept, our findings are modest, but we expect the study to lead to more research, public deliberation and action. We will re-look into the Social Capital Module in our next round of the BLSS and make sure that our questionnaires capture the informal institutions, agencies and mechanisms of social capital that our first survey could not capture sufficiently. We wish to redesign the module drawing as much as possible from our local expertise.

I would like to thank my staff Lham Dorji, Cheda Jamtsho, Sonam Gyeltshen and Cheku Dorji for their sincere attempt to study this new development concept. I was aware that this task was not going to be easy, as the concept is not only new to Bhutan but internationally as well. I am happy that with their hard work and diligence they have successfully completed the study. I urge them to keep up their interest in further studying the same concept, not forgetting that it is important to look at this conceptual genesis innovatively within our own development context.

I acknowledge gratefully the financial and technical support of the Asian Development Bank.

We urge our interested readers to direct your inquiries and critical views to directly to Lham Dorji at lhamdorji@gmail.com.

Kuenga Tshering

Director General

CHAPTER I

INTRODUCTION TO SOCIAL CAPITAL CONCEPT

Social capital, in simple terms can be understood as interpersonal relationship built on mutual trust (*blo ted*) and the norms of reciprocity (*phen tshun nyam phen*) that facilitate collective (*mnyam rub*) action to achieve common goals (*spyi mthun dmigs don*). Social capital until now has remained one of the least explored research subjects in Bhutan. For this reason, this study becomes one of the first ever studies of its kind in the country. At this stage, we cannot determine the extent of the decline in social capital in our country, but we can say there are already signs of our social capital stock either changing or declining. The rise in the reported crimes, increased feelings of insecurity and isolation, and growing sense of individualism and competition (among the Bhutanese citizens) are some of the spin-off effects of modernisation and urbanisation. We believe these phenomena are partly responsible for the weakening of social capital in the country.

Social capital worldwide is a new concept that gained prominence only in the 1990s. The concept remains ambiguous and controversial, firstly because it has no univocal definition. Secondly, a strong view that integrating 'capital' to 'social' leads to colonising and reducing sociological ideas by a mere economic thinking, often leads to disparaging of the concept. Thirdly, the concept has a measurement issue.

We consider that integrating social and economic ideas have greater potential for better development outcomes. We base our study on the idea that blending these two branches of knowledge would make development processes more holistic by lending to the proper balance between material, social and psychological wellbeing. This is similar to our development approach of the Gross National Happiness (GNH). We support Ostrom's (1999) view that all forms of capital are essential for development, but none of them is sufficient (in and of themselves) and that social capital can complement other forms of capitals. In view of the several recent findings on the role of social capital in promoting household welfare and wellbeing in developing countries, it would be inexpedient to reject the concept of social capital. We cannot obstruct a promising line of research simply because the concept has definitional and measurement issues.

In general, both the critics and the advocates of social capital tend to agree that social capital is a useful tool for poverty alleviation and in promoting human welfare (USAID 2011b: 2). Just as physical and human capitals enhance the individuals' productivity, social capital enhances a society's overall productivity. Putnam did analogise that 'just as a screwdriver (physical capital) or a university education (cultural capital or human capital) can increase productivity (both individual and collective), so do social contacts affect the productivity of individuals and groups' (2000:19).

Knack and Keefer (1997: 1) sampled 29 market economies from the World Values Survey, and deduced that interpersonal trust, norms and civic cooperation are positively associated with the economic prosperity and sustainable development. They held a view that mutual trust is more important than group memberships. Putnam (1993), on the other hand, asserted that associational life and group memberships have a strong positive correlation with the growth and development.

According to Narayan (1997), social capital brings prosperity and reduces poverty. Putnam (2000), Leung *et al* (2010), Helliwell, and Putnam (2004: 1437) have shown that social capital is the most important correlate of subjective well being. Jetten *et al* (2012: 1) observed that the conservatives are happier than the liberalists are mainly because the conservatives have better access to group memberships (social capital). Ura *et al* (2012: 40) has shown that in Bhutan the community vitality contributes more to the GNH Index than any other domains. The GNH index derives more weights from the community vitality indicators of the rural than that of the urban areas.

The world is now looking for a radical change in development thinking. The Millennium Development Goals (MDGs) ends in 2015; the UN is in the new search for an alternative development paradigm that integrates social perspectives into economic development thinking. The UN General Assembly, at the request of Bhutan, has unanimously adopted happiness as an independent goal for all countries (Resolution 65/309, July 2011), co-sponsored by 68 countries.

As a follow-up to this resolution, Bhutan hosted a High-Level Meeting (HLM) on *Wellbeing and Happiness: Towards a New Economic Paradigm* at the UN Headquarters for about 800 participants. Bhutan assented to lead the search for a new development paradigm that is based on human

happiness and wellbeing of all forms of life (with the support from the UN and a group of international experts).

Back in Bhutan, on July 28, 2012, the King issued the Royal Edict to establish the Steering Committee and International Expert Working Group (IEWG). The IEWG, with the support of the Secretariat of New Development Paradigm (based in Thimphu), is now working on a New Development Paradigm (NDP) based on Bhutan's GNH philosophy (www.newdevelopmentparadigm.bt). The NDP will be a holistic model, and logically, every social aspect of human development should encompass the model.

The World Bank (WB) that once promoted the neo-liberalism has acknowledged that we can best understand poverty from the multidimensional perspectives, and that we can address it only by using multidimensional strategies. The WB recognises the role of social capital in promoting the welfare, wellbeing and happiness of the individuals, households, communities and nations (Johannes A. Tabi 2009:1). This recognition comes partly because the Bank was convinced of the positive role of social capital in promoting the household welfare in developing countries in Asia, South America and Africa through its several conceptual, empirical and policy-related studies on social capital. The WB's social capital research has informed major policy documents including *The World Development Report 2000/01* (Grootaert 2004: 1).

Against these backdrops, we want to address a question, 'are there enough evidences to show that social capital contributes to promoting the household welfare, happiness and wellbeing in Bhutan'?

Having been isolated until the 1960s, the harsh geographical reality and limited mobility, and strong social-cultural values of interdependence have led to the emergence of cohesive and self-sustaining communities. However, Bhutan is modernising fast including the growth of the consumerism, and so has our dependence on other countries increased by manifolds. It is certain that the modernisation *per se* urbanisation will affect our traditional social structure and the age-old institutions and community practices of civic behaviour and collective action.

The government is emphasising on reducing material deprivation without compromising on the people's emotional, spiritual and ecological needs. We expect this study to advocate promoting social capital as an important

policy issue and theme for public discourse. This study, we believe, will be our modest contribution towards acknowledging the Constitution's State mandate of creating conducive conditions for cooperation in community life and the institutions of extended family (Article 9, the Principles of State Policy). The academicians, researchers and policy analysts may find this report useful to conduct further empirical researches on applying social capital for development. The report may serve as an introduction to the social capital concept and its uses for those unfamiliar with the subject.

The economists have long recognised the role of natural, physical and human capitals in promoting household welfare, wellbeing and happiness. However, the literature on the significance of social capital is just evolving in different countries. In Bhutan, social capital as a separate development concept was first discussed in 2010 when the Royal Government directed the National Statistics Bureau (NSB) to conduct preliminary studies for the proposed GNH-based system of national accounts.

We are aware that the Centre for Bhutan Studies & GNH Research has identified 'community vitality' as one of the nine domains of the GNH Index. Our attempt to explore social capital separately is not to duplicate the earlier works on community vitality. Many scholars look at these two concepts as same, but our intention to use social capital as a separate concept is just that we have used the World Bank's Social Capital Integrated Questionnaires (SC-IQ) to collect data and the Bank's Social Capital Analysis Tool (SOCAT) to analyse the data. We hope our work will strengthen our understanding and appreciation of the significance of the community vitality domain of the GNH Index.

The report proceeds as follows: in the remainder of this chapter, we explore the ideas of social capital and its various definitions in the literature. We then discuss the concept as understood in Bhutan, and identify its significance in the context of Bhutan's development and the GNH.

Chapter II presents the conceptual framework and method. It includes the research design (multivariate models), explanation of the social capital indicators, assumptions, statistical treatment and the analysis.

In chapter III, first, we present the summary of the findings of the first-stage analysis of social capital data (published as chapter 10, 2012: 75-91).

Second, we present the results of the additional descriptive analyses we carried out before proceeding with the econometric analyses. Third, we discuss the results of econometric analyses, mainly the empirical evidences supporting the relationships between social capital, household welfare and happiness.

In Chapter IV, we first summarise the key findings, then discusses broadly some issues relevant to social capital policies and programmes in Bhutan.

In the remaining part of this chapter, we discuss social capital in relation to six important questions: What is social capital? What are the benefits and harms of social capital? What are the controversies surrounding the concept? What is the theoretical basis of understanding the concept in Bhutan? Can we measure social capital? And, what is the definition of social capital for this study?

WHAT IS SOCIAL CAPITAL?

Some villages perform annual rituals through collective efforts, contributing not only cash and kind, but also labour and civic participation for the well-being and prosperity of the community;

Residents of Thimphu city help their native community members admitted in the hospital;

In 1984, three community members of Lomnyekha initiated and built a new community road with full support from the villagers. This is the case of people cooperating to initiate and implement their own development activities;

Famers in Thimphu suburbs earn additional income through cooperative marketing of the diary products;

Tarayana Foundation is a non-profit organisation that seeks to uplift and enhance the lives of vulnerable communities in rural Bhutan by building houses for the poor, providing financial support for the deprived children to continue their schooling, and taking care of elderly people who do not have children or other family members to care for them; and
A friend calls one of his friends on mobile and informs about the availability of job. Another person discusses with her Facebook friend on the recent development in party elections in the country.

The various examples of networks, groups, and collective actions indicate the prolificacy and diversity of social capital in Bhutan. Social exchanges and interactions between people take place daily outside the economic marketplace and the government. The only thing is that social capital, as a development concept remains less understood in the country. This may have to do with the fact that the concept itself is new to the world; it came into an academic limelight only in the 1990s. Since there is no universal definition of the concept, it's possible that Bhutan with its unique set of historical, social and political circumstances will lend a different perspective to the concept and contribute to the growing literature on social capital.

Regardless of its origin elsewhere beyond our borders, we consider it important to discuss social capital as a development concept and its relevance in the contexts of Bhutan's unique cultural, social, political and economic situations. To begin with, we first discuss several definitions of social capital found in the literature and on the trend in its application in the development practices in developing countries. We then try to synthesise the various interpretations into the one that is relevant to the Bhutanese context.

An early understanding of social capital comes from O' Reilly Wade Belliveau (1996: 1572) who defined social resources as 'an individual's personal network and elite institutional affiliations'. Loury (1977) introduced the term 'social capital'.

Pierre Bourdieu, a French sociologist and philosopher (1980; 1985: 248: 1986) and James Coleman, a sociologist (1998, 1990) presented the concept separately. Bordieu defined social capital as 'the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalised relationships of mutual acquaintance and recognition to a membership in a group that provides each of its members with the backing of collectivity' (1986:249). He interpreted social capital as convertible and collective resources accumulated through human interactions and for generating human, natural and built-in capitals. His definition did not restrict the understanding of social capital to a historically driven mode of production (Marxist view) of capital, but as universally available resources, emerging out of social relations between the individuals. Social capital removes class conflict between capitalists and workers, the former (with monopoly

control and ownership over the means of production) exploiting the latter to produce capitals (Bourdieu 1986: 249; Reznik: 6).

James Coleman (1988:100), a sociologist, defined social capital as 'multiple entities with two common elements, namely, social structure and social actions that facilitate certain actions of individuals within the structure'. He integrated the economic principle of rational action into the analysis of the social system-a diversion from the rational choice theory's 'individualism premise'. Coleman's version of social capital possesses multiplicity of forms and functions (what it does) with their roles in the citizens' cooperative and collective actions (Ariff, M and Nambiar, S. 2005: 115). As a sociologist with a strong economics milieu, Coleman managed to draw insights into the concept from both sociologist and economist perspectives. He was also responsible for exploring the supplementary roles of social capital in the creation of other forms of capital like human and cultural capitals (Teachman, Paasch and Carver. 1997).

Robert Putnam, a political scientist, was one of the recent thinkers on social capital. He brought the concept to the forefront of current debates. Putnam defined social capital as 'features of social organisation such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit' (1995: 67). His definition emphasises on three important characteristics: networks, norms and trust (input). These three characteristics are essential for cooperative actions (output) among individuals to pursue and fulfil their shared objective(s).

In his book (2000) *Bowling Alone: The Collapse and Revival of American Community*, Putnam noted about a general secular decline in the level of social capital in the America, mainly in terms of memberships in voluntary organisations (Schuller *et al.* 2000) and voter turnout. He used the 'Putnam instruments' (Adam and Roncevic 2003; Paldam and Svendsen 2000) to measure social capital. The Putnam Instruments have four important indicators: trust in people and institutions, norms of reciprocity, networks, and membership in voluntary associations (Adam and Roncevic 2003). Trust and civic action, though different phenomena are mutually reinforcing in that 'the more we connect with other people, the more we trust them, and vice versa' (Putnam 1995:665).

Francis Fukuyama (1995: 10), an American political economist, defined social capital as 'the ability of people to work together for common

purposes in groups and organisations'. He construed social capital as a certain set of informal values and norms shared among group members that enable cooperative actions. The expected outcomes of networks and cooperation are social cohesion, solidarity, harmony, civic participation and effective social and economic development. Fukuyama recognised the importance of empowering individuals through decentralisation and interactive processes to promote people's participation and cooperation for their own social and economic development.

Fukuyama further equated social capital with trust, though other scholars have criticised the use of trust to measure social capital (Paxton 1999). He affirmed that the 'radius of trust' (Harrison, 1985: 7-8) varies in different groups--the higher production of positive externalities is usually associated with a larger radius of trust. Portes and Landolt (1996) saw social capital as extensive networks of voluntary associations emerging in the presence of a culture of trust and tolerance (Inglehart 1997, p. 188).

Jonathon Porritt (2005: 112-113), one of the leading 'eco-warriors' wrote in his book titled, *Capitalism as if the World Matters* that capital is anything that can generate a flow of benefits valuable to every human being. It 'takes the form of structures, institutions, networks and relationships which enable individuals to maintain and develop their human capital in partnership with others, and to be more productive when working together than in isolation'.

Ronald Burt (1992: 9) defined social capital as 'friends, colleagues, and more general contacts through whom you receive opportunities to use your financial and human capitals; they provide the brokerage opportunities in the networks'. Woolcock (1998:153) defined social capital as 'the information, trust, and norms of reciprocity inhering in one's social networks'.

The World Bank's *Measuring Social Capital: An Integrated Questionnaire* rests on two social capital perspectives (Grootaert 2004). First perspective is derived from the views of the sociologists Ronald Burt, Nan Lin, and Alejendro Portes. These scholars treated social capital as social resources acquired through mutual relationships with other people. The resources are information and idea-sharing and social support. Second perspective is drawn from the idea of Robert Putnam who emphasised on the people's involvement in both informal network and civic organisation that weighs on the nature and extent of social interactions ranging from informal

chatting to joining the social organisation and political parties. The World Bank defined social capital as 'a set of institutions, relationships, attitudes and values that governs interactions among people and contributes to economic and social development' (2004).

Regardless of some ambiguity in how one defines social capital, it is clear that social capital's intellectual background dates back to the classical times and the nineteenth century sociology when Durkheim emphasised on group life as 'antidote to anomie'. The German theorist Karl Marx distinguished between atomised and mobilised classes (Portes, A 1998: 2). Both the scholars had accentuated 'collectivism' as essential to maintain moral standards of the society and to prevent individual state of isolation and anxiety within a society, and important to maintain a totality of society.

WHY IS SOCIAL CAPITAL CONCEPT CONTROVERSIAL?

The main controversy arises from how one defines social capital, not in its essence. Most of the definitions do not discuss 'what social capital is', but 'what it consists of', 'what uses it has', and 'where social capital resides' (Robinson, Schmid and Siles 2000:1). One main criticism relates to the use of term 'capital' with 'social'. The critics see the phrase social capital as a misleading capital metaphor, as capital used is different from the conventional notion of capital. Economic capital, for example, is 'a commodity itself used in the production of other goods and services" (Smithson 1982:111).

Arrow (1999) explained that the folly of the capital metaphor lies in the fact that social capital lacks the characteristics such as extension in time, sustainability and transferability or alienability. Unlike economic capital, one can neither borrow social capital nor calculate its interest rate. The critical questions are: What stock of social capital do we save for future use? Can one transfer social capital to other people offshore like remittance (Fisher 2005:157)? Can one measure the past flow of investments and depreciation of social capital (Solow 1995)? These questions cast doubts on the use of the term capital with social. Samuel Bowles (1999:6) considered the use of the terminology as unjustifiable, for social capital is a resource possessed by individuals that rests in social relationships.

Woolock (1998: 5 & 6) cautioned that grounding social capital in various sociological traditions risk explaining too much within a single concept, leading to uncritical and indiscriminate adoption and imprecise application of the concept. Hayenes (2009:6) argued that by attempting to attach capital to social, it is purely an attempt to colonise sociological ideas and principles within the economic domain. Fine and Green (2000:1) based their criticism on a 'reductionist argument' that social resources are stultified and reduced to economic thinking when expressed as social capital.

The other controversy appertains to difficulty in measuring social capital, as it consists of sociological and psychological attributes that are not easy to quantify (Durlauf 2002: F 475). The diverse interpretation of the concept and its unspecified elements results in the measurement issue. Portes (1998:6) has identified the undistinguished elements of social capital like the possessors, sources, motivations of those who give and receive, and social capital itself. In contrast to economic capital that resides in, for instance, an individual saving account or human capital in a person's intellectual acquisition, social capital inheres in an individual's relationship with others. It is only when the *given* and *giver* are in relationships that one can access social capital. On the other hand, one can access human and economic capitals from oneself.

The non-uniform motivation to make social capital available makes it problematic to equate it with economic capital. In economic transactions, the motivation is clear. The transaction is an equivalent return(s) for the payment within an agreed timeframe. This transaction can be measured accurately. In the social capital transactions, self-interest and profit are not always the motivations, and so, such transactions are sometimes wrongly measured (Fitzsimons 2007: 3). The norms of reciprocity prevail in such transactions since a recipient accumulates obligations. These obligations are not strictly cleared in one form; it may range from as intangible as paying consolation and emotional support (for example to a bereaved family), showing allegiance and loyalty (*tha dhamtsi*) to returning goods and services (*drin-len*). Repayment timing is unspecified, and may often terminate into the altruistic dispensation in which case a recipient does not even have to repay. In this way, measuring social capital tend to remain complex, if not impossible.

Just as the sources and transactions of social capital are sophistic, its outcomes cannot always be beneficial. Some people blame social capital

for being the provenance of corruption--impeding meritocracy and for leading to many anti-social ends such as Mafias, gambling groups, gangs and prostitution rings (Portes 1998: 18). The empirical result from the Third World Value Survey confirms that social capital causes higher levels of perceived public and political corruption (Harris 2007:1). Putnam mentions in *Bowling Alone* (2000) that 'networks and associated norms of reciprocity are generally good for those inside the network, but the external effects of social capital are by no means always positive'. Social capital sometimes facilitates terrorism, organised gangs, ethnic rivalries, clientelism, rigid communities that stifle positive change and innovation, certain economic efficiencies and inequality (Warren 2004: 1), and sectarianism. The other negative effect is the opportunity cost of isolating the individuals at the cost of other individuals or groups (social exclusion).

Maintaining social capital often would involve imposing social and economic obligations on others, while encouraging non-productiveness among the patronised. One typical example is the social obligations borne by many civil servants to support the education of their rural nieces or nephews or children of their kith and kin who need their social (or family) support. Needless to mention, it provides a social safety net for the poor children and contributes towards building human capital and economic capital (if all goes well). This, even so, entails huge sacrifices on the part of these civil servants--especially with limited earnings--in having to endure such social obligations. If they do not bear such burden, the State should provide the additional resources for these children. This leads to an important question: What incentives should these benefactors be provided for bearing such social responsibility? What would be the additional cost to state if such tradition of social support decline?

There are both horizontal and vertical social networks in the Bhutanese society. The horizontal networks exist between the people of the same socioeconomic status and power (*ta lto tshang* and *'cham mthun*). The vertical networks exist between the common people and the power groups, business elites and politicians (*ggom dpon gyog*). For example, most of the bureaucrats, politicians and urban dwellers have their roots in their native communities (*gyul*) and maintain large networks with the village folks and members of the extended families. This speaks of a deep sense of community the Bhutanese people in general perpetuate. Such community orientation serves to maintain large social networks, but with this comes many social obligations.

The vertical linking can have tremendous positive effects on social capital, but it can sometime lead to nepotism, favouritism and conflict-of-interest situation. Consider an example of a senior functionary with extensive networks of families, friends and community members. His close village-folk visit him to request for his 'backing' of his son who is looking for an employment. Say, the official has the authority, and he endorses the request. In such case, two things are clear: first, fulfilling this social obligation leads to lower standard of moral behaviour (of a public official) and tantamount to culturally reinforced corruption. Second, by not realising the obligation, he risks losing his social networks. Such negative effects are not limited to the vertical linking form of social capital. Even within the social groups of the same status, social capital often impose peer pressure on the network members to return favours, sometime at the cost of the eligible others.

From the policy front, several authors have reasoned that social capital is too subjective that designing policies and programmes to support their creation and growth is beyond the scope. Ariff and Nambiar (118) argue that social capital constitutes intrinsic social fabrics, located at the micro-level (individuals), and as a result, no effective policy intervention is possible.

Narayan (1999:1) distinguishes social capital as a potential source of group competition that generates negative externalities. She argues that social capital is built between social groups with varying attitudes, beliefs, identities and social values that determine their access to resources and power. These attributes are beyond the purview of the state policy interventions, and that any attempt by the government to mould social thinking and behaviour would prove futile. Her underlying argument is that networks, norms and reciprocity should be left to evolve on their own without the government's interventions.

Group competitions can lead to social exclusion and create a wedge between the communities or societies (Aldridge *et al* 2002). Social capital also fails to appeal at the policy level, as one cannot explain how the intervention would work to improve the quality and quantity of social capital.

We question the pessimistic views of Ariff, Nambiar and Narayan. Our optimism about the policy use of social capital is based on the communitarian perspective on social capital. This perspective (that looks

at the number and density of social groups) holds that social capital is inherently good for the community's welfare (Claridge, T 2004). This implies that the policies and programmes are possible at the community level. We cite here a simple example of how local programmes can influence the creation and promotion of social capital. We have recently witnessed the setting up of children's park, temple (*mani dung-mkhor*), and community resource centre at a Changjiji housing colony in the capital. These facilities are set up as a policy response to promote social interactions, social cohesion and unity among the residents in the colony (BBS, November 12, 2012). In fact, many residents claim that having such public structures and access to their services help to connect the residents through casual interactions.[1]

This demonstrates that the government and interest groups can carry out many interventions programmes to promote social capital using network, synergy, institutional and communitarian approaches. Woolcock and Narayan's (2000: 230) views that community vitality and civil society are largely the products of the political, legal and institutional environments support our argument.

WHY IS SOCIAL CAPITAL IMPORTANT?

Whatever criticism or controversy may surround the concept, not even a single critic (the works of which we have referred) question the immense value of social capital. The controversies are confined to definitional, conceptual and empirical frameworks, but not on its core values and the essence.

The literature on social capital is emerging regardless of the non-uniformity in its meaning and the alleged difficulty in measuring this concept. It would lead to an intellectual imprudence to reject the concept simply for the reason that accepting the phrase would lead to a reduction of its social significance by economic thinking. Rather, it would make sense to see it as a positive development in the social science. Using the concept can provide a ground for economists and other social scientists engendering a multi-disciplinary approach to development to work together. There are flaws associated with single economic development approach. The other forms of capital are also not sufficient in and of themselves; they are mired with controversies as well. Therefore, we

restate that it is worthwhile to draw the contextual meaning of the concept and explore its practical implications for human development.

Some people contend that setting this concept against the backdrop of the GNH is again likely to lead to the dominance of the GDP over GNH unless the term 'capital' is replaced by other terms like 'resource' or 'cohesion'. We choose to retain it as one form of capital on the ground that the GNH does not reject the importance of economic capital. One of the participants,[2] during the consultative workshop on social capital, held in Thimphu on 26 June 2013 supported our stance by reasoning out that it does not matter what terminology we use as long as we are able to derive the meaning (in our own context) out of it and find it pertinent to development.

The Bhutanese government had recognised the value of the grass root participation in decision making and implementing the development programmes in the early 1980s. His Majesty (HM) the Fourth King Jigme Singye Wangchuck who initiated the 'Khamdang Integrated Valley Development Project' in 1976 saw the immense benefits of the grassroots collective action. The success of the project led to intensive decentralisation programme throughout the country. Lham Dorji (2008:92) wrote that when the King visited Khamdang (then under Trashigang Dzongkhag) in 1976, the HM learned that drought was affecting the local farmers almost perennially. After consulting the people, the King decided to launch the Khamdang Project-one of the earliest development projects implemented jointly by the government and people of more than forty villages and handled by the erstwhile Public Works Department (PWD). The Bhutanese engineers were engaged in building roads, bridges, irrigation canals and houses.

In 1977, the King revisited Khamdang to inaugurate the project. Satisfied with the success of the project, the HM told the people, '[I]t was only for the reason that I have not been able to delegate responsibility to the people. If you, my people, are given the power and responsibility, it seems there is nothing that you c a n n o t d o t o g e t h e r. I am happy that a year of effort on development by collectively involving you, my people have resulted in building irrigation canals, roads, schools and hospitals'. Decentralisation then was the government strategy to base development on civic participation, cooperative action and empowerment

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[1] Sangay Dorji, National Statistics Bureau, resident of Changjiji Housing Complex, casual conversation on 12 May, 2012, venue: NSB, Thimphu

[2] Karma, CEO, SAARC Development Fund Secretariat (SDF) Fund, Thimphu.

of the grassroots people. It was a social mobilisation programme of motivating people to organise and seek access to available opportunities and resources. It was more of a strategy to deepen a drive towards development that values community institutions that are based on interpersonal relationships among the social units.

The cooperation and collective actions among our people is part of their day-to-day community life, except that our development discourses and policy documents do not explicitly express these informal associational life and community institutions and self-help mechanisms. Though social capital is not widely understood as a development concept (in the country), the recognition of its importance is implicit in the Constitution of the Kingdom of Bhutan, which states:

> The State shall endeavour to promote those conditions that are conducive to co-operation in community life and the integrity of the extended family structure" *Article 9, Principles of State Policy.*

Beside the Constitution, the other important document that touches on social capital is *Vision 2020: A Vision for Peace, Prosperity and Happiness*:

> Our development has been able to draw upon a strong tradition of self-reliance, self-sufficiency, self-help and self-organisation. Our highly dispersed populations developed over centuries into tightly-knit and self-regulating communities, bound together by unwritten laws, practices and customs that governed kinship and community relations and the use of such shared resources as irrigation water and grazing land. Without this tradition of cooperation and compromise, communities would have been unable to cope with the threat and adversity or, indeed, to have survived in the harsh conditions that characterise most parts of our nation. While development agencies emphasize the importance of local self-reliance, it has been a basic fact of life in our mountain kingdom for centuries. (Planning Commission, RGoB 1999)

Besides, Bhutan's GNH-based development requires an interdisciplinary approach. Lack of terminological rigour and empirical validity of the concept should not avert us from exploring the many benefits of social capital. The research on social capital is highly imperative for our GNH-based development.

Social capital is now seen to contribute to a very diverse set of outcomes-governmental performance, democratisation, economic performance and individual level outcomes like quality of health, education, sanitation, and happiness (USAID 2011b:2). The World Bank to large corporate bodies, developed market economies to developing countries, and the governments to NGOs have begun to recognise social capital as a potential solution to several social problems ranging from urban poverty to crime, social insecurity, and economic problems to inefficient governments (Boix and Posner, 1998:686).

Narayan and Pritchett (1997:3) contended that social capital improves governance, facilitate local cooperative action, and solves common property problems. It is premature to establish the precise role of social capital in promoting good governance in Bhutan, though we all know that our citizens have to come together and actively participate in local governance and civic affairs to discuss common problems and articulate our demands. Through groups and networks, we become well-informed about our rights and choices, can hold our elected representatives accountable, and manage our local collective resources.

Social capital is an effective tool to reduce the regulatory and compliance enforcement costs. Groups and communities possessing high level of trust and cooperative-actions generally tend to have low levels of free-rider problems, and require lesser formal compliance mechanisms. Social capital fosters good governance and civic virtues among citizens by shifting their personal interest, for example, 'how can I get richer' to community-oriented concerns 'how can our community be improved? (Bixio *et al*: 691).

Social capital is an asset that is easily available to the poor. It is a promising tool for alleviating poverty, as it facilitates resource and information sharing, burden-sharing and collective decision-making (Grootaert and Thierry, 2002: 8). Social capital has been found to have major impacts on the welfare of the poor by improving household access to water, sanitation, credit and education in both rural and urban areas (Yusuf 2008:221). Sen's capability-approach to poverty highlights the lack of capacity of the poor individuals to make right choices or decisions and take over certain collective actions as the determinants of poverty and vulnerability. Social capital helps the poor in making right choices and right decisions and actions together (Knack 1999:2).

The potential influence of social capital on happiness has drawn significantly less attention than its influences on other areas of development. Nevertheless, the studies that were conducted so far reports a positive correlation between social capital and subjective happiness. There is a growing consensus that people tend to be happy not only because of their better material status, but also because they live in a socially cohesive society (Moa and Pereira 2008). Richard Layard (2005: 5) stated, 'If we want to be happy, we need some concept of common good towards which we all can contribute'.

Some people are beginning to deliberate on the policy implications of social capital for the GNH-based development. This came to light after the Centre for Bhutan Studies & GNH Research identified 'community vitality' as one of the nine domains of the GNH, and the National Statistics Bureau's bringing out the estimate of the economic value of volunteerism in Bhutan.

His Majesty the Fifth King summed up the importance of family and community in maximising the GNH:

> We strive for the benefits of economic growth and modernization while ensuring that in our drive to acquire greater status and wealth we do not forget to nurture that which makes us happy to be Bhutanese. Is it our strong family structure? Our culture and traditions? Our pristine environment? Our respect for community and environment? Our desire for a peaceful coexistence with other nations? If so, then the duty of our government must be to ensure that these invaluable elements contributing to the happiness and wellbeing of our people are nurtured and protected. Our government must be human. (The Madhavrao Scindia Memorial Lecture delivered by His Majesty the King on 23 December 2009)

The first democratically elected Prime Minister, Jigmi Y Thinley, a strong advocate of social capital, cautions about the risks associated with social dislocation. He suggests that family, community and relationships form the basis of a happy society:

> Amid such mindless economic growth and collapse of the economic system, if there ever was one, the nobler values of a civilized society are being eroded. Family, community and relationships that form the very core and basis of society are disintegrating.

> We labour like mindless robots to earn more, unaware that there can never be enough to feed the insatiable greed within us. Those of us who supposedly succeed in the rat race, and are 'ahead', soon become aware of its hollowness and suffer the terrible physical, emotional and psychological costs. Without the support of stable and caring family or relationships, these are all the more difficult to bear. The stresses and strains are deepened by the loss of trust, unbearable loneliness, hostile perceptions, and the culture of competition... We live in bigger homes but have no room for relatives, friends and even parents; drive big, fast cars but cannot reach our loved and dear ones in times of need; adorn our wrists with precision watches to manage time, but find no moment for rest and leisure." (The Ex-Prime Minister's speech on *Gross National Happiness: A Holistic Paradigm for Sustainable Development* at New Delhi on the occasion of the 4th Professor Hiren Mukerjee Memorial Annual Parliamentary Lecture on 23rd December, 2011, www.moaf.gov.bt)

CAN WE MEASURE SOCIAL CAPITAL?

Growing empirical evidences suggest that social capital can be measured using quantitative and qualitative instruments. Several developing countries have successfully tested the Social Capital Assessment Tool (SOCAT) developed by the World Bank's Social Capital Initiatives (SCI). Each of these instruments measure structural and cognitive dimensions of social capital at households and community level. The SCI group, though agreeing that social capital is a broad concept suggests the possibility of producing solid and verifiable results if researchers are cautious in developing methodologies and indicators that correspond with the context-specific conception of social capital (Grootaert and Theirry, 2002: 5).

The recent years have seen the progressive shift from theoretical conceptualisation to the empirical measurement of social capital. Narayan and Pritchett (1999) constructed a measure of social capital by matching the measures of social capital like the level of associational activity and trust with the household incomes. Grootaert (1999) and Maluccio *et al* (2000) used the household social capital survey data to establish the relation between social capital and household welfare. Many of the empirical studies were conducted in the African countries where the poverty rates are relatively higher.

The communitarian perspective that dominates the social capital literature bears the strongest empirical support. It equates social capital to local groups and associations (Woolcock and Narayan, 2000: 6) and treats social ties as central to helping the poor to manage risk and vulnerability (Dordick 1997). This perspective presents the possibility of a realistic set of policy recommendations for poverty reduction.

Structural social capital relates to networks, groups, roles, rules and participation, and cognitive dimension include norms, values, attitudes and beliefs of relations and cooperative actions (Krishna 2000, Uphoff 1999; Grootaert and Theirry 2002). Uphoff (1999) postulated 'structural components facilitate collective actions while cognitive elements predispose people toward mutually beneficial and reciprocal collective actions'. Combining these two dimensions generates social capital. The structural dimension can be measured by measuring the membership in groups, civil society and any other local institutions or agents that facilitate cooperative actions. Cognitive dimension is measured in terms of the members' attitudes and expectations of the groups, networks and collective life, and importantly, the mutual trust between the individuals.

Measuring social capital is difficult, but it is not impossible. Several studies have identified proxies for social capital, using different types and combinations of qualitative, comparative and quantitative research methodologies.

THEORETICAL DISCUSSIONS: SOCIAL CAPITAL IN THE BHUTANESE CONTEXT

That social capital concept lacks universal definition allows for context-driven interpretations of the concept. The unique historical, political, geographical, social, and economic circumstances of Bhutan may lend some distinct consideration of the concept and its practical implications. We discuss in short the concept in the Bhutanese historical context with a few examples, its different forms, core values, and the possible Bhutanese way of interpreting the concept.

More than six decades ago, the Bhutanese society was largely self-sufficient and feudalistic, now changing into modern structure and function. The local institutions are giving way to more complex forms of social and economic organisations. We discuss the three important stages of social and political transformations in relation to social capital.

Historical context

First, during the pre-monarch theocratic period (17th to early 20th Century), the Bhutanese society mainly constituted the peasantry and monastic community (state, *gzhung dge-'den*). The state's purpose was to propagate the Buddhist teachings and guarantee citizens' protection, happiness and well-being by maintaining law and order in the spirit of the Buddhist principles. The subjects (peasantry) supported the state functions through in-kind taxes and free labour. The harmonious state-society relationship partly rested on the belief that the ordinary peasants could not renounce their daily social life to pursue a spiritual path, and that supporting the state gave them the opportunity to serve monastic bodies and earn for themselves the spiritual virtues.

The dual system of governance (*choe-srid*) then looked at balancing the spiritual and secular affairs of the state. This *Dharma*-mediated secular governance system guided both the government and subject to adopt attitudes and actions that foster both individual as well as collective moral good, virtuous duties and social responsibilities for, and beyond the fellow beings, extending to all sentient beings. The duty-based society promoted the growth of co-dependency, con-existence, altruism and sense of volunteerism and cooperative action both at the macro and micro levels, and set back the idea of individualism, right-seeking attitudes and self-interest seeking behaviour of the people, which are salient in the modern economies and democracies.

Being located in several dispersed and isolated areas, the communities developed distinctive social structure conducive for the exchange of goods and services between their members. Such confined social interactions are usually called 'bonding' social capital, and is characterised by a high level of trust and cooperative actions undertaken to mitigate and overcome the common issues like calamities, food shortage, scarcity of labour, local conflict management, resource sharing, and so on.

In that way, most of the villages emerged as a strong amalgam of peasant households, bound together by the principle of consensus, solidarity, self-reliance and cooperation (Lham Dorji, 2005). In the process, several local customs and institutions that fostered cooperative and interactive actions evolved, many of which are alive and vibrant up to now.

Karma Galley (2003, 156) observed that the individuals in any particular village in the country share many similar interests by virtue of their neighbourhood proximity, and consequently, there existed a strong sense of neighbourhood and interdependence. He asserted that the sense of solidarity was not only the result of the Buddhist principles, but also a congregation of factors that determined it. One factor that would have led to the emergence of many self-sufficient communities could have been their geographical solitariness.

Where possible, several communities have developed inter-communal linkages known in the literature as 'bridging' social capital. One example of the bridging social capital is a guest-host relationship between the people of the highland communities (guests) and the low-lying valleys. The Highlanders come down to the valleys to barter their dairy products with grains and other goods. The Highlanders stay with their hosts as if they are just one big family. This tradition had been there for generations past.

Tashi Choden and Lham Dorji (2005) surmised that the social networks that are built on trust, commitment (*dham tshig*) and reciprocity are widespread, and forms the basis for collective action, which individuals cannot achieve on their own. They have conducted one of the earliest studies of the communal management of resources. They have documented a *northue* tradition (inter-village cattle herding) of north western Bhutan and published this in *Understanding Civil Society in Bhutan* (CBS, 2005). This tradition is a typical example of informal social capital with both structural and cognitive elements.

> In the *northue* tradition of Wanakha, Dawakha and Langmikha, about twenty households (out of fifty-five who owned between twelve to fifteen cattle) would pool their herds and graze them in Kamji areas of the south sub-tropical regions (*thasa*) for entire winter months and in northern pastures during summer months. This was an age-old tradition of transmigrating the joint herds to pasture lands (in different climatic zones) owned by the three communities. The transmigration was necessary to make up for the seasonal and spatial forage scarcity. Each party (from the three communities) would take over the responsibility of the common herds over six months including the privilege of using the dairy products. This tradition of managing and sharing pooled resources would involve a high level of trust between the players.

The relationships between the players are extended through the exchange of gifts. The herders from southern sub-tropical areas would gift betel nuts, betel leaves, and cane products that are normally reciprocated by their counterparts in the north with rice and homemade alcohol (*ara*). (Adapted from *Understanding Civil Society in Bhutan, CBS, 2005*)

The *northue* tradition is a good example of both bonding and bridging social capital. It was bonding social capital because it involved mutual trust and strong ties, and it was bridging as the ties and dyadic exchanges took place between the families of different communities. The tradition has waned now, and suggests the role of modern development in the demise of the traditional social capital.

Second, contrary to a theory that autocratic power impedes the growth of cooperative groups and practices, the situation in Bhutan was different. The establishment of the monarchical system in 1907 did not disrupt the conjunct practices. The new system of governance instead allowed for a closer, warmer and more harmonious bond between the ruler and subject. The monarchs reinforced the nation's stability and dispensed justice and protection to their people; the subject reciprocated by paying customary taxes and making labour contributions. During the 1950s, the third King freed most of the indentured servants of the local aristocracies, putting an end to oligarchy. Instead of the aristocrats watching and monitoring their cooperative activities, they got new freedom to lead a more organised community life, or in other words, they got more equality in social life.

There was a strong division between the eastern and western regions of the country during the theocratic rule. Such regional division slowly subsided. The first and second kings headquartered the government in the central region. The State could take strategic control over the eastern and western regions and act as the bridge between the two major regions. The third king shifted his headquarter to the western region, thereby, increasing the mass interactions between the people of the eastern and western Bhutan.

Third, the modernisation of the country in the 1960s changed the state-society relationships. The state became the development provider; the society became the beneficiary. The government initiated and implemented most of the development activities; the people contributed labour. In the 1980s, the government redefined its role from the development provider to facilitator. Decentralisation was introduced to

empower people and mobilise their active participation in development works and self-governance. Bhutan's Vision 2020 document states that the aim to redesign the role of the state is to make the government more responsive to its citizens:

> We must continue with the progressive redefinition of the role of the Royal Government from that of 'provider' to that of enabler' of the development, with a continued emphasis on the creation of conditions that mobilise the energies and imagination of people, enable entrepreneurship to flourish, and make private sector become a more active partner in the nation's future development. This redefinition should not be interpreted as an abrogation of responsibility. The Royal Government will continue to chart the future course of the nation's development…and that participation and empowerment at the local level continues to be actively promoted. (Vision 2020, Planning Commission, Thimphu)

His Majesty the Fourth King stated that for the country to advance socially and economically, the people should work together hand-in-hand with the government:

> As far as you, my people, are concerned, you should not adopt the attitude that whatever is required to be done for your welfare will be done entirely by the government. On the contrary, a little effort on your part will be much more effective than a great deal of effort on the part of the government. If the government and people can join hands and work together with determination, our people will achieve prosperity and our nation will become strong and stable (The Royal Address to the people of Bhutan on the Coronation Day, June 2, 1974)

The Royal Government sees the role of people as central to bring about effective development and accentuates 'cooperation and coordination':

> No development effort can succeed without the people's cooperation and commitment and effective development cannot be only top to down process. While the government would give the lead in the overall direction of development and provide resources and technical inputs, which are beyond the capacity of the people, plans would have to be formulated in consultation with the people in order that these plans reflect felt-needs and execution is within the capabilities of people. It is the Government's conviction that only when these conditions are satisfied and effectively pursued that the benefits of

development would actually reach all sections of the population leading to an increased distributional equity. (Planning Commission, 1981; CBS 1999)

The government allocated most of the development works to the local communities along with the delegation of responsibilities. Simultaneously, the government founded several formal institutions of co-operation and collective action. The community's requirement to form Water Users Associations (WUAs) to be eligible for the government support to build the irrigation system is one example. The other such associations are water and sanitation groups, community forest and milk cooperatives. Many of the local groups are an extension of the traditional system and the practices of self-help and cooperation. For example, the WUA is similar to the *chusungpa* tradition. *Chusungpa* (water guard) post was responsible to ensure the equal distribution of water to every farm.

Despite the notion that the NGOs and civil societies cannot flourish in traditional, hierarchal and centralised states, in Bhutan several state and privately advocated NGOs and civil societies flourished since the 1980s. Bhutan presents a unique example of how the state was able to play an important role in the creation and fostering the growth of social capital *vis-à-vis* civil society. Creating and promoting social capital was necessary to support the state policies of decentralisation and people's participation. The larger state-supported NGOs like National Women Associations (NWAB, established in 1981), Bhutan Chamber of Commerce and Industry (BCCI, 1980), Royal Society for Protection of Nature (RSPN, 1999), and Royal Society for Protection and Care of Animals (RSPCA, 1999) emerged mainly with the support of the state. The Voluntary Artists Studio Thimphu (VAST, 1998) and Tarayana Foundation (2003) were established to harness talents and carry out charity works respectively.

Several small private welfare associations came into being in the recent years. The prime purpose of these smaller groups is to look for the welfare of their members, and mostly formed through the members' initiatives. A few examples of such groups are Deling Phendey Tshogpa (1997), Yang-Bum Thuenshey Tshogpa (YBTT, 2000), Trong-Dangkhar Phendey Tshogpa (TDPT, 2010), Ranjung Wosel Choling Zhendep Tshogpa and Chithuen Phendey Tshogpa.

Bhutanese social values as the basis of social capital

The social capital characteristics such as networks, norms, trust and reciprocity are the very essence of the Bhutanese traditional values and practices. The concept of *tha dhamtshig,* literally translated as 'boundary of the sacred path' (Kinga, S, JBS 3, 153) refers to the commitment and obligation of love, trust, reciprocity, compassion, respects and loyalty in one's relationship with other people. The Bhutanese people practise these social values through three conducts. First, the disciples and followers are expected to respect and worship their masters for teachings and religious initiations (*lopen da lobma gi tha dhamtshig*). Second, children must be grateful and reciprocate their parents' love, affection and kindness (*pham dha bhugi tha dhamtshig*); and third, subjects must be loyal to the sovereign, government, leaders and elders (*gomdha yog gi tha dhamtshig*) for benevolent rule, peace, harmony, guidance and protection.

These social values are not restricted to three types of human relationships, but extend to relationship among relatives, neighbours, spouses and community members. They are further condensed and built upon the idea of reciprocity (Kinga, S), widely known as *drinlen jelni* (repaying kindness) and *loteg hingteg* (trustable) and exercised through *pham puencha* (parents and relatives), *ngen nghew* (kith and kin), and *cham thuen* (networks and friends). Each terminology is laden with strong social values and serves as the basis for human relationships, meaningful interactions, cooperation and support to each other. Considering the preponderance of all these social values and norms in the Bhutanese society, it would not be difficult to appreciate the concept of social capital even if it has been first conceptualised outside the country.

We stress on the reciprocity that give incentives for people to cooperate and support each other. Reciprocity is a driver of cooperation and relationships. One example is, a family member from Chendebji going to pay condolence to the bereaved family in Bemji which is about a day's walk (Dorji, L, observation, 2007) to reciprocate the latter's past commiseration. In this example, three elements are notable: communalism, repayment of obligations and the actual extent of the obligation. This type of social capital exists in social structures where people are involved in a network of obligations to one another and where they trust each other to fulfil social obligations. This becomes strong in times of illness and death.

The basic tenet of these social values is to maintain a social harmony-a kind of bond between individuals, based on trust, commitment and reciprocity. The harmonious relation is best demonstrated through a pictorial representation of four harmonious friends '*thunepa punzhi'* painted on the walls, usually in temples. The picture constantly reminds people of the importance of harmonious relations. Similarly, the Bhutanese code of conduct and ethics (*driglam namzha*) emphasis on the relationship between the individuals. They convey the ideas concerning individual and society's morality, justice, egalitarianism, sense of duty to the state and others in the society, obligation, relatedness and affections.

Different forms of social capital in Bhutan

The examples the contemporary groups and associations (given above) are formal forms of social capital that have emerged in response to new social and economic development. These are in essence the extension of the tradition except that they are more formalised and structured along the line of the modern idea of groupings and entrepreneurships with legal writ. The emergence of new self-help groups suggests that some revolution in the ways people organise themselves for civic actions is taking place. They exactly fit with those that Putnam describes as possessing the functionality-orientation.

The informal forms of social capital are ill defined and lack legal statute, but are based on social values, norms and practice. They constitute almost every day-to-day activity and have overlapping functions. They do not accord well with Putnam's version of structural social capital, as they do not emphasise much on organisational functions. They also remain obscure unless one delves deeper into the social structure, human behaviour and their intimate or obligatory relations.

Then, we can classify social capital into structural, network and cognitive social capital. Structural social capital can be either formal or informal. A neighbour's help when one is in trouble, a relative nursing over sick relative and friend borrowing or lending money from or to friends constitute a network social capital. Networks are 'patterns of social exchange and interaction' and represent structural capital being strongly grounded in the cognitive process of benefit-expectations and norms of reciprocity (Uphoof 2000: 218-219). The intimate relationships between the people that are based on trust and reciprocity, and they constitute

cognitive social capital. This form of social capital is unobservable and elusive, and largely constitutes mental process.

Different forms of social capital are 'mutually reinforcing' but can function individually (Grootaert & Bastelaer, 2002). For instance, some NGO may represent structural social capital in which cognitive social capital may remain inactive and void. Similarly, without formalised structure, social and mutual relations, trust and reciprocity exist not only between friends, relatives, and neighbours but also in the villages and communities. Uphoff (2000) however asserted that structural and cognitive social capital are intrinsically connected; they cannot persist without one another.

Then there is the other type of social capital formed out of close social networks that allows the creation of sanctions or enforcing group norms. Some forms of social capital are 'appropriable'. Lham Dorji (2005) studied a community fund for religious activities (*drongyul bhumdhey mangnyul*) in Lomneykha (Chukha) that represent the appropriable social capital and function effectively due to group sanction:

> The community has created the fund to sustain annual community *bhumdey* (religious scriptural recitation). In the past, the designated patrons would organise *Bhumdhey* on rotation basis. As organising *bhumdey* required lavish provision of foods and drinks, the community members decided to form a group of five households to co-share the burden.

> The idea of organising the event through group gave rise to the *community fund* (sometimes referred to as *loteg mangyul*). The seed money that they collected through individual and household donations exceeded a million *Ngultrum*. They now keep the money in a revolving bank account and loan to community members at an appropriate interest rate. The borrowers have to repay the loans on the last day of the *bhumdey* recitation in the presence of the entire community. Whosoever fail to repay the loans have to face the community sanctions that normally come in the form of social denigration.

> They use the fund for many purposes such as to renovate community roads, temple, dispensary and school, and to buy books for the school library. (Short version of the case published in *the Understanding Civil Society in Bhutan*, 2005 by CBS)

The literature describes the above social capital as 'appropriable social organisations or activities' as they are used for the purposes other than their original intent (James S. Coleman, 1988). In the above case, the original purpose was to uphold the spiritual practice, but later they appropriated the fund for other social activities. This present a typical example of a spiritual group (not considered as civil society in Bhutan) functioning as civil society. This reflects the strong potential the spiritual values and practices have in generating and promoting social capital in the country.

Furthermore, Grootaert (2004) distinguished social capital at three levels: the *micro*-level social capital is horizontal networks of individual and households and their associated norms and values. The *meso*-level social capital comprises both horizontal and vertical relations among the groups. It represents a link between individuals and society. The *macro*-level social capital takes the form of institutions and political environment that serve as an engine of economic and social activities and governance stability supported by the rule of law, strong judicial system, and law enforcement. The three levels of social capital interact for complementary and supplementary impacts. For example, when the government provides enabling environment for the local associations, the complementary effect functions between the three levels (Grootaert 2004: 3-4).

The *micro*-level social capital in Bhutan takes the form of the institution of the extended family and intimate connections between the relatives, friends and neighbours (*nyen nyew, cham thuenm, khyimsang dangra*). The relations are in essence bonding in nature. The examples of the traditional *meso*-level social capital are the indigenous community institutions, collective custody of communal resources, and workforce exchange system. The regional groupings of local associations are also the examples of contemporary *meso*-level social capital. The harmonious relationship between the state and society is an example of the *macro*-level social capital. It provides the *macro*-enabling environment for the growth and sustainability of social capital.

Taking into account the three levels and different forms of social capital, we conclude that social capital in Bhutan primarily constitutes social, cultural and economic institutions of relationships among individuals and groups, operating at national and local levels, formal and informal, and possessing the civic elements like volunteerism, trust, collective action, reciprocity, and sense of commitment.

Social capital and civil society

Having touched on the historical development of social capital with examples and the various forms of social capital, we now focus our discussion on civil society because 'social capital forms an integral part of civil society at the micro and macro levels' (World Bank website). Civil society and social capital are substitutable terms, except that civil society are treated as the groups and organisations, both formal and informal, situated between the state and market to promote diverse interests in society while social capital is more about social relations between the people.

The 87th session of the National Assembly passed the Civil Society Act in June 2007 to foster the creation and growth of the civil societies in the country. According to the Act, the purpose of the civil society is to develop human qualities and render humanitarian services (CSO Act, 2007).

The CSO Act (2007: 2) defines civil society as 'associations, societies, foundations, charitable trusts, not-for-profit organisation or other entities that are not part of government and do not distribute any income or profit to their members, founders, donors, directors or trustees'. The definition does not count trade unions, political parties, cooperative and religious organisations as civil societies. Two types of civil society organisations (as per this definition) are Public Benefit Organizations (PBOs) and Mutual Benefit Organizations (MBOs). The PBOs are bigger entities aimed at benefiting a larger section of the society; the MBOs promote the shared interests of their members and supporters. See appendix 7 for the registered PBOs and MBOs.

Going by the normative definition of civil society, most of the groups and associations that the Social Capital Module (BLS Survey 2012) have captured do not seem to fulfil the criteria of civil societies. Nonetheless, since these groups are created through collective efforts for common benefits and to facilitate cooperative actions, they should qualify as social capital. Formal networks of social relations concern those aspects most often described as civic (Baum *et al*, 2000), and term civic is associated with social capital (Putnam, 2000). Many grassroots groups are emerging with different missions and functions, and their functions range from service delivery, credit provision, advocacy, social mobilisation and

religious teaching to welfare promotion. These groups constitute the elements of both civil society and social capital.

Change and continuity

With the change in our political ideology and practices, more and more people are now beginning to adopt the right-based approach to livelihood, emphasising on individual right than a sense of duty for others. Development and modernisation may cause the traditions to decline or vanish under the force of the modern values, ideas and forms of interaction. Of course, social and economic modernisation can offer greater diversity and plurality of lifestyles, leading to the democratisation of personal relationships. Still then, experiences elsewhere have indicated that the disintegration of the traditional social fabric has led to the weakening of community vitality.

Putnam cautions that the stock of social capital--the very fabric of connections between the individuals--is fast depleting, impoverishing the community life. Using about 500, 000 interviews over the last quarter of the 20th Century, Putnam concluded that the Americans now interact less with each other, worse to the extent that one is alone when bowling. One of the causes of the decline in social capital in the America is obviously the rampant pursuits of individualism. Their leap into capitalism by dismantling the previous forms of social and economic planning and replacing them by private property rights and practices seem to have impoverished the America's community life, and now they are desperately trying to revive it.

Intrinsic to capitalism is market society, governed by self-interest or swarmed with the individuals who are interested to accumulate as much wealth as are available and possible. The self-interest seeking behaviour brings about the cutthroat competitions and destruction of social resources. Everyone is in a race to make money that they have lesser time for family, neighbours and others, though the capitalists purport that the capitalism enhance societal welfare. The need to revive social capital in the capitalist economies and preserve the same in transitional economies is now coming to the fore.

In Bhutan's case, unless we make efforts to preserve and promote the traditional moral frameworks, institutions and practices of communal life as enshrined in the Constitution, time will not be far when the Bhutanese

people will realise that the things that matters more in their life have vanished. The need for the policies and programmes to revive what had been lost to economic development and social modernisation will then arise like in the advanced economies.

We put forward our view that we have in our country the legal, social and political enabling environment for the growth of social capital as much as we are exposed to the risk of losing it. It is urgent that we bring the issue of preserving and promoting social capital on a real policy table and practice them. We hope more exploration of theory and practice of social capital will follow.

Happiness

On the happiness, the GNH conceives happiness as being beyond the subjective state of mind to incorporate both material and emotional attributes (*gakyid*-Bhutanese term for happiness and wellbeing). In the traditional construct, an individual or a household is in an unhappy state when he or she, or their families do not have adequate means for survival such as food, shelter, relationships, physical health and mental wellbeing.

Happiness to most Bhutanese people means being able to maintain one's body free of pain and diseases and mind free of stress and anxiety. Achieving this 'state of life' requires both material and non-material resources. One of the most important means to this end is the social relationships. The catchphrase 'let us all meet again in that harmonious state of health and happiness' has become something of importance for the continuity of human relationship. Meeting again conduce social interactions and exchanges, generating social capital.

These are some theoretical bases for understanding social capital in the Bhutanese context. The evidences [elsewhere] of the benefits of social capital and the new approaches to its measurement provide the initial impetus to begin a conceptual and empirical inquiry into social capital and its role in development, and more so, linking it with the GNH.

THE DEFINITION USED FOR THE PRESENT STUDY

The World Bank's social capital conceptual framework adopts two lines of thoughts to define social capital. The first idea accentuates on social relationships; the second one goes beyond to include the individual membership in civic organisations/groups. Both the ideas recognise

group variation and dynamism, as the quondam social capital needs to be modified or replaced by new ones according to the change in technology, demography, economic development, urbanisation and social mobility. The two ideas lean towards community's associational life and wide-range of social problems it can solve such as poverty, unemployment, health, crime, governance and so on.

We use both the ideas to derive the most simple and appropriate definition of social capital for the present purpose. We define social capital for the present purpose as:

> Networks, groups and relationships between the citizens--traditional or contemporary, and formal or informal--grounded on mutual trust, duty and reciprocity, practised through a set of traditional norms and customs as well as modern ideas of cooperative action and entrepreneurship to facilitate collective actions resulting in common benefits.

CHAPTER II

CONCEPTUAL FRAMEWORK AND METHOD

We can measure social capital in several innovative ways, though for some reasons obtaining a single true measure is impossible (World Bank). We used the World Bank's Social Capital Integrated Questionnaire (SC-IQ) to collect data and Social Capital Assessment Tool (SOCAT) for the analysis. We modified the SC-IQ slightly to suit our context. The Social Capital Module (SCM), consisting of 38 questions, was included in the Bhutan Living Standard Survey (BLSS 2012). Of six dimensions of the SC-IQ, 38 questions represented only the first three dimensions, namely, *Groups and Networks*, *Trust and Solidarity* and *Collective Action and Cooperation*. We excluded the other three dimensions: *Information and Communication*, *Social Cohesion, Inclusion and Empowerment*, and *Political Action* for time and space considerations. As acknowledged by the World Bank, not all the questions from the SC-IQ were so relevant to the Bhutanese context, and so we omitted some of them.

The World Bank has designed the SC-IQ for nationally representative surveys, especially suitable to be integrated with the Living Standard Surveys. We initially thought the validity, reliability and usefulness of the SCM would not be a major issue, as it was directly adapted from the World Bank's SC-IQ. The World Bank has designed each question after pilot surveys with extensive input and critique from a panel of experts, and pre-tested in Nigeria and Albania. However, while doing the first stage analysis, we found out that the questionnaire has captured mostly the formal social capital such as memberships to the formal groups. The informal groups that are ingrained within the social structure and those we consider constitute the core components of our version of social capital were insufficiently captured. This is one caveat of our present dataset. We feel it is important to redesign some questions in the future surveys to capture informal and folksy forms of social capital that are extant in the traditional communities.

In the first stage analysis, we assessed social capital stock using a simple descriptive analysis. We use the same dataset, in the second stage analysis, to examine relationships between social capital and other outcome variables such as poverty/household welfare (money-metric measurement of social capital), happiness, and other development indicators by integrating the SCM with the BLSS dataset.

We have published the results of the first stage analysis in Chapter 10 (page 75-91) of the BLSS Report 2012. We incorporate a shorter version of the first stage analysis in this report. We use two sets of social capital indicators for the second stage analysis: structural social capital (membership in associations and networks, and collective action) and cognitive social capital (trusts, cooperation and adherence to norms).

In the main multivariate model, we use Grootaert and Van *et al's* (2002) equation to analyse the contribution of social capital to household welfare (*log real per capita household expenditure*). We treat social capital as a class of capital like human, physical and economic capitals that contribute to the household welfare. We treat it as capital because it has been proven that social capital results in the measurable benefits to the participating individuals, and leads to higher levels of well-being (Grootaert 2001: 16).

The dependent variable is in its *log*-transformed state and the independent variable is in its original metric. When the dependent or response variable is *log*-transformed and the predictors or independent variables are not, the dependent variable changes by 100 x (*b*-coefficient) percent for a unit increase in the independent variable, holding all other variables constant. In this way, we can interpret the changes in percentages. We take into account the regional price variation and inflation in Bhutan to get the *real* value. We use a single food basket to ensure a consistent comparison of welfare levels of people living in different parts of the country.

Beside social capital variable, we use the asset endowment index, aggregated from 18 household assets as listed in table 1. We do not use the land and house, as they do not seem to contribute much to the model. We exclude the farm equipments because we take the variable 'a household in the agriculture sector' or 'a household in rural areas' as a proxy for the ownership of the farm equipments.

Table 1: List of 22 common asset items

1. Sofa set	10. Television
2. *Bukhari*	11. VCR/DVD
3. Heater	12. Radio
4. Curry cooker	13. Electric iron
5. Modern stove	14. Grinding machine
6. Washing machine	15. Sewing machine
7. Water boiler	16. Weaving tool
8. Microwave oven	17. Wrist watch
9. Fan	18. Camera

The other independent variables are the household endowment of human capital (years of education of household heads), vector of household characteristic: size, proportion of households with members age 15 and above (economically productive members), whether a household's head is working in the agriculture sector, and if a female heads a household.

The equation below represents the generalised model:

$lnE_i = a + bSC_i + cHC_i + dOC_i + eX_i + fZ_i + u_i$ .... (Equation 1)

Where,

> E_i = real per capita household expenditure I (the dependent variable is the natural logarithm)
> SC_i = household endowment of social capital
> HC_i = household endowment of human capital
> OC_i = household endowment of other assets
> X_i = a variable of household characteristics
> Z_i = a variable of community/region characteristics
> u_i = error term

The equation corresponds to the conventional econometric model of household economic behaviour, which is a function of the level of composition of household expenditure. Social capital in the model is assumed as a *real* capital and measurable like human capital.

The indicators for structural social capital are derived from the households' memberships in local groups and the various characteristics of their memberships. The membership in local groups is assumed to be an input indicator, as being the group members serve as the medium by which social capital is generated. Seven indicators of group memberships are selected using the principal component analysis (see annex 3) to build single structural social capital index:

1. Membership density score- measured by the number of groups in which a household belongs. This is normalised by household size to allow comparison.

2. Meeting attendance score– measured by the number of meetings attended by a household. The result is averaged on a quarterly basis. Logically, it appears the mere membership in the groups bear little value if one does not attend the meetings with other group members. Attending more meetings should indicate greater participation and higher social capital.

3. Cash contribution score– measured by the average monthly cash that a household contributes to local groups. This includes the in-kind contribution wherein the respondents have imputed the equivalent monetary value.

4. Work contribution score – measured by the number of days of work that the members contribute to the groups in 12 months. We use cash, in-kind and work contribution as measures of structural social capital on the ground that all other things being equal, it is a sign of greater interest in the groups that the members are willing to pay or contribute.

5. Community orientation index – measured by the memberships in groups that are initiated by the community members. The case studies in Latin America and South East Asia have found that local groups that find their roots in the community are more effective than the ones formed through external imposition or mandated by the government (Uphoff 1992; Narayan, 1995; Ostrom, 1995).

6. Decision-making index – measured by the average score of the members' participation in groups' decision-making processes. The categories of decision-making and their respective scales include the following: 3 for leadership role, 2 for very active participation, 1 for somewhat active and 0 for non-participation. The average is then re-scaled from 0 to 100. The index is based on the reasoning that the groups that follow a democratic pattern of decision-making are more effective than other groups.

7. Openness index- measured by how a household seeks a group membership. The modes of seeking group memberships and their respective scales include the following: 3 as voluntary, 2 as invited to join, 1 as required to join and 0 as forced to join. We assumed the groups with the members who joined voluntarily are more effective than the other groups.

A group's homogeneity and heterogeneity may have varying influences on its effectiveness. Grootaert and Bastelaer (2002:63) reckoned that internally homogenous group make it easier for its members to trust each other, share information, and reach effective collective decisions. On the other hand, a group with diverse members can get access to multiple sources of information and resources. The World Bank's Social Capital Initiatives (SCI) studies measure group diversity in terms of the differences in age, gender, occupation, education, religion and political affiliation of the members. We drop the diversity index simply for the reason that most of the groups into consideration have homogenous characteristic.

Again, six indicators of cognitive social capital are selected using the principal component analysis. The dependent or response variable in the model is the natural logarithm of *real* per capita household expenditure. The explanatory variables are social capital, human capital, asset owned by the household, demographic control variables and location dummy variable. Cognitive social capital indicators are as follows:

1. Close friendship score–measured by the number of friends that a respondent feel at ease with, can talk about private matters or call on for help in times of need. This is more of network or structural component, but we decided to include it under cognitive dimension, for developing close friendship involves cognitive processes.

2. Source of financial support score–measured by the number of people who a respondent thinks can provide him or her small amount of money in case of emergency. This is equivalent to a weekly household expense (rural) or one week's wages (urban).

3. Assistance given score –measured by the number of people with a personal problem who came to a respondent seeking for assistance in the last 12 months

4. Emergency support index– measured by the availability of help and support during sickness and death in a family. The value 1 represents the availability of people and 0 otherwise. We chose in the survey 'sickness and death' because this is one event that brings the individuals and families closer.

5. Social interaction index– measured by an average of three everyday interactive activities undertaken in last one month. These activities include (1) meeting with people in public places to talk or have foods or drinks, (2) people visiting the respondents in their homes, (3) the respondents visiting other people at their homes.

6. Trust index – measured by the total score on the level of trust and feeling of closeness or togetherness in the neighbourhood and the level of trust within the neighbourhood. We use generalised trust and specific trust, that is, whether a respondent agree or disagree with the four general statements:

    i. Trustworthiness –measures whether the people in the neighbourhood (in general) trust each other. The value 2 represents trust strongly or somewhat. The value 1 represents neither agree nor disagree. The value 0 represents somewhat and strongly disagree.

    ii. Alertness–measures if someone in the neighbourhood would take advantage of a respondent. The value 0 represents strongly or somewhat disagree. The value 1 represents neither agree nor disagree. The value 2 represents somewhat and strongly agree.

    iii. Helpfulness– measures the willingness of the people in the neighbourhood to help a respondent in need. The value 2 represents strongly or somewhat agree. The value 1 represents neither agree nor disagree. The value 0 represents somewhat and strongly disagree.

    iv. Untrustworthiness–measures if people in the neighbourhood do not trust each other in the matter of lending or borrowing money (specific trust). The value 0 represents strongly or somewhat disagree. The value 1 represents neither agree nor disagree. The value 2 represents somewhat and strongly agree.

    v. Closeness– measures the feeling of togetherness or closeness in the neighbourhood. The value 2 represents strongly or somewhat agree. The value 1 represents

neither agree nor disagree. The value 0 represents somewhat and strongly disagree.

In cognitive social capital model, we measure human capital again by a variable representing the number of years of education of a respondent (usually the household's head). We derive an asset index by averaging the scores on the 18 basic household assets. We use a dichotomous variable, wherein 'value 1 indicates the household own the asset and value 0 otherwise'. Demographic control variables include the household size, a dummy variable indicating whether a respondent is economically active (either unemployed or not part of the labour force). We use sex as another dummy variable (value 1 indicates female and 0 indicates male).

The two most important components of cognitive social capital are trust and solidarity. Solidarity is understood as the network density a person posses to mobilise mutual support. In the survey, the respondents were asked if the people in the neighbourhood could cooperate to deal with 'hypothetical crisis situation' that affects everyone.

Trust is an abstract concept. It is difficult to measure trust simply because it may mean different to different people. Groostaert and Van Balieaster (2002a) grouped trust into two parts for the ease of measurement-specific and generalised trusts. Generalised trust is the extent to which one trusts others in the neighbourhood. Specific trust pertains to a specific transaction, especially money lending and borrowing or entrusting children to a neighbour's care when their parents have to be away.

We chose the World Bank's quantitative framework for the analysis because the data was collected using its questionnaire. It is considered as one of the most recent and tested methods of producing direct and accurate indicators of social capital. Importantly, it takes into account multidimensional nature of social capital and incorporate different level and unit of analysis. For example, while we can analyse structural social capital at household level, cognitive dimension can be analysed at an individual level.

Some indicators that we use in the cognitive social capital model can be output measures as well. We can alternatively treat cooperation and collective action, resulting from trust and networks as the output indicators, though at present, we use them as input indicators of cognitive social capital. Grootaert and Van Bastelaer (2001) maintain that an

empirical analysis must include both structural and cognitive dimensions of social capital. They reasoned that forming networks and groups (structural) depends on trust and adherence to norms (cognitive).

We agree that the association between the various social capital variables are not always unidirectional; groups can sometimes generate trust among their members and at other times, trust can lead to group formation. The reverse causality (endogeneity problem) is possible. For example, the households with higher income can devote more resources to form networks and generate more social capital (Grootaert and Bastelaer, 2001: 66), like rich people being able to invest more on education to generate human capital. The endogeneity problem normally arises when there is a correlation between a variable and the error term.

The extent of the two-way causality can be resolved by applying instrumental variables estimation, but it is difficult to identify a suitable instrument set for social capital. The theoretical ideal is to apply historical social capital data, as the past social capital can drive the current income or consumption but cannot cause reverse causality. The historical data on social capital is not available. The fact that we do not use instrumental variables to test the 'endogeneity' problem remains another limitation of the study.

We take the structural and cognitive dimensions separately in two econometric models because of differences in the sample sizes. The sample size of the structural dimension was 631 households, whereas it was 8799 households for the cognitive dimension. The latter's sample size was higher as the survey questions were directed to the individuals (mostly the households' heads). When we combine the variables of the two dimensions, sample size is reduced to 617, because only this many individuals who have responded to the cognitive dimension questions have answered the structural dimension questions. The fact that only 617 households have responded that they are members of at least one group does not mean the rest of the households in the sample does not interact or are not part of the groups.

We have included a description of quintile and logistic regression in their respective sections.

CHAPTER III

RESULTS

Chapter III presents two sections. In the first section, we re-introduce the summary results of a simple descriptive analysis published in the BLSS 2012 report. We substantiate the summary results by *elaborate descriptive analyses*. The differences between these two results are that while the simple descriptive analyses are expressed in percentages, the results of elaborate descriptive analysis are mostly expressed in scores and averages.

The second section of the chapter turns to the econometric analyses and models. The main aim of building social capital models is to identify the contribution of social capital to the household welfare (*real* per capita household expenditure) in relation to other household assets, human and physical capitals. We try to address a question: 'Does social capital contribute to the household welfare'? Specifically, we try to answer the question: 'Is social capital important to the poor, considering that the poor households are not fully able to accumulate other forms of social capital?' We also examine the relationships between social capital and self-reported happiness.

SECTION I: FIRST STAGE SOCIAL CAPITAL DATA ANALYSIS

Structural social capital

The functional effectiveness of structural social capital may depend on the structure of the group, its membership pattern, norms and values, practice and collective action. The first set proxy indicators of structural social capital are the types of local groups (that support cooperation and coordination), household's membership in different groups, and their spatial distribution. We classified eighteen major groups from three hundred and one different names of local groups (provided by the survey respondents, for different name, see appendix 6). We also used the known functions of the groups while classifying the groups.

As shown in figure 1, the majority (24.69 percent) of the households has reported they are the members of the Community Forest Groups (CFGs). The government encourages the people to form the CFGs mainly to mobilise people's participation in the collective management of the forest

resources. Rinchen Wangdi and Nima Tshering (2006:1) found that the CGFs are contributing to a positive change in the social, economic and environmental areas of rural livelihood.
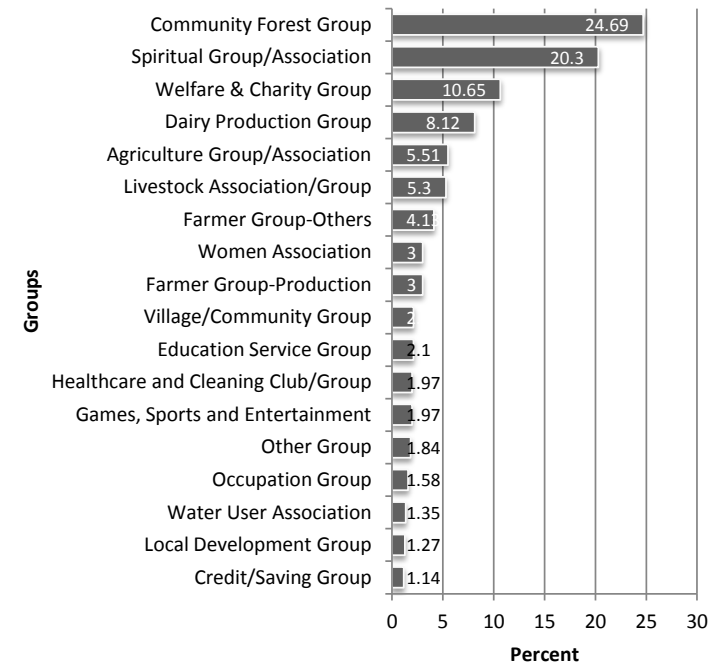
Figure 1: Household memberships in different local groups (by percent)

Bhutanese culture and tradition have spiritual roots and constitute the important ideological and realistic foundations of the daily life. They are the sources of collective values and practices (BLSS, 2012). Twenty percent of the households surveyed are the members of the spiritual groups (second most common group). The religious groups help to uphold spiritual institutions and heritage, and to meet the spiritual aspirations and the wellbeing of people.

The welfare and charity groups make up the third most common group (figure 1 above). They either serve the welfare of their members or benefit

the larger society by facilitating group action and making the people the agent of their own change and development. The self-help groups are known to promote duty-based approach to development through collective actions, ownership sharing, and collective risk aversion and mitigation.

Simply being group members cannot fully explain the effectiveness of the groups. The household heads are the members in most of the eighteen groups (62.49 percent). This indicates the high importance given to group participation. The groups that follow a democratic pattern of decision-making can be more effective and successful. Ten percent of the group members participate as leaders (in making group decisions), fifty percent participate actively, and eight percent does at all not participate (figure not provided).

More female-headed households participate in the CFGs, dairy production groups, women associations and welfare & charity groups, village/community groups, farmer groups-production and credit and saving groups. However, in terms of participation in making group decisions, more male members are more active than female members are. More male-headed households are represented the spiritual groups. The members who are in the age group of 31-40 head the majority of the households.

Sixty-four percent of the total households with group memberships are headed by someone 'who did not at all attend schools'. More than fifty-three percent belongs to the households with 3 to 5 members and about thirty percent of the households have 6 to 8 household members. A greater percentage of smaller households belong to credit and saving, education services, healthcare and cleaning and welfare and charity groups.

Twenty-nine percent of the households with group memberships are among the households in the third expenditure quintile. The percentage of the households with group memberships increases across the quintiles until the third quintile and then remains constant. More households with no group memberships are represented in the lowest quintile (20.47 percent), and other households spread equally across all the quintiles (figure 2). We conclude that more households without group memberships tend to belong to the poorer quintiles compared to the households with group memberships.


	1 (Poorest)	2	3	4	5 (Richest)
No group membership	20.47	19.94	19.79	19.94	19.86
Group membership	14.77	20.76	22.4	20.67	21.4
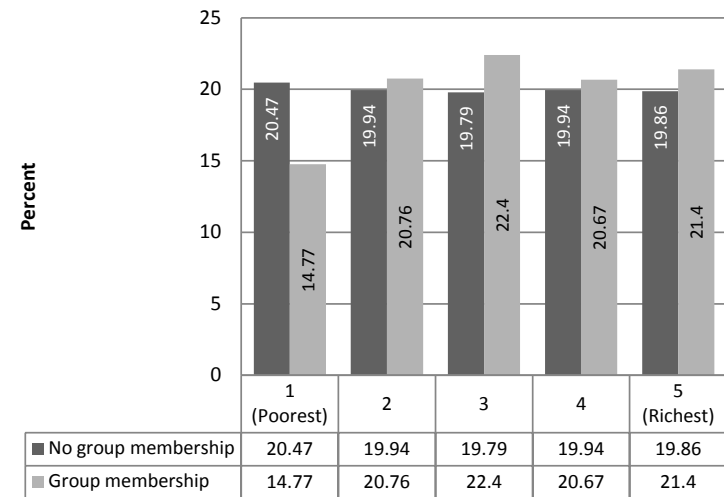
Figure 2: Households with and without group memberships by total household expenditure quintiles (percent)

The games, sports & entertainment group, occupational group, spiritual association, water user association, and welfare and charity group have more members from the top quintile. This corresponds well with the Grootaert's theory (2002: 66) that 'demand for participation in social groups pursuing leisure activities is quite likely to rise with income because leisure is usually a luxury good'. We assume that in our case, reverse causality from welfare to social capital is likely only in the case of leisure groups.

The credit and saving group, farmer group-production (that is, those groups involved in small-scale farm-based production activities) and the community forest group have the highest representations from the fourth quintile. The dairy production group, livestock association and farmer-other group (mainly the groups formed for road and footpath maintenance) are represented more in third quintile; while health and cleaning group, local development group, education service group and women association are represented more in second quintile. None from the poorest quintile is the members of the education service group and the local development group. The poorest households are less represented in agriculture association, dairy production group, village/community

group, livestock association, farmer group-production and forest community groups (table 2).

Table 2: Household's group memberships across total household expenditure in quintile (percent)

Group/Association	1 Poorest	2	3	4	5 Richest
Agriculture Group/Association	12.37	21.85	13.76	33.44	18.58
Community Forest Group	16.14	21.17	23.53	25.51	13.65
Credit/Saving Group	19.38	29.72	0	37.47	13.43
Dairy Production Group	4.75	23.92	42.21	18.15	10.97
Education Service Group	0	37.2	20.72	13.25	28.83
Farmer Group-Others	22.54	23.74	29.61	18.52	5.6
Farmer Group-Production	12.48	16.52	22.72	29.36	18.93
Games, Sports & Entertainment	17.2	0	0	34.36	48.43
Healthcare and Cleaning Club	35.6	36.64	19.05	0	8.71
Livestock Association/Group	6.38	21.62	29.77	25.82	16.4
Local Development Group	0	46.46	27.2	26.33	0
Occupation Group	10.58	0	24.55	5.43	59.44
Other Group	9.13	27.15	19.04	15.99	28.69
Spiritual Group/Association	18.2	16.53	18.9	17.58	28.8
Village/Community Group	8.13	16.23	26.37	15.81	33.46
Water User Association	0	26.68	12.81	13.37	47.14
Welfare & Charity Group	18.21	18.07	20.79	12.01	30.91
Women Association	22.62	28.7	8.55	19.53	20.61
*Total	14.77	20.76	22.40	20.67	21.40

Note: *Cross tabulation by rows, identifies to which quintile a household belong to in that particular group or row; * total taken within the same group.*

Among the many options to join the groups, such as volunteering, by requirement or obligation, on request or by nativity, groups with members who have joined voluntarily are expected to have a higher success rate than the other groups. Forty-six percent of members have joined their group through their own voluntary choice. It is interesting to note that eight percent of them have become groups' members by descent, which means, at least, the survey has captured a few traditional groups.

The group dynamism and effectiveness can be assessed by the extent of the decision-making power given to its members. In more than half of the groups, the members reach decisions showing a democratic pattern of decision-making (figure 3). In more than a quarter of the groups, the

government imposes decisions. In about thirty percent of the groups, the local leaders (either elected or others) make the decisions.
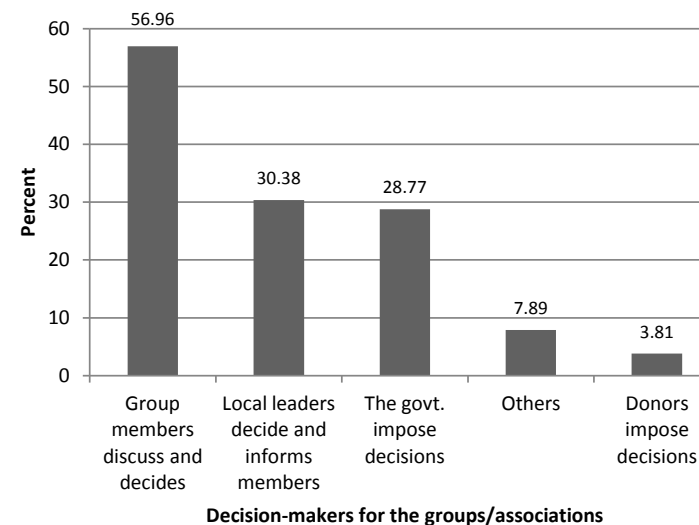
Figure 3: The extent of decision-making by the members

Generally, the community-initiated groups are expected to be more effective and successful than those formed through external imposition. Forty-two percent of the groups (in the sample) are formed through the community initiatives. Thirty-five percent of the groups are established through the central government schemes (figure 4). This can be the results of the government officials' involvement in instituting several farmers' groups, livestock groups, water user associations, diary groups and community forest groups.

It is possible to build social capital through capacity building programmes initiated by government, nongovernmental organisations, and external actors in the civil society (Falk and Harrison, 1998: 23; Cernea 1993: 11-15). While the government can initiate building social capital, the ones initiated by the government tend to be weak due to distant ties. It is best to outsource social capital building exercises to the nongovernmental organisations, or to the local governments (Onyx and Bullen, 2001: 45-58).
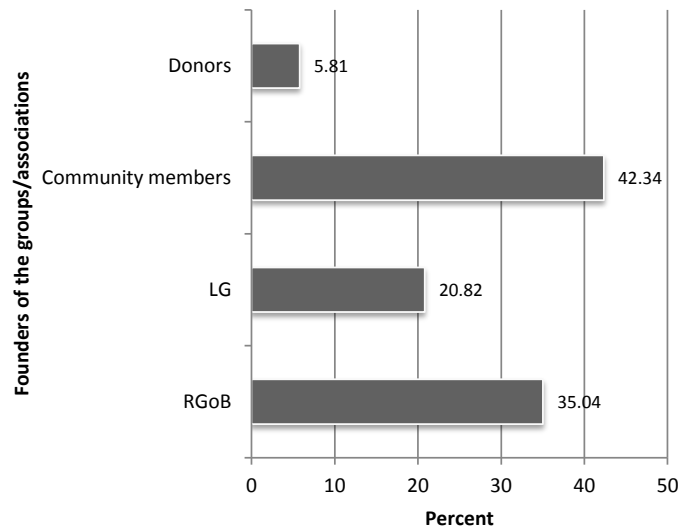
Figure 4: Distribution of groups by founders (percent)

The functional scope of the groups depends on whether they operate singly or together with other groups of similar goals and functions. The groups with linkages outside the communities often have better access to resources such as from the governments or NGOs or from other groups. Such linkage, referred as 'bridging social capital' has thin trust (Anheier and Kendal, 2002: 343-362). Bonding social capital is more localised, found among the people of close communities or similar localities, and usually have thick trust (Wallis and Crocker *et al*, 1998: 253-272).

The groups that have bridging social capital characteristics are credit and saving, healthcare and cleaning, village or community groups, occupational, education service, local development, welfare and charity groups and women associations. Close to forty-eight percent of the groups, interact occasionally with other groups, that is, they exhibit bridging social capital (figure not provided).

The aggregate measure of cash and in-kind contributions reflect the support given to the groups. The mere membership in a group can be of little value if a member does not contribute anything to the group. The membership fees usually constitute the main source of fund by which

most of the groups operate. More than half of the groups operate through membership fees. The funds from the sources outside the community support sixteen percent of the groups (figure 5).
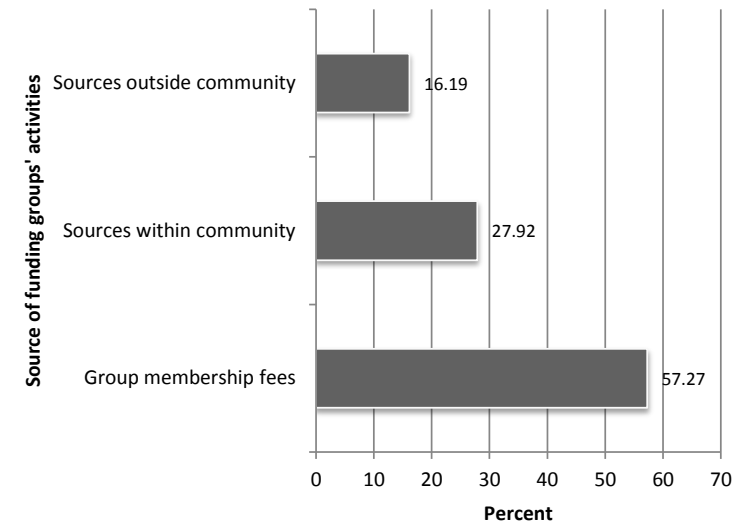
Figure 5: Source of funding for local groups (percent)

The frequencies of participation in the groups' activities and total cash and kind contributions are determined. The survey asked the respondents how many times they participate in the activities of the two most important groups that they are part of in the last one year, and the same question was repeated for contribution in cash and kind and number of days worked for or in their groups.

On average, the sample households participate 10 times in groups' activities and provide 12 days of free labour in one year. Each member household on average contributes about Nu. 3382 and kind worth Nu. 4778 in one year. The details are presented in table 3.

Table 3: Mean values of the contributions (cash, kind and labour) made by households to local groups in the past 12 months

Groups	Obs.	Mean	Std. Err.	[95% Conf. Interval]	
Times of households' participation in groups' activities in 12 months (mean)					
Group A	565	10	0.6	8.7	11
Group B	62	10	1.9	6.7	14
Group A +B	566	11	0.7	9.8	12
Mean cash contributed by households to groups in the past 12 months (Nu)					
Group A	379	3031	569	1913	4150
Group B	51	3729	1344	1029	6428
Group A +B	396	3382	585	2231	4532
Mean kind contributed by households to groups in the past 12 months (value in Nu)					
Group A	117	5239	1540	2189	8290
Group B	22	369	88	186	551
Group A +B	130	4778	1391	2025	7530
No. of days of free labour contributed by households to groups in the past 12 months (mean)					
Group A	104	16	1.8	12.1	19
Group B	18	4	1.2	1.6	6
Group A +B	113	15	1.7	11.7	18

Note: *The respondents were asked to report their contributions to the two most important groups that they are members.*

The groups that receive more cash contributions are water users association, credit and saving group, spiritual association, games and sports & entertainment group, local development group, and dairy production group (figure 6). These groups are usually the ones that are common among the households in the higher quintiles. This conforms to the Hu and Jones' (2004:9) finding that the richer homes contribute slightly more than poorer homes, and that homes with higher welfare level are often committed to invest more in social networks, particularly those that facilitate consumption of more luxurious goods, or those that are useful to help the poorer ones.
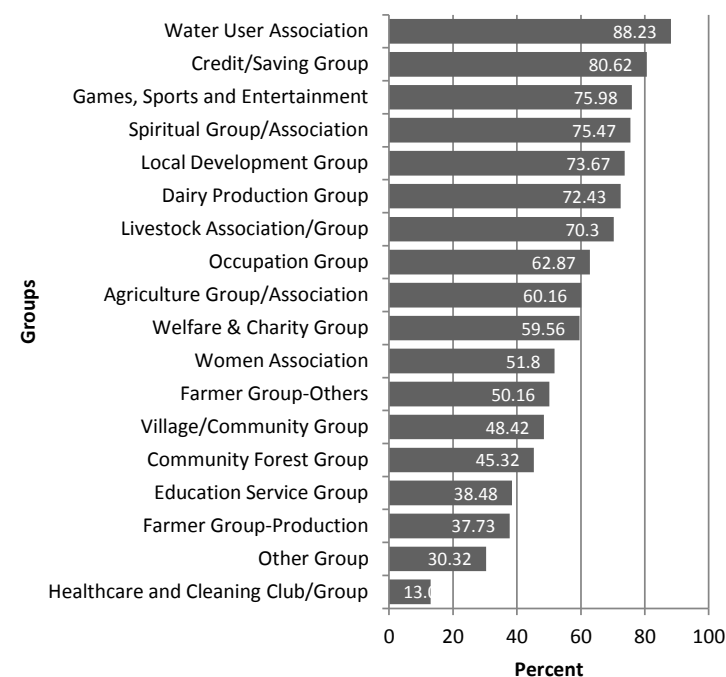
Figure 6: Percentage of households contributing cash to various groups (ranked)

The extent of participation in a group determines the success of the group, but the level of participation may vary over time or remain consistent. More than half of the respondents believe that within last five years, their participation in the groups' activities has remained the same. Thirty-six percent reported that their participation in the groups has increased.

The individuals acting on their own cannot produce social capital; it depends on the formal or informal network and interaction between them. The informal social ties function without any written norms and institutionalised sanctions. Lack of close friends (whom one can feel at ease, talk important matters or seek help), is one of the causes of social isolation. Eleven percent of the respondents reported that they do not have close friends and confidants. Seventy-one percent have one to five

close friends, and less than one percent of them have 41 to 80 close friendship networks.

Cognitive social capital

Simply emphasising on the structural dimensions may ensue in the neglect of mutually beneficial collective actions that has a cognitive basis. Mutual trust is an important dimension of cognitive social capital. Two types of trust, generalised and specific are considered.

A high level of mutual trust exists if we go by the survey responses. More than half of them 'strongly agree' that most people in the neighbourhood can be generally trusted. Only ten percent disagree that trust exists between the individuals in their neighbourhood. Generalised trust is higher in rural than in urban areas (figure 7).

Most people in the neighbourhood can be trusted
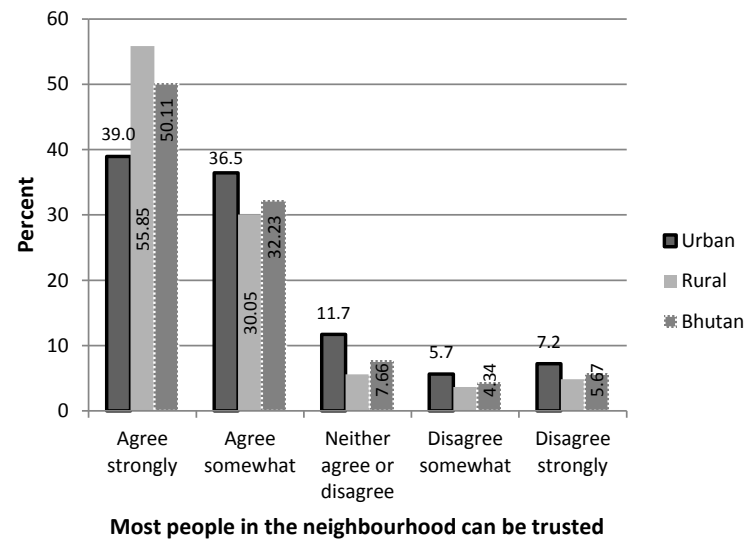
Figure 7: Generalised trust in the neighbourhood by Bhutan, rural and urban areas

The individuals' propensity to trust each other is lower in matters related to money transactions (shown in figure 8). Only twenty-five percent 'strongly agree' that there is trust in the neighbourhood when dealing with

monetary transactions. Conversely, more than fifty percent reported they 'strongly agree' that most people in the neighbourhood can be trusted (generalised trust). The specific trust (money lending and borrowing) is slightly higher in the urban areas (26.39 percent than in the rural areas (24.66 percent)).
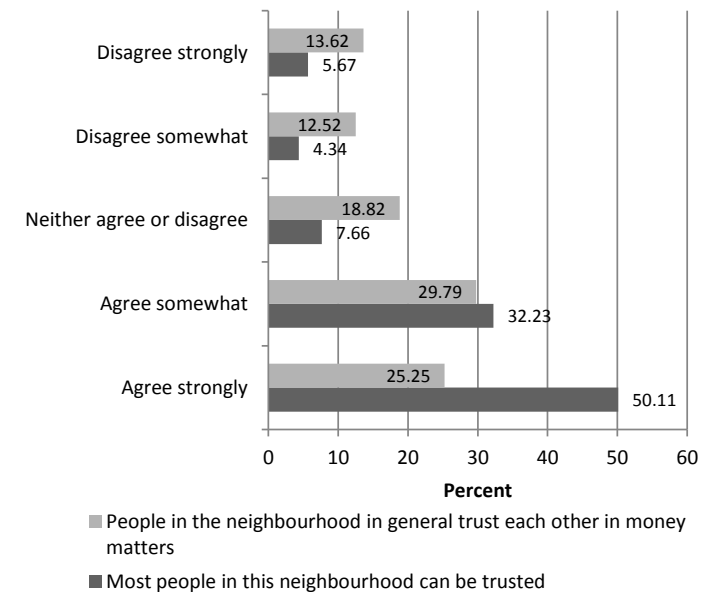
Figure 8: Perception on trust in the neighbourhood, generalised and specific trust (percent)

Thirty-seven percent of the respondents accounted that they have one to two people from whom they can borrow money in times of need (amount enough to pay one week's expenditure). Fifty percent can borrow money from more than three people. About ten percent cannot borrow money from their neighbours. They must the people who are not trusted by their friends and neighbours (figure not given).

The specific trust level associated with taking care of their neighbours' children (when their parents are away) is higher than trust associated with monetary transactions. Overall, forty-five percent can entrust their

children to their neighbours. The level of particularised or specific trust is higher in the rural areas (figure 9). The specific trust level is higher in the rural than in the urban areas.
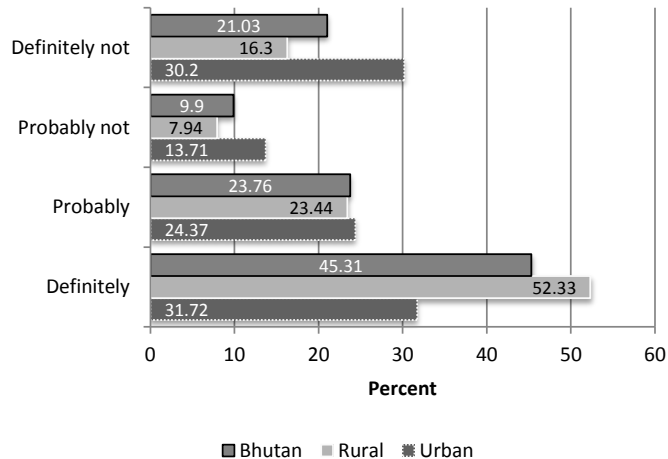

Figure 9: Perception on trust in the neighbourhood in terms of entrusting children to others (percent)

Trust is history-dependent expectations of others; individuals trust others when they know them well. To know each other well, they must have adequate platforms to interact socially. This is the reason why some people tend to use trust as an instrumental variable in econometric analyses. Some scholars consider trust as one of the most important factors of social capital. Trust is also highly correlated with happiness in most of the recent happiness studies.

Due to the rapid rise of materialistic value orientation and increased mobility of the individuals, trusts in the neighbourhood may also change, particularly with in-migration or out-migration. This is something that we need to look at when we establish new communities for the people who are displaced by larger development projects.

As shown in figure 10, about thirty-nine percent of the respondents feel the trust level in their urban neighbourhood has gone up in the last five years. Forty-nine percent of rural respondents reported the trust level in the rural neighbourhood has gone up. About forty-six percent of them

have reported trusting in the neighbourhood has become better than five years ago.
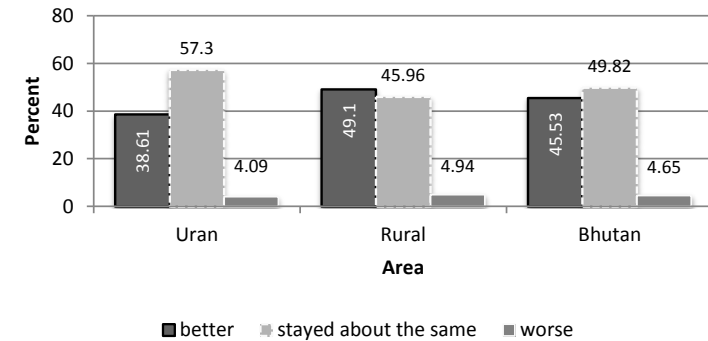
Figure 10: The trend in the change in the level of trust by area (percent)

A high level of trust exists according to the respondents' accounts, as does the feeling of safety in the neighbourhood. The extent to which the individuals feel they need to be alert because others in the neighbourhood would take advantage [of them] can be a proxy indicator of trust. More people in urban areas 'strongly agree' that they need to be alert most of the time (figure 11).
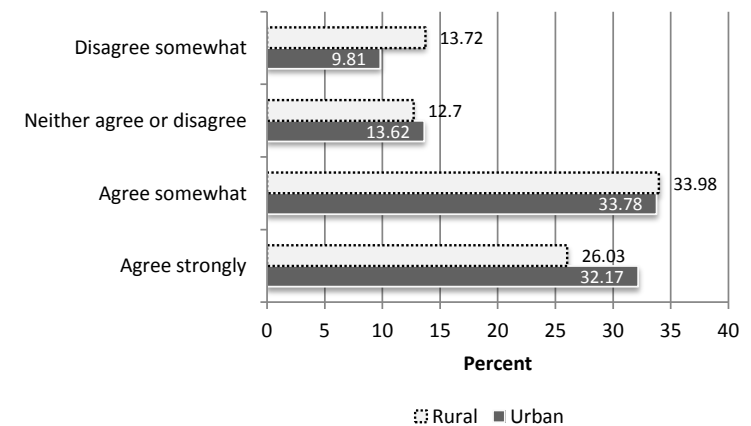
Figure 11: Perception on the need to remain alert in the neighbourhood (percent)

Cooperation and collective action (output measures)

The individuals' sense of closeness in their neighbourhood is another proxy indicator of social capital. Eighteen percent of the respondents reported a high level of closeness in their neighbourhood and thirty-six percent reported some level of closeness exists in their neighbourhoods (figure 12).
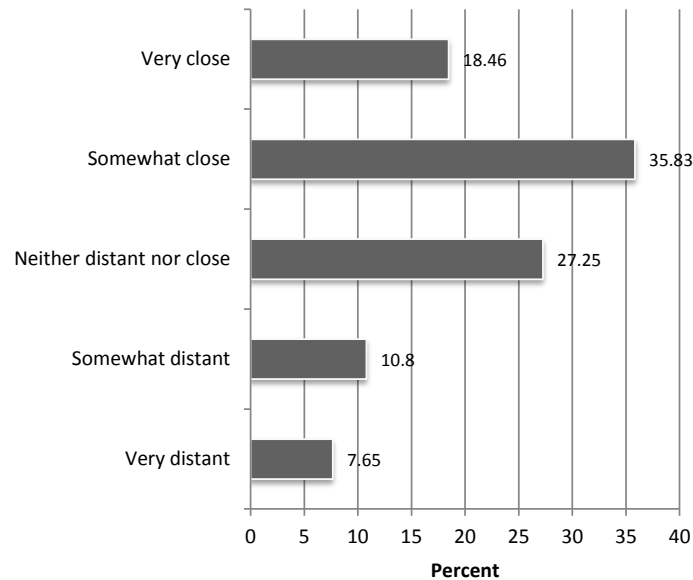
Figure 12: Feelings of closeness or togetherness in the neighbourhood (percent)

Greater social ties may bring about the increase in the availability of social support in the neighbourhood. Helping each other in the neighbourhood is indispensable to the healthy functioning of social networks and in generating social capital. In response to 'how well the people are helping each other these days', thirty-two percent of them have reported they help each other always. The higher proportion of rural people reported 'they always help each other'. More urban respondents relatively reported the complete absence of help in their neighbourhoods. This is one indication of the rich presence of the informal social capital in the country, despite the low density of the formal group memberships (figure 13). Overall, just

seven percent of the respondents across the country have reported the people do not help each other in their communities.
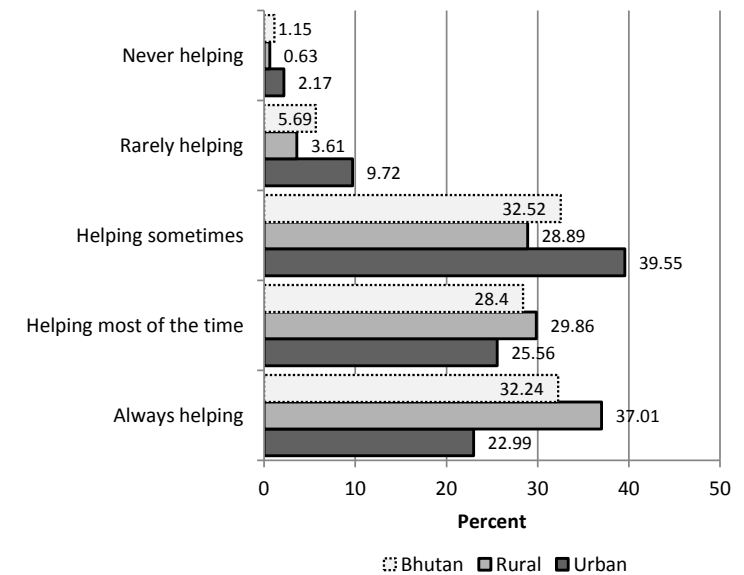

Figure 13: The presence of help in the neighbourhood (percent)

Slightly more urban people are willing to contribute money than the rural people; whereas more people from the rural areas are willing to contribute time (figure not provided).

Despite the presence of strong willingness to help each other, just twenty percent of the respondents reported they were actually working with others in the neighbourhood to do something for the benefit of the community in the past 12 months.

The main activities they participated (on voluntary basis) are making blood donation, cash donation, and to support the bereaved families during illnesses and deaths (figure 14). The major activities the respondents supported as social obligations (or required) are providing free labour services for school construction and maintenance services, water services (irrigation and drinking water) and works related to temples and other common facilities.
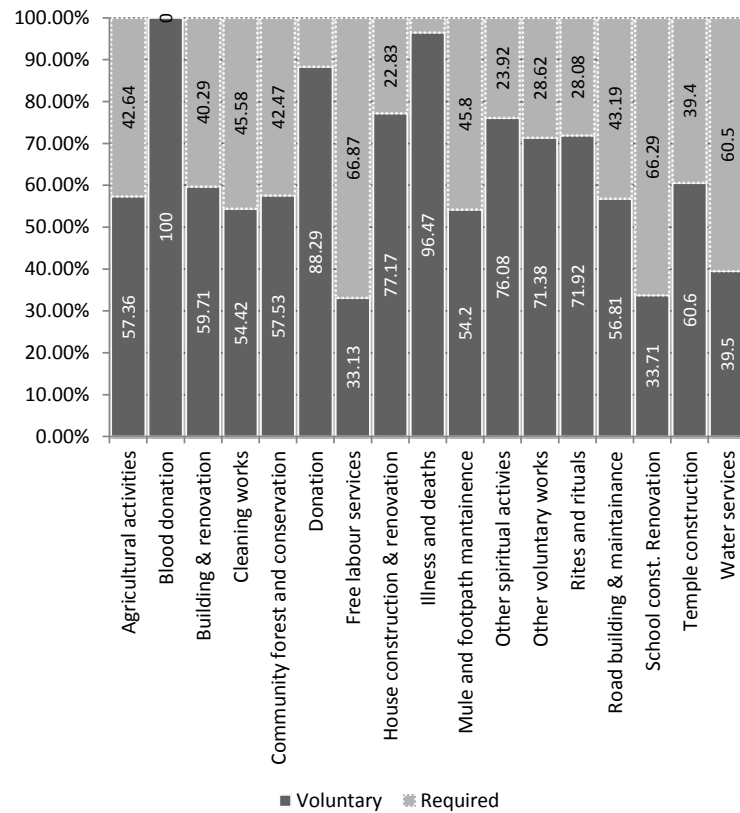
Figure 14: The main activities the people took part on a voluntary basis and as required in the past 12 months (percent)

Social sanctions normally exist to control the non-compliant behaviour in the groups. A chance of the members being penalised or criticised for not participating in the community activities is high. Fifty-five percent of the respondents (from the rural areas) reported they would be penalised for absenting from the group activities or certain behaviours that violate group values and norms. About forty-six percent of the urban respondents reported the same (figure 15).

Elsewhere in Armenia and South Africa, Cassar *et al* (2007:F85) has found the relevance of existing social capital in micro-finance and group lending

because of effective social sanctions. Social trust and acquaintanceship provide effective group sanctions against those who default.

	Very likely	Somewhat likely	Neither likely nor unlikely	Somewhat unlikely	Very unlikely
Urban	45.65	27.08	15.36	3.62	8.29
Rural	55.11	28.3	8.59	3.76	4.24
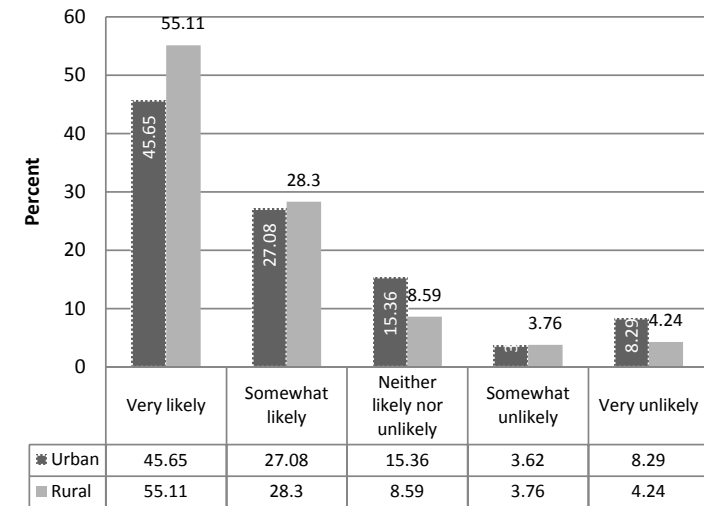
Figure 15: The possibility of group sanction by area (percent)

A majority of the respondents from the rural areas believe joining the various groups benefit their communities. The benefit perception is slightly lower in the urban areas. The higher proportion of the urban people believes that joining the groups has a spiritual benefit. About a quarter of the rural people believe that joining groups help improve their current livelihood and access to services, and about thirteen percent of the rural respondents reported being group members will be important for their future benefits (figure 16). Interestingly, not many of them reported being in groups (likely the formal groups) are important during emergencies, and this may have to do with the fact that people resort to informal help mechanisms in times of emergencies.
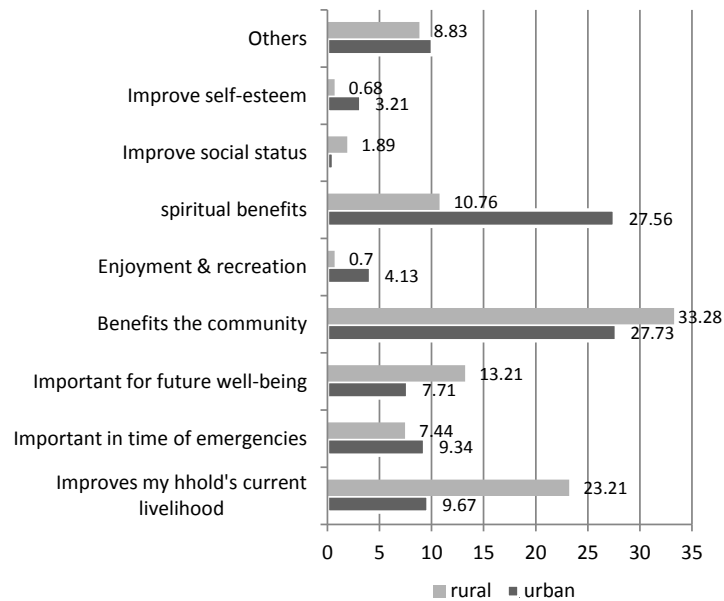
Figure 16: Perceived benefits of the household memberships in groups (percent)

The respondents perceive that being the group members significantly improve the household's overall access to different services. About twenty-seven percent of them think that being the members of the groups helps them obtain agricultural inputs; nineteen percent attribute their access to credit and savings to their group memberships, and between thirteen and sixteen percent reported the groups allow them access to education, health and water services (figure 17). Overall, the highest number of the respondents reported that group memberships provide them the avenues for spiritual pursuits, which in the traditional context is important to achieve psychological well-being.
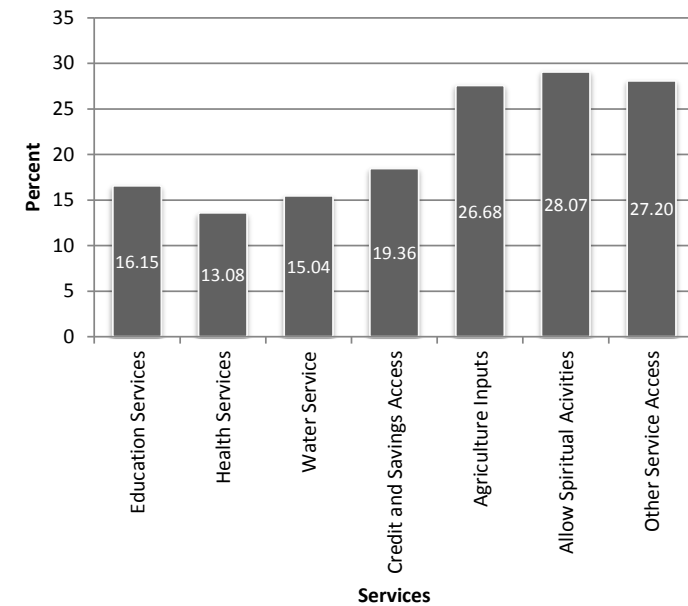
Figure 17: Household access to different services through group membership (percent)

Self-rated happiness, poverty perception and social capital

At the national level, thirty-three percent and fifty-two percent of the households are 'very happy' and 'moderately happy' respectively. One percent reported they are 'unhappy' (figure 18). The results are similar to that of the Population and Housing Census of Bhutan (PHCB) 2005. The reported level of happiness in 2005 was forty-five percent 'very happy', fifty-two percent 'happy' and two percent 'not very happy'. The results also correspond to that of the GNH Survey 2010 conducted by the CBS & GNH Research. In our happiness question, we asked our enumerators to explain to the respondents that the happiness in question constitutes emotional, physical and material well-being (*ga-kyid*). Simple analogy to explain what is happiness in the survey context was *luelu na-tshag med; semlu dungnyel med* (literally, body free of pain and suffering, mind free of anxiety and stress).
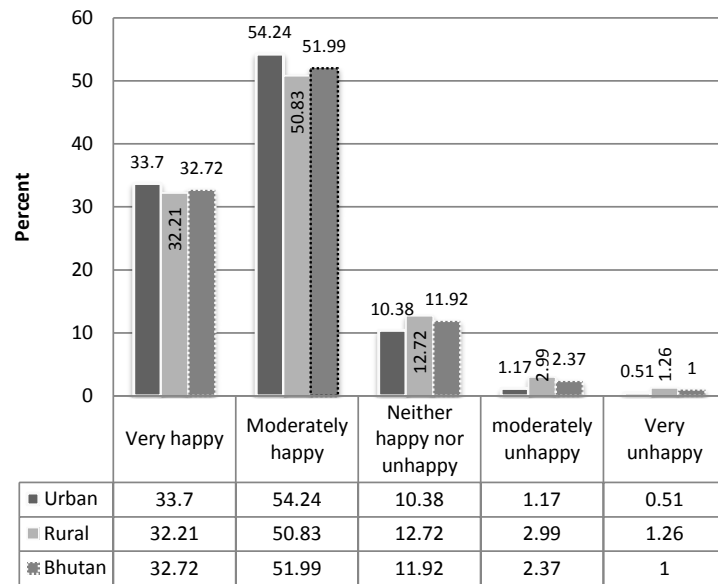
Figure 18: Self-reported happiness levels by area and Bhutan

	Very happy	Moderately happy	Neither happy nor unhappy	moderately unhappy	Very unhappy
■ Urban	33.7	54.24	10.38	1.17	0.51
▤ Rural	32.21	50.83	12.72	2.99	1.26
✳ Bhutan	32.72	51.99	11.92	2.37	1

The households' group memberships and the level of self-rated happiness show some relationship. Thirty-eight percent of the respondents whose households belong to at least one group have reported as being 'very happy'; thirty-three percent of the respondents whose households do not belong to any group reported the same. The percentage of respondents whose households belong to at least one group decreases with the increase in the level of self-reported unhappiness. Conversely, the percentage of the respondents from those households without any group membership is higher along the line of the self-rated unhappiness compared to those with group membership. Slightly more households that do not have any group membership have reported to be unhappy compared to those that have group memberships. Overall, about forty-four percent of the total respondents with the group memberships are happy, while forty-two percent of them without the group memberships have reported that they are happy but more households without the group memberships also reported they are unhappy (figure 19).
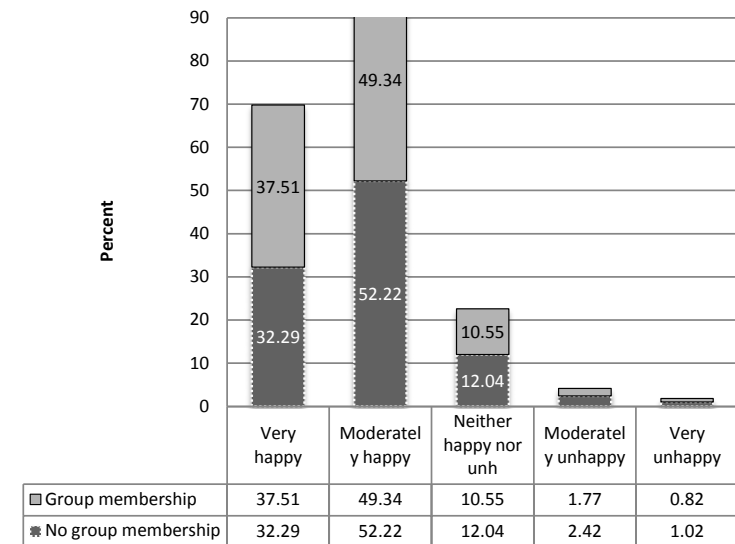
Figure 19: Happiness across the households with and without group membership (percent)

	Very happy	Moderately happy	Neither happy nor unh	Moderately unhappy	Very unhappy
▤ Group membership	37.51	49.34	10.55	1.77	0.82
✳ No group membership	32.29	52.22	12.04	2.42	1.02

The households without any group memberships are represented slightly more in the self-rated 'non-poor' category when compared to those households with group memberships. However, the higher proportion of the households with group memberships is 'neither poor nor non-poor'. In the 'poor' and 'very poor' category, more households without the group memberships are represented (figure 20).

Thirteen percent of the respondents from the 'very poor' households rate themselves as 'very unhappy'; other respondents who reported as 'very unhappy' are insignificant. The proportion of the 'moderately unhappy' respondents are represented more in the 'very poor' category, while the proportion of 'very happy' also reporting to be 'non-poor' is double the 'very happy' respondents from poorer households (figure not provided).
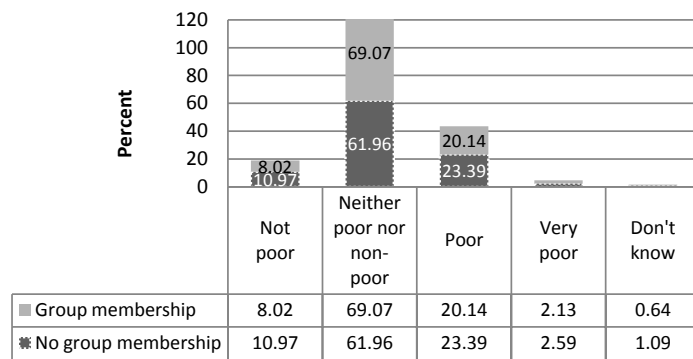
Figure 20: Perception poverty level across the households with and without group membership (percent)

SECTION II: SECOND STAGE ANALYSIS

Section II of this chapter presents the results of the second stage analysis. We present the results of a few more descriptive analyses that we carried out prior to the multivariate analyses. Instead of simple percentages, we take the average score of each of the social capital parameters and relate them individually with the household and demographic characteristics.

Structural social capital and household characteristics

Membership density

We estimate the membership density by a number of groups a household belongs to (averaged by the household size). The total number of active membership in groups included in the sample is 631. There is some variation between rural and urban areas in the membership density. The density is 0.04 in urban and 0.12 in rural areas. In both the cases, each household on average is a member of less than one group. This could be due to under-reporting of the multiple group memberships.

Bigger households, on average, have higher membership density. There is no gender variation in the membership density. The membership density increases with the increase in the level of education (of the households' heads), and it is highest among the households belonging to the agriculture sector (table 4).

Attendance at meetings

Rural homes on average attend two group meetings in three months; urban homes attend about three meetings. The meeting attendance score is derived from the average number of times a household's representative attends group meetings, normalised for the number of memberships and averaged for the three-month period.

The attendance at the meeting is higher in the urban (3.00) than in the rural areas (1.93), which is the flipside of the lower membership density in the urban areas. We presume that if one is a member of the few groups, one would attend meetings more frequently. The homes with 9-12 members attend the highest number of meetings. The female-headed households attend meetings little more than the households headed by the males. There is a very pronounced pattern of rising participation in the group meetings with the increase in the level of education and with the improvement of the household poverty status (from the poor to non-poor). The members who belong to service and industry sectors attend meetings more frequently compared to the households in the agriculture sector. The households headed by the least educated individuals are less frequent in attending the meetings.

Cash contribution

We assume that it is a sign of greater interest in the groups' activities if one is keen to contribute cash and labour, all things being equal (ceteris paribus). On average, the rural homes contribute Nu. 97.83, while the urban homes contribute Nu. 591.87 per month. The monetary contribution (in-kind value added) increases with the increase in the household size and education of the household heads. The male-headed households contribute more than the female-headed households do. On average, the households that belong to service and industrial sectors make a higher cash contribution.

Work contribution

On average, the households contribute 13 days (in the urban areas) and 12 days of works in the rural areas annually. We expected the urban homes would contribute less number of days, but the result is just otherwise. This could be due to the higher number of spiritual and other voluntary groups in the urban areas. Surprisingly, the larger households contribute less labour. There is not much variation in work contribution in terms of

the households' other characteristics such as gender, education and the sector.

According to the Community Vitality section of the GNH Survey, fifteen percent of Bhutanese aged 15 and above or roughly, 260,685 reported they contributed voluntary services (2010). The voluntary services came to about 9.47 days per year. The total economic value of voluntary works in the country (based on the Time Use section of the GNH survey 2010) was about 320.5 million (US$ 7.0 million), while the value using the Community Vitality section was Nu. 169.2 million or US$ 3.7 million (Hayward, K and Colman, R 2012, NSB: 62).

Community orientation

The community orientation (memberships to the groups initiated by the community members) is much higher in the rural areas (4.42) as compared to that of the urban areas (1.9). The community orientation increases gradually with the increase in household size. More male-headed households tend to join the community-initiated groups than the female-headed households. The households belonging to the agriculture sector tend to join the community-initiated groups more frequently compared to the households in the service and industrial sectors.

Decision-making

Four patterns of members' participation in the group decisions are 'play leadership role, participate actively, somewhat active and do not participate'. The decision-making index is higher in the rural (53.33) areas than in the urban (47.76) areas, showing that quality of structural social capital is slightly better in the rural areas. It is also higher for the female-headed than male-headed households. Participation in decision-making is higher when the households' heads have an education level higher than secondary education (table 4). However, the less educated households are slightly more active than the households that are headed by the individuals with primary and secondary education.

Openness index

More groups in the urban areas (score 36.74) have the members who joined them voluntarily than the groups in the rural areas (score 25.92). There is not much difference in whether a household headed by male or female would join voluntarily in the groups. However, more households headed by the individuals with the education level higher than secondary education tend to join in the groups on a voluntary basis. More

households belonging to the industrial sector join the groups voluntarily than those in the service sector, and more households in the service sector join the groups voluntarily compared to those households in the agriculture sector (table 4).

Results

Table 4. Structural social capital variables and selected demographic characteristics

Particulars	Membership density	Meeting attendance	Cash contribution	Work contribution	Community orientation	Decision making	Openness
Area							
Urban	0.04	3.00	591.87	13.63	1.90	47.76	36.74
Rural	0.12	1.93	97.83	12.07	4.42	53.33	25.92
Household size							
3-5	0.09	2.23	179.00	12.04	3.45	51.62	27.17
6-8	0.11	1.84	148.00	11.13	4.49	52.65	26.96
9-12	0.13	3.48	67.60	16.45	4.96	52.42	26.28
13-17	0.14	2.20	7.20	3.00	5.88	41.67	34.48
Sex of household head							
Male	0.09	2.00	182.28	12.00	3.79	51.64	27.36
Female	0.09	2.62	140.63	12.00	3.01	52.56	27.79
Educational attainment of household head							
None	0.09	1.73	87.30	11.49	4.20	52.67	25.20
Primary	0.10	1.77	140.20	10.46	5.68	51.32	24.01
Secondary	0.05	2.17	272.42	12.41	2.56	51.37	29.40
Higher than secondary	0.12	2.64	646.57	14.00	5.75	54.17	30.70
Sectors							
Agriculture	0.10	1.98	91.41	12.88	6.02	53.27	25.36
Industry	0.04	2.64	365.92	13.64	2.21	49.71	34.39
Services	0.07	2.28	361.51	12.15	2.97	52.75	30.32

The households in all the quintiles have almost the same membership density. The average density is 0.09. The fact that the membership density on average is low, but uniform in every quintile shows that the economic status does not affect the household memberships in the groups.

Nevertheless, when the households are disaggregated into the observed poor and non-poor (based on whether they fall above or below the actual poverty line), the membership density is slightly higher for the observed non-poor. That is, more members from the observed non-poor category have higher membership density. The households reporting that they are 'perceived non-poor' have slightly higher membership density compared to the households reporting that they are 'perceived poor' (table 5).

On average, the households in lower quintiles attend the meetings less frequently than the rich households do. The households in the fifth quintile contribute the highest amount of money to the groups, while the poorest contributes the least (table 5). However, there is not much difference between the households in different quintiles in terms of the free labour contribution. The households in all the quintiles show almost the same level of participation in decision-making. While a majority of the households joins the groups on a voluntary basis, more households (34.30) in the richest quintile join the groups voluntarily.

The observed poorest households contribute lesser money than the observed non-poor households. Both the observed poor and non-poor make almost equal free labour contribution. More observed non-poor households tend to join the community-initiated groups than the observed poor households. There is only a small difference between the observed poor and non-poor households in terms of decision-making. The observed non-poor households tend to join the groups voluntarily than the observed poor.

The membership density is almost equal between the self-perceived poor and non-poor households. Slightly more self-perceived non-poor households attend meetings frequently (1.96) than the perceived poor households. Except in the decision-making index, the perceived non-poor does well in terms of cash and work contribution, community orientation and openness index (see table 5 for detail).

Results

Table 5. Structural social capital variables and poverty status

Particulars	Membership density	Meeting attendance	Cash contribution	Work contribution	Community orientation	Decision making	Openness
PCE quintile							
First	0.09	1.90	55.21	12.81	4.69	51.14	24.26
Second	0.09	1.73	127.26	12.10	3.46	54.16	27.93
Third	0.09	2.42	99.53	12.60	4.89	52.56	26.45
Fourth	0.09	2.01	141.08	10.08	3.63	51.45	24.59
Fifth	0.09	2.40	427.70	13.74	4.43	53.05	34.30
Poverty status							
Non-poor	0.09	2.11	175.40	12.27	4.29	52.46	27.52
Poor	0.07	1.62	94.01	12.63	3.65	52.57	27.11
Self-rated poverty							
Not poor	0.07	1.96	508.63	10.95	3.63	51.25	31.81
Neither poor nor non-poor	0.10	2.11	147.63	12.99	4.91	52.03	28.14
Poor/very poor	0.08	1.69	162.96	8.12	1.69	59.5	21.73
Don't know	0.04	4.51	18.18	24.99	2.85	58.39	32.31

Note: The observed poor and non-poor households: the poverty status is determined by the real per capita household expenditure; the households below the poverty line are categorised as the observed poor and those that are above the poverty line as the observed non-poor. The perceived poor or non-poor constitute those households reporting themselves to be poor or non-poor (perception poverty).

Though the survey was conducted at the household level, happiness appertains more to the individual happiness. We, nonetheless, assume that the households with their members reporting to be happy are happier families as well.

The membership density of those households in which the respondent members reported to be very happy is higher (0.10) than that of the households with the respondents rating themselves as very unhappy individuals (0.08).

The attendance at meetings and cash contribution score, on average, are higher for those households with their members reporting they are very happy. We observe a huge difference in free labour contribution between the households in which their members are very happy and very unhappy. The households with their members reporting they are very unhappy score zero; the score is 4.39 for those households with their members rating themselves as very happy. It goes with our wisdom born of our experiences that the people who are not very happy do not participate in the events initiated by their own community. Woolcock and Narayan (1999: 3) noted that some of our happiest hours are spent participating in the community events and in volunteering for the community projects. This suggests there could be positive correlation between the self-rated happiness state and the participation in community-based activities in our case as well.

We now look at the self-rated happiness and cognitive dimensions of social capital. The number of close friends [a person has] increases along the line of the respondents reporting themselves to be 'very unhappy' to 'very happy' (table 6). The happiest individuals tend to have more people from whom they can seek financial support when needed, and likewise, they tend to score more in terms of help they rendered to others. There is a huge difference in the social interaction index between the happy and unhappy people; those individuals in between the two extreme happiness ratings score almost equally in social interaction. The happiest people score higher in mutual trust (5.7) compared to the unhappy ones (4.9). The individuals in between the two extreme happiness ratings have almost equal scores in trust.

Table 6. Structural social capital indicators and self-rated happiness

Particulars	Membership density	Meeting attendance	Cash contribution	Work contribution	Community orientation	Decision making	Openness
Self-rated happiness							
Very happy	0.10	2.18	200.26	11.80	4.39	52.16	25.93
Moderately happy	0.09	2.03	146.48	12.90	4.31	52.27	28.18
Neither happy nor unhappy	0.08	2.02	145.93	12.50	3.91	53.74	29.65
Moderately unhappy	0.07	2.26	338.17	9.70	3.83	56.76	30.89
Very unhappy	0.08	1.02	116.99	3.00	0.00	50.23	21.59

Table 7. Cognitive social capital indicators and self-rated happiness

Particulars	Close friendship	Source of financial support	Assistance given	Emeregency support	Social interaction	Trust index
Self-rated happiness						
Very happy	5.0	2.7	1.9	3.5	10.6	5.7
Moderately happy	4.3	2.3	1.8	3.4	9.4	5.5
Neither happy nor unhappy	4.2	2.1	1.4	3.4	10.1	5.5
Moderately unhappy	4.1	2.0	1.4	3.4	10.1	5.5
Very unhappy	2.3	1.8	1.4	3.4	7.2	4.9

Cognitive social capital and the household characteristics

We derive five indicators to construct a cognitive social capital index from a larger sample of 8799 households. The responses mostly relate to the individuals' perception and expectations of networks and the dynamics of their relationships with other people. The choice of five cognitive indicators is motivated by the fact that numerous recent studies in Latin America, Africa and Asia have shown to contribute to social capital.

The close friendship score should be actually included under structural social capital dimension, as friendship involves close interactions with other people within a certain set of norms and behavioural traits. However, we have decided to include this indicator under the cognitive dimension, for building close friendships constitute more than just structural relations but cognitive processes such as intimacy and trust.

The results show that on average, a respondent has about 4.35 close friends. The rural people have about five close friends; the urban people on average have four close friends. The larger households and those headed by males tend to have more close friends. Education of the households' heads has only a small influence on the number of close friends a sample population would have. The close friendship score is higher among the households in the agricultural sector than that of those households engaged in the industry and service sector (table 8).

The social interaction index is constructed by averaging three close social interactions the respondents made in last one month. The index is higher in the rural places, among those households with educated heads, and among the agricultural families. The availability of benefactors (the respondents can turn to) in times of financial problems is higher in the urban localities, among the larger households and among the families in the agriculture sector. More households in the rural areas and male-headed homes have reported that the other people approach them for help or support (see table 8).

Building trust is a long process. The presence of strong trust in the neighbourhood help to generate the feeling of closeness or togetherness and improves the overall sense of safety and cooperative actions. Exactly opposite is the case when the level of trust is low in the neighbourhood. Trust is considered as an important element of social capital. The rural residents score higher in trust (5.7) than their urban counterparts (5.3).

The trust level decreases with the increase in the education level of the household heads. The families in the agriculture sector enjoy a higher level of trust compared to the families in the industry and service sector.

The trust level is now changing in many communities. For example, even in the rural places, a rising number of vandalism and theft of sacred religious repositories, contributes to the decline of trust and the increased feeling of insecurity in the neighbourhoods. The need to be alert in the neighbourhoods is increasing. A few decades ago, villagers would rarely lock their houses when family members were away. This was possibly because of the presence of strong trust among the villagers and the higher sense of safety.

The emergency index, built by averaging the number of people in the households can turn for help and support, particularly during family bereavement, is almost equal among the households with different characteristics (table 8). The result affirms the previous findings (Lham Dorji & Tashi Choden, 2005) that most Bhutanese people can easily consociate in times of sickness or deaths in the neighbourhood.

According to these researchers, when death takes place in a community, the community members would even cancel or postpone the most significant community events. In Trong community (Zhemgang) for instance, the community members would in the past mourn for three days even when an ox die in their locality. The villagers believe that death in the neighbourhoods though undesirable has its own significance in generating social solidarity. A villager sums the social significance of death in the locality: 'when it comes to death in our village, we stand up united to help each other. We do not differentiate between the friends and foes when our neighbours are grief-stricken over the loss of their loved ones' (Dorji and Choden, 2005).[3] The way the people mourn over a death of a person in the urban neighbourhood is now becoming less intense than it once used to be.

The level of social solidarity during difficult period is higher in the rural than in the urban communities. This supports our general assumption that the urbanisation may gradually lead to social disintegration, social exclusion, and a decline in social solidarity. The growing rural-urban

migration and urbanisation are likely to lead to a gradual decline in social capital in the country. This will emerge as a major GNH policy challenge.

Comparing the various cognitive indicators with the *real* per capita household expenditure shows a small difference in close friendship score between the families in the first and fifth quintiles. The observed non-poor households tend to have more close friends than the observed poor. The households reporting that they are very poor (poverty perception) tend to have a relatively less number of close friends.

Number of people one can turn for financial help is higher among the families in the richer quintiles, among the observed non-poor and among the perceived non-poor households.

More families in the higher quintiles, the observed non-poor and perceived-non-poor households have other people approaching them for help and support.

The emergency index is higher in the richest quintile than in the poorest quintile. The observed non-poor and perceived non-poor have a relatively higher emergency index than the others.

The people belonging to the households in the richest quintile interact more with the other people than those in the lowest quintile. The observed non-poor households also tend to interact more with other people than the observed poor households do. It is same with the people belonging to the perceived non-poor and perceived poor households.

The trust index is relatively higher among the richest quintile (5.7); it is almost equal for other quintiles. The trust index is equal for the observed non-poor and those who belong to the perceived very poor. The details are given in table 9.

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[3] Tshewang Dorji, a resident of Trong in Zhemgang. Interview conducted by Lham Dorji in 2004.

Table 8: Cognitive social capital indicators and selected household and demographic characteristics

Particulars	Close friendship	Source of financial support	Emergency support	Social interaction	Assistance given	Trust Index
Area						
Urban	3.8	2.1	3.4	9.0	1.5	5.3
Rural	4.9	2.5	3.5	10.2	1.9	5.7
Household size						
1-2	4.1	2.3	3.4	9.9	1.7	5.5
3-5	4.2	2.3	3.4	9.6	1.7	5.5
6-8	4.9	2.4	3.5	10.1	1.9	5.7
9-12	5.4	2.8	3.6	10.9	1.6	5.8
13-17	5.8	2.9	3.3	7.3	3.7	5.1
Sex of household head						
Male	4.7	2.4	3.4	9.9	1.8	5.6
Female	4.0	2.3	3.5	9.8	1.6	5.5
Educational attainment of household head						
None	4.5	2.4	3.5	9.2	1.6	5.7
Primary	5.1	2.5	3.5	10.1	2.0	5.7
Secondary	4.1	2.3	3.4	11.1	1.9	5.3
Higher than secondary	5.2	2.8	3.4	12.8	2.8	5.3
Sectors						
Agriculture	5.1	2.6	3.5	10.0	1.7	5.8
Industry	3.8	2.3	3.4	9.7	2.0	5.4
Services	4.5	2.4	3.4	11.0	2.2	5.4

Table 9: Cognitive social capital indicators and the poverty status

Particulars	Close friendship	Source of financial support	Emergency support	Assistance given	Social interaction	Trust Index
PCE quintile						
First	4.4	2.1	3.3	1.4	8.2	5.7
Second	4.8	2.5	3.5	1.6	9.1	5.7
Third	4.7	2.4	3.5	1.8	9.2	5.6
Fourth	4.3	2.4	3.5	1.7	10.2	5.5
Fifth	4.5	2.7	3.5	2.3	12.5	5.4
Poverty status						
Non-poor	4.6	2.5	3.5	1.8	10.2	5.6
Poor	3.9	2.0	3.3	1.3	7.4	5.6
Self-rated poverty						
Not poor	4.6	2.6	3.4	2.1	11.2	5.5
Neither poor nor non-poor	4.7	2.4	3.5	1.9	9.9	5.6
Poor	4.3	2.3	3.4	1.4	9.2	5.6
Very poor	3.4	1.7	3.2	0.9	8.5	5.0
Don't know	3.5	2.1	3.0	1.9	10.0	5.2

HOUSEHOLD WELFARE AND SOCIAL CAPITAL

Structural social capital-household welfare model

We want to address the question: 'are the households with higher social capital better off in terms of the poverty/household welfare'? First, we estimate the multivariate model without any social capital variable. The result (presented in table 10) shows that the effect of household size on the household welfare (*log* real per capita household expenditure) is 11 percent (*b*=-0.112). That is, for every increase in a family member, the household welfare (*real* per capita household expenditure, dependent or response variable) decreases by 11 percent, holding all other variables constant. The negative coefficient indicates that the bigger homes experience lower household welfare compared to the smaller households.

The strong negative correlation between household size and consumption (or income) per capita in developing countries has led to the conclusion that larger families tend to be poorer (Mok, Maclean and Dalziel 2011: 2). The result makes sense because the smaller homes generally will have more consumption resources to share among its members.

For an every additional year in the education level of the household heads (human capital), the household welfare rises by about 4 percent (coefficient is 0.036, p-value is significant at 95 percent confidence interval), holding all other independent or explanatory variables constant. This reflects the contribution of the human welfare in promoting the household welfare or in reducing poverty.

We predict that on average the households headed by the females experience about 8.4 percent more household welfare than those headed by the males, controlling for other variables (ceteris paribus). Since the female is coded (0=male, female =1), the other interpretation is that for the male-headed households, the predicted *real* per capita household expenditure will be about 0.84 points lower than for that of the female-headed households. The gender (dummy) variable has two properties: categorical and non-ordinal (no ranks). The numbers associated with male and female serve only to identify gender categories but do not assign value or order to any category. A dummy variable is always binary, and is used here to control for a membership within a particular category of gender.

The other dummy variable is 'whether a household belongs to the agricultural sector'. The result shows that the households belonging to the agriculture sector on average experience the household welfare less by 16 percent compared to the households that belong to the non-agriculture sector, keeping all other variables constant. Going by this result, among three major sectors (agriculture, industry and service), consumption poverty is higher in the agriculture sector.

For the asset index, the result shows that for every rise in one unit of asset index, the household welfare increases by 6 percent. However, an increase in the number of the members age 15 and above (economically active age) in the families leads to only a small increase in the household welfare.

Controlling for the four poorest districts, that is, holding other richer districts constant; the result shows that the households located in the poorest districts on average experience the household welfare less by 23 percent compared to the households located in the richer districts.

T-statistic[4] (significance of estimated coefficients) in all cases is greater than 2 corresponding to p-value less than 0.05. We conclude that the independent or explanatory variables in question have significant impact on the dependent or response variable. In the same model, the R-squared[56] value is 0.54. This means that the model overall explains 54 percent of the variation in the *real* per capita household expenditure due to the independent variables.

We now introduce to the model structural social capital as an independent variable. It consists of one aggregate social capital, which is an additive index of seven structural social capital indicators. We assume that the households' possession of structural social capital have a positive effect on the *real* per capita household expenditure, or put simply, the household welfare.

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[4] T-statistic is a regression coefficient of a given independent variable divided by its own standard error. High t-statistics (over 2) implies that the variable is significant. P-value is the probability of observing larger t-statistics. P-value is normally greater than 0.05 when the t-statistics is less than 2 in absolute value. In such case, the coefficient is accidentally significant.
[5] The difference between Sum Square of Total (SST) and Sum Square of Error (SSE) The difference between SST and SSE is divided to give R-Square. It indicates the goodness of fit of the model.
[6] R-squared value is unitless statistic and there is no absolute standard for what is good value. This is an overall measure of the strength of association and does not reflect the extent to which any particular independent variable affects the dependent variable.

We notice the effect of the structural social capital on our model. The regression coefficients of the various predictors range from 0.004-0.162 in magnitude. The regression coefficients at a glance seem too small, but their smaller values do not indicate their less importance since regression coefficients depend on the underlying scale of measurements.

Notice that a unit rise in the household possession of structural social capital leads to an increase in the household welfare by 0.05 or 5 percent, significant at 0.002 (and t-statistic is greater than 2), when all other variables (all of which have some effects on the dependent variable) are held constant (results shown in table 10). By introducing the new variable, we notice that the coefficient of the effects of other independent variables does not change significantly. This possibly is indication of lack of multi-collinearity among the independent variables. This is substantiated by higher t-statistic value (t-statistic is higher when the standard error is lower).

We understand the relative importance of structural social capital by comparing the model with and without social capital variable (table 10). Introducing structural social capital variable leads to increase in the R-squared from 0.54 to 0.56 or increase the model fit by 2 percent. Since F-Score is <0.05, the results are not likely due to the sampling error. The presence of structural social reduces the coefficient of human capital from 0.036 to 0.035. This suggests that some human capital effects operate through the structural social capital. The coefficient for the female-headed households has now changed to 0.083. The coefficient for the 'households in the agricultural sector' is -0.162; it was -0.164 in the model without social capital variable. For every rise in one unit of the asset index, the household welfare increases by 5.4 percent. The effect of the increase in the number of the members age 15 and above in the families is same as in the model with no social capital variable.

The households located in the poorest districts, on average, experience *real* per capita household expenditure less by 21 percent compared to the households (on average) located in the richer districts. It was 23 percent without social capital variable in the model. This shows structural social capital has some additional positive effect on the model with respect to how much less is the *real* per capita household expenditure of the households in the poorest districts compared to the households in relatively richer districts.

Bhutan's Case: Social Capital, Household Welfare and Happiness

Table 10: Multiple regression model with structural social capital

Real per capita household expenditure (PCE)	Without Social Capital			With Aggregated Social Capital Variables		
	Coeff	t-stat	P>|t|	Coeff	t-stat	P>|t|
Intercept	8.128	67.06	0.000	8.162	68.53	0.000
Social capital index (additive)				0.047	3.120	0.002
Household size	-0.112	-9.50	0.000	-0.113	-9.79	0.000
Years of education of household head	0.036	7.230	0.000	0.035	7.200	0.000
Female-headed household	0.084	2.040	0.041	0.083	2.040	0.042
Farmer household	-0.164	-3.55	0.000	-0.162	-3.53	0.000
Members aged 15 and above	0.004	4.230	0.000	0.004	4.190	0.000
Asset index*	0.056	9.880	0.000	0.054	9.600	0.000
District	-0.228	-5.17	0.000	-0.212	-5.51	0.000
R-squared	0.5442			0.5569		
F-statistic[7]	102.48			0.5523		
Prob > F	0.0000			0.000		
Number of observations	631			631		
Note: Depedent variable is the natural logarithm of household expenditure per capita in real terms						

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[7] The F-test- R-Squared is a useful indicator of a model explanatory power, but it should not be treated in isolation. A significant F-test indicates that the observed R-squared is reliable, and is not a spurious result of oddities in the data set. Thus, the F-test determines whether the proposed relationship between the response variable and the set of predictors is statistically reliable.

Our first conclusion is that, after controlling for human and physical capitals and other relevant exogenous household and demographic characteristics, the presence of structural social capital (measured in terms of the memberships to local groups and their key characteristics) has an additional positive contribution to the household welfare.

The other key conclusion is that the additional positive effect on the household welfare of social capital is more than the additional positive effect of human capital. The issue is that, while there are clear-cut policies and programmes to increase human capital such as through schooling and non-formal education, policies and programmes to enhance household social capital are yet to assume policy blueprint.

Cognitive social capital-household welfare model

We now look at the second multivariate model, that is, the model with and without cognitive social capital variable. We run the model on the sample of 8799 households/respondents. We create cognitive social capital index by aggregating the scores of close friendship, financial support, assistance given, emergency support, social interactions and trust. In contrast to the previous model, we use a new dummy variable 'not economically active population', that is, whether a respondent is a part of any labour force or not. Instead of the four poorest districts as a control variable, we use a location dummy variable of the location (rural or urban). The results of the analysis are presented in table 11.

There is an additional positive effect of cognitive social capital (coefficient 0.07) on the household welfare. The regression coefficient (0.07) reflects the average increase in the *real* per capita household expenditure by 7 percent as the cognitive social capital increase by one unit, keeping all other independent variables constant.

Adding social capital variable to the model increases the R-squared from 0.50 to 0.52 (table 11). This implies that the model fit improves with the addition of social capital variable. The positive effect of human capital on the household welfare does not change. Social capital again contributes more to the household welfare than human capital.

On running the model without cognitive social capital variable, the rural households on average experience the *real* per capita household expenditure less by 19 percent relative to the urban households, holding

other variables constant. However, with cognitive social capital, the average rural *real* per capita household expenditure becomes less by 22 percent than that of the urban households, holding all other variables constant. We have no plausible explanation for the result, except to presume that the presence of cognitive social capital does not contribute to the rural household welfare as much as it does to the urban households.

An addition of an economically inactive member leads to decrease in *real* per capita household expenditure by 3 percent in both the cases. The results of cognitive social capital multivariate analysis are presented in table 11.

Results

Table 11: Multiple regression model with and without cognitive social capital independent variable

Variables	Without Social Capital			Aggregated Social Capital Variables		
	Coeff	t-statistic	P>|t|	Coeff	t-statistic	P>|t|
Intercept	8.47	364.65	0.00	8.51	369.79	0.00
Social capital index				0.07	12.49	0.00
Household size	-0.15	-46.55	0.00	-0.15	-48.08	0.00
Number of years of education	0.03	24.70	0.00	0.03	23.88	0.00
Female	0.05	3.81	0.00	0.06	5.02	0.00
Not economically activie	-0.03	-2.52	0.01	-0.03	-2.43	0.02
Asset index*	0.07	36.95	0.00	0.07	36.28	0.00
Rural	-0.19	-14.66	0.00	-0.22	-17.30	0.00
R-squared	0.50			0.52		
F-statistic	1313.93			1174.13		
Prob > F	0.0000			0.0000		
Number of observations	8799			8799		

Note: Depedent variable is the natural logarithm of household expenditure per capita in real terms

Disaggregated social capital-household welfare models

In the previous models, we used a single social capital index in the multivariate equations. We now use disaggregated social capital variables of both structural and cognitive social capital. We presume that each social capital indicator acts independently. We treat their effects are additive, though the literature shows that sometimes the effects can be multiplicative. The literature does not determine whether the additive or multiplicative approach is better.

Disaggregated structural social capital-household welfare model

The results of structural social capital-household welfare model are shown in table 12. The two significant indicators of structural social capital that contributes to the model are the *membership density* and *community orientation* (being members of the community-initiated groups). To reiterate, the membership density is a number of groups a household holds its membership. The other indicators of structural social capital are not significant.

The results show that an increase in the membership density increases the household welfare by about 3 percent. This is lower than in some countries studied under the World Bank's Social Capital Initiatives. For example, in Burkina Faso, every increase in a household membership in a group increases the household welfare by 7.1 percent. In Indonesia, it is 1.5 percent and in Bolivia, the increase is by 11 percent (Grootaert 2001:17).

A unit increase in community orientation (membership to groups founded by the community members) increases the household welfare by 11.4 percent. This could be because the groups that the community start promise the members higher material returns and higher success rate. This suggests that the government or donor-initiated groups are less effective in poverty reduction compared to the ones initiated by the community members. The real policy interventions can be not in the form of forcing the community members to form groups through the government's strict regulation, but by facilitating development of their own groups.

The attendance at meetings is not significant, suggesting that it is not an important indicator of structural social capital in our case. We know that throughout the country, people attend so many meetings in a year that they are often fatigued with meetings (*zom-du*).

Cash contribution as a measure of active involvement in the groups is significant because its p-value is smaller than 0.05, but its regression coefficient is zero. The other indicators of structural social capital are not statistically significant.

Table 12: Disaggregated structural social capital model

Variables	With Disaggregated Social Capital Variables		
	Coeff	t-stat	P>|t|
Intercept	7.871	47.540	0.000
Social capital index (additive)			
Membership density	0.025	0.360	0.016
Meeting attendance	0.002	0.860	0.388
Decision-making	0.001	0.740	0.463
Cash contribution	0.000	2.810	0.005
Work contribution	0.000	-0.170	0.869
Community orientation	0.114	3.270	0.001
Openness	0.000	-0.620	0.536
Household size	-0.115	-9.880	0.000
Years of education of household head	0.165	7.030	0.000
Female-headed household	0.099	2.430	0.015
Household head is in agriculture sector	-0.159	-3.500	0.000
Members aged 15 and above	0.004	4.200	0.000
Asset index*	0.053	9.390	0.000
District	-0.283	-6.050	0.000
R-squared	0.5689		
F-statistic	60.44		
Prob > F	0.000		
Number of observations	631		
Dependent variable = ln (real per capita household expenditure)			

Disaggregated cognitive social capital and household welfare

We now look at the results of disaggregated cognitive social capital. The close friendship score is not significant. This is contrary to our assumption that 'the more close friends a household has the higher welfare it would experience'. The other cognitive social capital indicators that contribute to the household welfare are the *financial score* (access to money lending in times of need), *assistance given score*, *emergency score* and *social interaction index*.

Surprisingly, trust index (an aggregate score of *trustworthiness, the need to be alert in the neighbourhood, and presence of help in the neighbourhood*) does not contribute to the household welfare, though trust may facilitate cooperative actions. One reason for such result could be that we are looking at the material welfare rather than the emotional well-being.

The cognitive dimensions of social capital like perceptions about the feeling of safety, satisfaction with the neighbours, trusting people and helping others are more likely to relate to the subjective well-being. We know that a person's happiness can be affected both by internal and external factors such as from warm social relationships with other people. Lu and colleagues found that positive relationship with others is one of the important predictors of happiness (Alipour and Noorbala, 1999; Ghamari 2012: 354).

Among six cognitive social capital indicators, the *financial score* (number of people who turned to the respondents for financial support in the last 12 months) is associated with the households with the higher welfare. This is true because the rich people are most likely to be approached by other people for financial assistance.

For every increase in the availability of help from the neighbours (to a household) during emergency, mainly death in a family, the *real* per capita household expenditure rises by one percent. It is same with the social interaction index. Interestingly, trust index (coefficient -0.01) is significant, but bear a negative relationship to the household welfare (table 13). We cannot explain this at present.

Table 13: Disaggregated cognitive social capital model

Variables	Disaggregated Social Capital Variables		
	Coeff.	t-statistic	P>|t|
Intercept	8.29	247.65	0.00
Social capital index			
Close friendship	0.00	1.65	0.10
Source of financial support	0.01	5.66	0.00
Assistance given	0.05	8.55	0.00
Emergency support	0.01	5.51	0.00
Social interaction	0.01	7.77	0.00
Trust index	-0.01	-2.02	0.04
Household size	-0.15	-48.36	0.00
Number of years of education	0.03	23.79	0.00
Female	0.06	5.05	0.00
Not economically active	-0.03	-2.46	0.01
Asset index*	0.07	35.93	0.00
Rural	-0.22	-17.64	0.00
R-squared	0.5259		
F-statistic	704.6		
Prob > F	0.0000		
Number of observations	9698		
Dependent variable = ln (real per capita household expenditure)			

Combined social capital model

Finally, we look at the mixed model that take into account both structural and cognitive social capital in one regression equation. *Log real* per capita household expenditure is a dependent variable; the independent variables are same as those in the previous models. We try to compare the models, estimated with and without social capital variables in order to show the relative contributions of social capital to the household welfare. When we combine the two dimensions of social capital, our sample is reduced to 617.

In the combined model, the R-squared value is 0.57, that is, the model explains 57 percent of the variation in the *real* per capita household expenditure due to the independent or explanatory variables. One interesting observation: the estimated contributions of both structural and cognitive social capital to the household welfare are significant. A unit increase in structural social capital brings about the increase in the household welfare by 3.6 percent; a unit increase in cognitive social capital increases the real per capita household expenditure by 5.4 percent (table 14), and the returns from both social capital dimensions are higher than human capital.

Table 14: Mixed social capital and household welfare model

Variables	Without Social Capital			Aggregated Social Capital Variables		
	Coeff.	t-statistic	P>|t|	Coeff.	t-statistic	P>|t|
Intercept	8.472	364.65	0.000	8.144	68.49	0.000
Structural social capital index				0.036	2.400	0.017
Cognitive social capital index				0.054	4.080	0.000
Household size	-0.002	-0.790	0.428	-0.113	-9.640	0.000
Years of education of household head	0.018	3.210	0.001	0.033	7.020	0.000
Female-headed household	0.015	1.350	0.177	0.083	2.000	0.046
Household head is in agriculture sector	0.014	1.240	0.216	-0.167	-3.570	0.000
Members aged 15 and above	0.000	1.130	0.257	0.004	4.180	0.000
Asset index	-0.001	-0.550	0.581	0.053	9.570	0.000
District	0.009	0.680	0.495	-0.216	-4.860	0.000
R-squared	0.1354			0.57		
F-statistic	4.66			89.29		
Prob > F	0.0000			0.0000		
Number of observations	617			617		

SOCIAL CAPITAL AND THE POOR

The results so far show social capital contributes positively to the household welfare. However, the equation (1) used for the multivariate analysis imposes a constant parameter over the entire distribution. The regression analysis summarises the relationship between social capital, other covariates and the conditional mean of the dependent variable.

In contrast, quintile regression model examines the relationship between explanatory factors and the conditional quintiles of Y (dependent variable) to detect the extremes, where the upper or lower quintiles are critical for policy interventions. Koenkaker and Bassett (1978: 38) have proposed quintile regression as an effective way of assessing poverty. The results of the quintile regression would be useful to understand whether social capital helps the poor to the same degree as the rich people, and whether it is worth investing in creating social capital as a public policy tool for poverty reduction.

We apply quintile regression model to quantify different effects of the independent variable and the covariates on different quintiles of the dependent variable. The results of quintile regression are presented in table 15. It shows whether the ownership of social capital is fairly distributed across the households in different consumption quintiles.

First, we observe no returns from structural social capital in the case of the households in the lowest or 10th quintile. This implies that structural social capital does not occupy prominent places in the household asset portfolio of the poorest ten percent. Taken together, the returns from structural social capital are generally higher for the households in the lower second quarter (25th quintile) and upper half of the distribution. The additional positive contribution of structural social capital to the welfare of the households in the richest quintile is 10.67 percent higher than that of the households in the 25th quintile.

The contribution of human capital to the welfare of the households in the poorest quintile is 19.35 percent less than that of the households in the richest quintile. As shown in table 15, the contribution of human capital to the household welfare is distributed more equally across different consumption quintiles than the contribution of social capital.

These raise two issues: (1) we have seen that structural social capital in general helps improve household welfare; (2) but the poorest households are not able to gain from the group memberships.

While further investigations such as through case study or qualitative research may be needed to ascertain why structural social capital do not benefit the poorest households so much. We assume that other relatively richer members who see them as a liability in the local groups exclude them. The groups that the survey has captured are mostly the formal ones that require a certain level of investment (cash and in-kind contributions). It is so often the case that the poorest households may not be able to afford full participation in the formal groups. If this is the case, then there is the need for the government to intervene, because this becomes a typical case of social and economic exclusions. The key question may then be 'how to bring this extremely poor section of the society into the mainstream'?

Second, the contribution of cognitive social capital to the welfare of the households in the richest quintile is higher by about 48.54 percent relative to that of the poorest quintile. In the same model (i.e when cognitive social capital variable is added), the contribution of human capital to the welfare of the households in the richest quintile is higher by 45.45 percent relative to that of the poorest quintile.

Results

Table 15: Quintile regression results-poverty and social capital

Variables	10th Quantile		25th Quantile		50th Quantile		75th Quantile		90th Quantile	
	Coeff	P>t	Coeff	P>t	Coeff	P>t	Coeff	P>t	Coeff	P>t
Structural social capital										
Constant	7.657	0.000	7.979	0.000	8.198	0.000	8.339	0.000	8.597	0.000
Structural social capital index	0.042	0.110	0.067	0.000	0.073	0.000	0.064	0.001	0.075	0.019
Years of education of household head	0.025	0.002	0.032	0.000	0.032	0.000	0.043	0.000	0.031	0.000
Asset index	0.057	0.000	0.049	0.000	0.057	0.000	0.058	0.000	0.053	0.000
Number of observations					631					
Cognitive social capital										
Constant	7.893	0.000	8.189	0.000	8.487	0.000	8.823	0.000	9.138	0.000
Cognitive social capital index	0.050	0.000	0.061	0.000	0.071	0.000	0.089	0.000	0.103	0.000
Years of education of household head	0.022	0.000	0.023	0.000	0.025	0.000	0.028	0.000	0.032	0.000
Asset index	0.070	0.000	0.067	0.000	0.070	0.000	0.071	0.000	0.070	0.000
Number of observations					8799					

The additional positive effect of structural social capital on the welfare of the households in 25th quintile primarily comes from the membership density (coefficient is 0.133 at p-value less than 0.05). The membership in groups initiated by the community is not significant at the 90th quintile suggesting that the richest people do not benefit from being the members of the community-initiated groups. The returns from the memberships to the community-initiated groups decrease from the poorest quintiles to the richer quintiles, suggesting that the poorer households benefit more than the richer ones by being the members of the community initiated-groups. The other indicators of structural social capital are not significant (table 16a).

In table 16b, we show which cognitive social capital indicators are significant. The overall observation is that the cognitive dimension contributes to the household welfare. The three indicators that are significant in all the quintiles are *financial support score*, *emergency score* and *social interaction index*. The *close friendship score* is significant only at the poorest quintile suggesting that having more close friends help the poorest improve their household welfare. Interestingly the trust index, though significant at the two upper quintiles contributes negatively to the household welfare.

The presence of *financial support* (through borrowing from others) has the highest contribution to the household welfare of the poorest quintile and is lowest for the richest quintile. The effect difference is about 56 percent. The presence of help during the emergencies such as sickness and death contributes to the household welfare, but contrary to our assumption, the effect is highest in the richest quintile. Nevertheless, the effect difference between the poorest quintile and the richest quintile is only about 11 percent. The contribution of social interaction is higher for the richer than on the poorer households.

Table 16: Disaggregated social capital and poverty models

Variables	10th Quantile		25th Quantile		50th Quantile		75th Quantile		90th Quantile	
	Coeff	P>t	Coeff	P>t	Coeff	P>t	Coeff	P>t	Coeff	P>t
B: STRUCTURAL SOCIAL CAPITAL										
Constant	7.575	0.000	7.649	0.000	8.078	0.000	8.361	0.000	8.365	0.000
Membership density	0.035	0.744	0.133	0.030	0.066	0.415	-0.083	0.303	0.047	0.688
Meeting attedance	-0.001	0.482	0.001	0.670	0.002	0.359	0.000	0.809	0.003	0.285
Decision-making	-0.001	0.210	0.000	0.720	0.001	0.424	0.001	0.420	0.002	0.222
Cash contribution	0.000	0.054	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Work contribution	-0.001	0.436	0.000	0.840	-0.001	0.364	0.003	0.124	0.000	0.907
Community orientation	0.191	0.000	0.134	0.000	0.117	0.007	0.095	0.027	0.002	0.981
Openness	-0.002	0.109	-0.001	0.214	-0.001	0.426	-0.001	0.613	0.001	0.707
A: COGNITIVE SOCIAL CAPITAL										
Constant	7.650	0.000	7.944	0.000	8.263	0.000	8.604	0.000	8.893	0.000
Close friendship	0.004	0.001	0.001	0.195	0.001	0.309	0.001	0.703	0.001	0.639
Source of financial support	0.014	0.000	0.013	0.000	0.012	0.000	0.013	0.000	0.009	0.026
Emergency support	0.048	0.000	0.046	0.000	0.044	0.000	0.050	0.000	0.054	0.000
Assistance given	0.002	0.186	0.007	0.000	0.008	0.000	0.011	0.000	0.011	0.000
Social interaction	0.002	0.003	0.004	0.000	0.005	0.000	0.008	0.000	0.010	0.000
Trust index	0.005	0.214	0.004	0.291	-0.003	0.374	-0.010	0.022	-0.015	0.012

SIMILAR STUDIES

Our analysis of the contribution of social capital to the household welfare is almost similar to the one done by Christian Grootaert (2001) for Bolivia, Burkina Faso and Indonesia except that there is a slight difference in the use of heterogeneity and openness indices. In our study, we did not use heterogeneity index whereas Grootaert's study did not use openness index. Grooataert has taken into account only the structural dimension of social capital to compare the effect of social on the household welfare. We have gone a little beyond to see the effect of the cognitive dimension of social capital. Nonetheless, we compare some of our results with the study results of the three countries. However, the comparison should be read with caution (read note 2 given below 17, pp. 96).

In Bhutan, structural social capital has a positive effect on the household welfare like in Burkina Faso and Indonesia (table 17). In fact, the effect is more significant in Bhutan than in these two countries. The contribution of structural social capital to the household welfare is not significant in Bolivia.

In Indonesia and Burkina Faso, the effect of social capital on the household welfare is slightly less than that of education or human capital, while in Bhutan; the effect of social capital is slightly more than that of human capital. This could be because the level of average adult education is relatively low in Bhutan.

Grootaert concluded that even after controlling for the ownership in human capital and physical capital and other relevant exogenous household and demographic characteristics, the presence of structural social capital exerts an additional positive effect on the household welfare. We conclude the same in Bhutan as well.

As an alternative to a single social capital index, we use disaggregated social capital indicators in the model and compare them with that of the three countries. We assume that each social capital dimension acts independently for the household welfare and that the effects are additive. The comparative results, presented in table 17 show that the membership density and heterogeneity index are the two most important characteristics in Indonesia, Bolivia and Burkina Faso, while membership density and community orientation are two important indicators in Bhutan. The magnitude of the effects on these indicators differs from one country to

another. For example, an additional membership in a group increases the household welfare by 1.5 percent in Indonesia, 7 percent in Burkina Faso, 12 percent in Bolivia, and 8 percent in Bhutan (table 17). The effect of education (human capital) on household welfare is high in Burkina Faso (9. 4 percent). It is 4.5 percent in Bolivia, 3.4 percent in Indonesia and 3.5 percent in Bhutan.

We further compare the scores of structural social capital indicators in four countries as shown in table 18. In terms of membership density, Indonesia has the highest. In Indonesia, on average, a household is a member of 3.7 groups. Bhutan on average has the lowest membership density. Our justifications for this low membership density in Bhutan, compared to the results of other the study that we compare are: (1) The survey has captured mostly the formal groups; (2) the formal groups in Bhutan are just coming up.

In Bhutan, the group members attend on average 2.47 meetings in three months, which is the lowest among the four countries (table 18). The participation in the decision-making is high in each of the four countries, but in Bolivia active participation in decision-making is above 80. Bhutan fares well in decision-making index than Indonesia.

In none of the countries do households make large cash contributions. The results in Bolivia, Burkina Faso and Indonesia are not surprising because the studies were conducted in the poor rural areas. Bhutan's score in cash contribution is the highest among others, possibly because the study covers both rich and poor areas. Bhutan scores higher on the free labour contribution.

Only about 11.4 percent of the groups (in Bhutan) are set up by the community themselves. This reflects the active role taken by the Bhutanese government to encourage and organise local groups for providing community services. The common groups in Bhutan are community forest groups, water user associations, diary groups, etc., which are formed mainly through the encouragement and support of the Renewable Natural Resources (RNR) sector (see appendix 5& 6 for the list of registered farmer groups and cooperatives). The responsibility of creating local groups is now gradually shifting to the people. Perhaps, many new groups are formed through the people's own initiatives. For example, welfare associations and spiritual groups (formed without any support from the government or donors) are emerging in large number.

Bhutan's Case: Social Capital, Household Welfare and Happiness

Table 17: The comparison of the contribution of social capital and its indicators to the household welfare in Bhutan, Bolivia, Burkina Faso and Indonesia

Per capita household expenditure	Bhutan	Bolivia	Burkina Faso	Indonesia
			Coefficients	
Structural social capital (index)	0.05	n.s	0.0045	0.0069
Membership density	0.08	0.12	0.07	0.015
Meeting attendance	n.s	n.s	n.s	n.s
Decision-making	n.s	-0.002	n.s	0.003
Cash Contribution	n.s	0.007	0.00	n.s
Work Contribution	n.s		0.00	n.s
Community orientation	0.114	0.001	n.s	n.s
Years of education of household head	0.035	0.045	0.094	0.034

Note 1: *n.s* not statistically significant.
Note 2: Although similar questionnaires were used in Grootaert's and our studies, our comparison may not be that rigorous due to differences in sampling size and if there are any, errors in survey data (both sampling and non-sampling) as well as some heterogeneity in survey design, processing, and survey context. Grootaert's study is community-based whereas ours the national-level survey data.

Table 18: The comparison of structural social capital indicators among the four countries (Bhutan, Bolivia, Burkina Faso and Indonesia)

Countries	Member ship density [1]	Heterogeneity Index [2]	Meeting attendance [3]	Decision making [2]	Cash contribution [2][4]	Work contribution [2]	Community orientation [5]	Openness [2]
Bhutan	0.08	-	2.47	74.43	5.76	12.85	11.4	49.7
Bolivia	1.00	64.10	5.20	84.90	4.30	-	68.50	-
Burkina Faso	1.60	77.00	3.20	79.70	3.60	10.90	83.70	-
Indonesia	3.70	53.30	6.00	63.50	1.90	5.70	52.90	-

1. Average number of active group memberships per household.
2. Scaled from 0 to 100.
3. Average number of times a household member attended a group meeting in the last three months, normalised for the number of memberships.
4. Total score of combined cash and in-kind contributions.
5. Percentage of memberships in the community-initiated groups/organisations.

THE PROCESSES CONTRIBUTING TO SOCIAL CAPITAL FORMATION

We now investigate some of the processes that contribute to the generation of social capital. One important element of social capital is collective action. Some people treat collective action as an input to social capital while others consider it as output of social capital. We do not make a distinction of whether it is an input or output factor. We estimate a model with collective action as a dependent or response variable and explanatory variable as that in the generalised equation 1. Collective action is measured in terms of the number of days a household participated in the community activities in a year.

Table 19 shows which structural social capital indicators are significant after controlling for other household and demographic characteristics. The membership density, community orientation and openness score contribute to collective action while other indicators are not statistically significant.

A unit rise in the household membership in the groups increases the household collective action by about 75 percent. Whether the groups are community-initiated or set up by the government, donors and the NGOs seem to matter a great deal. Every unit rise in the membership in community-initiated groups leads to an increase in collective action by about 21 percent, relative to the other groups.

This suggests that the community-initiated groups are more effective in mobilising cooperation and collective actions than other groups. However, considering the amount of effort our government has made to create and promote local associations, mostly tied up with a certain sectoral project and programme, it is a bit disappointing to note that the memberships in externally-initiated groups do not contribute much to collective action than the community-initiated ones. On the other hand, the fact that the community-initiated groups are effective in mobilising collective action is a good sign that people are now coming together to form groups that could take over certain functions handled by the government or external agencies.

In Bolivia, Indonesia and Burkina Faso, the groups that require more financial resources tend to do well when they are initiated by the external entities because they could get greater access to financial resources (Grootaert 2001: 32). However, in our case, since most contribution to

collective action comes from the community-initiated groups, it is clear that most groups operate with a moderate financial outlay.

The groups with the members who join them voluntarily tend to do better in terms of collective action than those groups with the members who are obliged to join them. All other covariates and control variables are statistically insignificant.

In table 20, we present the result of logistic regression to determine the relationship between collective action and cognitive social capital indicators. Collective action, which is taken as the dependent variable, is estimated by taking a binary response variable of whether a household has participated in the activities that benefit the community or not in last 12 months.

Among the cognitive social capital indicators, the *close friendship score* and *social interaction* score contribute to collective action. The *odds* of collective action increases by about 3 percent with a unit increase in the close friendship score. Similarly, for one unit increase in interaction index, we expect to see about a 2 percent increase in the *odds* of collective action. The *odds* ratio are given in table 21.

To our surprise, the *odds* ratio of the presence of trust in the neighbourhood is less than 1. This implies the *odds* of collective action is reduced by 1-0.7203654=0.279 or 28 percent in the neighbourhood where the respondents report there is trust compared to the neighbourhood without trust. We have no explanation for this result.

The effect of education on collective action is significant. The *odds* ratio for the human capital is 1.03. It means that for every year increase in education, the *odds* of collective action increases by 3 percent. The *odds* of collective action is 1.54 higher given the respondents are from rural areas compared to the respondents from the urban areas. In other words, the rural households are 1.54 times or 54 percent more likely to collective action as the urban respondents (table 21).

The 95% confidence interval (CI) is used to estimate the precision of the *odds* ratio. The CIs are not large indicating a high level of precision of the *odds* ratio.

Bhutan's Case: Social Capital, Household Welfare and Happiness

Table 19: Collective action, structural social capital and covariates

Variables	Disaggregated Social Capital Variables		
	Coefficients	t-statistic	P>|t|
Intercept	0.332	0.830	0.406
Social capital index			
Density of membership	0.750	4.380	0.000
Attendance to meeting	0.001	0.160	0.869
Decision making index	-0.001	-0.440	0.657
Cash contribution	0.000	0.920	0.357
Work contribution	0.006	1.470	0.142
Community initiated	0.208	2.390	0.017
Openness to membership	-0.007	-3.280	0.001
Household size	0.000	0.000	0.999
Years of education of household head	-0.007	-0.130	0.900
Female-headed household	0.044	0.400	0.687
Household head is in agriculture sector	0.010	0.090	0.931
Members aged 15 and above	0.001	0.580	0.560
Asset index*	0.006	0.370	0.710
District	-0.301	-2.330	0.020
R-squared	0.1047		
F-statistic	4.85		
Prob > F	0.000		

Dependent variable is the total number of days the household participated in community activities.

Results

Table 20: Logistics regression of collective action, structural social capital and covariates

Collective action	Coefficient	Std. Err.	z	P>z	[95% Conf.Interval]	
Close friendship density	0.0268235	0.0051703	5.19	0.000	0.0166898	0.0369572
Social interactions	0.0259529	0.0026741	9.71	0.000	0.0207117	0.0311941
Presence of trust in the neighbourhood	-0.3279967	0.1238674	-2.65	0.008	-0.5707723	-0.0852211
Schooling years	0.0365813	0.0073633	4.97	0.000	0.0221494	0.0510132
Rural	0.4329822	0.0806434	5.37	0.000	0.274924	0.5910404
Constant	-1.91914	0.1385752	-13.85	0.000	-2.190742	-1.6475370

Dependent variable: collective action (worked with neighbours to do something for the benefits of the community), No. of observations 5129.

Table 21: Odds ratio

Collective action	Odds Ratio	Std. Err.	z	P>z	[95% Conf.Interval]	
Close friendship density	1.027186	0.0053109	5.19	0.000	1.016830	1.037649
Social interactions	1.026293	0.0027444	9.71	0.000	1.020928	1.031686
Presence of trust in the neighbourhood	0.7203654	0.0892298	-2.65	0.008	0.565088	0.918809
Schooling years	1.037259	0.0076377	4.97	0.000	1.022397	1.052337
Rural	1.541849	0.12434	5.37	0.000	1.316431	1.805866

Dependent variable: collective action (worked with neighbours to do something for the benefits of the community)
No of observations: 5129

LOGISTIC REGRESSION: COGNITIVE SOCIAL CAPITAL AND SELF-REPORTED HAPPINESS

To look at whether cognitive social capital influences the self-reported state of happiness, we choose to run a logistic regression. The most appropriate approach is to run the ordinal *logit* regression, but due to complications in its interpretation, we chose the logistic regression. The survey asked the respondents, "[i]n general, how happy do you consider yourself to be'? (Respondents were told that 'happiness' means both physical and mental well-being). The responses to this question are categorical and scaled from 1 to 5 (1 very happy and 5 very unhappy with 3 as the midpoint or neutral response). We dismissed the neutral response.

In our model, to use happiness as binary categorical dependent variable, we combine two positive responses (happy) and two negative responses (unhappy). We use six indicators of cognitive social capital (close friendship, financial support, assistance given, emergency, social interaction and trust), ownership of basic asset, years of education and food security (whether household experience seasonal food shortage or not) as the dummy variable and rural (location) to control for areas (rural and urban).

The results of logistic regression, presented in table 22 shows that the number of observations is reduced to 5126. The probability of obtaining the chi-square statistics (if there is no effect of the independent variables taken together on the dependent variable) (prob>chi2) is 0.000. This is in fact the p-value, and indicates that the model is statistically significant. Logistic regression does not have an equivalent to the R-squared of the Ordinary Least Square regression (OLS) that represents the proportion of variance explained by the predictors. Some statisticians use the Pseudo R-squared to mimic the OLS-R2 in evaluating the goodness-of-fit. However, we consider that Pseudo-R2 does not mean what the R-square mean in the OLS regression, and that in the present logistic model, Pseudo-R2 of 0.1205 does not have straightforward interpretation.

Among the independent cognitive social capital variables, *neighbourhood trust* and *close friendship score* are statistically significant. The trust variable is binary (with 0 value if a person report there is no trust in the neighbourhood and 1 if a person respond that there is trust in the neighbourhood). The trust variable is strongly significant while close friendship variable is only barely significant (p-value 0.04, only slightly

lower than significant p-value 0.05). The three statistically significant independent variables are the ownership of 18 basic assets, education, and food security. We omitted from the model the covariates like land, house and livestock ownership because they are not statistically significant.

The result shows that the *odds* (success/failure) the individuals with more close friends reporting to be happy is slightly higher than that of those with no or fewer close friends. We use the *odds ratio* to compare the outcomes of the number of close friends. The *odds* ratio is 1.043738 as shown in table 22. This means that if a close friend increases by one, a person is 1.04 times as likely to report being happy. Increasing close friends by two increases the *odds* of reporting to be happy by 1.04 x 1.04=1.08. Here, the odds ratio works in a multiplicative fashion.

In table 23, we show the percentage change in the *odds* of reporting happy or unhappy. If a close friend is increased by one, *the odds* that a person would report to be happier increases by 4.4 percent.

The presence of trust in the neighbourhood comes out as the strongest predictor of happiness, irrespective of other variables including the location variable. The *odds* ratio for the trust variable is 2.33. We interpret the result as 'for every increase in a person who report there is trust in the neighbourhood, the *odds* of reporting being happy increases by 2.33 times than those who report there is no trust in the neighbourhood'. In percentage, the *odds* of a person who report there is trust in the neighbourhood being happy are about 132.5 percent of the *odds* of a person reporting there is no trust in the neighbourhood.

Three significant covariates are the number of years of education of the household heads (human capital), ownership of 18 basic assets and food security. The education is continuous variable. The food security (if a household faces seasonal food shortage) and asset ownership are categorical.

To interpret the *odds* ratio for *education*: for every increase in one-year in education, the *odds* of being happy increases by 1.107614 or 10.7 percent. The model shows that social and human capital are mutually reinforcing. The *odds* ratio for the ownership of 18 basic assets is 1.115243. It says that the *odds* of a person who own 18 basic assets reporting being happy is about 1.12 times the *odds* of a person who do not own 18 basic assets (chosen using the principal component and factor analysis). In terms of percentage, it is about 11.3 percent times. The *odds* that a person who

reports 'a household face seasonal food shortage' reporting being happy is reduced by 1-. 037958 = 0.96. It is 96 percent lesser than the corresponding *odds* for a person in a household not experiencing a seasonal food shortage, regardless of other variables.

In this model, the most important cognitive social capital predictor of happiness is trust. Social trust or the belief that the others in your neighbourhood or community can be trusted is a core component of social capital (Koroki 2011). Social trust is group resource, which is typically measured by aggregating individual response to a generalised question about whether the most people in the neighbourhood can be trusted or not. The economic theory and experiment suggest that social trust leads to faster economic growth by reducing transaction cost and facilitating investment (Knack and Keefer, 1997; Beugelsdjk et al, 2004). Uslaner (1999) postulated that trust promotes civic participation and contributes to creating a vibrant community.

Putnam (2001) concluded that in the United States, other things being equal, higher trust in the neighbourhood is associated with higher happiness and higher perceived quality of life. Tokuda, Fujii and Inoguchi (2010) investigated the relationship of individual and country level social trust and self-reported happiness using cross-national data of 39,082 people from 29 countries in Asia. They concluded that people are more likely to be happy if they live in countries where aggregate social trust is higher than countries with lower social trust. The communities with a greater sense of trust and stronger ties are more likely to share household risk and to develop informal means of insurance, which can allow households to pursue higher returns while mitigating the negative impacts of exogenous shocks (Townsend 1994).

Happiness as understood in Bhutan is a complex construct that concerns both physical and emotional experiences and functioning. Happiness can be secured when both basic physical and emotional needs are satisfied. Whether a household has adequate food throughout the year is an important determinant of a physical well-being. Failing to meet adequate food affects both physical and emotional well-being. Our model shows that inadequate access to food affects the self-reported happiness. The analysis suggests a strong relation between the household food security and happiness. Therefore, the important policy urgency remains the need to achieve universal food security.

Table 22: Results of logistic regression (happiness and cognitive social capital)

Number of observations = 5126
LR chi2(9) = 164.1
Prob > chi2 = 0
Log likelihood = -598.95083   Pseudo R2 = 0.1205

Happy	Odds Ratio	Std. Error	Z	P>z	[95% Confidence Interval]	
Close friendship	1.043738	0.0232546	1.92	0.044	0.9991405	1.090326
Source of financial support	0.8793577	0.2839913	-0.4	0.691	0.4669468	1.656013
Assistance given	1.011727	0.0225705	0.52	0.601	0.968443	1.056946
Emergency support	0.9077813	0.4984155	-0.18	0.86	0.3094786	2.662758
Social interactions	0.9932655	0.0057845	-1.16	0.246	0.9819925	1.004668
Trust in neighbourhood	2.325425	0.5995509	3.27	0.001	1.40295	3.854453
Years of education	1.107614	0.0314467	3.6	0	1.047663	1.170996
Ownership of basic assets	1.115243	0.0351721	3.46	0.001	1.048394	1.186354
Food security	0.1308658	0.0294614	-9.03	0	0.0841779	0.2034486
Rural	1.037958	0.2354608	0.16	0.87	0.6654028	1.619104

*P-value < 0.05 is statistically significant.

Table 23: Odds of happy and not happy

Happy	b	z	P>z	%	%StdX	SDofX
Close friendship	0.04281	1.921	0.044	4.4	30	6.1329
Source of financial support	-0.12856	-0.398	0.691	-12.1	-3.4	0.2719
Assistance given	0.01166	0.523	0.601	1.2	6.3	5.2028
Emergency support	-0.09675	-0.176	0.86	-9.2	-1.6	0.1718
Social interactions	-0.00676	-1.16	0.246	-0.7	-8.3	12.8353
Trust in neighbourhood	0.8439	3.273	0.001	132.5	25.9	0.2725
Years of education	0.10221	3.6	0	10.8	70	5.1912
Ownership of basic assets	0.10907	3.458	0.001	11.5	48.4	3.6188
Food security	-2.03358	-9.033	0	-86.9	-30.3	0.1775
Rural	0.03726	0.164	0.87	3.8	1.9	0.4989

B	=	raw coefficient	
Z	=	z-score for test of b=0	
P>z	=	p-value for z-test	
%	=	percent change in odds for	unit increase in X
%StdX	=	percent change in odds for	SD increase in X
SDofX	=	standard deviation of X	

Our regression model is based on the assumption that the *logit* of the outcome variable is a linear combination of the independent variable. As we are dealing with two sides of the logistic regression equation, we need to consider the link function of the outcome variable. We assume that we have in the equation all the relevant variables and have omitted the irrelevant variables, and that the *logit* function is a linear function of the predictors. To test whether our model has all the relevant predictors and if the linear combination of them is sufficient, or to detect a specification error, we run the *linktest*. The idea behind this test is that if the model is properly specified, we would not find any additional predictors that are statistically significant except by chance. The result of the test is presented in table 24:

Table 24: Linktest

Number of obs	=	5126
LR chi2(2)	=	164.29
Prob > chi2	=	0
Log likelihood	=	-598.854
Pseudo R2	=	0.1206

Happy	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
_hat	1.10976	0.278405	3.99	0.000	0.564098	1.65542
_hatsq	-0.02060	0.050126	-0.41	0.681	-0.11884	0.07764
_cons	-0.11629	0.375401	-0.31	0.757	-0.85207	0.61947

The variable **_hat** is a statistically significant predictor. This shows that the model is not mis-specified. If the _hatsq is significant, it means the *linktest* is significant, and thus, that we have either incorrectly specified link function or omitted relevant variable (s). Since our variable _hatsq is not significant, our *linktest* in insignificant. We conclude that we have correctly specified link function and have all the relevant variables in the model.

We use Hosmer and Lemershow's goodness-of-fit test, which is similar to a Pearson Chi Square test. It indicates the extent to which the model provides a better fit than a null model with no predictor. Just as in the Chi-square goodness-of-fit test, if the test is significant, then the model

does not adequately fit the data. The Hosmer and Lemershow test divide subjects into ten groups based on predicted probabilities and computes a chi-square distribution to test the model fit (table 25). We found that the HL P-value is greater than 0.05, implying that there is a difference between observed and model-predicted values. Therefore, we conclude that the model's estimates fit the data at an acceptable level (our model passes the test).

Table 25: Hosmer-Lemeshow Chi2 test Result

(The table collapsed on quintiles of estimated probabilities)

Group	Prob	Obs_1	Exp_1	Obs_0	Exp_0	Total
1	0.9530	449	455.0	64	58.0	513
2	0.9633	498	491.8	15	21.2	513
3	0.9701	497	495.1	15	16.9	512
4	0.9746	492	498.8	21	14.2	513
5	0.9783	505	500.0	7	12.0	512
6	0.9824	506	502.9	7	10.1	513
7	0.9872	503	505.2	10	7.8	513
8	0.9914	508	506.6	4	5.4	512
9	0.9946	508	509.4	5	3.6	513
10	0.9998	509	510.1	3	1.9	512

Number of observations	=	5126
Number of groups	=	10
Hosmer-Lemeshow chi2(8)	=	11.60
Prob > chi2	=	0.1698

CHAPTER IV

POLICY DISCUSSION AND CONCLUSION

The main aim of this study is to examine the relationship between social capital and the household welfare. We assumed that social capital has returns to households, the benefits almost equivalent to that of human capital. Christian Grootaert (1999; 2001) empirically estimated the effects of social capital on household welfare and poverty in Indonesia, Bolivia and Burkina Faso. One of his main findings was that the households with higher social capital spend more for consumption. In the similar line, we wanted to address the question: Do households with more social capital have higher *real* per capita household expenditure? We, further, wanted to determine whether cognitive social capital contributes to self-rated happiness.

Our analyses followed six stages. First, we conducted a simple descriptive analysis of social capital data. We presented the results as averages and percentages. Second, we created a social capital index aggregating the scores of various indicators of structural and cognitive dimensions. These indicators were cross tabulated with different household characteristics. Third, we ran the Ordinary Least Square (OLS) regression, taking *log* real capita household expenditure as the dependent variable and social capital as independent variable, controlling for relevant household characteristics and location variable. Fourth, we determined the distribution of social capital across the consumption and self-reported poverty quintiles. Fifth, we determined what determines collective action using both structural and cognitive social capital indicators, and lastly, we conducted logistic regression to determine the relationships between self-rated happiness and the various cognitive social capital dimensions and the covariates.

In the main analysis, first, we have done separate multivariate analyses of structural, cognitive and combined social capital models to examine the relationships between the various dimensions of social capital and the household welfare. We draw the following main conclusions from our analyses:

- The presence of social capital (both structural and cognitive), has a positive effect on the household welfare.

- Social capital has higher contribution to the household welfare than that of human capital (measured by the number of schooling of the household's heads).

- Among seven components of structural social capital, two most significant indicators that contribute to the household welfare are the membership in groups and the membership in the community-initiated groups.

- Among six cognitive social capital indicators, the availability of sources to borrow money (when needed), support from the neighbours during long-term emergencies, and social interactions with other people contributes positively to the household welfare. 'Trust' does not contribute to the household welfare.

- In the combined model (that is, when both structural and cognitive indicators are aggregated and included in the regression equation), social capital contributes positively to the household welfare.

Second, we ran the quintile regression to quantify different effects of independent variables and covariates on different quintiles of the dependent variable and concluded as follows:

- The membership in groups does not occupy prominent places in the household asset portfolio of the poorest 10 percent. The additional positive effect of structural social capital on household welfare is higher in the richest quintile. Our inference from this is that the poorest of the poor are not able to realise the potential of group memberships. We assume the result is mainly due to that the survey has captured mostly the memberships in formal groups, and that the poorest are not able to benefit much from these formal groups.

- The returns from the memberships in the community-initiated groups decrease from the poorest quintile to the richer quintiles, suggesting that poorer households benefit more than richer ones by being the members of the community initiated-groups. It is not significant at the 90th quintile.

- The difference in the effect of human capital on the poorest and richest households is huge while there is not much difference in the effect of social capital on these two extreme groups. However, across other consumption quintiles, the effect of human capital is more equally distributed than the effect of social capital.

- The positive contribution of cognitive social capital to the household welfare is higher in the case of the households in the richest quintile than in the households in the poorest quintile.

- The close friendship score is significant only at the poorest quintile. This suggests that having more close friends help the poorest to improve their household welfare, or as a social safety net.

- The presence of financial support (through borrowing from others) has the highest effect on the household welfare for the poorest quintile and is lowest for the richest quintile.

- The presence of help during the emergencies such as sickness and death affects the household welfare, but the effect is highest in the richest quintile.

Third, our logistic regression with dependent variable as collective action and the independent variables being the same as in the previous models results in the following:

- The membership density, being members of the community-initiated groups, and joining the groups voluntarily contribute to collective action.

- Among cognitive social capital indicators, the two most significant indicators that contribute to collective action are close friendship density and social interactions. These can be interpreted as that having more close friends and being able to interact more with others leads to greater collective action.

Fourth, we conducted logistic regression to examine the relationship between self-rated happiness and the cognitive social capital indicators, ownership of basic asset, education and food security. We derived the following key conclusions:

- The presence of trust in the neighbourhood and having more close friends are two important predictors of happiness. Social trust is the strongest predictor of happiness.

- Education contributes to self-rated happiness, and both social and human capitals are mutually reinforcing.

- The ownership of 18 assets contributes to self-rated happiness, and similarly, people who reported they do not face seasonal food shortages are happier than those people who face food insecurity.

Having discussed the key findings, we now discuss social capital and public policy, mainly the possibilities of using social capital as a development tool. However, since we are dealing with the subject in a broader context, we may not be able to provide more specific public policy recommendations. We might rather aim at providing the ground for discussing social capital and policy issues among the scholars, practitioners and policymakers and as a starting point for those who wish to embark on new empirical research and policy analysis in this field.

We often claim that Bhutanese society is a small and cohesive society with rich traditional values and norms that govern social behaviour and cooperative actions. Fukuyama (1999) raised the point relevant to our context. His main point was that all forms of the traditional social groups like villages, religious groups, tribes, and so on are the various forms of social capital that are based on shared norms and cooperative actions. He also noted that in general, modern development has not been able to see social capital in these traditional forms as an asset, but as a liability for which economic modernisation and urbanisation are seen as the ultimate policy panacea.

Our society too is not static; but exposed to the various forces of modernisation and urbanisation that change the context and structure of the society, effecting social cooperative norms and practices even to an extent of disintegrating the family and community life. In this context, we

take a serious note of Fukuyama's remarks that modernisation is often conceived as 'the progressive replacement of informal coordination mechanisms with formal ones'. No one will disagree that the modernisation overall brings about formal mechanisms for coordination, but most often at the cost of losing the informal ones. The rural-urban migration, growing consumerism, individualism, and dilution of social fabrics and cultural life have become a part of our economic modernisation.

By this, we do not mean we should ignore contemporary forms of social capital. The key question is that to what extent we need to preserve and promote the informal social values, norms, institutions and practices that make up our own version of social capital. All societies have their own versions of social capital. Developing countries that are not fully exposed to the 'individualism economics' are thought to be rich in traditional social capital, which the advance nations are now trying to revive after realising that they are equally important for achieving the human progress.

Our Constitution provides a legal framework for promoting the traditional forms of social capital. Article 19 of the Constitution emphasises on the need to foster the growth and sustainability of the extended family institution and community life. However, we believe that not enough is done to work on fulfilling this constitutional mandate while there are mounting evidence that family structure and community practices that foster traditional forms of social capital are changing or declining. The issue is not one of constructing social capital; we already have rich social capital. We just need to be cognizant of their importance and discuss seriously about establishing the context or enabling environment in which more people can harness the benefits of social capital.

Scholarly works on social capital in various disciplines and its applications in public policy is lagging in the country. We are living in the age when a new public policy agenda is increasingly formulated using the evidences of the ground realities. The government and other development agencies can become more effective by drawing evidences through research.

The research works on social capital and its applications are receiving firm endorsement of the governments in the various part of the world. Even a big international player like the World Bank--once accused of imposing the neo-liberal economic policies on people across the world-- has

emerged as a strong supporter of social capital research in the developing countries. The neoliberalism refers to the policies and processes that empower relatively a few private interests to control social life and maximise their profit interest (The Thistle Issue, 2000), and somewhat contributing towards the decline of social capital that concerns more of the greater common interest. Stieglitz (2002) once criticised that the IMF and World Bank's neo-liberal economic policies, designed mainly by the western economists were weakening the foundation of an indigenous social capital grounded on the kinship and family ties.

Our government needs to support and promote action research on social capital that encompasses deeper investigations of how the sector level policies could contribute to balancing economic and social well-being. We need a more comprehensive policy analysis of the place, role and significance of social capital, and in which development sector we can apply the concept. This does not mean that the policymakers and practitioners should wait for researchers to tell them what ought to be done, instead they should adopt a practice of learning by doing as well. The most important task in our hands is how to preserve the indigenous social capital that serve our communities' interests while the contemporary and more formalised social capital that are not devoid of our traditional ethos, values and norms emerge.

Social capital at a basic level is understood as a resource that one can own by building relationships with others through formal and informal means. We can use social capital to leverage material gain, and to serve as a safety net during a crisis. Social capital has both costs and benefits, and our approach to harnessing the potential of social capital should constitute strategies that would maximise the benefits and minimise the costs as far as possible.

Our own version of social capital consists of a close-knit 'bonding' social capital--stocked within smaller and socially and culturally segregated communities. For example, several local groups exist within each community with the limited geographical and functional scope. Interestingly, most of the local groups that we may see originating are multi-functional in nature. For examples, a community welfare group (*drongyul phendey tshogpa*) may have functions that cut across many development sectors; or a spiritual group (*chedhey tshogpa*) may extend their functional scope beyond merely organising spiritual activities to engaging in community development projects (Tashi Choden and Lham Dorji,

2005). Of course, the scope of a few groups like Chotheun Tshogpa or Threma Tshogap already extends across the country.

While we must support these small and geographically segregated groups, it is important to connect them to wider networks that extend beyond their own communities. In this way, we can build a 'bridging' social capital that might have larger positive impacts on the society as a whole. This is possible if the government and more prominent NGOs facilitate communications between them and link them for opportunities and structures of national and international supports. Such intervention nevertheless, should not necessarily be considered as a top-down approach of facilitating 'bridging social capital' while disrupting 'bonding social capital'.

In our analyses, the community-initiated groups tend to do better than the ones imposed on the communities by the government or other external agents. This indicates that the top-down approach to build community-level social capital cannot be effective (though not useless), but this does not mean that the external entities have no role to play. The external agents can adopt innovative strategies, and the most appropriate one is, to focus on integrating the many community-based groups.

In fact, the institutional view of social capital, described by Skocpol (1995, 1996), contends that civil society thrives when the state actively encourages it (Woolcock and Narayan, 2000: 234). One problem with the political economy of our civil society development initiative is that we emphasises on creating groups as an obligation rather than as an incentive. The requirement of the community members to form water user associations to get irrigation canal support from the government is one example. In such case, though it is an incentive scheme, people still seem to see the group formation as an obligatory rather than as a civic participation.

The term civil society entered the development lexicon only recently. Civil society does not actually constitute social capital by itself, but arise though social capital. The most recent intervention to promote civil society (another manifestation of social capital) in the country came with the establishment of the Civil Society Authority (2009) and the CSO Act governing it (2007). The main purpose of the CSO Authority is to address social welfare by promoting cooperation in groups. Its other objective is

to complement and supplement the institution and activities of *kidu* (social welfare, www. csao.org.bt).

The CSO Authority is one of the government agencies that could best take up the lead role in facilitating the interactions, if not the integration of the many local groups. The goal must be, however, such that it produces optimal strengthening of bonding social capital within each group, while bridging their ties with the other groups. In our literature review, we found that in Southampton, UK, the 'Council of Faith' that serve as a crucial forum for contact, discussion and dialogue across different faith groups also provide opportunities for different faith communities to work collaboratively on social innovation projects (McGhee and Pathak, 2012). We agree with the synergy view of social capital and economic development that the state is not only the ultimate provider of goods and services and the final arbiter and enforcer of the rule of law, but also the facilitator of enduring interactions and alliances across the boundaries of class, ethnicity, gender and religion (Woolcock and Narayan, 2000: 235).

The task of building bridging social capital may involve as simple as organising annual seminars and workshops for diverse participants of the local groups and facilitating the inter-group exchange of ideas and capacity building programme to forming a consortium of local associations. Tashi Choden and Lham Dorji (2005) observed during their field works in six districts the rich presence of formal and informal local groups. Some of the traditional groups lack formal structures and legal frameworks, but function as part of traditional norms and practices. New forms of social and economic groups are emerging, and the attempts to imbibe and use the modern-day group structure and management are evident from them. In doing so, some of them have even failed to sustain. Some of the local welfare groups, according to their study, lack ideas and skills of even managing the group accounts in the banks. They suggested that capacity building for the main actors of such informal groups would go a long way in enhancing the effectiveness of the groups [they manage].

Lham Dorji (2010: 30) wrote in his paper *improving local service delivery in Bhutan* prepared for DANIDA that given the limited capacities of the local governments to handle every aspect of development and service delivery activity, we must explore the new avenues of cooperation between the local government, larger NGOs and smaller community groups. This is necessary to allow close coordination between different

players to enhance their service delivery capacities and in mobilising resources for development.

He further noted that most of the national level civil society, possessing better technical capacity and higher potential for fund mobilisation, are based in the capital or major towns. He suggested that the national NGOs should explore the ways of linking themselves with the smaller local groups to help the latter break out from being bonding social capital to bridging social capital and use them as channel to reaching the isolated and needy population. The inter-group interactions can aid in consensus building among the groups with diverse interests and resources. Besides, it is equally important to take advantage of the recent improvements in physical access and modern communication technology to foster information exchange across the diverse groups.

The need to bridge local social groups and communities is important, especially with the poor people. We observed in the analyses that the poorest 10 percent of the sample households do not experience welfare improvement by being the members of groups. Studies in other developing countries have shown that group memberships of the poor are one of the primary resources they own to manage risk and vulnerability (Grootaert and Narayan, 2001). However, in our case, the kind of local groups that exist there do not seem to benefit the poorest or seem to exclude the poorest people. The government and other external agents must find ways to bring the poorest into the mainstream. In this respect, it is critical to identify these poorest people and investigate why the local groups do not benefit them.

Our analyses have determined that the returns of social capital to household welfare and happiness are positive, and hence we conclude that the investment in social capital can be one of the effective poverty alleviation and GNH maximisation strategies. Mutual social trust is the very important determinant of self-rated happiness, but trust is not a strong predictor of the household welfare and collective action. If public policy could influence trust, it would provide considerable advantage to the policy makers and development practitioners seeking to influence happiness policy. However, the data do not tell us the factors associated with the neighbourhood trust building. It is hard even to discuss about the strategies of building trust in the neighbourhood. All we can say now is that trust is an important determinant of the self-reported happiness. We propose further studies to determine what factors promote trust.

The evidence suggests that the contribution of social capital to the household welfare exceed that of human capital. The issue is that the policies and programmes related to social capital are not as pronounced as that of human capital. Most of them lack clearly articulated goals and the progress indicators. One of the reasons for not being able to comprehend the social capital concept within larger public policy circles could be that the social capital idea has not been able to enter wider public consciousness. The public understanding of the concept and appreciation of its practical applications can come only by engaging people of all backgrounds in regular public debates on the subject. The role of media in publicising the importance of social capital is crucial.

Because social capital is largely a by-product of tradition, religion, historical experience and other context-based factors, many believe it is impossible for the government to design effective public policy on social capital. However, policymakers should be aware that they could carefully study those attributes, the enabling environment for social capital to flourish, and respond appropriately. For example, in order for traditional family-based and community life to sustain the impact of economisation and urbanisation, we could emphasise on the transmission of social values such as *ley-jumdrey tha dham tshig* that constitute the core determinants of our social fabric to our children.

The area where the government can leverage policy intervention is in the education sector. The education system's role should not be only to generate human capital, but to transmit social values that are essential for creating social capital. Such transmission of social values, norms and practices should be done up from primary level to tertiary level. In general, both economic liberalisation and political democratisation can promote individual rights. Promoting individual rights may sometime compromise collective rights. In a society like ours, the Buddhist teachings in particular have enriched most of our citizens with a strong sense of duty not only for oneself, but also for the state and society, and all other sentient beings (the value that all sentient beings are like our parents). As we modernise and adopt new liberal ideals and principles, the risk is that our old-age duty-based society may gradually transform to right-based society. In the process, we may experience the decline in social capital. This is true because people are getting more and more self-centred- they neither wish to nor even feel obliged to consider the needs and feelings of other people. In this context, both formal and monastic

education system has an important role to play. The additional investment in maintaining the education system that imparts or transmit values and practice of interdependence, duty and obligations, and well-being and happiness to our youth and children would bring huge social, cultural and economic returns in the long run.

Social capital policies and programmes mostly exist in areas such as health, education, community services, sports, communications, agriculture, livestock and the provision of other basic services. Going by the diverse definitions of social capital, the policies and programmes that constitute its promotion can range from building a cohesive society (where individuals informally interacts for mutual benefits) to organising formal groups, developing legal framework, all the way up to the practice of religions.

The community initiatives of doing things together are crucial for fostering social capital. One major barrier to community initiatives is our attitude of dependence on the government. We expect the government to support us in every aspect of development. There are now concerns about our people getting too dependent on the state for social services and lacking tendency to help themselves. The governments sometime can negatively affect social capital if they take up the activities that are better left to civil society and the private sector. The Bhutanese Lama, Dzongsar Jamyang Khyentse Rinpoche, the mastermind of the Samdrupjongkhar Initiative (SJI)[8] has spoken about the Bhutanese dependency attitude:

> And still another reason for SJI is that our Bhutanese people are too dependent on the government. They expect the government to do everything. When people become so complacent, they will never realize that they can help themselves. That is why—in order to realize this themselves and live up to the national goal of GNH and work towards its achievement—we all should take part equally. Otherwise, GNH will remain as an idea forever—Even if you recite GNH one hundred thousand times, it will not do anything (Bhutan Broadcasting Service, 2011).

In the light of such initiatives coming forth, the government can look into what areas and in what best ways it can support such initiatives. From a

long-term perspective, it is better not to provide material assistance, but focus on the community's capacity to identify and initiate self-help groups as a way of encouraging self-reliance or avoiding the dependency syndrome. Of course, there is always the need to look at some exceptional cases. Some community-initiatives, especially the ones that belong to the poorest people critically require material assistance to kick off; others simply need management, coordination, and capacity building support.

The government can indirectly foster the creation of social capital by taking into account the social capital aspect of urban development. In urban places, people are increasingly experiencing social isolation. The reasons could be either that their access to money and market make the urban families more independent or they lack a platform for social interactions. In the urban areas, people are getting more and more self-centred, as they tend to get pretty entangled in meeting their own personal needs so that they do not have time to feel obligated to consider the needs and feelings of others. Many people resort to seek companionships in televisions, but then many of the uncensored programmes constantly expose them to the host of commodities that only adds to their sense of self-entitlement and self-centred thinking.

Social capital in another respect refers to the mechanisms by which residents interact with each other to solve problems, or work together for something good for the neighbourhood, or at the least, generate feeling for others. It is, therefore, important to design a physical neighbourhood environment that can foster social interactions and the growth of cohesive communities. The problem distinct to Bhutan's urban development is that it often falls short in physical neighbourhood environment. For instance, more pedestrian-oriented urban neighbourhood is known to contribute to building social capital, but our urban streets are better in promoting high vehicle dependency. It appears that we are more used to building urban neighbourhood without considering its social and physical characteristics and the interplay between them.

Some of the traditional villages present classic examples of the traditional cohesive societies. Our urban planners may sometime gain valuable insights by studying these villages and using this local knowledge for urban planning rather than entirely anchoring the designs of our urban development projects on the models developed elsewhere.

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[8] SJI is a project of the Lhomon Society, a registered civil society organisation in Bhutan. It is an active collaborative project between the civil society, government, university sector and the people of Samdrupjongkhar.

One among many other things that is obvious to us is that most of the traditional villages own a temple-an epicentre of community's social activities. It is ironic that we often dismiss the social and spiritual significance of having a temple built in the urban neighbourhood as much as we emphasise on building other modern amenities. For instance, social interaction could have been higher if we had included a temple or something of that sort in the design of the capital's famous Chanjiji low-cost housing scheme. This argument is based on the evidence of how the National Memorial Chorten provide an avenue for people to meet, especially the older people who come from their villages to stay with their working children. They are the ones among those who experience loneliness in urban villages. If it were not for their frustrations with the feelings of loneliness, many of them would not opt to return to their rural homes after a few weeks of stay, but they prefer to return home even if the material conditions back in their villages are no better. Therefore, it is extremely important to base the urban housing development on the social capital concept also, inherent in which is the idea that the primary resources of our society is not only economic but social as well.

We must note here that not all kinds of social interactions may contribute equally to generating social capital. The ones that can contribute the most towards this end are usually based on the idea of co-dependence, co-existence or interdependence. The idea of interdependence applies to the residents of both urban and rural areas, though in the rural locations the need for material interdependence can be higher. We have seen some negative consequences of development on sustainability of social capital. One good example is the effect on the traditional system of labour exchange. This system is no longer in practice in some villages that have better access to development infrastructure, services and markets. The rich families can recruit workers on daily wages, but the poorer ones who cannot afford to pay wages end up struggling with the meagre supply of labour.[9]

The case of farm mechanisation effort is another example worth discussing. There is no doubt that modernisation of farm production structure and process can enhance the agricultural productivity, but at times, this may come with negative impact on social capital. If for example, a wealthy family owns a power tiller (physical capital) in a village that the family also can rent out to other villagers. If everyone can afford

to hire the power tiller or have no problem accessing its service, the overall agricultural productivity of the village will increase. However, the externality cost of one family owning the tiller may shift over to the poorest farmers who cannot afford to hire (economic capital) the machine. Because the power tiller is there, the process of production may change, as the villagers may choose to abandon the traditional practice of labour exchange and even sell off their animal power such that the village is left with no substitute draught power in case the machine break down or is no longer there. This will disrupt the whole process of production that once thrived through consolidation of physical, labour and social capital as shared resources. From this example, we can draw five important policy insights:

- to investigate both positive and negative impacts of social and economic policy on the community life;

- to assure that new development interventions will not enhance a community's economic capital at the cost of depleting its social capital and traditionally shared resources;

- to integrate programmes across sectors to avoid the 'silo' effect;

- to pool resources through effective and efficient collaboration between the community members just as it used to be in the traditional societies;

- to ensure that development projects and programmes have long term social and economic goals as well as short term milestones.

Beyond the role of the government, religion provides an important source of social capital in the country. The spiritual group represents a dynamic yet distinctive field within social capital domain serving the continuation of religion in secularised environment. Buddhism has historically been the most important source of culture, and so are other religions in the country. It is for this reason that religion-inspired cultural groups remain the primary means of fulfilling spiritual aspirations of the people in a manner most suited to the goal of Gross National Happiness.

The use of concepts of religious and spiritual capital has emerged in the early 2000s. The Templeton Research Programme defines spiritual capital

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[9] Conversation with Aku Wangdi, Laptsakha, Talo gewog, January, 2013.

as a 'subset of social capital' (Metanexus, 2003; Christopher Baker and Greg Smith, 2010:8). In our country as well, though the Civil Society Act (2007) rejects religious groups as civil society, individual study such as the one done by the Centre for Bhutan Studies, authored by Tashi Choden and Lham Dorji (2005) acknowledge the positive impacts of spiritual social capital on individuals, communities and societies.

The role of religion in civil society and public welfare is gaining interest and informal support. In fact, most people see joining spiritual groups as the opportunities for volunteering and serving others to earn merit. The spiritual groups help to build stronger and more cohesive communities. Since the 1980s, the monastic institutions have been contributing to social policy through a series of initiatives on creating the public awareness about the ills of smoking. They had been spreading health, sanitation and environment messages to the public. Besides, the monastic institutions serve as a social sanctuary for the children of the poor, who get the opportunity to pursue monastic education.

At the local level, the spiritual groups do not limit their functions to organising spiritual activities, but extend to other activities having a positive contribution to development. For example, village-level community funds for spiritual activities are often spent to support other community-welfare schemes. From the standpoint of social capital, the spiritual groups have relatively greater potential to complement and supplement development, especially in areas of moral education, health, sanitation, psychological well-being and environment.

The GNH development approach is about attaining the balance between material and spiritual development. The monastic communities can make many positive contributions to the development and provision of social services to achieve this 'right balance'. During our consultative workshop for this study held on 26 June 2013 in Thimphu, Lam Gembo Dorji, the representative of the Central monastic body emphasised on the importance of looking at development from the dual perspectives-spiritual and secular. There was a consensus that while the primary responsibility of the monastic communities is to practice *Dharma* and promote spiritualism, they have as a secondary responsibility to look after the welfare and well-being of the society. The dual system of governance in Bhutan from 1626 until now reflects the inherent wisdom, functionality and benefit of coalescing politics and spiritualism. If spirituality is at the heart of social function, it rules out any major confrontation between the

governance, society, environment and any others that constitute a part of the holistic well-being because spiritualism supports social altruism and interdependence.

In summary, a global consensus is emerging about the importance of social capital in development. In Bhutan, the limited evidence we gathered supports the idea that social capital, when owned by the households along with other resources such as human and physical can complement and supplement the improvement of the household's material conditions and happiness. The most important step that we need to take is to incorporate within the policy circle the prospects of using social capital to achieve the GNH goals. In many respects, the research on social capital is in the infant stage; this implies that we need to do more quantitative as well as qualitative, community and project-based research on contextualising this very important concept, understanding its determinants, and discovering the mechanism by which we can harness the immense potential of social capital. Importantly, we should be mindful of the Constitution's provision on the need to preserve and promote the institution of extended family and community life for the health, wealth and happiness of our society.

We believe in sharing whatever we know about the concept 'social capital' if it were to lead to more studies on social capital and promoting its use in development. In this regard, we invite the readers to contribute to the ongoing research on social capital. Our study is just the tip of the iceberg; we have a long way to go to understand the concept and its applications. We believe that constructive debate is one way that can contribute to a genuine progress in research on social capital. We hope academicians, policy makers, legislators, development practitioners, students, researchers and in fact, the public will increasingly discourse on the subject.

The survey is one way by which we can generate information for research on social capital. To reiterate, our survey module (having been directly adapted from that of the World Bank) has somewhat failed to capture the informal relationships, traditional self-help practices, including the role of community events and other traditional methods of fostering social connections and community vitality. We did not have access to the GNH survey data; otherwise, we could have used the GNH data to complement our analysis. Whosoever undertake any such survey in the future, it is important that the surveys are designed to capture the traditional indicators of social capital stocks and make them available to the interested academicians, policy analysts, students and researchers.

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APPENDIX

Appendix 1: Principal component analysis for structural social capital index

```
Principal components/correlation              Number of obs   =       631
                                              Number of comp. =         7
                                              Trace           =         7
         Rotation: (unrotated = principal)    Rho             =    1.0000
```

Component	Eigenvalue	Difference	Proportion	Cumulative
Comp1	1.69799	.326426	0.2426	0.2426
Comp2	1.37157	.341968	0.1959	0.4385
Comp3	1.0296	.0483416	0.1471	0.5856
Comp4	.981257	.123692	0.1402	0.7258
Comp5	.857565	.182843	0.1225	0.8483
Comp6	.674722	.287424	0.0964	0.9447
Comp7	.387298	.	0.0553	1.0000

```
Principal components (eigenvectors)
```

Variable	Comp1	Comp2	Comp3	Comp4	Comp5	Comp6
cash	0.2218	0.1144	0.6456	-0.4357	0.5739	0.0016
community	0.2558	0.5860	-0.2290	0.0061	0.0498	-0.7320
decision	0.1725	0.1478	0.2638	0.8859	0.2804	0.1228
density	0.2222	0.5243	-0.4437	-0.1487	0.1921	0.6474
meeting	0.6254	-0.3065	-0.0871	-0.0389	-0.0610	0.0123
work	0.6196	-0.3145	-0.1042	0.0105	-0.1023	-0.0257
join	0.1765	0.3923	0.4958	-0.0390	-0.7338	0.1706

Variable	Comp7	Unexplained
cash	0.0414	0
community	-0.0168	0
decision	-0.0147	0
density	0.0268	0
meeting	-0.7085	0
work	0.7036	0
join	-0.0066	0

```
Scoring coefficients
    sum of squares(column-loading) = 1
```

Variable	Comp1	Comp2	Comp3	Comp4	Comp5	Comp6	Comp7
cash	0.2218	0.1144	0.6456	-0.4357	0.5739	0.0016	0.0414
community	0.2558	0.5860	-0.2290	0.0061	0.0498	-0.7320	-0.0168
decision	0.1725	0.1478	0.2638	0.8859	0.2804	0.1228	-0.0147
density	0.2222	0.5243	-0.4437	-0.1487	0.1921	0.6474	0.0268
meeting	0.6254	-0.3065	-0.0871	-0.0389	-0.0610	0.0123	-0.7085
work	0.6196	-0.3145	-0.1042	0.0105	-0.1023	-0.0257	0.7036
join	0.1765	0.3923	0.4958	-0.0390	-0.7338	0.1706	-0.0066

Appendix 2: Principal component analysis of asset index

```
Principal components/correlation          Number of obs    =      8968
                                          Number of comp.  =        19
                                          Trace            =        19
        Rotation: (unrotated = principal) Rho              =    1.0000
```

Component	Eigenvalue	Difference	Proportion	Cumulative
Comp1	4.90668	3.28489	0.2582	0.2582
Comp2	1.62179	.330176	0.0854	0.3436
Comp3	1.29162	.233604	0.0680	0.4116
Comp4	1.05801	.0318132	0.0557	0.4673
Comp5	1.0262	.0719293	0.0540	0.5213
Comp6	.95427	.084346	0.0502	0.5715
Comp7	.869924	.00635773	0.0458	0.6173
Comp8	.863566	.0745626	0.0455	0.6627
Comp9	.789003	.0335293	0.0415	0.7043
Comp10	.755474	.0326628	0.0398	0.7440
Comp11	.722811	.0229435	0.0380	0.7821
Comp12	.699868	.079639	0.0368	0.8189
Comp13	.620229	.0355185	0.0326	0.8515
Comp14	.58471	.0789939	0.0308	0.8823
Comp15	.505717	.0111067	0.0266	0.9089
Comp16	.49461	.031597	0.0260	0.9350
Comp17	.463013	.0578996	0.0244	0.9593
Comp18	.405113	.0377203	0.0213	0.9807
Comp19	.367393	.	0.0193	1.0000

```
Principal components (eigenvectors)
```

Variable	Comp1	Comp2	Comp3	Comp4	Comp5	Comp6	Comp7
sofa	0.3186	0.0244	-0.1292	0.0152	0.0605	-0.0907	0.0177
bukhari	0.0241	0.1279	0.6490	-0.1490	0.0234	0.3716	0.0419
heater	0.2831	0.0196	-0.1298	-0.2981	0.2079	-0.2665	0.1142
c_cooker	0.2400	0.4023	-0.0067	-0.0703	0.1432	0.1128	-0.0032
stove	0.2083	0.1314	0.1444	-0.0664	0.1328	0.3403	-0.3333
w_machine	0.2792	-0.3312	-0.0012	-0.0727	0.1013	-0.0184	0.0621
w_boiler	0.2829	0.4007	-0.0330	-0.0638	0.0483	0.0812	0.0400
m_oven	0.2481	-0.3618	0.0022	-0.1027	0.0901	0.0909	0.0079
fan	0.1546	0.0882	-0.3434	0.5915	-0.1889	0.1967	-0.2093
tv	0.3071	0.3277	-0.0498	-0.0061	-0.1003	0.0298	0.0475
vcr	0.2648	0.0693	0.0540	-0.0309	-0.3238	0.0411	0.0310
radio	0.0562	0.0052	0.5010	0.1497	-0.4280	-0.3213	0.2228
e_iron	0.3116	-0.1285	0.0061	-0.0515	0.0516	-0.2088	0.0284
g_machine	0.2422	-0.2781	0.1100	-0.0461	-0.0554	0.1054	-0.1552
s_machine	0.1118	-0.1920	0.3111	0.3858	0.2632	-0.0959	-0.5338
w_tool	0.0279	0.2362	0.1977	0.3886	0.5055	-0.4183	0.2122
watch	0.1868	0.0537	0.0247	0.1479	-0.4685	-0.2234	-0.0919
camera	0.2889	-0.2199	-0.0162	-0.0688	-0.0242	-0.1081	0.0381
bicycle	0.1353	-0.2112	0.0009	0.3938	0.0966	0.4405	0.6379

Variable	Comp8	Comp9	Comp10	Comp11	Comp12	Comp13	Comp14
sofa	-0.0227	0.0010	-0.1093	0.3418	-0.1811	-0.2710	0.3655
bukhari	0.1323	-0.1331	-0.1134	0.4899	0.0913	-0.1003	0.0770
heater	-0.1290	0.0515	-0.2266	-0.1571	-0.1864	-0.0797	0.2266
c_cooker	-0.2672	0.1019	0.0017	-0.1522	0.4584	0.0641	-0.2181
stove	0.3249	0.5052	0.0566	-0.2525	-0.4272	0.1807	0.0433
w_machine	0.0018	-0.0344	-0.0273	0.2183	0.1891	0.2042	0.2221
w_boiler	-0.2090	0.0559	-0.0673	-0.0504	0.2327	0.0021	-0.0434
m_oven	0.0123	0.0794	0.2829	-0.0681	0.3261	0.4005	0.3287
fan	-0.0828	0.1675	0.2222	0.3415	0.0388	-0.0559	0.0942
tv	-0.0053	-0.2939	0.0403	-0.0006	-0.2091	-0.0395	0.0840
vcr	0.0496	-0.5683	0.3229	-0.1691	-0.2558	0.2866	-0.0582
radio	-0.3839	0.3968	0.1937	-0.0861	-0.0926	0.0038	0.1296
e_iron	-0.0046	0.1051	-0.0750	0.1569	-0.2110	-0.1740	-0.2643
g_machine	0.1404	-0.0688	0.3113	-0.3223	0.2316	-0.7123	-0.0691
s_machine	-0.3528	-0.2723	-0.3114	-0.1470	-0.0592	0.0949	-0.0464
w_tool	0.4171	-0.0501	0.3018	-0.0089	0.0728	0.0287	0.0143
watch	0.5147	0.0349	-0.5166	-0.1375	0.3083	0.0812	0.0589
camera	0.0635	0.1222	0.0440	0.2999	-0.0314	0.1722	-0.6917
bicycle	-0.0281	-0.0061	-0.2884	-0.2563	-0.1142	-0.0268	-0.0737

Variable	Comp15	Comp16	Comp17	Comp18	Comp19	Unexplained
sofa	0.1440	0.0596	-0.6299	0.2247	0.1676	0
bukhari	-0.0935	0.1872	0.1961	0.0672	0.0128	0
heater	0.0912	0.4308	0.5285	0.1570	0.0298	0
c_cooker	-0.0207	-0.1161	-0.0948	0.5588	-0.2011	0
stove	0.0977	-0.1141	-0.0243	0.0309	0.0264	0
w_machine	0.3789	-0.6315	0.2713	-0.0117	-0.0079	0
w_boiler	0.0058	-0.0325	-0.0214	-0.6020	0.5195	0
m_oven	-0.3661	0.3281	-0.1933	-0.1379	-0.1286	0
fan	-0.0514	0.1496	0.3686	0.0810	0.0217	0
tv	0.0348	-0.0566	-0.0318	-0.3615	-0.7114	0
vcr	-0.0203	-0.0156	0.0411	0.2738	0.3567	0
radio	0.0949	-0.0258	-0.0190	-0.0029	-0.0466	0
e_iron	-0.7284	-0.3341	0.0842	0.0215	0.0302	0
g_machine	0.1269	0.0213	0.0457	-0.0424	0.0036	0
s_machine	0.0208	0.0602	-0.0562	-0.0487	-0.0143	0
w_tool	0.0318	0.0123	0.0285	-0.0028	0.0431	0
watch	-0.0386	0.0466	-0.0068	0.0344	-0.0054	0
camera	0.3341	0.3110	-0.1021	-0.0846	-0.0649	0
bicycle	-0.0029	0.0257	-0.0419	0.0209	0.0071	0

Test if luxury index and basic index have the same effect

```
( 1)  luxury_index - basic_index = 0

    F(  1,    622) =      0.41
         Prob > F =      0.5238
```

The result shows that luxury index and basic index have the same effect.

Appendix 3: Test for multicollinearity with aggregated social capital: Check for vif>10 or so, or tolerance <.1 or so

Variable	VIF	1/VIF
asset_index	1.63	0.615084
educ_head	1.45	0.690454
agri	1.39	0.716872
econ_mem	1.09	0.913363
district	1.08	0.926784
hsize	1.04	0.958512
sc_index	1.03	0.971212
Mean VIF	1.25	

Test for multicollinearity with disaggregated social capital: Check for vif>10 or so, or tolerance <.1 or so

Variable	VIF	1/VIF
asset_index	1.67	0.598034
meeting	1.63	0.612918
work	1.61	0.621044
educ_head	1.48	0.674095
agri	1.40	0.713647
community	1.19	0.840245
district	1.13	0.881131
density	1.12	0.890516
econ_mem	1.11	0.903993
cash	1.08	0.926543
join	1.07	0.934448
hsize	1.05	0.948834
decision	1.03	0.973792
Mean VIF	1.28	

Appendix 4: Groups/associations as recorded in the survey forms (BLSS, 2012, SCM Module)

Name of group/association	Name of group/association
Agriculture group	Dakchong tshogpa
Amla group	Dartsi khorlo tshogpa
Amtshu tshokpa	Daycare group
Amtshui gonor gongphel chithun tshogpa	Dekha nepa tshokpa
Archery group	Dharma practice association
Bangchung tshogpa	Dozhom tshogpa
BDBL group	Drinking water association
Behavioral change communication	Drakteng om chidhen tshogpa
Bey Langdra committee	Drokin phendhy tshogpa
Bhutan India friendship association	Drongdey nagtsel tshogpa
Bhutan kidney association	Druk warriors(dawa tendrel)
Bhutanese architects	Dujom tersarling tshogpa
BM group	Dungmenpa tshogpa
Bumpaling tshogpa	Dzongda thrimpoen tshogpa
Bumtab tshogpa	Education and training group
Cab driver association	Education service welfare scheme
Caller group	El shaddai
Chapcha women's association group	ESWS member
charity group	Facebook group
Charo volunteers	Farm road group
Cheese production tshogpa	Farmer group
Chess group	Friend association
Chethuen tshogpa	Funeral support group
Chirub jayi thoenkhung tshogpa	GAB
Choki dorji zhechu tshogpa	Ganga group
Chungdu kuenphen tshogpa	Gewog group
Cleaning group	Gonor namtrel tshogpa
Community forest group	Guide association of bhutan
Construction association	Hazelnut group

Groups/associations

Name of group/association	Name of group/association
Cordycep group	Health club
Crop insurance group	Hindu bajan mandaley
Dairy product group	Hindu dhar sambodaya
Hotel association of Bhutan	Puengu gongphel tshogpa
Irrigation canal group	Radhipa tshogpa
Jersey group	Rangjung foundation
JICA association group	Reading group
Jigten wangchu tshogpa	Renew group
Kara group	Risup group
Ken and zimchung tshogpa	Rinchen threngwa tshogpa
Kewa chithuen tshogpa	Riwsangchoe tshogpa
Kewa tshogpa	Rongthong tshogpa
Khajap tshogpa	Sa tshogpa
Kidu goup	Sama jevan
Kirat samaj sudar	Samazi community forest
Kuenchen drukgyel naktshel	Sebgor micro-hydro committee
Kuenphen drongyul tshogpa	Seedling group
Kuenphen tshogpa	Self-help group
Kuensel group	Sengor norlha chithuen tshogpa
Labour tshogpa	Serzong amtshui jayi tshogpa
Layguel detshen tshogpa	Shaba phuensum om tshogpa
Lhaling community forest	Shamchen tshether tshogpa
Library group	Shamu tshogpa
Lobdra zinchong tshogpa	Shari chithuen tshogpa
Local conservation support group	Shari lothuen om tshogpa
Lotar bumdhey tshogpa	Sherchu meto tshogpa
Lothuen om tshokpa	Shingkhar lauri group
Maize conflakes group	Sichur and tengma tshogpa
Manav dharma sa-tshang	Silambi tshogpa

Groups/associations

Name of group/association	Name of group/association
Mandir community	Singdue singmen tshogpa
Mangthang metser phendey tshogpa	Social service association
Midey damling tshogpa	Sonam babu detshen
Midey group	Sonam yangphel tshogpa
Midey thungchu tshogpa	Songdue naktshel tshogpa
Milk group	Spiritual association
Miser ngyamchung tshogpa	Staff welfare
Miser sonam tshogpa	Student support group
Monpa soelwai yoezer tshogpa (bamboo)	Tang kidu tshogpa
Musical group	Tarayana group
Nagor development tshogpa	Tashi tagay group
Namdrel sonam tshogpa	Tashi yangtse women association
Natural vegetable association	Tensum magmi phendey tshogpa
Nature club	Tersaling goenpa tshogpa
Ngarsel lamluk tshogpa	Themnangbi tsogpa
Ngatshang phendey tshogpa	Therpai lamdren tshogpa
Ninda group	Thing-nge(pepper) tshogpa
Nolha detshen	Thinley samphel tshogpa
Norbui bangzey detshen	Threma tshogpa
Norlha chithuen tshogpa	Thrisibi kuchoe tshogpa
Occupational group	Tsamung gongphel tshogpa
Onion production group	Tse-nying tshogpa
Organic vegetable group	Tsha tsha tsogpa
Orong tshogpa	Tshetse tshongdrel tshogpa
Paey group	Tshokey dorji foundation
Parents teacher association	Tsirang women association
Petshel tshogpa	Ugyen chithuen tshogpa
Phab tshogpa	Ugyen group
Phangkhar dubchen tshogpa	Vegetable association

Groups/associations

Name of group/association
Pipla management group
Wamling kep group
Water association group
Welfare association
Wood association
Yarkay drongsep tshogpa
Yingo gonphel tsohgpa
Young Buddhist association
Yumkha tshogpa
Zhemgang moenlam tshogpa
Zhenchung tshogpa
Zhingchen tshogpa
Volleyball and football group

Appendix 5: Groups/associations in Bhutan (recorded)

Sl. #	Groups/associations	No.	Source
1	Registered cooperatives & farm groups	318	Major achievement of the RNR sector 2012-2013, MoAF
2	Total informal groups in livestock, agriculture and forestry	740	Major achievement of the RNR sector 2012-2013, MoAF
3	Number of registered CSOs	30	Civil Society Authority , MoHCA, 2013

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Appendix 6: Farmers' groups and cooperatives registered under the Cooperative Act of Bhutan, 2009 with DAMC, MoAF

	Name of group/association	Dzongkhag	Year	Member	Purpose/ activities
1	Chokhor Gonor Gongphel Detshen	Bumthang	2010	50	Rearing and supply of brown Swiss cross bull
2	Kuenphen Rangzhin Tsesey Detshen	Bumthang	2009	6	Production and marketing of organic vegetables
3	Ugyentse Gonor Gongphel Detshen	Bumthang		14	Selling of butter and cheese
4	Dhur Kewa Gongphel Detshen	Bumthang		22	Potato production and marketing
5	Sonam Chithuen Rangzhin Detshen	Bumthang		15	Organic buckwheat production
6	Semthun Rangzhin Tsesey Detshen	Bumthang		4	Organic vegetable production
7	Phuntsho Rabten Kewa Detshen	Bumthang	2011	27	Potato based products
8	Bee Keepers' Cooperative	Bumthang	2009	17	Produces natural honey
9	Lobneykha Chithuen Kewa Detshen	Chukkha	2010	15	Potato Cultivation and Marketing
10	Darla Gonor Samphel Dhendrup Detshen	Chukhha	2010	17	Diary production
11	Tabjee Jashochong Thundrel Tshogpa	Chukhha		12	Poultry farming and marketing
12	Chapcha Amtsho Detshen	Chukhha		10	Potato chips processing and marketing
13	Sarphu Broom Grass Management and Marketing	Chukhha	2010	29	Production and marketing of quality broom
14	Sampheling Meday Gonor Gongphel Detshen	Chukhha	2009	30	Production and marketing of fresh milk
15	Daga Shingdrey Detshen	Dagana	2005	103	Marketing oranges, pickling chillies, etc
16	Chundu Detshen	Haa	2003	23	Fresh milk, butter, cheese and ginger supply
17	Balamna Gonor Tshongdrel Detshen	Haa		20	Production and marketing of livestock products
18	Haa Kila Farmers Group	Haa	2012	7	Zero Energy Cold store for off season apple
19	Eusu Meri Phuensum Tshongdrel Detshen	Haa	2012	47	Milk production and marketing
20	Dori-Noryang Layjay Detshen	Haa	2011	20	RNR products marketing
21	Mangkong Community Forest Group	Lhuentse	2010	20	Marketing of timer and NWFPs
22	Dungkhar Norlha Detshen	Lhuentse	2009	17	Production and marketing of dairy products

#	Name	Dzongkhag	Year	No.	Activity
23	Thuenpay Kuenphen Markhu Detshen	Lhuentse	2009	6	Production and Marketing of Mustard
24	Chaskhar Gonor Gongphel Nyamley Tshogdey	Mongar	2006	24	Increase of livestock production
25	Lemon Grass Oil Primary Cooperative	Mongar	2007	45	Market lemon grass oil
26	Wangling Meser Sonam Detshen	Mongar	2011	14	Production and Marketing of Vegetable
27	Phosorong Tshoesay Lothuen Detshen	Mongar	2011	13	Vegetable production and marketing
28	Drepong Phuengu Gongphel Detshen	Mongar		9	Vegetable production and marketing
29	Jangdung Gayza Doejung Detshen	Mongar	2011	22	Cultivate maize and preserved in SILO
30	Themnangbi Om Tshongdrel Gotsu Nyamley	Mongar	2006	19	Marketing of fresh milk
31	Jangcholing Tshoesey Gathen Namrub Detshen	Mongar	2010	10	Production and Marketing of vegetables
32	Phangtoe Gonor Nyamrub Tshongdrel Detshen	Mongar	2010	5	Processing and marketing of Chess and butter
33	Sershong Amsu Gonor Gongphel Chethuen Detshen	Mongar	2010	14	Marketing of cheese and butter
34	Zalaphangma Sonam Gongphel Detshen	Mongar	2010	6	Production and marketing of chips and corn flakes
35	Zhiten Sonam Nyamdrup Detshen	Mongar	2004	10	Production and marketing of vegetables and dairy
36	Ngatshang Phuensum Ja Sochong Detshen	Mongar	2010	11	Production and marketing of eggs
37	Ngatshang Gonor Phuensum Chethuen Detshen	Mongar	2012	25	Production and marketing of cheese and butter
38	Pelzhup Thuenpa Phuenzhi Detshen	Mongar	2012	32	Production and Marketing of dairy products
39	Lhakhang Tshesey Namrub Detshen	Mongar	2012	7	Production and marketing of vegetables
40	Redaza Gonor Chethuen Detshen	Mongar	2011	10	Production and marketing of vegetables
41	Dongtoe Sonam Chethuen Detshen	Mongar	2007	9	Production and marketing of vegetables
42	Karma Tsholing Tshesey Tshongdrel Detshen	Mongar	2007	8	Production and marketing of vegetables
43	Chali Jue Tshesey Thenkey Detshen	Mongar	2012	10	Production and marketing of vegetables
44	Jambay Amtshu Tshesey Detshen	Mongar	2012	7	Production and marketing of vegetables
45	Namkhar Sanam Detshen	Paro		6	Seasonal agriculture crops
46	Thuenpa Phuenshi Kewa Detshen	Paro	2010	23	Potato cultivation and marketing
47	Shari Lhothuen Omgi Detshen	Paro	2004	49	Marketing of fresh milk
48	Nganglam Pipla Zinchong Detshen	Pemagatshel	2008	43	Management and marketing of pipla

#	Name	Dzongkhag	Year	No.	Activity
49	Bartseri Gonor Chithuen Detshen	Pemagatshel	2007	15	To enhance income generation
50	Dampola Gongphel Detshen	Punakha	2002	15	To strengthen the collective self-help capacity
51	Druk Growers Cooperative	Punakha		16	Organic farming
52	Beytekha Tshesay Detshen	Punakha		14	Organic agriculture and horticulture
53	Pateri Sonam Phuensum Detshen	Punakha		22	Production and marketing of passion fruit and other
54	Lobesa Sonam Nyamley Tshogdey	Punakha		74	Rice commercialization with mustard and vegetable
55	Limbukha Amsue Phenden Detshen	Punakha	2012	20	Production and marketing of vegetables
56	Nabchey Phunsum Gongphel Detshen	Punakha	2012	22	Production and marketing of vegetables
57	Gyemkha Sonam Tshongdrel Detshen	Punakha	2012	18	Production and marketing of vegetables
58	Rechanglo Vegetable Producer and Marketing Group	Sjongkhar	2008	31	To market their excess vegetables
59	Wooling Samtencholing Mardatse Thuendrel	Sjongkhar	2010	37	Production and marketing of butter and cheese
60	Orong Mardatse Thuendrel Detshen	Sjongkhar	2007	33	Increase milk production and sustain marketing
61	Dewathang Milk Marketing Primary Cooperative	Sjongkhar	2003	126	Diary production
62	Phuntshothang Druna Gongphel Detshen	Sjongkhar		49	Increase the production of paddy
63	Raling Yul Chum Gongphel Detshen	Sjongkhar		48	Increase rice production and marketing
64	Pagli Community Forest Management Group	Samtse	2010	24	To boost bamboo clumps/shoots and brooms
65	Gakey Gonor Gongphel Detshen	Samtse	2011	24	Semi commercial layer farm
66	Tenzin Nordup Gonor Detshen	Samtse	2010	27	Dairy development and products marketing
67	Chilu Gonor Gongphel Detshen	Samtse	2013	13	Dairy development and products
68	Yoeseltse Jarsey Detshen	Samtse	2010	16	Fresh milk supply
69	Zhigten Gongphel Detshen	Samtse	2008	12	Sale of eggs and pullets
70	Sangaygang Milk Supply Detshen	Samtse	2011	17	Fresh milk marketing
71	Belbotey Milk Supply Detshen	Samtse	2011	24	Fresh milk marketing
72	Peljorling Milk Supply Detshen	Samtse	2011	15	Milk production and marketing
73	Yosel Detshen	Samtse	2011	11	Production and sale of piper species
74	Chholing Yargay Detshen	Samtse	2010	25	Livestock products

75	Samtse Poultry Cooperative	Samtse	2011	24	Market poultry products
76	Jangcholing Tshoesey Dumra Detshen	Samtse	2012	3	Production and Marketing of vegetables
77	Ugyentse Rice Production Group	Samtse	2012	14	Rice commercialization
78	Chuzagang Sonam Nyamley Tshogdey	Sarpang	2010	231	Rice cooperative
79	Gelephu Om Detshen	Sarpang	2007	72	Diary commercial marketing activities
80	Phuentsum Nya Sochong Gongphel Nyamley	Sarpang	2009	29	Production of fish
81	Thimphu Om Thuengdrel Nyamley Thsogdey	Thimphu	2010	137	Production and marketing of milk
82	Ganey Shamu Detshen	Thimphu	2010	88	Collection and marketing of mushroom
83	Happy Green Cooperative (HGC)	Thimphu	2009	20	High quality employment
84	Druk Orchid Growers Group	Thimphu		10	Promoting a nursery business as pot plant and orchid
85	Ritshangdung Sonam Gongphel Detshen	Trashigang	2011	9	Production and marketing of vegetables
86	Pam Meday Gonor Gongphel Nyamley Tshogdey	Trashigang	2011	150	Production and marketing of milk
87	Ashamdello Tsheoesay Gongphel Detshen	Trashigang	1994	8	production and marketing of vegetables
88	Mertsham Sonam Natsho Gongphel Detshen	Trashigang	1994	13	Production and marketing of potatoes
89	Thargom Tshoesey Detshen	Trashigang	2012	8	Production and marketing of vegetables
90	Domkhar Gonor Gongphel Detshen	Trashigang	2010	13	Marketing of dairy products
91	Dangling Dungkar Choeling Gonor Detshen	Trashigang	2009	20	Dairy farming
92	Jeri Lemi Gonor Gongphel Detshen	Trashigang	2008	22	Marketing of dairy products
93	Dawzor Tsesay Tshongdrel Detshen	Trashigang	2008	5	Potato and Tengma production and marketing
94	Sonam Zhenphen Detshen	Trashigang	2002	5	Marketing of Tengma and potato chips
95	Yul Sum Gongphel Chethuen Detshen	Trashigang	2009	31	Marketing of dairy products
96	Tashi Tsheringma Medey Gonor Detshen	Trashigang	2009	46	Marketing of dairy products
97	Bikhar Gonor Gongphel Detshen	Trashigang	2007	21	Processing of dairy products
98	Sonam Gongphel Thritshay Detshen	Trashigang	2008	15	Processing and marketing of Tengma and Kharang
99	Bikher Domkhar Gonor Yargay Meser Thuendrel	Trashigang	2010	23	Marketing of dairy products
100	Phuntshog Thingee Detshen	Trashiyangtse	2010	13	Production and marketing of zanthoxylum (NWFP)

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101	Tangsibji Dolkar Mushroom Marketing Group	Trongsa	2010	8	production and marketing of mushroom
102	Samdrupcholing Zang ja Tshongley Detshen	Trongsa		27	Production and marketing of Green Tea
103	Taktse Tesay Tshongley Detshen	Trongsa		35	Production and marketing of fresh vegetables
104	Tsesey Chethuen Detshen	Trongsa		16	Production and marketing of fresh vegetables
105	Nubi Menchong Nyamley Tshogdey	Trongsa		138	Production and marketing of MAP products
106	Lothuen Om Detshen	Tsirang	2008	51	Diary production
107	Gonor Gongphel Detshen	Tsirang	2010	20	Boiler Farming
108	Patshaling Tsesay Tshongdrel Detshen	Tsirang	2010	31	Vegetable production
109	Tsirang Poultry Cooperative	Tsirang		15	Production and marketing of poultry products
110	Nakha Samdrup Tshongley Detshen	Tsirang Wangduephodrang	2011	15	Production and Marketing of seed potato and livestock products
111	Berti Community Group	Zhemgang	2008	22	Vegetable and other production
112	Trong-Dangkhar Gonor Chethuin Detshen	Zhemgang		52	sale of milk and its products
113	Bjoka Tsharzo Gongphel Nyamley Tshogdey	Zhemgang	2012	126	Production and marketing of Cane & Bamboo

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Appendix 7: List of Public Benefit Organization and Mutual Benefit Organization registered with CSOA

Sl.#	PBOS (Public Benefit Organizations)
1	BCMD (Bhutan Centre for Media & Democracy)
2	The Loden Foundation
3	RENEW (Respect, Educate, Nurture & Empower Women)
4	BAOWE (Bhutan Association of Women Entrepreneurs)
5	Bhutan Youth Development Fund
6	Royal Society for Protection of Nature
7	Draktsho Vocational Centre for Special Children & Youth
8	Tarayana Foundation
9	The Disabled Persons Association of Bhutan
10	LHAK-SAM
11	Royal Society for Senior Citizens
12	Royal Textile Academy
13	Phuentsholing Sports Association
14	Menjong Foundation
15	Ability Bhutan Society
16	Chithuen Phendey Association
17	Lhomon Society
18	SAARC Business Association for Home Based Workers (SABAH)
19	Music of Bhutan Research Center
20	The Rural Education Foundation
21	Construction Association of Bhutan
22	Bhutan Centre for Nature Conservation
23	Bhutan Kidney Foundation
24	GNH Centre Bhutan
25	Youth Media Centre

Sl. #	MBOs (Mutual Benefit Organizations)
1	Guide Association of Bhutan
2	Association of Bhutanese Tour Operators
3	Association of Bhutanese Industries
4	Handicrafts Association of Bhutan

Source: Civil Society Organization Authority, Thimphu Bhutan
Website: http://www.csoa.org.bt/?mode=Page&LinkID=21, accessed on 23rd June.

Appendix 8: Group distribution across expenditure quintiles

Group/Association	1 Poorest	2	3	4	5 Richest
Agriculture Association/Group	11.73	15.27	16.36	36.03	20.60
Community Forest Group	11.25	19.03	25.03	23.12	21.57
Credit/Saving Group	6.82	30.08	0.00	55.14	7.95
Dairy Production Group	5.36	20.08	46.90	18.62	9.04
Education Service Group	0.00	30.36	20.42	12.71	36.51
Farmer Group-Other	21.30	20.77	27.98	22.17	7.77
Farmer Group-Production	13.01	11.96	30.62	31.07	13.35
Games, Sports and Entertainment	23.81	0.00	0.00	28.53	47.65
Healthcare and Cleaning	25.24	39.58	28.35	0.00	6.83
Livestock Association/Group	6.36	22.40	23.65	33.10	14.48
Local Development Group	0.00	40.60	29.80	29.61	0.00
Occupation Group	10.00	0.00	27.59	3.22	59.19
Other Group	10.29	32.31	19.12	13.41	24.88
Spiritual Association/Group	17.81	14.12	18.72	18.70	30.66
Village/Community Group	5.87	26.92	29.90	4.40	32.90
Water User Association	0.00	32.24	12.81	8.16	46.79
Welfare & Charity Group	16.78	15.26	16.95	11.66	39.35
Women Association	21.21	28.54	8.43	20.79	21.03
Total	12.78	18.63	23.52	21.51	23.55

Appendix 9: Self-rated happiness by Dzongkhags

Dzongkhag	Very happy	Moderately happy	Neither Happy nor unhappy	Moderately unhappy	Very unhappy
Haa	90.32	8.19	1.15	0.34	0
Gasa	84.08	2.93	10.05	2.93	0
Bumthang	71.81	20.27	6.61	1.31	0
Wangdue Phodrang	52.23	34.58	10.46	1.61	1.13
Pema Gatshel	42.26	52.07	5.24	0.42	0
Trashi Yangtse	39.78	39.88	16.03	3.86	0.44
Paro	37.05	51.18	9.68	1.81	0.27
Samtse	36.81	56.33	4.63	1.23	0.99
Chhukha	35.67	47.33	13.39	3.04	0.57
Punakha	34.59	21.66	31.27	6.32	6.16
Monggar	32.37	52.57	11.06	2.76	1.24
Thimphu	31.12	60.09	7.89	0.82	0.09
Trongsa	29.18	39.07	19.38	7.7	4.68
Samdrup Jongkhar	23.6	50.15	23	2.63	0.62
Sarpang	23.55	67.9	7.86	0.23	0.47
Zhemgang	22.13	64.09	12.1	1.27	0.41
Trashigang	18.15	50.49	23.74	4.83	2.79
Dagana	15.09	75.36	6.69	2.86	0
Tsirang	14.58	73.37	9.91	1.66	0.48
Lhuentse	12.77	69.2	8.45	7.75	1.82
Total	**33.2**	**51.59**	**11.84**	**2.38**	**0.99**

Appendix 10: Important things one needs to attain happiness for oneself and family and social capital components (highlighted)

Rank	Categories	Urban	Rural	Total
1	Good health	36.88	36.45	36.59
2	Income	34.78	35.06	34.97
3	Family relationship	17.39	17.99	17.79
4	Network, relationship & social support	17.32	14.99	15.77
5	Land	10.45	8.08	8.88
6	Good housing	9.23	7.99	8.41
7	Food & clothing	3.18	10.10	7.77
8	Education	8.09	7.38	7.62
9	Employment	7.01	3.84	4.91
10	Wealth	3.97	5.38	4.90
11	Trust	4.09	4.82	4.57
12	Roads	0.70	5.47	3.87
13	Peace & security	4.47	2.88	3.42
14	Water supply	1.58	4.16	3.29
15	Spiritualism	1.80	3.47	2.91
16	Others	2.33	3.13	2.86
17	Sincerity, understanding & frankness	2.91	2.75	2.81
18	Love & kindness	3.16	2.49	2.72
19	Automobiles	2.79	2.23	2.42
20	Electricity	0.65	3.23	2.36
21	Co-operation	1.85	2.31	2.15
22	Independent & sufficiency	2.22	1.67	1.85
23	Psychological wellbeing	2.38	1.18	1.58
24	Good marriage	1.73	1.42	1.53
25	Happiness	2.70	0.74	1.40
26	Credit	1.84	1.16	1.39
27	Agriculture	0.27	1.66	1.19
28	Hospitals/medical facilities	0.41	1.55	1.17
29	Household items	0.38	1.40	1.06
30	Public transport	0.61	1.27	1.05
31	TV	0.16	1.49	1.04
32	Solidarity	1.34	0.84	1.01
33	Increase salary	2.04	0.38	0.94
34	No suffering	1.36	0.50	0.78
35	Temperament	0.98	0.51	0.67
36	No need	0.97	0.48	0.64
37	Good neighbors	0.48	0.72	0.64
38	Public infrastructure	0.16	0.74	0.55
39	Good governance	0.60	0.48	0.52
40	Environment	0.67	0.40	0.49

41	Longevity	0.34	0.45	0.41
42	Livestock	0.05	0.56	0.39
43	Irrigational channel	0.03	0.54	0.37
44	Welfare & charity	0.26	0.33	0.31
45	Self contentment	0.40	0.21	0.27
46	Access to information	0.21	0.29	0.26
47	Equity & justice	0.21	0.24	0.23
48	Games, sports, leisure & entertainment	0.18	0.18	0.18
49	Property & assets	0.09	0.19	0.16
50	Time use	0.21	0.09	0.13
51	Manpower	0.08	0.15	0.13
52	Freedom	0.15	0.06	0.09
53	Authority & power	0.04	0.06	0.06
54	Lhakhang	0.02	0.06	0.04
	Total households	**38,875**	**75,202**	**114,077**

Appendix 11: Social Capital Module (SCM), BLSS 2012 Questionnaries

BLOCK 12- SOCIAL CAPITAL

SC1. I would like to start asking you about the groups or associations (tshogpa) to which you or any member of your household belongs. These can be formal organized groups or informal groups of people who regularly get together to discuss collective action. As I read the following list of groups, please tell me if anyone in this household belongs, and tell me the most active member in decision making.

Type of association/group	Name of association/group	Most active member [use Sl. No. from the Household roster]	How actively does this person participate in group's decision-making 1 -Leader 2 -Very active 3 - Somewhat active 4 - Does not participate
1. Farmer group			
2. Other production group			
3. Spritual association (eg: chothuen Tshogpa)			
4. Trade or business organization			
5. Credit/saving group			
6. Education group			
7. Occupational group			
8. Village/gewog group			
9. Charity group			
10. Sport or entertaintment group			
11. Other group (specify)_____			
12. None (>> SC17)			

SC2. Compared to five years ago, do members of your household participate in more or fewer groups?

1. More
2. Same
3. Fewer

SC3. Of all the groups to which members of your household belong, name the two most important groups

Group A _____

Group B _____

SC4. How many times in the past 12 months did anyone in this household participate in this/these group's activities?

Group A

Group B

SC5. How does one become a member of this/these groups? [write the response number in the respective boxes]

1. Born into the group   Group A
2. Required to join
3. Invited   Group B
4. Voluntary choice
5. Other (specify)_____

SC6. How much money [Nu.] did your household contribute to this/these group in the past 12 months?

Group A

Group B

SC7. What other goods/kinds did your household contribute to this/these group in the past 12 months [estimated value in Nu.]

Group A

Group B

SC8. How many days of work did your household give to this group in the past 12 months?

Group A   days

Group B   days

SC9. What is the main benefit from joining this group?

1. Improves my hhold's current   Group A
   livelihood or access to
   services
2. Important in time of need   Group B
   or emergency
3. Important for future
4. Benefits the community
5. Enjoyment/recreation
6. Spiritual
7. Improve social status
8. Improve self-esteem
9. Other (specify)
   _____

SC10. In total, how many days of work did your household give to this/these group in the past 12 months?

            days

SC11. Does the group help your household get access to any of the following services?

	Group A	Group B
Education services		
Health services		
Water supply		
Credit and savings		
Agriculture input		
Allow spiritual activities		
Other (specify)		

1. Yes
2. No

SC12. In the past five years, has membership in the group declined, remained same or increased?

	Group A	Group B
Remained same		
Declined		
Increased		

1. Yes
2. No

SC13. When there is a decision to be made in the group, how does this usually come about?

....Decision imposed by the government

..... Decision imposed by donors

Local leaders decides and informs members

..........The group members discuss & decide

................Others (specify)

1. Yes
2. No

SC14. Does this group work or interact with other groups with similar goals outside the village/neighbourhood?

1. No   Group A
2. Yes, ocassionally
3. Yes, frequently   Group B

SC15 Who has originally founded the group?

	Group A	Group B
Central Government		
Local Government		
Donor		
Local Leaders		
Community Members		

1. Yes
2. No

SC16. What is the most important source of funding of this group?

	Group A	Group B
1. From the membership fees		
2. Other sources within the community		
3. Sources outside the community		

1. Yes
2. No

SC17. About how many close friends do you have these days? These are people you feel at ease with, can talk about private matters or call on for help.

            persons

SC18. If you suddenly need a small amount of money [RURAL: Enough to pay for expenses for your household for a week; URBAN: Equal to about one week wages], how many people beyond your household would be willing to lend you money?

1. No one (>>20)
2. One or two people
3. Three or four people
4. Five or more people

SC19. Of those people, how many do you think are currently able to provide this money?

SC20. If you suddenly had to go away for a day or two, could you count on your neighbours to take care of your children?

1. Definitely
2. Probably
3. Probably not
4. Definitely not

SC21. If you suddenly faced a long-term emergency such as death of member in your household, how many people could you turn for help and support?

1. No one
2. One or two people
3. Three or four people
4. Five or more people

SC22. In the past 12 months, how many people with a personal problem have turned to you for assistance?

            persons

SC23. In general, do you agree or disagree with the following statements?

Most people who live in this neighbourhood can be trusted

In this nehihbourhood, one has to be alert as someone will take advantage of you

Most people in this neighbourhood are willing to help if you need it

In this neighbourhood, people generally do not trust each other in matter of lending or borrowing money

1. Agree strongly
2. Agree somewhat
3. Neither agree nor disagree
4. Disagree somewhat
5. Disagree strongly

SC24. Do you think that over the last five years, the level of trust in the neighbourhood became better, worse or stayed about the same?

1. Better
2. Stayed about the same
3. Worse

SC25. How well do people in your neighbourhood help each other these days?

1. Always helping
2. Helping most of the time
3. Helping sometimes
4. Rarely helping
5. Never helping

SC26. If a community activity does not directly benefit you, but has benefits for many others in the neighbourhood, would you contribute your time or money to this activity?

1. Yes
2. No

Time

Money

SC27. In the past 12 months, have you worked with others in your neighbourhood to do something for the benefit of the community?

1. Yes
2. No (>>29)

SC28. What were the three main such activities in the past 12 months? Was participation in these voluntary or required?

1. _____

1. Voluntary
2. Required   2. _____

3. _____

SC29. Altogether, how many days in the past 12 months did you or anyone from your household participate in the community activities?

            days

SC30.	How likely is it that people who do not participate in community activities will be criticized or sanctioned?
	1. Very likely
	2. Somewhat likely
	3. Neither likely nor unlikely
	4. Somewhat unlikely
	5. Very unlikely

SC31.	Suppose something unfortunate happened to someone in the neighbourhood, how likely is it that people in the community would get together to help them?
	1. Very likely
	2. Somewhat likely
	3. Neither likely nor unlikely
	4. Somewhat unlikely
	5. Very unlikely

SC32.	How strong is the feeling of togetherness or closeness in your neighbourhood?
	1. Very distant
	2. Somewhat distant
	3. Neither distant nor close
	4. Somewhat close
	5. Very close

SC33.	I am now going to ask a few questions about your every-day interaction.
	1. 1- In the last month, how many times have you met with the people in a public place either to talk or have food or drinks?
	2. In the last month, how many times have people visited you in your home?
	3. In the last month, how many times have you visited people in their homes

SC34.	Name any two main local deities [lha, lu, tsan,tshomen, dralha, etc] your community worship and specify their sex?
	Name _____ Sex ☐
	Name _____ Sex ☐

SC35.	In general, how happy you consider yourself to be?
	1. Very happy
	2. Moderately happy
	3. Neither happy nor unhappy
	4. Moderately unhappy
	5. Very unhappy

SC36.	In general, what are the five most important things you and your household would need to make your life happy [respond in order of importance; Happy life here means both emotional and physical well being or ga-kid]?
	1. _____
	2. _____
	3. _____
	4. _____
	5. _____

SC37.	Who is the main respondent of this questionnaire? [Enter the Sl. No. from the Household Roster]

SC38.	Do you believe that your household is poor?
	1. No
	2. Neither poor nor non-poor
	3. Poor
	4. Very poor
	5. Don't know

This is the end of the interview.

Remember to include on the front cover the outcome of the interview. Thank your respondents for their cooperation and express how important the inputs are for the policy making, and leave the household.

Give explanation of any unusual situation:

_____

_____

_____

_____

_____