

## Social Capital cultivates “Fruits of Happiness” in Eastern Bhutan

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### ABSTRACT

*Bhutan is an agrarian economy where agriculture sector provides employment to about 58% of the total employed persons. However, farmers were found to be the least GNH happy from the result of the 2015 GNH Survey conducted by the Centre for Bhutan Studies and the Gross National Commission with assistance from Japan International Cooperation Agency (JICA). In order to improve this sector, the Royal Government of Bhutan (RGoB) in collaboration with JICA implemented a five-year horticulture project (2010-2015) called Horticulture Research and Development Project (HRDP) covering six eastern dzongkhags. Based on the secondary data of HRDP-GNH Survey 2016, this paper aimed at studying the impacts of the project on the three dimensions of social capital – bonding, bridging, and linking social capital at both micro and macro level linkages. Quantitative data indicated that HRDP has made a significant impact on social networks, norms of reciprocity, social trust and identity, and numerous forms of social contribution. In effect, these results can play a vital role in the project’s long term success since the project is in its early life-cycle stage. Based on the results of this study, it is recommended that future agriculture projects apply the social capital oriented approach of HRDP to enhance farmers’ happiness in the country.*

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**Keywords:** GNH, Social capital (Bonding, Bridging and Linking)

### 1. Introduction

JICA in collaboration with the Ministry of Agriculture and Forests started the horticulture research and development project (HRDP) in 2010 with the main aim of making horticulture more popular as a source of income in the six eastern dzongkhags (RNRRDC 2014). More than 40 varieties of fruits and vegetables were cultivated by more than 750 farmers across more than 2,000 acres of land through careful hands-on training, on the basis of mutual understanding and trust. The project ended in 2015. It is considered as one of the most successful projects of JICA in Bhutan.

The technical evaluation report as well as a GNH based evaluation found significant positive impacts of the project. Despite the project being in the early life-cycle stage, results showed a significant impact on living standard, mental health, social capital, and emotions from the standpoint of people’s happiness (Phuntsho 2017). This paper is an attempt to further discuss how the different dimensions of social capital were impacted and how they contributed to the success of the project towards the ultimate aim of enhancing farmers’ happiness. It goes beyond the scope of the former report by delving into social capital indicators which are not part of the GNH index<sup>aa</sup>.

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Social capital is understood in different ways. Putnam (1995, p. 67) has defined it as ‘features of social organization such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit’. Lin (2001), for instance, has described social capital as ‘investment in social relations with expected returns in the marketplace’. In more general terms, social capital is defined by the OECD as ‘networks together with shared norms, values and understandings that facilitate co-operation within or among groups’ (OECD n.d.). Social network relations are ‘capital’ in the sense that ‘they provide access to a variety of goods and services, such as information, the pleasure of social interaction, or social exchange opportunities’ (Whitham 2012). Further debate exists over whether social capital is an individual or solely a community concept or a function of both. To this, Megyesi, Kelemen and Schermer (2010) considered social capital as ‘the property of the individuals, but only by virtue of their membership in a group’. On the other hand, Hawkins and Maurer (2010) contend that it is in the focus on the actions of individuals in relation to structural forces (their community) that the framework of social capital finds its greatest usefulness in social work. There is no universally accepted concrete definition of social capital but what is overwhelming is, there has been a proliferation of academic works on the subject. It is being empirically proven that social capital plays a vital role in happiness (Choden 2016), sustainable economic growth (Rupasingha et al 2000), health (Kitchen et al 2012; Song 2010), sustainable development (Vera-Toscano et al 2013), etc. Lin (2001) offers four explanations as to why social capital plays a very decisive role not accounted for by forms of personal capital such as economic or human capital. These four elements in short are information, influence, social credentials, and reinforcement.

In the agriculture sector too, there is a lot of focus on social capital. According to Vera-Toscano et al (2013), farmers often form part of one or several associations to defend their general interests (as occurs with professional organizations, also called farmers unions), to articulate their specific interests as producers tied to a particular type of agricultural or livestock production, to purchase inputs or commercialize their products (as is the case of cooperatives), to mediate in the regulation of markets (such as organizations of producers), to ensure the quality of production in certain sectors, etc.

## **2. Materials and Method**

This paper uses the theoretical framework proposed by Megyesi et al (2010) to explain the roles of bonding, bridging, and linking social capital in the project’s success. The social capital typology shown in Table 1 is adapted from their work.

The paper is based on the secondary data of HRDP-GNH survey conducted in 2016. The sample constitute of 47 beneficiaries<sup>bb</sup> and 196 comparable<sup>cc</sup> non-beneficiary farmers. Due to

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<sup>bb</sup> A total of 64 beneficiary farmers were interviewed but only 47 of them have started reaping the benefits of the project. This was taken as the final sample of beneficiary farmers in the HRDP-GNH report

<sup>cc</sup> A screening questionnaire which consists of seven variables has been used to select the comparable non-beneficiary farmers. Matching using PSM retained all 196 of them.

small sample size, only descriptive statistics has been used. Chi-square test of association and independent samples t-test were used to test statistical significance<sup>dd</sup> of the results.

Indicators used for each of these social capitals are as follows<sup>ee</sup>:

*Bonding social capital:* trust, sense of belonging, frequency of socialization, social support, volunteerism, cultural participation, and donation

*Bridging social capital:* skill and knowledge transfer, generalized trust, ties to markets and resource persons

*Linking social capital:* participation in *zomdue*, voting, connection to formal institutions, trust in institutions

Table 1. Social capital typology

Macro	Synergy	Organizational integrity
	Ties connecting the representatives of HRDP to formal institutions – government and other organizations involved in it	Trust and credibility of the formal institutions and their capacity to provide the services effectively
	Linking/Bracing social capital Linkages between members of HRDP and government officials, decision makers, development partners, and the market	
Micro	Bonding social capital	Bridging social capital
	Ties within the members of the project and in the local community	Ties with people outside the HRDP project and other communities

### 3. Results and Discussion

Bonding social capital refers to the social capital generated through the interaction between members of a relatively homogenous group (Vera-Toscano et al 2013). Putnam (2000) suggests that bonding social capital can be used ‘to help people meet their basic needs in a mutually beneficial manner by bringing people together who are similar in some respect’. HRDP has made significant impacts on various indicators of bonding social capital. It was found that the percentage of respondents who reported their sense of belonging to the local community as ‘very strong’ is statistically significantly higher among the beneficiary farmers (83%) as compared to non-beneficiary farmers (62.2%) (Table 2). Sense of belonging is a very important indicator of social capital. A person with high sense of belonging is more likely to cooperate with other members of the community. In fact, Kitchen et al (2012)

<sup>dd</sup>For the purpose of this study, null hypothesis is accepted (i.e. relationship between two variables are considered significant) if p-value is less than or equal to 0.1.

<sup>ee</sup> Indicators were selected from the works of Kitchen et al (2012), Vera-Toscano et al (2013), Megyesi et al (2010).

pointed out that social capital is closely related to the concept of sense of belonging. This variable is comparable to local identity of members (found in Megyesi et al 2010). Level of trust towards one's neighbor is also higher among the beneficiary farmers but the difference is not statistically significant (Table 3). However, community relationships<sup>ff</sup>, which is an aggregation of the former two variables was found to be statistically significant (Phuntsho 2017, p. 43). Such positive results may have occurred as a result of the higher frequency of interactions they make with people in their neighbourhood (Table 4). In addition, social support which is measured in terms of the number of people they can count on during the times of sickness, financial problems, emotional problems, and important personal events such as childbirth, funeral, wedding, etc. are being assessed. This is similar to the concept of reciprocity. There is a high correlation with the number of people whom you lend support to and who lends support to you in return. Results show that the average number of people they can count on during such times is substantially higher among farmers who have joined the project (Table 5) thus indicating a better network of people whom they could rely upon during times of need. Skill transfer rate refer to the average number of people to whom they have transferred their knowledge and skill gained after attending the trainings provided by the project. Project evaluation report conducted in 2015 showed that the skill transfer rate among farmers who attended the training is 6.4 persons<sup>gg</sup> (RNRDC 2014). Within a period of less than five years, this is an impressive number. Other objective indicators<sup>hh</sup> of bonding social capital include the amount of donation, number of days volunteered, and number of days engaged in socio-cultural events in the community. Consistent with the earlier findings, beneficiary farmers were found to be significantly better in all these indicators (Table 6; Table 7; Table 8).

Table 2. Sense of belonging to the local community

	Non-beneficiary	Beneficiary	Total
Weak	0.5%	4.3%	1.2%
Somewhat strong	36.7%	12.8%	32.1%
Very strong	62.2%	83.0%	66.3%
Don't know	0.5%	0.0%	0.4%
Total	100%	100%	100%

Pearson  $\chi^2(3) = 13.7914, p = 0.003$

<sup>ff</sup> This is one indicator under community vitality in the computation of GNH index (Ura, Alkire, Zangmo, & Wangdi 2012).

<sup>gg</sup> One of the key objectives of the project is to enhance the project's impact through their trained farmers by extending their skills to others. In the project assessment report, it was mentioned that 656 farmers have been trained till September 2014 and 86.2 percent of the trained farmers have extended their skills to others till March 2014 (RNRDC 2014).

<sup>hh</sup> Kitchen, Williams and Simone (2012) has termed such variables as social capital 'actions'. Volunteering is one of the indicators used by them

Table 3. Trust towards neighbour

	Non-beneficiary	Beneficiary	Total
Trust none of them	1.5%	2.1%	1.6%
Trust a few of them	18.9%	10.6%	17.3%
Trust some of them	51.5%	42.6%	49.8%
Trust most of them	28.1%	44.7%	31.3%
Total	100%	100%	100%

Pearson chi 2(3) = 5.5326,  $p= 0.137$

Table 4. Frequency of socialization

	Non-beneficiary	Beneficiary	Total
Not in the last month	12.2%	8.5%	11.5%
Once a month	9.2%	4.3%	8.2%
Few times a month	55.1%	53.2%	54.7%
Few times per week	23.5%	34.0%	25.5%
Total	100%	100%	100%

Pearson chi 2(3) = 3.2638,  $p= 0.353$

Table 5. Social support

	Non-Beneficiary	Beneficiary	d.f.	t	<i>p</i> -value
Important personal events	16.9	26.8	239	-3.1991	0.0016
Sickness	5.4	7.5	241	-1.4572	0.1464
Emotional problem	7.5	7.6	240	-0.0676	0.9461
Financial problem	32.8	46.1	236	-3.1086	0.0021

Table 6. Number of days volunteered

	Non-beneficiary	Beneficiary	Total
	9.67	15.77	10.85

$t(241) = -1.9537, p = 0.0519$

Table 7. Donation

	Non-beneficiary	Beneficiary	Total
	4974	9233	5798

$t(241) = -2.5857, P = 0.0103$

Table 8. Participation in socio-cultural activities

	Non-beneficiary	Beneficiary	Total
	14.32	18.57	15.14

$t(241) = -1.7975, p= 0.0735$

These indicate that the project has made a significant impact on bonding social capital. What may be some possible reasons for that? First, the project focused on group activity. Some cooperatives were also formed. Most beneficiary farmers are enrolled under the focus-village approach<sup>ii</sup>. Under this, all selected farmers in the village grow same horticulture crop. A village representative attends the training at the project base in Wengkhar and he/she is responsible for disseminating the knowledge and skill to other members of the project in the village. In other approaches too, there are mentions of group learning and peer-to-peer knowledge sharing. Second, according to many beneficiaries, horticulture has become a part of their identity: a well-regarded activity and a ground for common interests. Many pride themselves of having joined the project and found an alternative means to support their livelihood in the village. Such characteristics of bonding to one's community are vital in order to sustain and spread the benefits of the project.

Bridging social capital refers to connections with other non-members of the community, members of other communities, resource persons, funders, and markets. Such linkages are important for mobilization of external resources and other forms of capital. One important aspect of bridging capital is the linkage between farmers who have joined the project and the coordinators and the resource persons of the project, such as technical experts, trainers, and supervisors. On this aspect, HRDP is the most advanced agriculture project so far (Phuntsho 2016). Most government interventions are limited to the supply of seed and other resources. The main distinctive feature of HRDP is that so much emphasis has been laid on skill and knowledge transfer through actual learning. For instance, farmers under systematic training and orchard development approach spend months at Wengkhar undergoing training, starting from pit digging to post-harvesting to food processing through the practice of leaning-through- working together, directly receiving advice from Japanese and Bhutanese horticulture experts. Farmers who have joined the project in general were found to have close ties with the project coordinators. Project coordinators visit their fields frequently in person to investigate the progress as well as to explore ways for further improvement. So far as connection to markets is concerned, the farmers have not started selling fruits in large quantities. However, beneficiary farmers have made a significant amount of cash income from the sale of vegetables as compared to those who have not joined the project (Phuntsho 2017, p. 42). In addition to that, the project enhanced farmers' groups in marketing of their products. Project evaluation report mentioned that overall about 96.3% of the groups in which the trained farmers joined have started to take their produce to the markets. To what extent does a person trust other people in general, often termed as generalized trust, is an important aspect of civic culture. Survey showed that farmers who have joined the project had a higher level of generalized trust (Table 9) but the difference is not statistically significant.

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<sup>ii</sup> There are three different approaches under HRDP: (i) systematic training and orchard development, (ii) focus-village development approach, and (iii) direct support programme.

Table 9. Generalized trust

	Non-beneficiary	Beneficiary	Total
Trust none of them	3.6%	8.5%	4.5%
Trust a few of them	57.1%	42.6%	54.3%
Trust some of them	32.7%	40.4%	34.2%
Trust most of them	5.1%	8.5%	5.8%
Don't know	1.5%	0.0%	1.2%
Total	100%	100%	100%

Pearson chi2(4) = 5.6829  $p=0.224$

Linking social capital is very similar to bridging social capital. The only difference is, the latter refer to ties with individuals or groups that belong to, or linkages with people or groups in a position of political or financial power (Vera-Toscano et al 2013). This aspect is measured by participation in meetings and voting. Participation in meetings (*zomdue*) is an important forum to connect with decision makers and local leaders. In the past one year, only 6.4 percent of beneficiary farmers have not attended a *zomdue* as compared to 11.2 percent of non-beneficiaries (Table 10). Proportion of individuals who have voted in the last Local Government (LG) election is also higher among the beneficiary farmers (Table 11). The difference is not significant though.

Table 10. Participation in *zomdue*

	Non-beneficiary	Beneficiary	Total
No	11.2%	6.4%	10.3%
Yes	88.8%	89.4%	88.9%
Not applicable	0.0%	4.3%	0.8%
Total	100%	100%	100%

Pearson chi2 (2) = 9.2056  $p=0.010$

Table 11. Voted in last LG election

	Non-beneficiary	Beneficiary	Total
Yes	73.0%	76.6%	73.7%
No	12.8%	6.4%	11.5%
Not applicable	14.3%	17.0%	14.8%
Total	100%	100%	100%

Pearson chi2(2) = 1.5954  $p=0.450$

At the macro-level, social capital is discussed in terms of synergy between members of the project and concerned formal institutions, and perceptions of organizational integrity. This paper identifies two key institutions of interest to the HRDP project: the government and the development partner (JICA). His Majesty the King, in recognition of the project's success and its significant contribution to the lives of people in the eastern dzongkhags, have awarded National Order of Merit Gold to two key persons who spearheaded the project. It is obvious that this initiative by the King will play a very significant role in the success of the project since the project is still in the early life-cycle stage. On behalf of the Ministry of Agriculture and Forests, HRDP is being handled by RNRDC located at Wengkhar in Mongar

Dzongkhag. The centre is one of the biggest agriculture research and development centre in the country. The location of the centre at the heart of six dzongkhags makes it even more accessible to the farmers. From JICA's part, the team was led by Tomiyasu who has an experience of 20 years of working in horticulture project in Nepal and 17 years in Bhutan.

#### **4. Conclusion**

The findings reveal that HRDP project has made significant impacts on different dimensions of the social capital. It can also be argued that different forms of social capital have contributed significantly to the success of the project. The products of the project became well known as the "Wengkhar Brand" –a token of trust. Megyesi et al (2010) have concluded that bonding social capital is an essential ground for bridging and linking social capital. This is evident in the present case also where strong trust, local identity, cooperation and greater contributions towards the community have created enabling conditions for establishing successful ties with outside actors like the government, decision makers, development partners and markets. But from this particular case, it may be concluded that the macro level synergy, organizational integrity, and project modality have played an equally, if not more, important roles in achieving the success of the project. The ability to link Japanese expertise, product viability, and effective delivery model together contributed to success of the project. Had this project not been implemented by JICA and RNRRDC in the present form, success at this level is not expected, especially on social capital. Therefore, in the agriculture sector, it is suggested that future projects embody the salient features of HRDP – social capital. Farmers were found to be the least happy among other occupational groups in the 2015 GNH survey. In order to alleviate farmers' unhappiness, social capital must be one key point.

In future, a quantitative study to explore the dynamics of inter-linkages between different indicators and dimensions of social capital is recommended. Whether social capital leads to better economic and social conditions including happiness of the farmers is also an interesting question to be pursued. The current study suffers from small sample size and such analysis was not attempted.

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