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**Empowerment of farmers through agricultural
extension: A case study of farmer groups in
Khairahani, Chitwan, Nepal**

A thesis presented in partial fulfilment of the requirements
for the degree of

Doctor of Philosophy (PhD)

in

Agricultural Extension and Rural Development

**at Massey University, Palmerston North,
New Zealand**



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2018

Abstract

The government of Nepal adopted a farmer group approach as the official agricultural extension approach for Nepal in 1988/89. Since then, this has been the major strategy of the Government for the provision of agricultural extension services. The literature has shown that organizing rural farmers into groups has provided an effective institutional mechanism for their empowerment. However, limited research has been conducted in either Nepal or other developing countries to investigate farmer groups through the lens of empowerment theory. The overall aim of this study has been to gain an improved understanding of how participation in farmer groups, assisted by the public agricultural extension organisation, leads to the empowerment of rural farmers in Nepal. To this end, four farmer groups that were assisted by the District Agriculture Development Office in Nepal were studied using a qualitative case study approach.

This study provides a more comprehensive model of the relationship between farmer groups encompassing the three different forms of capital accumulation and the four dimensions of empowerment. It has revealed that participation in a farmer group facilitated the accumulation of human, social and financial capital which then contributed to economic, psychological, social and political empowerment. The study illustrated the interconnected nature of different forms of capital accumulation. Likewise, the present findings showed that feedback loops existed between the dimensions of empowerment. The findings of this study suggests that improvement of one form of capital by itself is not sufficient to ensure the empowerment of farmers across the four dimensions, unless the other two forms of capital are already present.

It was found that the degree of empowerment that occurred within a group was influenced by the level of cohesion among group members and the volume of resources that flowed into the group. The findings of this study demonstrate that farmer groups are more beneficial for women as opposed to men, and for the poor as opposed to wealthier farmers. These findings suggest that the current group-based extension approach can serve as an effective strategy for providing agricultural extension services to women and poor farmers who have limited financial and personal resources on their own.

Acknowledgments

First of all, I am very much grateful to my esteemed supervisors for their continued encouragement, friendly support and scholastic guidance throughout the research process to complete this thesis. I am particularly thankful to my main supervisor **Dr David Gray** for his constructive comments and suggestions which helped me to write this thesis in a more structured and logical way. I appreciate his exhaustive scrutiny of every minute detail of my writing. I am deeply indebted to my co-supervisor **Dr Janet Reid** for her critical suggestions that helped to broaden my understanding of research. Your guidance to refine my research question and develop data collection checklists is highly appreciated. I thank you both for providing me with new insights into qualitative research methods.

My special thanks are due to those in Nepal who helped me during the research fieldwork. I would like to express my heartfelt gratitude to the people of Khairahani Village Development Committee, who participated in this research, for their full cooperation, wonderful hospitality and valuable inputs. Without their participation and contributions, the research findings would not have been possible. I am very grateful to the staff of the Agriculture Service Centre, Khairahani, the District Agriculture Development Office, Chitwan and the Directorate of Agricultural Extension, Lalitpur for providing me with information about their experiences and views on the research topic and for allowing me to access official documents.

I am indebted to the New Zealand Government for providing a New Zealand Development Scholarship (Open Category) which enabled me to study at Massey University. I would also like to acknowledge the relentless support of all staff at the International Student Support Office, in particular, Sylvia

Hooker, Olive Pimentel and Jamie Hooper. I am grateful for the support from the staff and colleagues at the School of Agriculture and Environment. Special thanks to Professor Peter Kemp and Steward Denise. I also appreciate the support from the Ministry of Agriculture Development and the Department of Agriculture, Nepal for granting me study leave for the PhD study. My special thanks also go to all my friends and Nepalese community in Palmerston North who provided me with company during my stay in a foreign land and culture.

My sincere thanks go to my mother, parents-in-law, brothers, brothers-in-law, sisters, sisters-in-law, niece, nephew and relatives for their love, blessings and inspiration. Most importantly, I would like to acknowledge my wife Pabitra and children Prabisha and Prabesh for their love, sacrifice, patience and support. You gave up your time and interests in order for me to reach to this stage. Your contribution is the greatest of all.

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Abbreviations

AA	Agriculture Assistant
ASC	Agriculture Service Centre
DADO	District Agriculture Development Office
DLSO	District Livestock Service Office
DOA	Department of Agriculture
DOLS	Department of Livestock Services
JT	Junior Technician
JTA	Junior Technical Assistant
NGO	Non-Governmental Organisation
SADO	Senior Agriculture Development Officer
SLC	School Leaving Certificate
VDC	Village Development Committee
VLAA	Village Level Agriculture Assistant

CHAPTER ONE

INTRODUCTION

1.1 Introduction

The purpose of this chapter is to provide the background to the research problem. The chapter begins with a brief overview of Nepalese agriculture and in particular the evolution of agricultural extension in Nepal over the last six decades, that provides the basis for the research context. The problem statement is then presented along with the aim of the research and research question. Finally, the structure of the thesis is presented.

1.2 Background

Agriculture is the backbone of the Nepalese economy and some 65.6% of the population still depend on agriculture for their livelihood (Ministry of Agriculture Development, 2015). The contribution of this sector to the gross domestic product was 31.6% in the 2015/16 fiscal year¹ (Ministry of Finance, 2016). Some 82.9% of the population live in rural areas (Central Bureau of Statistics, 2015) and the majority of the rural population are small and marginal farmers (Nepal & Thapa, 2009). About 69.5% of landholders have less than one hectare of land (Devkota, 2007). Poverty is widespread in rural areas (National Planning Commission, 2010) and current official statistics show that 21.6 % of the population of the country are still living below the poverty line (National Planning Commission, 2016).

Agriculture still largely operates at subsistence and semi-commercial levels of production in Nepal, although a large proportion of the population engages in this sector (Thapa, Joshi, & Joshi, 2015). Rich geographical and

¹ Fiscal year in Nepal starts from 16 July.

diversified agro-climatic zones ranging from subtropical plains to alpine zones, allow farmers in Nepal to cultivate a wide range of crops (Shrestha, Ladha, & Gami, 2006). This includes cereals such as rice, maize, wheat, millet, barley and buckwheat, pulses such as lentil, chickpea, black gram, pigeon pea, horse gram, grass pea and soybean, spices such as cardamom, ginger, turmeric, garlic and chilli, along with oilseeds, potato, sugarcane, jute, cotton, tea, coffee and different types of fruits and vegetables. Livestock is an integral part of the Nepalese agriculture production system as most farmers run mixed cropping and livestock systems (Panthi et al., 2016), with livestock contributing nearly 11% to the national gross domestic product (Ministry of Livestock Development, 2017).

The fact that the agricultural sector contributes significantly to poverty reduction is not new. The growth of the agriculture sector has direct and indirect impacts on rural poverty reduction (Anríquez & Stamoulis, 2007; Bresciani & Valdés, 2007; Christiansen, Demery, & Kuhl, 2010; Department for International Development, 2004). As a direct impact, growth from this sector can increase rural incomes in two ways: (i) by increasing the income of farming households directly and (ii) by increasing on-farm employment opportunities and agricultural wages (Department for International Development, 2004). An increase in farm incomes also allows households to increase their savings and these can be further invested in a range of sectors within the economy (Department for International Development, 2004). The indirect effect of growth in the agriculture sector on poverty reduction is through its impact on the growth of other sectors within the economy (Anríquez & Stamoulis, 2007; Bresciani & Valdés, 2007; Christiansen et al., 2010; Department for International Development, 2004). For example, increased agricultural production and income levels creates

additional local demand for consumable goods and services from non-agricultural sectors (Department for International Development, 2004; Mellor, 2001) that leads to expansion in the agro-processing industries and service sectors. This, in turn, creates more employment opportunities for rural people (Mellor, 2001). Increased food production also results in a reduction in food prices which allows the rural and urban poor to draw on a lower proportion of their total income for basic food requirements (Department for International Development, 2004). Thus, several authors (for example, Anríquez & Stamoulis, 2007; Bresciani & Valdés, 2007; Christiansen et al., 2010; Department for International Development, 2004) have argued that the agriculture sector is much more effective in reducing rural poverty than the non-agriculture sectors such as servicing or manufacturing sectors.

The Government of Nepal has recognized for a long time that agriculture is the engine for rural economic growth and poverty reduction (Nepal & Thapa, 2009). Accordingly, from the beginning of the planned development approach in 1956, most of the development plans and their associated policies have stressed the development of this sector (Nepal & Thapa, 2009; Suvedi & McNamara, 2012). In particular, agricultural extension has been considered as one of the most important instruments for agriculture and rural development in Nepal (Thapa & Ojha, 2004). Various extension approaches have been adopted over the last six decades of agriculture development in order to increase the production and productivity of the agricultural sector and thereby reduce poverty.

1.3 Previous extension approaches in Nepal

The extension approaches that have been tried in the past in Nepal include the conventional extension system, the training and visit system, the Tuki

system, the farming systems research and extension approach, the integrated rural development approach and the block production programme (Dongol, 2004; Suvedi & McNamara, 2012; Thapa, 2010). These are briefly described in the following sections.

1.3.1 The conventional extension approach

The conventional extension approach was practised from the 1960s to the 1970s in Nepal (Suvedi & McNamara, 2012). This was the traditional system of agricultural extension based on the trickle-down theory of diffusion (Dongol, 2004; Suvedi & McNamara, 2012). A key assumption behind this approach was that agricultural technologies are available, but farmers are not using them (Centre for Rural Development and Self-help, 2007). This is because their knowledge of agricultural technologies is low and they do not know about improved agricultural practices (Thapa & Rawal, 2016). If this knowledge could be transferred to farmers, they would use it to improve their practices (Centre for Rural Development and Self-help, 2007).

In the conventional extension approach, agricultural extension services were provided by field level frontline extension workers designated as Junior Technicians (JTs) and Junior Technical Assistants (JTA) who were supervised and supported by district-based Agricultural Development Officers (Dongol, 2004). Field level extension workers (JTs/JTAs) identified and selected some progressive farmer leaders, called Agriculture Assistants (AAs) as a contact point to introduce agriculture technologies to the community (Dongol, 2004). The agricultural innovations were demonstrated at the AA's farm with the expectation that this would be disseminated within the surrounding farming community (Dongol, 2004; Thapa & Rawal, 2016). In this approach, the extension workers maintained direct contact with the

farmers (Manandhar, 2007; Thapa & Rawal, 2016). The main extension teaching methods used in this approach included training, demonstrations, meetings, farmer field days and exhibitions (Dongol, 2004). The extension workers were also involved in the provision of subsidized inputs and the delivery of agricultural loans (Manandhar, 2007; Thapa & Rawal, 2016).

The major weaknesses of this approach reported in the literature included: (i) the adoption of a top-down approach to programme planning that did not fully address the real needs and problems of farmers (Manandhar, 2007; Thapa & Rawal, 2016); (ii) inadequate physical facilities for field level extension workers, such as transport and accommodation (Manandhar, 2007); (iii) weak linkages between research and extension (Manandhar, 2007; Thapa & Rawal, 2016); (iv) limited provision of career opportunities and professional training for field level extension workers (Manandhar, 2007; Thapa & Rawal, 2016); and (v) a lack of subject matter specialist to support field level extension workers (Manandhar, 2007; Thapa & Rawal, 2016).

1.3.2 The training and visit approach

The training and visit approach to agriculture extension was introduced in the Bara and Parsa districts² of Nepal; in 1975 with financial support provided by the World Bank. This approach was gradually extended to a further 19 districts in the *Tera*³ and four districts in the mid-hill region (Manandhar, 2007; Thapa, 2010). The training and visit system was developed by Daniel Benor in the early 1970s and promoted by the World Bank in many developing countries including Nepal (Dongol, 2004; Musa, Aboki, & Audu, 2013). The key features of this system were a single line of

² Nepal is administratively divided into 75 districts (Central Bureau of Statistics, 2015).

³ Nepal is divided into three agro-ecological zones, namely mountains, hills and *terai*. *Tera* refers to the lowest terrain which lies below 300 meters above sea level (Paudel, 2013)

command, regular and continuous training of extension workers, scheduled visits by extension workers to contact farmers and strong linkages between research and extension (Anderson, Feder, & Ganguly, 2006; Dongol, 2004; Musa et al., 2013). The training and visit system adopted in Nepal also had similar features stated above.

Under the training and visit approach in Nepal, the village level agriculture assistants (VLAA)⁴, JTAs and JTs received fortnightly training from a subject matter specialist. The training focused on the technical information the field staff were expected to deliver in the next two weeks (Dongol, 2004). After receiving training, the VLAA had a fixed fortnightly schedule to visit contact farmers in their assigned area (Dongol, 2004; Thapa & Rawal, 2016). It was expected that these contact farmers would disseminate the recommended technology within their community (Anderson et al., 2006). Linkage between research and extension were fostered through bi-monthly meetings, semi-annual regional workshops, research out-reach programmes, and the creation of a central technical committee and district technical committee (Dongol, 2004).

A number of issues regarding the training and visit approach are highlighted in the literature. Firstly, this approach required a large amount of financial and human resources for its operation. This prevented the replication of the approach in other districts where no donor-assisted projects operated (Thapa, 2010). Secondly, the approach seemed unsuitable in hilly districts because of the difficult terrain and inaccessibility (Thapa, 2010) that restricted the mobility of field extension workers to take part in regular

⁴ Local people who completed eight years of schooling were provided with a month long intensive training and appointed as VLAA's in their village on a contractual basis (Basnyat, 1995).

training and visits with farmers (Dongol, 2004). Thirdly, field level extension workers lacked motivation that hampered the delivery of effective extension services (Dongol, 2004; Thapa, 2010). It was identified that the low honorarium paid to the VLAA (Manandhar, 2007; Thapa & Rawal, 2016) and their inadequate supervision were major factors that limited the effectiveness of the approach (Dongol, 2004; Thapa, 2010). Finally, this approach was criticized for placing too much emphasis on technical recommendations and production (Thapa, 2010). The production support services, such as the provision of agricultural inputs, credit and agricultural marketing, were inadequate to meet farmers' requirements because of the weak linkages and partnership between the extension service and other related stakeholders (Thapa, 2010).

After the restoration of democracy in 1990, the VLAAs demanded an increase in salary equivalent to that of civil servants and to be accepted as civil servants. The government, however, was unable to fulfill their demands and decided to discontinue the use of VLAAs within the agriculture extension service. This then led to an abrupt end to the training and visit system in Nepal in 1991 (Basnyat, 1995).

1.3.3 The Tuki approach

The concept of the Tuki approach to agriculture extension was developed locally and adopted in 1977 in the Dolakha and Sindhupalchowk districts under the Integrated Hill Development Project, supported by the Swiss Government (Dongol, 2004; Thapa, 2010). The word Tuki is a Nepalese term that refers to a traditional small oil lamp that is used in rural households (Thapa, 2010). The Tukis, therefore were expected to spread the light of knowledge in the community. Tuki was the name given to progressive

farmers who: (i) were held in high respect in the community; (ii) were willing to inform and train their neighbors on agriculture technologies; (iii) were self-motivated to work voluntarily for rural development; (iv) had their own farm to demonstrate agricultural innovations and (v) were keenly interested to interact with their neighbours about farming issues (Dongol, 2004; Manandhar, 2007; Thapa, 2010).

The Tukis were selected voluntarily after a 15-days long intensive training course (Dongol, 2004). In addition, they were also given refresher training four times a year prior to the agricultural season in order to enhance their capacity in the field of agriculture and rural development (Thapa, 2010). One of the assumptions of this system was that agricultural productivity could be improved to a greater extent when the delivery of information and knowledge on improved agricultural technologies was accompanied by the provision of production inputs (Basnyat, 1990). Thus, under the Tuki system, the extension workers were expected to deal with the input demands of the farmers in addition to disseminating information and technologies (Dongol, 2004; Sharma & Bhandari, 2005; Thapa, 2010). In turn, the Tukis were paid a twenty percent commission on the sale of the agricultural inputs (fertilizers, seeds, fruit saplings, pesticides and insecticides) and provided with a travel allowance of NPR0.50⁵ per kilometre walked to deliver the inputs as an incentive for their work (Thapa, 2010; Thapa & Rawal, 2016).

In this approach, linkages between research and extension were established through regular meetings organized at the project headquarters. This type of meeting was organized four times a year prior to the agricultural season (Dongol, 2004). However, the system was not designed to develop new technologies, but depended on technologies generated by the existing

⁵ US\$1=NPR104

research programme. Trials were conducted on three agricultural farms in the project districts to screen the new technologies and assess their value to local farmers (Dongol, 2004; Thapa, 2010).

The major weakness of this approach was that the incentives given to the Tukis in terms of sales commissions on agricultural inputs and travel costs were found to be too expensive for the Government to continue with after the termination of the donor-funded project in 1990 (Centre for Rural Development and Self-help, 2007; Thapa, 2010). The approach was also criticized for placing too much emphasis on the sale of agricultural inputs rather than technology dissemination (Thapa & Rawal, 2016).

1.3.4 The farming systems research and extension approach

As the current development programmes had failed to address the needs of small and marginal farmers, the farming systems research and extension approach was initiated in Nepal in 1977 (Centre for Rural Development and Self-help, 2007). This approach was practised in the hilly districts of Nepal by the Lumle Agricultural Centre and the Pakhribas Agricultural Centre under the support of the Overseas Development Administration of the British Government (Dongol, 2004; Thapa, 2010).

Three key principles of this approach highlighted by Cornwall, Guijt, and Welbourn (1994) are: (i) agriculture is viewed as an holistic system in which all major interactions that influence its performance need to be considered; (ii) joint efforts are required by extension agents, researchers and farmers in designing, testing and modifying agriculture innovations to suit local conditions; and (iii) a multi-disciplinary approach for the analysis of the problems or situation, the design of technology and implementation and evaluation of the technology is required.

The farming systems research and extension approach was launched with the expectation that the adoption of technology would be more rapid when the technology was developed with the active involvement of farmers (Manandhar, 2007). Under this approach, agricultural inputs and credit were also made available to farmers through the project in order to promote the technologies developed under the farming systems research and extension approach (Dongol, 2004). However, little attention was paid to the involvement of private stakeholders in marketing and enterprise development for future sustainability (Thapa, 2010).

The extension services maintained good contact with the farmers during the project period, however, the extension cost per household was too high and the Government found it could not afford to continue with this approach (Dongol, 2004; Thapa, 2010). Although the farming systems research and extension approach aimed to integrate research and extension to develop agricultural technologies suitable for the local context, it was conceived as a kind of research strategy rather than an extension approach in Nepal (Basnyat, 1991).

1.3.5 The integrated rural development approach

The integrated rural development approach was implemented in Nepal in the 1970s and 1980s with the support of different bilateral and multilateral donor agencies (Thapa, 2010). A total of 12 integrated rural development projects were implemented in Nepal covering 34 districts (Dongol, 2004). There was considerable variation in the sources and levels of funding, project components, the density of agriculture extension support services and geographical coverage (Thapa, 2010). In spite of this variation, project components in all integrated rural development projects included agriculture,

livestock, forestry, irrigation, soil conservation, village and cottage industries, local institution development, education and drinking water. The agriculture extension component was one sub-system within this approach (Dongol, 2004). In relation to the implementation arrangement of these integrated rural development projects, the then Ministry of Local Development acted as the central coordinating agency whereas sectoral components were implemented by the respective line ministries through their district level offices (Thapa, 2010).

The core assumption of this approach was that the available agricultural technologies were adequate, but a lack of inputs, a lack of coordination and inadequate extension services limited the adoption of technologies by farmers (Dongol, 2004; Manandhar, 2007). The integrated rural development projects attempted to address these barriers to technology adoption through the provision of agricultural inputs and credit, physical facilities and infrastructure, such as office buildings for Agriculture Service Centre (ASC), additional temporary manpower and additional funds for extension services (Thapa, 2010). However, the extension strategy employed by the integrated rural development approach was essentially the conventional extension approach based on diffusion theory (Dongol, 2004; Thapa, 2010). Extension-research linkages were fostered through the strengthening of existing public agricultural farms located within the project area (Thapa, 2010).

One of the major strengths of the integrated rural development approach reported by Thapa (2010), was that infrastructure developed at the grassroots level such as market yards and rural roads, ACS buildings and small irrigation canals proved to be very beneficial to farmers. Another strength of this approach was that agriculture extension services were made available through the ASC and supported by subject matter specialists at the

district level (Manandhar, 2007). Although the cost of agriculture extension services was moderate for this approach, the coverage provided by the services was relatively low (Dongol, 2004). However, the task of coordination and integration of different components within the integrated rural development projects was found to be difficult (Thapa, 2010). This is mainly because of (i) the unclear line of command due to the presence of more than one manager to whom the extension service was required to report and (ii) variation in working guidelines and procedures adopted by different sectoral ministries (Thapa, 2010).

1.3.6 The block production programme approach

The block production programme approach is an agricultural extension service based on the concept of the green revolution where agricultural productivity could be increased through adopting complete packages of production practices in a concentrated and coordinated way (Thapa, 2010). This programme was initiated on a pilot basis in two *Terai* districts, namely Bara and Chitwan under the USAID supported project called the Integrated Cereal Project in 1982 (Thapa, 2010). The programme was then extended to the entire *Terai* region (20 districts) and some hilly districts (8) covering some 110,000 hectares of land (Dongol, 2004). At this stage, the programme was funded by the Government (Thapa, 2010).

The major assumption that this approach was based on was that agricultural productivity could be enhanced when appropriate agricultural technologies were introduced, along with the related agricultural inputs, agricultural credit and technical advisory services (Basnyat, 1990). The extension services were funded on the basis of a block and sub-block. A thousand hectares of land constituted a block, whereas a sub-block consisted of 100 hectares in

the case of the *Terai* district and 20 hectares in the hilly districts (Thapa, 2010). A separate production agronomist was assigned to each block along with a JT/JTA and AAs for technical support while a production team consisting of staff from the Agriculture Development Office, Agriculture Input Corporation, Agricultural Development Bank and *Sajha* (cooperative) was formed at the district level to coordinate and manage the block production programme (Dongol, 2004). This team met monthly and jointly visited the block to address the problems on the spot (Dongol, 2004). Initially, one agronomist, two JTAs and 10 AAs were deployed to each block for technical support and supervision, but this was later made more flexible to accommodate manpower availability (Thapa, 2010).

Prior to the introduction of a new technology, socio-economic and technical analyses were undertaken in the block to identify the technologies that were suitable for the location (Dongol, 2004). Technology generated at the research centre was further evaluated by conducting pre-production verification trials before dissemination. The technologies that were accepted in the pre-production verification trial were then extended to the production block (Dongol, 2004).

The strengths of this approach were that (i) the extension workers visited all the client farmers. This was because of the higher number of extension workers deployed in the field; (ii) farmers had direct access to extension workers and (iii) the technologies recommended under the block production programme were relevant to the local conditions as they were screened through a pre-production verification trial (Dongol, 2004). Regarding the weakness, firstly, this approach was criticized as being costly in terms of human and financial resources (Dongol, 2004; Thapa, 2010). Secondly, this approach was believed to favour large and resource-rich farmers at the

expense of small farmers (Basnyat, 1990; Thapa, 2010). This is mainly because of (i) the selection of blocks and sub-blocks in high potential production areas of the district that tended to provide benefits to rich farmers (Basnyat, 1990); (ii) extension workers tended to choose farmers who had large farms with irrigation facilities and the means to afford agricultural inputs rather than small farmers (Basnyat, 1990), Thirdly, the approach was criticized as being dependent on the public sector for agricultural inputs, irrigation, credit, agricultural marketing and so on, thus neglecting the role of the private sector (Thapa, 2010).

In summary, the different agricultural extension approaches described above did not significantly influence the vast majority of resource poor-farmers to increase agriculture production and productivity (Dongol, 2004). As such, these approaches have been considered as inappropriate for the nationwide adoption in Nepal (Dongol, 2004) and none of these approaches are in current use (Thapa & Rawal, 2016). In response to the criticisms of the past approaches and the lessons learned from these, the Government of Nepal adopted a farmer group approach as its official agricultural extension approach in 1988/89 (Central Agriculture Training Centre, 2002; Sharma & Khanal, 2009; Sinha, 2014) with the objective of enhancing the participation of the farmers and developing a sense of ownership in the agricultural development programme (Sharma & Khanal, 2009). It was argued that the group approach was built on the experiences of the earlier approaches and their strengths (Basnyat, 1990).

1.4 The group approach to agricultural extension

The group approach to agricultural extension was introduced for the first time in Nepal by the Small Farmer Development Programme of the

Agriculture Development Bank in 1975/76 (Central Agriculture Training Centre, 2002; Sharma & Khanal, 2009). The basic reason for using farmer groups in this programme was, however, to provide credit access to the farmers, but not agricultural extension services (Central Agriculture Training Centre, 2002; Sharma & Khanal, 2009). However, the success of this approach provided some impetus to the policy makers and planners about the potential of the farmer group approach in agriculture extension service delivery (Central Agriculture Training Centre, 2002; Sharma & Khanal, 2009). For example, the farmer group approach initiated in three pilot districts, namely Chitwan, Morang and Tanahu under the World Bank funded Agricultural Extension Project provided encouraging results to the Government (Central Agriculture Training Centre, 2002; Sharma & Khanal, 2009; Sinha, 2014). The then Ministry of Agriculture recognized this approach as an official extension approach to agriculture extension service delivery in Nepal in 1988/89 (Central Agriculture Training Centre, 2002; Sharma & Khanal, 2009). Since then it has become the dominant strategy for the Government to provide agriculture extension services throughout the country (Sharma & Khanal, 2009; Suvedi & McNamara, 2012). Under this programme, farmers are required to be a member of a farmer group to obtain access to public extension services in Nepal (Thapa, 2010). For example, the farmer members are provided training on the subject of their interest; technology demonstration plots are established in the fields of group members and they have access to grants and subsidies. As a result of this policy, a large number of farmer groups have been formed throughout the country (Adhikari & Risal, 2006).

Currently, the Department of Agriculture (DOA) and the Department of Livestock Services (DOLS) are the two public organizations responsible for

providing public extension services to the farmers of Nepal (Suvedi & McNamara, 2012; Thapa, 2010). The former is mandated to deliver extension services related to crops and fisheries whereas the latter is for livestock-related extension services. The farmer group approach is the major strategy for service delivery in both agriculture and livestock services (Sharma & Khanal, 2009). A recent official report revealed that a total of 55,591 (37,732 farmer groups under the DOA and 17,859 under the DOLS) farmer groups existed under the public agriculture extension system by the end of 2014/15 and this comprised some 1,008,488 farmers as members (Directorate of Agricultural Extension, 2016). Out of 55,591 farmer groups, 61.7% were mixed in terms of gender, whereas 26.3% and 12.0% were female and male only, respectively (Directorate of Agricultural Extension, 2016). Of the total farmers organized in the groups, 52.8% were female while 47.2% were male (Table 1.1) (Directorate of Agricultural Extension, 2016).

Table 1.1: Details of farmer groups organised under the public agriculture extension system in Nepal

S.N.	Indicators	Unit	FGs under DOA	FGs under DOLS	Total
1	Farmer group by gender				
1.1	Female farmer group	No.	8,657	5,957	14,614
		%	22.9	33.4	26.3
1.2	Male farmer group	No.	3,939	2,731	6,670
		%	10.4	15.3	12.0
1.3	Mixed farmer group	No.	25,136	9,171	34,307
		%	66.6	51.4	61.7
1.4	Total	No.	37,732	17,859	55,591
		%	100.0	100.0	100.0
2	Member composition in FG				
2.1	Female	No.	413,029	119,895	532,924
		%	52.4	54.2	52.8
2.2	Male	No.	374,444	101,120	475,564
		%	47.6	45.8	47.2
2.3	Total	No.	787,473	221,015	1,008,488
		%	100.0	100.0	100.0

Source: Directorate of Agricultural Extension, 2016

The main philosophy of the group approach is to help people to help themselves (Central Agriculture Training Centre, 2002). The group approach recognizes a farmer as an active partner in technology development and dissemination instead of a passive recipient (Hoffmann, Probst, & Christinck, 2007). This approach emphasises building and strengthening farmer groups at the local level and using this as a vehicle for development (Anandajayasekeram, Puskur, Workneh, & Hoekstra, 2008). A farmer group is a group of farmers united for mutual interest and common goals related to their farming. The members of the groups are expected to have similar interests and occupations (Directorate of Agricultural Extension, 2009). Though farmer groups vary in size, a group size of 20 to 30 members is considered ideal for the delivery of extension services because this size

would enable the members to interact face-to-face and exchange information freely (Madukwe, 2006; Shepherd, 2007; Singh, 2011).

In the farmer group approach, the role of the extension organization is to help rural communities to organize themselves and to develop their capacities so that the farmers can take control of their own development (Anandajayasekeram et al., 2008; Chamala & Shingi, 1997). In contrast to prescribing technical solutions, the extension service helps the farming communities to develop their technical and managerial capabilities so that the farmers are able to identify their problems and seek out solutions (Chamala & Shingi, 1997).

Numerous papers have been written about the advantages of a group approach in agricultural extension. It is argued that the group approach is much more efficient and cost effective compared to individual contacts from the perspective of the government and developmental organizations (Food and Agricultural Organization, 2004; Schad, Roessler, Neef, Valle Zárate, & Hoffmann, 2011; Sharma & Khanal, 2009). This is because the extension message reaches more farmers; groups become a focal point of contact for several farmers and provide a common forum for organizing extension activities such as field days, workshops and training activities (Food and Agricultural Organization, 2004). Bergevoet and van Woerkum (2006) claimed that the group creates a favourable environment for learning; it is a venue for sharing experiences and knowledge which fosters mutual learning and adoption (Akinagbe & Ajayi, 2010). When small farmers are united in a group, their self-confidence and bargaining power will be increased (Anandajayasekeram et al., 2008; Food and Agricultural Organization, 2004). Small holder farmers often face problems of market access due to their low volume of production and high transaction costs (Kaganzi et al.,

2009; Shiferaw, Obare, & Muricho, 2006). A group has advantages in terms of economies of scale and reducing transaction costs through collective marketing and the purchase of inputs (Anandajayasekeram et al., 2008; Kaganzi et al., 2009; Shiferaw et al., 2006; Stockbridge, Dorward, Kydd, Morrison, & Poole, 2003). Groups can also act as security for members to access loans (Anandajayasekeram et al., 2008). Farmer groups can exert pressure to demand better extension services and influence government policy in their own favour (Directorate of Agricultural Extension, 2009). The group approach is considered one of the best options for addressing the common problems of rural farmers that require joint decision-making and action at the community level such as water access, and watershed management (Food and Agricultural Organization, 2004).

A review of the contemporary agricultural extension literature from developing countries including Nepal (for example, Anandajayasekeram et al., 2008; Chamala & Shingi, 1997; Danish International Development Agency, 2004b; Davis, 2006; Friis-Hansen & Webster, 2004; Garforth, 1994; Githaiga, 2007; Meena, Jain, & Meena, 2008; Meinzen-Dick, Behrman, Pandolfelli, Peterman, & Quisumbing, 2014; Qamar, 2005a; Sharma & Khanal, 2009; Singh & Swanson, 2006; Swanson, 2008; Swanson & Rajalahti, 2010) suggests that organizing rural smallholders and poorer farmers into groups has provided an effective institutional mechanism for their empowerment. For instance, Swanson (2009) and Swanson and Rajalahti (2010) claimed that one of the functions of agricultural extension is to empower farmers in order to increase their access to extension services, inputs and markets that can be achieved by organizing them into groups. On the other hand, Anandajayasekeram et al. (2008) argued that the farmer

group approach is a form of participatory extension approach that aims to empower farmers so that this can lead their own development.

The notion of empowerment has become a mainstream concept in the discourse and practice of development since the 1980s (Luttrell, Quiroz, Scrutton, & Bird, 2009). It is a complex concept that lacks a universally accepted definition. However, a review of the wider development literature for the purpose of this thesis (see Chapter Two) suggests that empowerment entails (i) an expansion of the agency of individuals to achieve change, (ii) increased access and control over resources that help the individuals to shape their lives, and (iii) a transformation of unequal power relationships that hinder individuals' ability to exercise their agency and to access and take control over resources. With respect to empowerment, the term agency in this context refers to the ability of individuals or groups to act and make their own choices independently (Luttrell et al., 2009).

Although the relationship between farmer groups and empowerment has been widely recognized to constitute a fundamental theme in the contemporary agriculture extension literature (for example, Anandajayasekaram et al., 2008; Chamala & Shingi, 1997; Danish International Development Agency, 2004b; Davis, 2006; Friis-Hansen & Webster, 2004; Garforth, 1994; Githaiga, 2007; Meena et al., 2008; Meinzen-Dick et al., 2014; Qamar, 2005a; Sharma & Khanal, 2009; Singh & Swanson, 2006; Swanson, 2008; Swanson & Rajalahti, 2010), little is known about how participation in farmer groups contributes to the empowerment of rural farmers in developing countries such as Nepal. There is little research that has been conducted to examine farmer groups through the lens of empowerment theory not only in the Nepalese context but also in the broader developing country context (see Chapter Two for details). Rather,

the empirical literature on farmer groups has tended to focus on easily measured direct outputs from agricultural extension such as technology adoption, innovation diffusion, yield increment, income and/or farm profit (for example, Adong, 2014; Cramb, 2005; Darr, 2008; Darr & Pretzsch, 2008; Davis, 2006; Desai & Joshi, 2014; Fischer & Qaim, 2012b; Hennessy & Heanue, 2012; Mwaura, 2014; Vuthy, Socheat, Keosotha, Sreymom, & Pirom, 2014; Wambura, Rutatora, Oygard, Shetto, & Ishumi, 2007). It does not provide useful insights into how farmer participation in groups leads to empowerment. A number of authors such as Bantilan and Padmaja (2008); Coutts, Roberts, Frost, and Coutts (2005); the Danish International Development Agency (2004a); Friis-Hansen and Webster (2004) have also highlighted the fact that there is a general lack of understanding regarding the effect of agricultural extension programmes on empowerment. Bantilan and Padmaja (2008) claimed that despite ample literature that explains the direct impacts of agricultural development, such as yield increment, income growth and so on, empowerment is one of the important qualitative dimensions of impact that is almost ignored in conventional studies. Likewise, when Coutts et al. (2005, p. 65) suggested several areas for further research in extension, they stressed that "the less tangible concepts of empowerment requires further work".

1.5 Problem statement

The government of Nepal has realized for a long time that agriculture is the engine for rural economic growth and poverty reduction because of its contribution to the national economy and its importance to the livelihood of the majority of the population. Agricultural extension has been considered as one of the most important instruments for agriculture and rural development since the planned development efforts were initiated in Nepal. In the past,

several approaches to agricultural extension have been adopted that include: the conventional extension system, the integrated rural development project, the training and visit system, the Tuki system, the farming systems research and extension approach and the block production programme. However, these approaches have been criticized for being accessible mainly to resource-rich and influential farmers, and failing to influence the vast majority of resource-poor farmers to increase agriculture production and productivity and thereby reduce rural poverty. These approaches have been considered as inappropriate within the Nepalese context.

In response to the criticisms of the previous extension approaches and the lessons learned from them, the Government of Nepal adopted a farmer group approach as their official agricultural extension approach in 1988/89, and this has remained the main strategy for government agriculture extension since that point. This approach emphasises building and strengthening farmer organizations at the local level and using this as a vehicle for agriculture service delivery. Recently, farmer group participation was seen as an avenue to empowerment in the contemporary agriculture extension literature. However few empirical studies have been conducted in either Nepal or other developing countries to understand how participation in farmer groups contributes to the empowerment of farmers. Various scholars in agricultural extension have also asserted that there is a general lack of understanding about how agricultural extension programmes influence the empowerment of participating farmers. Rather, the empirical literature on farmer groups has tended to focus on easily measured direct outputs from agricultural extension such as technology adoption, innovation diffusion, yield increment, income and/or farm profit.

1.6 Aim of the research and research question

The main purpose of this research is to gain an improved understanding of how participation in a farmer group contributes to the empowerment of its members in the rural context of Nepal. To this end, farmer groups assisted by the public agricultural extension organisation in Nepal were studied by using empowerment theory and through employing a qualitative case study research approach. In order to answer the overall aim, the following research question is formulated:

How does participation in a farmer group, assisted by the public agricultural extension organisation, contribute to the empowerment of its members in rural communities in Nepal?

1.7 Structure of the thesis

This thesis is organized into seven chapters. In Chapter One, the background of the research, aim and research question for the study are described. Chapter Two contains a review of the relevant literature associated with empowerment and farmer groups to develop a theoretical framework that provides the basis for conducting this study. Chapter Three provides a description of the research methodology used in this study. A description of the case that was used as the basis for this study is presented in Chapter Four. Chapter Five reports the results from the study and describes how farmer groups facilitate the empowerment of participating farmers. In Chapter Six, the findings from this study are compared and contrasted with the existing literature. The conclusions of the study are presented in Chapter Seven.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The purpose of this chapter is to review the relevant literature associated with the research inquiry outlined in Chapter One and thereby to develop a theoretical framework that provides the basis for understanding how participation in a farmer group assisted by the public agricultural extension organisation in Nepal contributes to the empowerment of its members. At first, the concept of empowerment is reviewed from the broader disciplines of the social sciences. This is followed by a review of the concept of power in the context of empowerment. The third section outlines the empowerment framework used in this study to guide the research. Finally the literature related to farmer groups is reviewed to identify more specific and relevant concepts in order to refine the framework and make it more relevant to farmer groups.

2.2 The concept of empowerment

Empowerment became a mainstream concept in development in the 1980s (Luttrell et al., 2009). The earliest written evidence of the term "empower" and its derivation, however, dates back to the seventeenth century in a book *The Reign of King Charles* by Hamon L. 'Estrange, according to Lincoln, Travers, Ackers, and Wilkinson (2002). On the other hand, Batliwala (2007) and Pettit (2012) argued that the notion of empowerment is embedded in a wide range of social movements and historic struggles. Batliwala (2007) further related empowerment to the Veerashaiva movement of the 12th century. This movement agitated against gender and caste discrimination in

southern India and sought the redistribution of power through the destruction of the existing social stratification.

Although the notion of empowerment has been related to other terms such as self-direction, autonomy, self-confidence, self-reliance, own choices, liberation, mobilisation, control, participation and independence (Ibrahim & Alkire, 2007; Malhotra & Schuler, 2005; Narayan, 2002), there is no universal definition of the concept. The term has been used by many organisations and scholars to mean different things and there are an endless number of interpretations (Luttrell et al., 2009; Malhotra & Schuler, 2005; Scrutton & Luttrell, 2007). The term also conveys a diverse range of meanings in different sociocultural and political contexts (Narayan, 2002). Furthermore, the term has been used across a broad variety of disciplines in the social sciences such as community psychology, social work, political theory, education, women studies, management and sociology (Lincoln et al., 2002). This is why, Hennink, Kiiti, Pillinger, and Jayakaran (2012) argued that in spite of the wider application of the notion of empowerment, it still lacks a clear definition. The following section briefly reviews the concept of empowerment in development literature in order to provide a broad overview of the concept within the development context.

Page and Czuba (1999 para. 12) defined empowerment as "a multi-dimensional social process that helps people gain control over their own lives. It is a process that fosters power (that is, the capacity to implement) in people, for use in their own lives, their communities, and in their society, by acting on issues that they define as important". Page and Czuba (1999) suggested that there exist three components that are the basis to the understanding of the notion of empowerment. First, empowerment is multi-dimensional in the sense that it happens within economic, social,

psychological and other dimensions. Further, it also takes place at different levels, that is, at the individual or personal, group, and community or collective level. Second, Page and Czuba (1999) argued that empowerment is a social process because it always happens in relationship to others. The third component of their definition views empowerment as a process similar to a journey or a path. This view is further strengthened by Mosedale (2005) who claimed that empowerment is an ongoing process rather than a final product. She argued that one cannot reach a state of being fully empowered in the absolute sense. Rather, the notion of empowerment, or disempowerment exists in relation to someone else or relative to oneself at a previous time.

Kabeer (2001), one of the most frequently cited authors on empowerment, particularly with regard to the empowerment of women, also provides a similar view of empowerment to Mosedale (2005) by directly linking it with disempowerment. Looking at the individual level, she defined empowerment as “the expansion in one’s ability to make strategic life choices in a context where this ability was previously denied to them” (p. 19). This definition suggests that empowerment involves a process of change from a situation of disempowerment to one of empowerment. According to Kabeer (2001)’s notion of empowerment, an individual who exercises a lot of choices in life might be powerful but is not necessarily empowered. This is because that individual has never been disempowered (Kabeer, 2001). Thus, this definition implicitly separates empowerment from the general notion of power that is wielded by dominant people or groups. This definition relates empowerment with the change in the ability of individuals to exercise choices that are strategic for their lives. Thus, Kabeer (2001) classified choices into two categories: first order and second order choices, based on

their consequences for people's lives. First order choices encompass strategic choices that are crucial to the lives of individuals such as choices related to livelihood, residence/living arrangements, marriage, reproduction and so on. Second order choices, on the other hand, are those choices that might influence the quality of their lives but are less consequential ones for their lives (Kabeer, 2001).

Kabeer (2001) argued that the ability of an individual to make choices is composed of three inter-related elements: resources (as conditions), agency (as process), and achievements (as outcomes). Resources provide the conditions that serve to increase the ability of people to exercise choices and may be material (such as land, finance and equipment), human (for example, skills, knowledge and creativity), or social (for instances, expectations, claims and obligations inherent in the relationships, connections or networks of the individuals). In the context of empowerment, Kabeer (2001) claimed that the conditions under which individuals have access to resources are as noteworthy as the resources per se. For example, if a woman has access to resources but that access is primarily dependent upon a family member, her ability to make strategic life choices appears to be limited (Kabeer, 2005). This implies that empowerment involves not only an increase in access to resources, but also a change in the conditions under which the resources are obtained.

The second inter-related dimension of empowerment, according to Kabeer (2001), is agency, which is at the centre of the process through which choices are made. It is the ability of individuals to set their own goals and act on them. The third dimension, achievement, is the outcome of an individual's choice. It is essentially the manifestation of their resources and agency (Kabeer, 2001). The presence of one or two of these elements does

not enhance the ability of individuals to make strategic life choices. In other words, this does not empower an individual. For instance, a benevolent autocrat can offer food resources to people and this will lead to achievement in terms of improved nutrition. However, this does not have any bearing on the ability of the recipient to make strategic life choices (Mosedale, 2003). Furthermore, Malhotra and Schuler (2005) claimed that although resources are crucial in the process of empowerment, they are not sufficient by themselves and access to resources may not necessarily lead to greater control over resources. As such, resources are not a feature of empowerment, but are considered an enabling factor which has the potential to foster empowerment (Malhotra & Schuler, 2005). However, if an individual has no capacity to identify and make use of the available resources, such resources will not generate empowerment (Malhotra & Schuler, 2005).

Like Kabeer (2001), scholars such as Alsop, Bertelsen, and Holland (2006), Narayan (2002, 2005) and Petesch, Smulovitz, and Walton (2005) also place emphasis on the importance of choice when describing empowerment. For Alsop et al. (2006), empowerment is “a group’s or individual’s capacity to make effective choices, that is, to make choices and then to transform those choices into desired actions and outcomes” (Alsop et al., 2006, p. 10). Similarly, Narayan (2005, p. 4) viewed empowerment “as increasing poor people’s freedom of choice and action to shape their own lives”. Unlike Kabeer (2001), who focused on three inter-dependent dimensions that define the capacity of an individual to exercise strategic life choices: resources, agency and outcomes, these authors (Alsop et al., 2006; Narayan, 2005; Petesch et al., 2005) argued that the capacity to make effective choices is influenced by two inter-dependent factors: agency and opportunity structure. Agency is described by Alsop et al. (2006) as the

ability of individuals or groups to make choices purposefully. In contrast, opportunity structure is the institutional environment within which individuals live and work and includes formal and informal rules, cultural practices, value systems and beliefs that influence their ability to translate agency into action (Alsop et al., 2006). This implies that agency alone cannot constitute empowerment. This is because, even though individuals have the ability to choose options, they might not be able to exercise that agency fruitfully because of constraints imposed by the opportunity structure. Stern, Dethier, and Rogers (2005) echoed this sentiment, arguing that empowerment involves both the improvement of individual abilities and the removal of external constraints. This suggests that any development strategy that aims to empower people needs to consider both agency and structure.

Scholars such as Narayan (2002, 2005) and Petesch et al. (2005) claimed that the expansion of one's freedom of choices and action implies individuals' increased control over resources and decisions that influence their lives. However, poor peoples' freedom of choice is severely limited by the absence of assets and their powerlessness in connection with a wide range of both formal and informal institutions. Thus, the World Bank's publication *Empowerment and Poverty Reduction: A Sourcebook* provides an institutional definition of empowerment as "the expansion of assets and capabilities of poor people to participate in, negotiate with, influence, control, and hold accountable institutions that affect their lives" (Narayan, 2002, p. 14). In this definition, assets encompass material assets, that is, both physical and financial assets such as land, livestock, jewellery, housing, and savings that enable individuals to expand their freedom of choices. "Capabilities" are viewed as inherent in individuals and these enable individuals to utilise their assets effectively to enhance their wellbeing

(Narayan, 2002). Capabilities can be human, social and political. Human capabilities encompass education, good health and productive or other skills necessary to live. Social capabilities include leadership, social belonging, a sense of identity, trust and the ability to organise. Political capabilities comprise an individual's capacity to form associations, represent oneself or others, and participate meaningfully in the political affairs of a community or state (Narayan, 2002).

According to Narayan (2002), such assets and capabilities can also be collective. Collective capabilities include the capacity of people to organise and mobilise. It enables poor people to overcome their problem of limited resources and get their voices heard (Narayan, 2002, 2005). The term "institution" in Narayan (2002)'s definition refers to both the formal and informal institutions that influence poor people's lives. Formal institutions comprise the rules and laws of state, markets, civil society and international organisations, while informal institutions include exploitative relations, norms of social exclusion, corruptions, networks of kin, neighbours, norms of social solidarity and practice of discrimination (Narayan, 2002). The Sourcebook clearly emphasises that the empowerment of the poor requires the removal of both formal as well as informal institutional barriers that limit their choices and prevent them from moving forward to improve their lives. This means that empowerment is about altering unequal institutional relationships and state reforms and state actions are also required to achieve this. This implies that empowerment is not necessarily a bottom-up or grassroots action, but one in which the state also plays an important role in overcoming the institutional barriers.

In contrast to the above authors, other authors claimed that empowerment originates at the grassroots level through collective action (Batliwala, 2007;

Bennett, 2002; Jacobs, 2006) or social movements (Batliwala, 2007; Jacobs, 2006). From this perspective, empowerment is a bottom-up process where poor and excluded people work collectively to challenge the existing power relations, gain control over the sources of power and enhance their lives (Jacobs, 2006). This is in line with Batliwala (2007)'s view that the notion of empowerment is embedded in a wide range of social movements and historic struggles. Luttrell et al. (2009) mentioned that empowerment has also been seen as a radical concept for social transformation that enables disadvantaged and marginal people to define and exercise their rights collectively. This means that empowerment is a political notion that entails a collective struggle that seeks to redress oppressive and discriminative social relations.

According to Sardenberg (2008), it is not possible to bring about empowerment without conflict, if empowerment refers to change undertaken with respect to domination. This suggests that empowerment that requires structural transformation will engender conflict. Using the example of the empowerment of women as a process of the transformation of unequal power relations between individuals and social groups, Batliwala (1993) mentioned three critical ways to bring about empowerment. First, by challenging the prevailing ideologies that foster social inequality such as caste or gender (that is ideological change), second, changing the existing pattern of access to, and control over, resources and third, transforming the structures and institutions such as family, media, market and state that strengthen and reproduce the existing unequal power relations.

Scholars such as Batliwala (2007) and Luttrell et al. (2009), however, asserted that the meaning of empowerment that is associated with social movements and liberation struggles had been lost when empowerment

became a mainstream concept in the discourse of governments and development organisations in the 1990s that focused on it as an individualistic process. On the other hand, Sardenberg (2008) criticised the World Bank's notion of empowerment because it fails to address why some groups of people in society lack access to resources and are excluded. She argued that their framework of empowerment pays no attention to the fundamental structure of power that gives rise to the situation of disempowerment and exclusion. On the other hand, Parpart, Rai, and Staudt (2002) criticised the notion of empowerment that focuses only on a bottom-up process because it appears to underrate the impact of national and global forces on the prospects of people's empowerment. This is because such forces (whether political, economic or cultural) can contribute to the marginalisation of some individuals and groups and can enhance the power of others. As such, empowerment requires a multilevel analysis that ranges from the local through to the national, or even the global level (Parpart et al., 2002). In relation to this debate about top-down versus a bottom-up process, or collective versus individualistic approach, as argued by Grootaert (2005), this thesis posits that efforts towards empowerment are most effective when considered at the different levels taking in both the individual and collective perspectives.

Grootaert (2005) mentioned that the definition of empowerment in the World Bank's Sourcebook is more specific and narrow than that of the common notion of empowerment in terms of power. First, unlike Kabeer (2001) who viewed empowerment in relation to disempowerment, the definition adopted by the World Bank relates empowerment to poor people only. Second, it limits activities to those that are related to institutions (Grootaert, 2005). This definition suggested that non-poor people are powerful and do not require

empowerment. However, the empirical work of Lokshin and Ravallion (2005) in Russia indicated that many men and women who do not recognize themselves as poor believe that they have little power. This implies that the scope of empowerment should not be confined only to the poor. However, this narrow definition of empowerment is useful for selecting the indicators of, and describing, empowerment (Grootaert, 2005).

The above review suggests that despite the fact that the notion of empowerment has become a mainstream concept in the discourse and practice of development, it is a complex concept that lacks a universally accepted definition. It is a debatable concept that conveys a wide variety of meanings. For example, the work of Ibrahim and Alkire (2007) provided a list of 29 definitions of empowerment that are currently used in the development literature. On the other hand, Batliwala (2007) asserted that the term empowerment is one of the most extensively used and abused terms among the buzzwords that are entrenched within the development discourse in the past three decades. Furthermore, there is an ambiguity about whether the concept is top-down or bottom-up, a process or an outcome, an individual effort or a collective effort. Some of the definitions emphasise the issue of power and control over resources and decisions that enable the individuals to control their lives while, for others, it is the expansion of individual agency. In contrast, others take into consideration the structural inequalities that affect social groups rather than only concentrating on individuals. Having said that, empowerment is such a complex and broad notion that it is difficult to incorporate the whole concept in a single definition. This thesis goes on to posit that empowerment includes (i) an expansion of agency of the individuals to achieve change, (ii) increased access and control over resources that help individuals to shape their lives, and (iii) a transformation

of unequal power relationships that hinder individuals' ability to exercise their agency and to access and take control over resources. This review of literature on empowerment indicates that a fundamental concept within empowerment is power and thus understanding empowerment requires understanding the notion of power. The following section briefly reviews the concept of power.

2.3 Power in the context of empowerment

Power is a multidimensional concept (Belaya, Gagalyuk, & Hanf, 2009; Csaszar, 2005; Veneklasen & Miller, 2002b) that is central to understanding many different social phenomena (Snyder & Kiviniemi, 2001). It is a complex concept that lacks a universal definition (Belaya et al., 2009; Csaszar, 2005), despite the fact that the notion of power is widespread in many social sciences including political science, sociology, international relations, anthropology, organisational studies, political economy and geography. The term has diverse meanings depending on the context in which it is operating and its meaning is often contentious (Eyben, Kabeer, & Cornwall, 2008). However, Haugaard (2011) summarised different power theories into three schools of thought: first, power as conflictual, second, power as consensual and third, power as a combination of both. Conflictual power-theorists look at power in conflictual terms as a means through which one party protects its interests against another (Alsop et al., 2006). In this perspective, power is inherently negative and noxious (Csaszar, 2005). From this viewpoint, power allows one individual to force another to act in ways that the latter would not otherwise do (Haugaard, 2002). Here, power is seen in terms of dominance where one actor exerts dominance over another (Maschietto, 2016). According to Haugaard (2011), theorists such as Max Weber, Michael Mann, Robert Dahl and Steven Lukes perceive power as primarily conflictual. At the

other end of the spectrum, scholars of the second school of thought, such as Barry Barnes, Hannah Arendt and Talcott Parsons, view power mostly as consensual (Haugaard, 2011). From this viewpoint, power is generated through social interaction and consent is the fundamental basis of power (Maschietto, 2016). Unlike the conflictual power theorists, consensual power theorists presuppose that power is not a zero-sum game, that is, the gain in power by one person must be offset by the loss of power by someone else (Csaszar, 2005; Haugaard, 2002). Rather, consensual power theorists claim that power is the ability to achieve goals or outcomes (Csaszar, 2005). One telling example of the manifestation of consensual power relates to a form of empowerment, according to Haugaard (2011), is where like-minded individuals come together to form a self-help group for a common interest. Theorists like Anthony Giddens, Keith Dowding, Mark Haugaard, Michael Foucault and Stewart Clegg representing the third school of thought, argue that power is constituted by both consensus and conflict (Haugaard, 2011). A review of such a rich and complex theory of power is, of course, beyond the scope of this thesis. Rather, this section aims to highlight briefly the meaning of power from different perspectives that is useful to understand the notion of empowerment.

Traditionally, power simply refers to the ability of one actor to get another actor to do something in spite of resistance (Ronayne, Harkins, Austin, & Sharicz, 2010). For example, a notable social scientist, Max Weber defined power as “the probability that one actor within a social relationship will be in a position to carry out his own will despite resistance” (Weber, 1947, p. 152). Weber (1947) relates power with authority and rule. He is primarily interested in power as domination. This form of power is also theorised as *power over* (Haugaard, 2012). In this perspective, the powerful are those

individuals who have resources and capabilities and who hold power over other individuals (Cahill, 2008). This means that power is exercised by politically, economically or socially dominant people over those who have less resources, be it economic, social or political. According to Haugaard (2012), several other prominent scholars (such as Bachrach & Baratz, 1962; Dahl, 1957; Lukes, 1974, 2005) also examine power as a form of domination like Weber (1947). Under this view of power, Cahill (2008) claimed that empowerment refers to the process through which disempowered or powerless people gain control over resources and institutions that are in the hands of the powerful. She further argued that the notion of empowerment entails opposition against the powerful structure of the centre to redistribute resources to the powerless on the margin. However, Page and Czuba (1999) claim that focussing only on the notion of power as control or domination limits our capacity to define and interpret empowerment.

Parsons (1963), one of the leading representatives of the second school of thought, argued that power does not simply just exist, it is produced or created by society. He looks at power as a generalised resource or means to achieve goals. It is produced by the individuals within a social system that can then circulate like money, within the system and can accumulate in some positions/roles within the social system (Parsons, 1963). His fundamental concept of power is that power in a political system plays the same function as money in an economic system. Authors such as Csaszar (2005), Haugaard (2010) and Haugaard (2012) claimed that Parsons (1963) made a fundamental contribution to the power debate by showing that power is not necessarily a zero-sum game. A gain in power by a powerful actor may not necessarily be at the expenses of the powerless. Rather, the power of both parties can be expanded. However, Parsons (1963) is criticised for

his concept of power because it overlooks conflictual power and his analogy between power and money is too simplistic (Csaszar, 2005).

A very influential theorist on power, Foucault (1980), on the other hand, refuted the notion that power as a 'thing' or a 'capacity' that is gained, held and wielded by particular individuals or social groups, classes or the state. He asserted that power is relational and found in every social interaction between different people and groups or organisations and that it exists only when it is exercised. According to him, power is not located at a particular place or person, but power is everywhere. This implies that not only the state, ministers or authorities, but also any individual including socially excluded people, children or the poor have and can exercise power. Another feature of Foucault (1980)'s conception of power is that power is not simply a form of domination. Rather he argues, power is generative or productive. That is, it produces different types of knowledge and action, new vocabularies and ways of speaking (Foucault, 1980). The negative connotation of power is broadened by him to comprise positive power (Stein & Harper, 2003; Wickham, 2006). Despite his immense scholarly contribution to the understanding of power, Foucault is criticised for his analysis of power because it is Eurocentric and male-focussed (Parpart et al., 2002). Furthermore, Foucault fails to include a detailed analysis of how hierarchies of caste, ethnicity and gender influence the complex web of power (Bradley, 2007).

This review suggests that power is also a very contested and multidimensional notion that lacks a universally accepted definition. Some see power as a finite thing or capacity gained, held or exercised by actors and that makes some more powerful while others are powerless. Others conceptualise power as relational that affects everyone, but no-one holds it

and it exists only when it is exercised. Another debate related to power is whether it is conflictual or consensual. For some, it entails conflict where one actor influences another to do what he/she would not have done otherwise while for others, power is thought of as consensual where actors can achieve more together than they can by acting alone (Dowding, 2011). This is why Gohler (2009) asserted that the notion of power appears to be one of the most controversial and ambiguous concepts in the social sciences. Haugaard (2010) argued that rather than seeking a single universal definition acceptable to all, power can be best understood as a family resemblance concept. By this, he means power comprises of a cluster of concepts where the notion of power is employed in a variety of contexts and its meaning differs depending on the nature of the contexts. As argued by an eminent German philosopher, Nietzsche (1998), observing the same phenomenon through more and different eyes provides a much more complete conceptualisation of that phenomenon, the alternative meanings of power offer complementary means for examining power relationship in the context of empowerment. In this context, the comprehensive typologies of power, suggested by Gaventa (2006), Rowlands (1997), VeneKlasen and Miller (2002a, 2002b), provides a useful framework for understanding empowerment in this thesis. Their typology indicates that power operates in four different ways: *power over*, *power to*, *power with* and *power within* which can be described as follows:

2.3.1 Power over: This is a very commonly recognized type of power that can be regarded as controlling power (Csaszar, 2005; Rowlands, 1997). The notion of *power over* refers to the capacity of powerful actors to influence the actions and thoughts of powerless actors (Gaventa, 2006). Allen (1999) claimed that the exercise of *power over* may not necessarily be

intentional. For example, in the case of male-female power relations, the male, who is unaware of his power, can exercise *power over* his female counterpart in a routine way. This type of power represents a zero sum game or win-lose situation where the gain of power by one person must be offset by the loss of power by someone else (Csaszar, 2005; Veneklasen & Miller, 2002b). It has various negative expressions such as force, repression, coercion, discrimination and abuse (Csaszar, 2005; Veneklasen & Miller, 2002b). However, Chambers (2006) and Maschietto (2016) claimed that *power over* as such, is neither bad nor good, but rather how it is produced and exercised makes it bad or good. Chambers (2006) argued that *power over* can also be used to empower the powerless. Further, he suggested a wide range of actions through which *power over* can be utilised for the benefits of powerless such as coaching, facilitating, catalysing and making enabling rules. According to Luttrell et al. (2009) empowerment in terms of *power over* focuses on the participation of people in existing economic and political and decision-making structures but this does not encompass changes to these structures. This implies that from a *power over* perspective, empowerment involves bringing marginal and powerless people into the decision-making process.

2.3.2 Power to: This refers to the potential of each individual to shape his/her own life and world (Veneklasen & Miller, 2002a). For Rowlands (1997), this is the productive or generative power that engenders new actions and possibilities without domination, that is, without the exercise of *power over*. Wong (2003) argued that this form of power is the capacity of an individual to take action. In other word, this is agency or effective choice (Chambers, 2006). In terms of *power to*, empowerment is concerned with

individual capacity improvement and access to decision-making (Luttrell et al., 2009).

2.3.3 Power with: This is collective or collaborative power where the powerless exercise power through acting together (Chambers, 2006) to overcome common problems and achieve objectives (Wong, 2003). The notion of *power with* is based on the assumption that “I cannot, but we can” (Wong, 2003, p. 311). VeneKlasen and Miller (2002a) explained that *power with* reinforces personal talents and knowledge through collaboration, mutual support or solidarity. In contrast to *power over*, *power with* operates on the assumption that an increase in the power of one actor enhances the power of others rather than reducing it as is the case in *power over* (Luttrell et al., 2009). The notion of *power with* suggests that the powerless should utilise groups or networks and collaborates with others to challenge and transform existing power relations.

2.3.4 Power within: This conceptualisation of power is related to the concepts of self-esteem, self-identity and self-confidence (Rowlands, 1997; Wong, 2003) which are prerequisites for making decisions and carrying them out (Gaventa, 2006). Csaszar (2005) considered that *power within*, also known as personal power is “the spiritual strength that resides in each of us and makes us truly human” (p. 154). Mosedale (2005) argued that real empowerment starts with *power within* and that it is an asset of an individual that is essential before anything else can be achieved. Its objective is to strengthen an individual's sense of ability to conquer internalised oppression (Wong, 2003).

In the above section, different typologies of power are presented briefly. According to Haugaard (2012), it is generally assumed that *power over* is

related to the conflictual view of power. The remainder of the three forms of power (*power to*, *power with* and *power within*) fall into Foucault's categorisation of power as a positive power (Csaszar, 2005). However, these different expressions of power should not be seen as separate entities and are not mutually exclusive, but they can coexist at the same time or in the same place (Maschietto, 2016). The above framework of power suggests that the notion of empowerment entails not only a change in power relations through the transformation of existing power structures, but it also includes enhancing the ability of individuals and groups to challenge *power over*. Most importantly, the combination of three positive power concepts: *power to*, *power with* and *power within* provide an ability for actors to act and change their own lives and the world they live in (Csaszar, 2005). The following section describes the framework of empowerment that this thesis uses to explore how farmer groups facilitate the empowerment of their member farmers (both male and female).

2.4 A framework of empowerment

As with the definition of empowerment, where different authors have defined it in a number of ways and from different perspectives and there is no consensus on its definition, the assessment of empowerment has also been carried out in a variety of ways in the literature. Despite the fact that a number of studies have been conducted on empowerment, "there has been no overarching framework available for practitioners and researchers hoping to grasp the process and components of empowerment in a comprehensive manner" (Hur, 2006, p. 523). Although some authors (for example, Alkire et al., 2013; Charmes & Wieringa, 2003; Njuki, Kruger, & Starr, 2013) have attempted to develop a composite framework for assessing empowerment, these frameworks have been designed to measure the empowerment of

women only. Such frameworks have not captured all aspects of empowerment because they have only taken into consideration gender relations in order to measure women's empowerment rather than empowerment related to ethnicity or class or caste (Charmes & Wieringa, 2003). Moreover, these types of frameworks are not applicable for the study of the empowerment of men (Carr, 2016).

On the other hand, as concluded by Hur (2006), this review of literature also indicates that the majority of the authors (for example, Alkire et al., 2013; Carr, 2016; Carr, Tenywa, & Balasubramanian, 2015; Mahmud, Shah, & Becker, 2012) have developed a framework to measure the outcomes of development interventions on empowerment rather than the process or mechanisms of empowerment. Generally they have collected data from surveys, created indexes of empowerment and analysed the data to measure empowerment. As such, they fail to capture the detailed mechanisms by which empowerment occurs. Furthermore, most of the empirical literature in the field of rural development (for example, Al-Amin, Hossain, & Mathbor, 2013; Duvendack, Palmer-Jones, & Vaessen, 2014; Hashemi, Schuler, & Riley, 1996; Islam, Siddiqui, Hossain, & Islam, 2014; Jain & Jain, 2012; Kato & Kratzer, 2013; Krenz, Gilbert, & Mandayam, 2014; Mahmud, 2003; Pitt, Khandker, & Cartwright, 2006; Sarumathi & Mohan, 2011; Swain & Wallentin, 2009; Vaessen et al., 2014; Weber & Ahmad, 2014) has focussed on the study of the impacts of micro-credit on the empowerment of women. Duvendack et al. (2014), Malhotra and Schuler (2005) and Vaessen et al. (2014) also observed that micro-credit is the most extensively studied area in relation to empowerment. The aim of the micro-credit programme is to offer a small collateral-free loan to poor people for income generation and self-employment. The micro-credit programme

organises people into groups and the group is jointly liable for each other's loans although there are some operational dissimilarities across implementing organisations and countries (for details see Girabi & Mwakaje, 2013; Islam, 2007; Lahkar & Pingali, 2012; Nawaz, 2010; Swain & Wallentin, 2009; Vaessen et al., 2012). However, in some cases, micro-credit lending institutions also offer capacity-building activities such as training and workshops to the borrowers in addition to lending money (for example, Swain & Wallentin, 2009; Vaessen et al., 2012). However, in contrast to micro-credit programmes, the literature (Directorate of Agricultural Extension, 2009; Thapa, 2010) suggests that major interventions in farmer groups, the focus of this study, are to provide agricultural extension services, not credit facilities. In farmer groups, the extension organisations do not offer financial services (credit) to the farmer members as such. Rather, they advise the farmers to establish a group welfare fund for that purpose (Directorate of Agricultural Extension, 2009; Thapa, 2010). Thus, the literature that examined empowerment in relation to micro-credit programmes is contextually different from farmer groups. As such, it does not provide a complete framework for understanding the mechanisms of empowerment vis-a-vis farmer groups.

An additional pitfall in the literature is that generally authors (for example, Holvoet, 2005; Kantor, 2003; Moyle, Dollard, & Biswas, 2006; Oladipo, 2009; Vaessen et al., 2012; Vaessen et al., 2014; Weber & Ahmad, 2014) have selected one or two dimensions or a few indicators of empowerment in their studies, empowerment being a multidimensional concept (Alsop et al., 2006; Friedmann, 1992; Malhotra & Schuler, 2005; Narayan, 2005; Oxfam, 2005; Page & Czuba, 1999; Stromquist, 1995). This problem has long been recognised in the literature. For instance, in a review of empowerment,

Narayan (2005) concluded that economic empowerment is the most commonly studied dimension of empowerment while social empowerment and political empowerment receive less attention and the psychological dimension of empowerment is the least studied dimension of all. Malhotra and Schuler (2005) also reviewed several studies about women's empowerment conducted throughout the world and concluded that "most studies capture only a slice of empowerment" and "they do not even come close to measuring all potentially relevant dimensions" (Malhotra & Schuler, 2005, p. 81). Sanyal (2009) reviewed the literature on empowerment in relation to micro-credit, and found that it overwhelmingly focused on examining economic empowerment. Similarly, Khan and Ghadially (2010) observed that authors from psychology mostly concentrate on the psychological dimension of empowerment whereas economists were more interested in an economic-based framework that focuses primarily on the economic dimension of empowerment such as improved income level for individuals or households.

Some authors (Elwood, 2002; Holvoet, 2005; Khan & Ghadially, 2010; Malhotra & Schuler, 2005; Roy, 2010), however, have highlighted the drawbacks from studies or frameworks that have examined only one dimension of empowerment. For example, examining empowerment solely from one dimension or aspect fails to capture the possibility of changes in other dimensions or aspects and that it may fail to identify other possible changes in power relations (Elwood, 2002). This type of assessment is bound to offer only a partial picture of the entire situation and fails to reflect the complex nature of empowerment (Roy, 2010). In order to avoid this limitation, some authors such as Boraian (2008), Do and Kurimoto (2012), Elwood (2002), Khan and Ghadially (2010), Malhotra and Schuler (2005)

have suggested the use of a multidimensional framework of empowerment that allows a more complete assessment.

Few authors have examined farmer groups in relation to empowerment in general and employed a multi-dimensional framework of empowerment in particular. Against the backdrop that a multi-dimensional framework is more likely to provide a more complete picture of empowerment and because few studies have investigated farmer groups in relation to empowerment, this thesis draws on the social science literature (Ahuja, 2012; Boraian, 2008; Friedmann, 1992; Islam et al., 2014; Maathai, 2012; Malhotra & Schuler, 2005; Narayan, 2005; Oladipo, 2009; Stromquist, 1995) to use a multi-dimensional framework and consider the four dimensions of empowerment: economic, psychological, social and political to investigate empowerment in farmer groups. Since the multi-dimensional framework that delineates empowerment into four dimensions has been used in many different contexts such as ecotourism (Fiorello & Bo, 2012; Park & Kim, 2016; Scheyvens, 2000) micro-credit (Khondkar, 2002; Sangeetha, Bahal, Singh, & Venkatesh, 2013) and media and publication (Magallanes-Blanco & Pérez-Bermúdez, 2009) studies, it is expected that this framework can also be used to examine empowerment in relation to farmer groups. These dimensions of empowerment are described in the following sections.

2.4.1 Economic empowerment

Economic empowerment, according to Maathai (2012), is the ability of individuals to control their own livelihoods through their capacity to make choices on productive enterprises in which they wish to engage. In a similar vein, Stacki and Monkman (2003) defined economic empowerment as the ability of an individual to earn and control economic resources. For Luttrell et

al. (2009), economic empowerment seeks to ensure that an individual has the appropriate capabilities, skills and resources and access to sustainable income for their livelihood. This is thought to enable the individual to think beyond their immediate daily survival needs and it allows them to recognise and exercise their own agency and choices (Eyben et al., 2008). For instance, economic empowerment allows an individual to make decisions about investments in education and health and to take risks to expand the sources of their income (Khan, 2012). Economic empowerment occurs when the individual is able to increase their savings, income and assets (Anand, 2002) while for Aminuzzaman, Baldersheim, and Jamil (2003), economic empowerment entails an increase in income, control over resources and involvement in and control over economic transactions.

Golla, Malhotra, Nanda, and Mehra (2011) claimed that economic advancement (economic gain and success) and agency (making choices and decisions that affect their lives) are inter-related components of economic empowerment. According to them, economic advancement improves an individual's agency. However, when individuals have the ability to exercise choices, they will be in a better position to gain economic success (Golla et al., 2011). This suggests that an improvement in agency is a necessary condition for economic advancement.

Although there is an overwhelming amount of literature on economic empowerment, most of it concentrates on the empowerment of women (Khan, 2012). This literature review found that most of the authors (for example, Al-Amin et al., 2013; Cheston & Kuhn, 2002; Deininger & Liu, 2013; Duvendack et al., 2014; Goetz & Gupta, 1996; Islam et al., 2014; Kato & Kratzer, 2013; Mayoux, 2003, 2007; Vaessen et al., 2012; Weber & Ahmad, 2014; Wrigley-Asante, 2012) have examined the economic

empowerment of women through micro-credit schemes in the development literature. There is a paucity of literature on topics other than women and micro-credit. Few authors (such as, Friis-Hansen, 2008; Schroeder, Zeller, & Agboh-Noameshie, 2013) have studied farmer groups explicitly through the lens of economic empowerment.

In the rural development literature, different authors have used different indicators of economic empowerment. However, the most common indicator of economic empowerment that the majority of the authors highlighted was increased income (such as, Al-Amin et al., 2013; Aminuzzaman et al., 2003; Anand, 2002; Moyle et al., 2006; Narayan, 2005).

Increased ability to generate incomes may enable the people to purchase items to satisfy their personal and family needs, as well as to save money that can be used for further investment (Al-Amin et al., 2013). However, there is consensus in the literature that the mere increase in income does not guarantee that women make decisions related to the use of the increased income unless they have control over that (Alkire et al., 2013; Banu, Farashuddin, Hossain, & Akter, 2001). In other words, the increase in income may not enable them to exercise their agency. There are ample empirical examples particularly in micro-credit literature that increased access to credit through micro-credit programmes enabled women to enhance their income, but despite this, their male counterparts controlled the loan money and the resultant income in patriarchal societies (for example, Al-Amin et al., 2013; Armendáriz & Roome, 2008; Goetz & Gupta, 1996). Control over income is seen as particularly important in the agricultural sector (Alkire et al., 2013). This is because, although women are involved in producing crops and livestock in developing countries, the produce is often marketed by their male counterparts who then retain and use the income

(Alkire et al., 2013). Husain, Mukerjee, and Dutta (2014) argued that women's control over their incomes provides them with financial autonomy. When women have control over the use of their income, then only they can benefit from their own earnings (Alkire et al., 2013). Thus, in the context of women's empowerment, many authors in the rural development literature (for example, Al-Amin et al., 2013; Alkire et al., 2013; Banu et al., 2001; Goetz & Gupta, 1996; Husain et al., 2014; Kantor, 2003; Kato & Kratzer, 2013; Malhotra & Schuler, 2005; Mayoux, 2001; Noponen, 2003; Pitt et al., 2006; Sinha, Parida, & Baurah, 2012; Weber & Ahmad, 2014) have used control over financial resources such as income, savings and loans as a key indicator of economic empowerment, in addition to increased income. The next section reviews the literature on psychological empowerment.

2.4.2 Psychological empowerment

Friedmann (1992) argued that psychological empowerment is about the personal sense of potency that is demonstrated in self-confident behaviour. Stromquist (1995) claimed that psychological empowerment involves the realisation that one can act at the individual and societal levels to change one's condition for the better. Al-Amin et al. (2013) defined psychological empowerment as the enhancement of self-confidence and self-esteem that motivates people to take action. Onyishi and Agbo (2010) argued that empowerment cannot take place unless people have the belief that they can change their own situation and are willing to undertake activities that are directed towards improving their condition. Thus, according to Onyishi and Agbo (2010), the absence of the psychological component renders the rest of the dimensions of empowerment ineffective. This suggests that psychological empowerment is necessary for all other dimensions of empowerment to take place. However, Stromquist (1995) believed that one

cannot bestow the elements of psychological empowerment such as self-esteem and self-confidence, but one can help foster it by providing the conditions favourable for its development. Psychological empowerment is also known as personal empowerment, according to Edwards et al. (2003), Francina and Joseph (2013), Iglehart (2009), Pollack (2000) and Whiteside, Tsey, McCalman, Cadet-James, and Wilson (2006).

A review of literature indicates that micro-credit has been widely studied in relation to psychological empowerment among the group-based development initiatives in developing countries. However, very few authors (for example, Blissett, Simmons, Jordan, & Nelson, 2004; Schroeder et al., 2013) have investigated psychological empowerment in relation to farmer groups. Although authors have used quite different indicators of psychological empowerment, self-confidence and self-esteem are the most common indicators used by the vast majority of authors in the rural development literature (such as, Al-Amin et al., 2013; Carr, 2016; Malhotra & Schuler, 2005; Stacki & Monkman, 2003; Wrigley-Asante, 2012).

Self-confidence is defined as "the belief in oneself and one's abilities" (Al-Shalabi, 2011, p. 72). It is the degree to which a person has confidence in his/her general abilities to handle a situation and accomplish tasks (Tengland, 2008). Self-confidence is also referred to as self-efficacy in some social science literature (for example, Hill, 2016; Jensen, Huber, Cundick, & Carlson, 1991; Lundberg, 2008; Maurer, 2001). Self-confidence can be related to Kabeer (2001)'s notion of *agency* which enables people to define and attain goals and the sense of power they have within themselves (Cheston & Kuhn, 2002; Samanta, 2009). Self-esteem, on the other hand, is the judgement of one's own value, worth or importance (Blascovich & Tomaka, 1991). It is a personal perception of oneself, according to

Zimmerman (1995). Some authors (for example, Mosedale, 2005; Rowlands, 1997; Wong, 2003) relate the concept of self-confidence and self-esteem to the *power within* notion of power that was discussed in a previous Section 2.3.4. With reference to women's empowerment, Kato and Kratzer (2013) claimed that increased self-confidence and self-esteem enable women to play a more active role in decision-making within the household and the community. In the next section, a review of the literature on social empowerment is discussed.

2.4.3 Social empowerment

Maathai (2012, p. 31) stated that social empowerment is about “taking steps to change society so that one’s own place within it is respected and recognised on the terms on which the person themselves want to live, not on terms dictated by others”. This is further elaborated by Khan (2012) who argued that social empowerment entails the process of acting individually and collectively to transform the existing social relationships and discourses and institutions that create discriminative social relationships and exclude some social groups such as the poor, women and lower castes. In other words, social empowerment addresses any form of social discrimination on the basis of gender, race, ethnicity, religion and so on (Mandal, 2013). Eyben et al. (2008) claimed that although anti-discrimination laws are important, such laws are not sufficient unless they are accompanied by deliberate efforts to change the existing informal rules of the game, language and attitudes that reinforce and perpetuate discrimination. Social empowerment is created with the removal of social and cultural barriers that impede the ability of individuals to access equal opportunities and exercise choices (Mahdi, Creighton, Gutierrez, & Agi, 2010). In contrast to this meaning of social empowerment, Fiorello and Bo (2012), Park and Kim

(2016) and Scheyvens (1999) believed that social empowerment refers to an increase in social cohesion and integrity of people in the local community. Magallanes-Blanco and Pérez-Bermúdez (2009) viewed social empowerment differently again and considered that it is the process of acquiring knowledge, skills or other abilities and engaging in collective action.

The above discussion suggests that the meaning of social empowerment differs widely in the rural development literature. There is no universally accepted definition of social empowerment (Pillai & Gupta, 2006). Despite the fact that the literature reflects substantial diversity in defining social empowerment, this thesis conceptualises social empowerment as the transformation of existing social relationships, discourse, norms and values that create discrimination based on gender, class and caste, which is similar to the concept of Eyben et al. (2008); Khan (2012), Koskinen and Paloniemi (2009) and Mandal (2013) described above. This notion of social empowerment is used for the present study because the literature review in Section 2.2 has shown that empowerment also includes a transformation of unequal power relationships and this meaning of empowerment is reflected in this notion of social empowerment. This researcher is interested to know whether farmer groups contribute to the transformation of existing social relationships and, if so, how that occurred. To date, however, few authors have studied farmer groups in relation to social empowerment

Just as social empowerment is defined in different ways in the rural development literature, scholars (for example, Herrman, 2012; Jain & Jain, 2012; Khondkar, 2002; Sangeetha et al., 2013; Soroushmehr, Kalantari, & Fami, 2012; Weber & Ahmad, 2014) have examined it from different perspectives using different indicators. However, Boraian (2008) has

suggested some indicators that could be used to assess the changes in the existing social relationships that have occurred through the implementation of rural development programmes. They are (i) changes in the social relationships between men and women and (ii) changes in social relationships between the poor and money-lenders and landlords (Boraian, 2008). These indicators are used for this study because the meaning of social empowerment used in this study is similar to this concept of Boraian (2008). In the following section, literature related to political empowerment is reviewed.

2.4.4 Political empowerment

Political empowerment is the equitable representation of excluded groups of people in the decision-making structure and the enhancement of their voices, so that they can be involved in making the decisions related to their lives and communities (Eyben et al., 2008). For Bayulgen (2008) political empowerment is reflected in people's ability to make political choices and their freedom to act on these. Luttrell et al. (2009) and Stromquist (1995) argued that political empowerment involves the capacity of individuals to analyse their socio-political environment and organise and mobilise collectively for social change. This suggests that political empowerment requires not only individual awareness, but also collective action to bring about change. This is further elaborated by Guerin and Palier (2007) that political empowerment involves: i) the engagement of the people in local political institutions, ii) people taking part in protests and public demonstrations for individual rights and to obtain basic services and iii) the lobbying of public officials by the people. Politically empowered individuals can be better equipped to influence the course of their own lives and the public decisions that affect their lives and that of the communities in which

they live (Bayulgen, 2008). It allows individuals to influence policy, claim citizens' rights and hold the state accountable and responsive (Maathai, 2012).

Few authors have studied farmer groups in relation to political empowerment. However, authors (such as, Bayulgen, 2008, 2015; Khondkar, 2002; Maurya, 2015) who have examined political empowerment in contexts other than farmer groups, have attempted to measure political empowerment in terms of two indicators. The first is political awareness and the second one is political participation. Political awareness is a wider concept in the social science literature that refers broadly to an individual's knowledge about politics (Amer, 2009). A number of authors in rural development (Hashemi et al., 1996; Islam et al., 2014; Pitt et al., 2006; Sahu & Singh, 2012; Snijders & Dijkstra, 2011) who have conducted studies in relation to micro-credit, have measured the level of political awareness by using the indicator "knowledge of the name of the elected political officials". However, Attri (2014) argued that this is a narrow indicator of political awareness and that this concept should not be seen only in this narrow sense. Moreover, this indicator of political empowerment is not relevant to the present study. This is because there has been an absence of elected officials in the case village for a long time. For this study, data was collected in 2012 whereas the last local election was held in 1997. Nepal has not had local elections due to a decade-long Maoist insurgency and the resultant political transition (Khanal, 2013). In contrast to the studies in rural development, this particular study uses the definition of political awareness suggested by the political scientist Bayulgen (2008). He believes that political awareness can be measured using four indicators that relate to the level of knowledge individuals have about: (i) publicly provided goods and

services that are available to the community, (ii) the performance of the officials who provide these goods and services, (iii) the rights and instruments available to the community to make the public officials accountable and (iv) the rights and tools available to the community to obtain these goods and services from the public officials.

Political participation, on the other hand, refers to the involvement of the people in the process of public decision-making regarding the affairs that influence their own wellbeing and that of the community (Bayulgen, 2008). Gochhayat (2013) defined political participation as those voluntary activities that aim at influencing the selection of elected public officials and the formulation of public policy, directly or indirectly. There has been no explicit study of the role that farmer groups play in relation to political participation.

Although different forms of political participation have been discussed in the social science literature, the most common forms of political participation that are considered by many authors (for example, Bayulgen, 2015; Gottlieb & Robinson, 2016; Howard, 2013; Husain, Mukerjee, & Dutta, 2013; Kabeer, Mahmud, & Castro, 2012; Mosley, Olejarova, & Alexeeva, 2004; Schuler, Islam, & Rottach, 2010) in the context of rural people are (i) voting, (ii) involvement in party activities such as joining a political party and political campaigning, (iii) contacting elected political leaders and public officials and (iv) involvement in organized collective actions such as marches, campaigns or protests. Although voting is often considered a fundamental form of political participation in the social science literature (for example, Banerjee & Ghosh, 2012; Bayulgen, 2008; De, 2013; Ekman & Amnå, 2012; Jirovec & Erich, 1992), this indicator is not relevant for this study because local elections have not taken place for more than 15 years in Nepal. Alsop and

Heinsohn (2005) also claimed that voting is not an adequate indicator of political empowerment in a place where local elections have not been held.

In the above sections, the social science literature was reviewed in an effort to identify a useful framework of empowerment that would be useful to guide, analyse and explain how participation in a farmer group contributes to the empowerment of its members. The review identified four dimensions of empowerment, that is economic, psychological, social and political, along with different indicators for each dimension, that provides a broad skeleton to frame this study. This framework has been developed largely from studies in contexts other than farmer groups and thus does not provide the detailed causal links between participation in farmer groups and different dimensions of empowerment. In order to establish these links and identify more specific and relevant themes and concepts that explain these links with reference to farmer groups, the literature related to farmer groups is reviewed in the following section. This review aims to obtain insights into how participation in farmer groups can contribute to the empowerment of members in terms of its dimensions and indicators that were identified in the above sections.

2.5 The empowerment of farmers through participation in farmer groups

The contemporary developing country agricultural extension literature (for example, Anandajayasekeram et al., 2008; Chamala & Shingi, 1997; Danish International Development Agency, 2004b; Davis, 2006; Friis-Hansen & Webster, 2004; Garforth, 1994; Githaiga, 2007; Meena et al., 2008; Meinzen-Dick et al., 2014; Qamar, 2005a; Sharma & Khanal, 2009; Singh & Swanson, 2006; Swanson, 2008; Swanson & Rajalahti, 2010) has long recognized that organizing rural smallholders and poorer farmers into groups

has provided an effective institutional mechanism for their empowerment. For instance, Swanson (2009) and Swanson and Rajalahti (2010) claimed that agricultural extension has four functions, one of which is to empower farmers in order to increase their access to extension services, inputs and markets and that this can be achieved by organising them into groups. For Chamala and Shingi (1997), the empowerment function of agricultural extension is the cornerstone of any new approach to agricultural extension. The farmer group approach is a form of participatory extension that aims to empower farmers so that they can lead their own development (Anandajayasekeram et al., 2008). Similarly, Rivera (2008) viewed farmer groups as a participatory empowerment model of agriculture extension that enables the farmers to organise into a power group that influences agriculture development policies, extension and research.

Although farmer empowerment is seen as an important ingredient in contemporary agricultural extension services, the literature about farmer empowerment is scant (Danish International Development Agency, 2004b; Friis-Hansen & Webster, 2004). Further, Friis-Hansen and Webster (2004) argued that there is no consensus on what farmer empowerment embraces. Despite the links explicit in the literature between farmer groups and empowerment that constitutes a fundamental theme in the contemporary agriculture extension, empirical research highlighted that there is a general lack of understanding regarding the impacts that agricultural extension programmes can have on empowerment. For instance, in a review of literature on farmer empowerment, the Danish International Development Agency (2004a) found that although farmer empowerment has been emerging as an important agenda in the agricultural development of developing countries, “a consistent strategy supported by concrete activities,

which may contribute to the empowerment of farmers.....is still lacking in the design and implementation of projects and programmes, because of limited knowledge” (p. ii). Bantilan and Padmaja (2008) claimed that despite ample literature that explains direct impacts of agricultural research and development such as yield increment, income growth and so on, empowerment is one of the important qualitative dimensions of impact that is almost ignored in conventional studies. In another review of agricultural extension, Coutts et al. (2005, p. 65) suggested a direction for further research in extension, particularly “the less tangible concepts of empowerment requires further work”.

This review did not find any publications in international peer-reviewed journals that explained explicitly how participation in farmer groups assisted by the public agricultural extension services in Nepal contributes to empowerment. The review revealed that little empirical research has been conducted to examine farmer groups through the lens of empowerment theory not only in Nepal but also in other developing countries. In this regard, after reviewing research and development in the field of agricultural extension, Fulton et al. (2003) rightly observed that there is a dearth of studies that draw on disciplines other than extension and education. Rather, the empirical literature on farmer groups has tended to focus on easily measured direct outputs from agricultural extension such as technology adoption, innovation diffusion, yield increment, income and/or farm profit (for instances, Adong, 2014; Cramb, 2005; Darr, 2008; Darr & Pretzsch, 2008; Davis, 2006; Desai & Joshi, 2014; Fischer & Qaim, 2012b; Hennessy & Heanue, 2012; Mwaura, 2014; Vuthy et al., 2014; Wambura et al., 2007). It does not offer useful insights into how membership in farmer groups facilitates empowerment. Faure, Desjeux, and Gasselin (2012) also

concluded from their review that most of the articles in the literature have analysed the impacts at the farm level in terms of yields and incomes and that research that focussed beyond the area of the farm performance level was rare.

It has already been discussed in Section 2.4 that very few authors have studied farmer groups using a multi-dimensional framework of empowerment that delineates empowerment into four dimensions: economic, psychological, social and political. Although Schroeder et al. (2013) analysed women farmer groups in Benin with respect to economic, psychological and social empowerment, they did not investigate the political dimension of empowerment. In contrast to the present study that viewed social empowerment as the transformation of existing social relationships, discourse, norms and values that creates discriminations based on gender, class and caste, Schroeder et al. (2013) did not define explicitly what they meant by 'social empowerment'. However, it seems that social empowerment in their study was participation in collective actions and the benefits that accrued from this. The literature on empowerment accrued through participation in farmer groups is discussed in the following section.

2.5.1 Economic empowerment

Although few authors such as Schroeder et al. (2013) and Friis-Hansen (2008) have examined farmer groups in relation to economic empowerment, they have not explained in detail the causal mechanisms of how participation in farmer groups contributes to economic empowerment. For example, Schroeder et al. (2013) reported that farmer group membership increased access to productive resources, such as, information, inputs and credit and that this brought economic empowerment for women farmers. However, they

failed to describe how increased access to productive resources contributed to an increase in income. Moreover, their analysis was not theory-informed, that is, the causal link between participation in farmer groups and economic empowerment was not explained in relation to theory.

Other authors (Aliguma, Magala, & Lwasa, 2007; Msuta & Urassa, 2015; Vaarst, Nalunga, Tibasiima, Dissing, & Dissing, 2012; Wambura et al., 2007) have also reported that farmer group membership has contributed to an increase in incomes, but they did not examine farmer groups through the lens of empowerment. These authors have also not described the mechanisms by which participation in farmer groups has led to an increase in farmers' incomes. For instance, a study by Msuta and Urassa (2015) revealed that farmer groups increased access to goods and services for farmers such as improved seeds, pesticides, fertilizers, credits, market information and extension services and that this then enabled farmers to increase yields and incomes. However, they did not describe how increased access to goods and services contributed to an improvement in yields. In a similar vein, Wambura et al. (2007) reported that farmer groups provided increased access to inputs, credits, information and the use of improved production technology, which enabled farmers to increase production. Then, this contributed to an increase in incomes. However, they did not explain how increased access to inputs, credits and information engendered a higher level of production.

The literature review in the previous Section 2.4.1 suggests that control over financial resources is an important indicator of economic empowerment, particularly for women. However, few studies (for example, Fischer & Qaim, 2012a; Schroeder et al., 2013) have examined this aspect of empowerment in relation to farmer groups. In a study of women farmer groups in Benin,

Schroeder et al. (2013) found that most of the women had control over the income they generated through participation in farmer groups. They observed that around two thirds of the women had control over decision-making regarding their self-generated incomes, whereas around 10 % of women had no such control. In other words, in 10 % of the cases, the male counterpart made the decisions regarding the use of the income earned by the women. In another study, Fischer and Qaim (2012a) surveyed banana-producing farmer groups in Kenya and reported that the participation of women in farmer groups increased the likelihood that women would have control over incomes generated from banana production. However, neither of these two studies have investigated another two aspects of control, that is, control over loans and control over savings which are important from the perspective of women's economic empowerment. The following section reviews the literature on psychological empowerment as a consequence of farmer group membership.

2.5.2 Psychological empowerment

Few authors have examined the psychological dimension of empowerment in relation to farmer groups. Blissett et al. (2004) and Schroeder et al. (2013) found that the self-confidence and self-esteem of farmers increased as a consequence of participation in farmer groups. However, these studies did not describe the causal mechanisms by which farmer group membership facilitated psychological empowerment. For instance, Schroeder et al. (2013) reported that farmer groups in Benin provided opportunities for women farmers to build capacity and that this enhanced their self-confidence and self-esteem. However, they did not specify what constituted capacity-building in their study and how that enhanced capacity developed a greater

sense of self-confidence and self-esteem. The following section reviews the literature of farmer group membership on social empowerment.

2.5.3 Social empowerment

There is little written in the literature about the contribution of farmer groups to change in the power relationships within both the households and the communities. In a study of women farmer groups in Benin, Schroeder et al. (2013) found that group membership strengthened women's positions within the household and the community. Participation in farmer groups allowed women to generate income on their own and that enabled them to support their husband and family members by contributing to household expenses. This, in turn, strengthened their position within the household and community (Schroeder et al., 2013). However, little has been written about the role of farmer groups in shifting the power dynamics between the rich and poor and the mechanisms associated with this. The influence of farmer groups on political empowerment is reviewed in the following section.

2.5.4 Political empowerment

Although farmer groups have been considered as an effective means for farmers to present demands and exert pressure on agricultural extension service providers to deliver the agricultural extension services efficiently in the agriculture extension literature, (for example, Christoplos, 2010; Friis-Hansen & Webster, 2004; Heemskerk & Wennink, 2004; Karaya, Onyango, & Amudavi, 2013), little has been written explicitly about the role that a farmer group might play in enhancing political awareness and political participation, the indicators of political empowerment identified in the foregoing Section 2.4.4.

In above sections, the empirical literature that assesses the different dimensions of empowerment in relation to farmer groups in developing countries is reviewed. The literature does not provide a clear theory-informed route to empowerment through participation in farmer groups. Neither does it describe the causal mechanisms of how participation in farmer groups contributes to the different dimensions of empowerment. However, in a study of farmer field schools⁶ in Bangladesh, Bartlett (2004) has reported explicitly on the three routes to empowerment through the accumulation of three different forms of capital. These were human capital, social capital and financial capital. However, Bartlett (2004) did not consider empowerment in relation to its four dimensions and thus has not explained how these three different routes lead to economic, psychological, social and political empowerment.

In a quantitative study of the impact of the "Lifelong Learning for Farmers" programme on the overall empowerment of farmers in Uganda, Carr et al. (2015) also concluded that integration of the three forms of capital (human, social and financial) had a positive impact on the empowerment of farmers. However, they did not explain which form of capital influenced which dimension of empowerment. Although these two studies do not provide detailed insights into how the three different forms of capital contribute to the four dimensions of empowerment, they do suggest that these three forms of capital may lead to different dimensions of empowerment. Thus, in the following section, the three forms of capital are briefly reviewed.

⁶ A farmer field school is a participatory extension method of learning in which a group of farmers sets up experimental plots for a crop and meets regularly (generally weekly) throughout the season to learn about the crop through observation, experimentation and discussion (for details, see David, 2007; Davis et al., 2012; Friis-Hansen & Duveskog, 2012; Noordin, Niang, Jama, & Nyasimi, 2001)

2.6 The three forms of capital that can be accumulated through membership in farmer groups

The following section briefly reviews the literature on human capital, social capital and financial capital accumulation through farmer group membership. The farmer group literature does not provide an adequate understanding of the meaning of these three forms of concepts. As such, definition of these concepts is drawn from the social science literature whereas insights into the influence of farmer group membership on the acquisition of the different forms of capital is drawn from the literature on farmer groups.

2.6.1 Human capital accumulation

Human capital refers to the attitudes, knowledge and skills of individuals (Baptiste, 2001; Björkman & Welch, 2014). Although most authors rarely use the concept of human capital explicitly when explaining the phenomenon, the studies from a range of developing countries (Cramb, 2005; Mudege, Nyekanyeka, Kapalasa, Chevo, & Demo, 2015; Ngwira, Johnsen, Aune, Mekuria, & Thierfelder, 2014; Njuki, Mapila, Zingore, & Delve, 2008; Schroeder et al., 2013; Wambura et al., 2007) has provided evidence that participation in a farmer group can enhance the knowledge, skills and attitudes of member farmers.

Farmer groups provided an important avenue for farmers to participate in extension activities that contributed to the acquisition of knowledge, skills and attitudes related to farming (Andersson & Gabrielsson, 2012; Ngwira et al., 2014; Njuki et al., 2008; Schroeder et al., 2013). The major extension activities that farmers can access through farmer groups are training courses, exposure visits, study tours, field demonstrations, and contact with extension professionals (Jacobson, 2012; Ngwira et al., 2014). In addition to

learning through participation in extension activities, farmer groups also provided a platform for social learning (Hennessy & Heanue, 2012; Morgan, 2011; Ngwira et al., 2014). Social learning is defined as the acquisition of knowledge, skills or behaviour as a consequence of interactions with other people (Croney & Newberry, 2007). In a study of farmer groups in Benin, Schroeder et al. (2013) reported that social learning occurred through observation and imitation of other farmer group members. Vaarst et al. (2012) observed that farmers developed knowledge about farming through increased interactions within, as well as between, farmer groups in Uganda.

While the above literature indicates that farmer groups enhance the knowledge, skills and attitudes of members, few studies (for example, Mudege et al., 2015; Schroeder et al., 2013) have linked this to empowerment. Mudege et al. (2015) and Schroeder et al. (2013) have linked increased knowledge, skills and attitudes by virtue of farmer group membership primarily to economic empowerment. Schroeder et al. (2013) found that group membership allowed members to acquire knowledge and skills related to rice farming that contributed to the generation of additional income in Benin. Mudege et al. (2015) reported that farmer group membership increased access to new technologies through training and that led to higher potato productivity and increased incomes in Malawi. However, they did not explain how increased access to technologies contributed to higher productivity of potatoes. Neither did they mention what knowledge, skills or attitudes were enhanced through increased access to technologies that helped to improve productivity. Similarly, Msuta and Urassa (2015) reported that increased access to agricultural extension services by virtue of farmer group membership allowed farmers to enhance their knowledge of modern farming and that this helped them to increase productivity and

incomes in Tanzania. However, they did not explain how that acquired knowledge brought about improvements in yields. Neither did their study examine farmer groups from an empowerment perspective. Other studies (Danish International Development Agency, 2004b; Trompf, Sale, Saul, Shovelton, & Graetz, 1998) have shown that learning through farmer groups enhanced farmers' self-confidence, but they did not capture whether learning influenced self-esteem, the other indicator of psychological empowerment.

2.6.2 Social capital accumulation

There are a diversity of definitions for social capital in the social science literature (such as Bourdieu, 1986; Coleman, 1988; Portes, 1998; Putnam, 1993, 1995). For example, Bourdieu (1986, p. 248) 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 institutionalized relationships of mutual acquaintance or recognitionwhich provides each of its members with the backing of the collectively-owned capital". This definition suggests that social capital consists of two components: a network with which an individual is associated and the resources that stream through that network. For Bourdieu (1986), social capital is a resource attributed to individuals by virtue of their membership in groups or social networks such as voluntary organizations and trade unions. On the other hand, Putnam (1995, p. 67) defined social capital as "features of social organization such as networks, norms and social trust that facilitate coordination and cooperation for mutual benefit".

Putnam (1993)'s definition of social capital contains three distinct elements of social capital: trust, norms and networks. Trust is defined as "confidence in the reliability of a person or a system. It is based on the expectation that

people or organizations will act in ways that are expected or promised, and will take into account the interest of others" (Edwards, 2004, p. 26). According to Putnam (1993), trust lubricates cooperation and collective action, that is, people work together easily if they trust each other. Norms are "shared values and accepted behaviours and expectations that may exist within networks, and which serve to enhance the functioning of networks" (Edwards, 2004, p. 149). The norms related to cooperation, reciprocity and acceptance of diversity facilitate individuals to act cooperatively (Edwards, 2004) because they provide people with the confidence that others will also act in the same way (Pretty & Ward, 2001).

Networks are the relationships between the people that exist at different levels and these range from household to global levels (Edwards, 2004). These networks are important channels for the flow of different types of resources (Schuller, Baron, & Field, 2000) such as information, goods and money. A network also generates trust because a network provides the information about the trustworthiness of other individuals (Putnam, 1993). Edwards (2004) classified networks into three types: bonding, bridging and linking. A bonding social network refers to the connections among a homogenous group of people (Edwards, 2004; Iwase et al., 2012; Schuller et al., 2000) with respect to location (Stayner, 2005), socio-demographic characteristics (Szreter & Woolcock, 2004) and ethnicity, social class and status (Iwase et al., 2012). Formal and informal clubs, associations and farmer groups are examples of bonding social networks (Njuki et al., 2008). This type of social capital encourages homogeneity and tends to develop strong ties (Schuller et al., 2000). A bridging social network is the linkage between heterogeneous groups (Giorgas, 2007; Iwase et al., 2012; Szreter & Woolcock, 2004). Linkage between two different farmer groups from

different places is an example of bridging social networks (Heemskerk & Wennink, 2004; Njuki et al., 2008). In contrast to bonding and bridging social networks, a linking social network refers to the ability of groups or individuals to connect vertically with powerful people in terms of politics and wealth (Woolcock & Sweetser, 2002) and/or with external organizations to obtain useful resources or to influence policies that affect them (Pretty & Smith, 2004). The connection of farmer groups with organisations related to research and development and agriculture extension service providers is an example of linking social networks (Heemskerk & Wennink, 2004).

The literature that has employed a social capital framework in agriculture development has largely concentrated on exploring the social capital embedded in the social networks that individual farmers can access and mobilize (for example, Katungi, Edmeades, & Smale, 2008; Muange, Chwarze, & Qaim, 2014; Njuki et al., 2008; Seboka & Deressa, 2000; Sseguya, 2009; Tatlonghari, Paris, Pede, Siliphouthone, & Suhaeti, 2012; Winters, Cavatassi, & Lipper, 2006). Limited research has been undertaken into farmer groups and how social capital is built within such groups. However, the literature on farmer groups (such as de Haan, 2001; Jacobson, 2012; Kilpatrick, 2007; Kilpatrick & Bell, 2001; Schroeder et al., 2013; Vaarst et al., 2012) has revealed that farmer groups can be an effective means of building social capital. Drawing from the literature (such as Catacutan, Cramb, & Culasero-Arellano, 2006; Cramb, 2005, 2007; Jacobson, 2012; Kilpatrick & Bell, 2001; Schroeder et al., 2013) it can be said that farmer groups can help to foster three elements of social capital. These are social networks, trust and norms. Jacobson (2012) observed that farmer groups strengthened bonding, bridging and linking social networks in Kenya although such networks varied across farmer groups. Similarly, a study by

Cramb (2005) in the Philippines also indicated that participation in farmer groups can expand bridging and linking social networks.

Katungi, Machethe, and Smale (2007) argued that farmer groups provided a platform for interaction that contributed to the accumulation of social capital. Although the literature (for example, Cramb, 2005, 2007; Kilpatrick & Bell, 2001; Schroeder et al., 2013) indicated that group meetings, participation in collective action and participation in extension activities are three mechanisms that contributed to the enhancement of social capital, little is written about how these three mechanisms (group meetings, collective action and extension activities) helped to foster different forms of social capital. For instance, Kilpatrick and Bell (2001) reported that farmer learning group meetings helped to develop trust within the group in rural Australia. However, they did not explain whether the meetings helped to build other forms of social capital such as norms of reciprocity and norms of cooperation. On the other hand, Schroeder et al. (2013) observed that collective farming strengthened social capital by strengthening social ties in Benin but they did not mention the other elements of social capital. Catacutan et al. (2006) suggested that group training helped to strengthen bridging social networks in the Philippines and a study by Jacobson (2012) demonstrated that exposure visits fostered bridging social networks in Kenya.

Although the above review shows that farmer groups helped to develop different forms of social capital, the mechanisms by which social capital is enhanced are poorly explained in the literature. Few authors have examined the impact of social capital accumulated through farmer groups on empowerment. The study by Schroeder et al. (2013) revealed that social capital accumulated through farmer group membership contributed to

economic empowerment but they do not comment on the other dimensions of empowerment. With respect to economic empowerment, their study reported that social capital facilitated collective action, that is group farming and then that contributed to an increase in incomes. However, they did not explore other forms of collective actions that farmer groups may be involved in such as the collective purchase of inputs, collective marketing and labour exchange and their influences on empowerment. Although other authors such as Fischer and Qaim (2012b), Lapar et al. (2006), Mwangi, Markelova, and Meinzen-Dick (2012), Praharaj, Sankaranarayanan, Singh, and Tripathi (2013) and Shiferaw, Obare, Muricho, and Silim (2009) reported that collective action by farmer groups such as the collective procurement of seeds and collective marketing of agriculture produce, enhanced incomes, none of these studies have analysed farmer groups through the lens of empowerment.

2.6.3 Financial capital accumulation

Financial capital is defined as "monetary resources available to people such as savings and credit" (McIlwaine & Moser, 2003, p. 119). Both normative and empirical literature on farmer groups (for instances, Anandajayasekaram et al., 2008; Catholic Relief Service, 2007; Directorate of Agricultural Extension, 2009; Food and Agricultural Organization, 1995; Groverman, 1994; Hoang & Graham, 2006; Karaya et al., 2013; Murisa, 2011; Schroeder et al., 2013; Thapa, 2010; Vaarst et al., 2012; Wambura et al., 2007) have revealed that one of the main benefits of farmer group membership is increased access to financial capital, although the literature has not explained this phenomenon using the concept of financial capital. Several studies (for example, Hoang & Graham, 2006; Karaya et al., 2013; Mahato & Bajracharya, 2009; Murisa, 2011; Vaarst et al., 2012) have shown that

farmer groups facilitate increased access to financial capital through two mechanisms: (i) increased access to loans through group savings funds and (ii) increased access to grants from extension service providers.

As smallholder and poor farmers often face cash constraints that limit their farming operations, several authors (for example, Anandajayasekeram et al., 2008; Catholic Relief Service, 2007; Food and Agricultural Organization, 1995; Groverman, 1994; Thapa, 2010) have suggested that farmer groups can be an effective means of providing access to credit through internal group savings funds. Although there is a large variation in operational modalities, many authors reported that generally farmer groups in developing countries set up a fund, where each member makes a monthly or weekly fixed deposit. Members obtain loans from the fund when they need finance and then repay the loan in instalments (for example, Hoang & Graham, 2006; Islam, Gray, Reid, & Kemp, 2011; Mahato & Bajracharya, 2009; Murisa, 2011; Vaarst et al., 2012). These funding schemes are known by a number of different names: group savings funds (Achet & Fleming, 2006; Mahato & Bajracharya, 2009; Prayukvong, 2005); revolving funds (Danda, Gichinga, & Murithi, 2014; Hoang & Graham, 2006; Islam et al., 2011; Muhanji, Roothaert, Webo, & Stanley, 2011; Peacock, 2005); rotating savings scheme (Murisa, 2011) and welfare funds (Arki & Bauer, 2005; Directorate of Agricultural Extension, 2009; Nepal, 2013; Thapa, 2010).

The second mechanism by which farmer groups increased members' access to financial capital is through increased access to grants through extension service providers (for example, Karaya et al., 2013; Murisa, 2011; Vaarst et al., 2012). Murisa (2011) reported that farmer groups provided opportunities for farmers to obtain grants from the government to procure irrigation pumps and pipes in Zimbabwe. Similarly, Jacobson (2012) observed that farmer

group membership allowed farmers to access grants for machinery in Kenya.

Although the literature provides evidence that farmer group membership facilitates increased access to credit and grants (for example, Hoang & Graham, 2006; Jacobson, 2012; Karaya et al., 2013; Mahato & Bajracharya, 2009; Murisa, 2011; Vaarst et al., 2012), little is written about its impacts on empowerment. A few authors (such as, Mahato & Bajracharya, 2009; Msuta & Urassa, 2015; Wambura et al., 2007) have reported that loans obtained through farmer groups helped enhance farmers' incomes, which is one of the indicators of economic empowerment. However, they have not described how such loans facilitated an increase in incomes. Similarly, the literature is not explicit about links between access to loans through group saving funds and the other dimensions of empowerment. The impact that grants received from extension organizations have on empowerment is rarely reported in the literature. The next section summarises the key points that have emerged from the literature review and identifies the gaps in the literature in relation to empowerment vis-a-vis farmer groups.

2.7 Summary and conclusions

Empowerment is a complex concept, often with different and contested meanings, that are difficult to adequately reflect in a single definition. However, to sum up, empowerment consists of (i) an increase in the agency of the individuals to achieve change, (ii) increased access to, and control over, resources that help the individuals to shape their lives, and (iii) a transformation of unequal power relationships that hinder individuals' ability to exercise their agency and to access and take control over resources. Empowerment is not only a change in power relations through the

transformation of existing power structures, but it also includes enhancing the ability of individuals and groups to challenge *power over*. The integration of *power to*, *power with* and *power within* provide the capability for individuals to act and change their own lives and that of their communities.

Despite the increasing popularity of the concept of empowerment, there is no overarching framework that can be used to help understand empowerment in relation to farmer groups. In the field of rural development, most of the previous studies have examined the empowerment of women in relation to micro-credit. As such, these studies do not provide a complete framework for investigating how farmer groups contribute to empowerment. While some authors have developed a composite framework to assess the empowerment of women, focussing mainly on gender relations, this does not allow one to capture all aspects of empowerment and it is not applicable to the study of the empowerment of men. Other studies have tended to assess the outcomes of development interventions on empowerment rather than the mechanisms that lead to empowerment. Other authors have chosen to study empowerment using some of its dimensions or indicators. These approaches provide a partial view of the phenomenon and do not capture the complex and multi-dimensional nature of empowerment. However, some authors have suggested the use of a multi-dimensional framework of empowerment to allow a more complete assessment of the concept. They mostly divide empowerment into four dimensions: economic, psychological, social and political. Although few authors have studied empowerment with respect to farmer groups, this multi-dimensional framework has been used in diverse sectors such as micro-credit, ecotourism and media and publication. Thus, it is expected that this framework can also be employed to investigate empowerment in relation to farmer groups.

The broader social science literature that examines phenomena other than farmer groups provides useful definitions of and indicators for each of the four dimensions of empowerment. Although various authors have used different indicators to measure empowerment, the most common indicators used by many authors for economic empowerment are increased income and control over financial resources. Self-confidence and self-esteem are the most common indicators of psychological empowerment used by many authors. Indicators for social empowerment included changes in social relationships between men and women and change in social relationships between the poor and the money lenders and landlords. Political awareness and political participation are two major indicators used by authors to measure political empowerment.

Although the multi-dimensional framework that is drawn from broader social science literature provides a framework to guide this study, it does not provide specific themes and concepts that explain mechanisms of empowerment in relation to farmer groups. This review of literature has highlighted that although farmer groups have been increasingly recognized as an effective means for the empowerment of farmers, surprisingly little is known about the impact of farmer groups on the empowerment of their members. Further, this review reveals that few authors have investigated this domain using a multi-dimensional framework. Although some research has been undertaken on farmer groups in relation to economic and psychological empowerment, little has been written about the other two dimensions of empowerment, that is, social and political empowerment. Moreover, the literature does not offer clear theory-informed routes to empowerment and it does not set out the mechanisms by which farmer group membership facilitates empowerment across the four dimensions.

However, in a study of farmer field schools in Bangladesh, Bartlett (2004) reported that farmer field schools empowered farmers through three routes: human capital accumulation, social capital accumulation and financial capital accumulation. However, this study did not analyse farmer field schools using the multi-dimensional framework of empowerment and, thus, this study also does not provide the detailed causal links between these three forms of capital accumulation and the four dimensions of empowerment.

In spite of the fact that most authors rarely use the concept human and financial capital explicitly in their writings, the literature on farmer groups provides some evidence that participation in farmer groups contributes to the accumulation of these three forms of capital. However, limited literature has linked the three forms of capital accumulated by virtue of farmer group membership with the four dimensions of empowerment. Although there are a few studies that show that the three forms of capital acquired through participation in farmer groups contribute to economic and psychological empowerment, these studies provide limited insight into how the acquired capital leads to economic and psychological empowerment. Moreover, knowledge about the impact that this capital has on social and political empowerment and the associated mechanisms is lacking in the literature. Based on the literature review, the following two specific research sub-questions are developed in order to help answer the main research question stated in the Chapter One: *How does participation in a farmer group, assisted by the public agricultural extension organisation, contribute to the empowerment of its members in rural communities in Nepal?*

- (i) *How does participation in a farmer group facilitate different forms of capital accumulation?*

- (ii) *How do the different forms of capital accumulated by virtue of farmer group membership enhance the different dimensions of empowerment?*

The next chapter describes the research method used in this study.

CHAPTER THREE

RESEARCH METHODS

3.1 Introduction

This study is intended to answer how participation in a farmer group, assisted by the public agricultural extension organisation, contributes to the empowerment of group members in rural communities in Nepal. The agricultural extension literature provides limited guidelines about the appropriate research methodology to carry out this type of study. Thus, material from the wider social sciences literature was drawn on to develop the research method used in this study. In this chapter, the research strategy, case study design, case selection, methods of data collection and analysis, and the ethical considerations for the study are explained.

3.2 Research strategy

Influential author Yin (2003) has described five main research strategies that a researcher might undertake: experiment, survey, archival analysis, history and case study. This author also suggested three criteria to determine the type of research strategy to be adopted : the type of research question asked, the amount of control the researcher requires over the behavioural events and the focus of the research, that is, whether it is contemporary or historical (Table 3.1). According to Yin (2003)'s typology, the case study is a suitable research strategy when a researcher: (a) seeks to answer how and why questions, (b) does not require control of behavioural events, and (c) wants to focus on contemporary events. This research is intended to answer 'how' participation in a farmer group, assisted by the public agricultural extension organisation, contributes to the empowerment of its members. The

mechanisms by which participation in farmer groups facilitates empowerment can be best understood in natural settings. As such, control over behaviour is not required for this investigation. The focus of this study is on contemporary rather than historical events. Based on these criteria, a case study approach was assessed as the most appropriate research strategy for this study.

Table 3.1: The criteria used to select appropriate research strategy

Strategy	Forms of research question	Requires control of behavioural events	Focus on contemporary events
Experiment	how, why?	Yes	Yes
Survey	who, what, where, how many, how much?	No	Yes
Archival analysis	who, what, where, how many, how much?	No	Yes/No
History	how, why?	No	No
Case study	how, why?	No	Yes

Source: Yin (2003, p. 5)

A case study is "an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when boundaries between phenomena and context are not clearly evident" (Yin, 2003, p. 13). This means that information on both context and phenomenon are collected in a case study because information about the context is pertinent to understanding the phenomenon under investigation (Hartley, 2004; Yin, 2003). Although surveys are also designed to capture data on phenomenon

and context, the fundamental characteristic of a survey, that is, the limited number of variables to be investigated, only allows the researcher to investigate the context to a limited degree (Yin 2003). Verschuren (2003) argued that a case study is especially useful for studying complex phenomena that are embedded in a socio-cultural context. The contextual nature of empowerment is highlighted by several authors (for example, Bartlett, 2008; Mahmud et al., 2012; Malhotra & Schuler, 2005). For example, the literature (Mahmud et al., 2012; Malhotra & Schuler, 2005) suggests that the ability of women to travel freely without the permission of their male household members may be a sign of empowerment in a rural community in a patriarchal society, but not in a western context where women go out routinely on their own. As such, the context is an important element in the current study providing further justification for the choice of the case study as the appropriate research approach (Hartley, 2004; Verschuren, 2003; Yin, 2003). Bartlett (2008) also argued that a case study is a useful method for the assessment of empowerment because of its contextual nature.

Although case study research can involve a quantitative, a qualitative or a mixed approach (Eisenhardt, 1989; Gerring, 2007; Yin, 2003), this study has adopted a qualitative case study. This research attempts to explain how participation in a farmer group, assisted by a public agricultural extension organisation, contributes to the empowerment of group members in rural communities in Nepal. This topic cannot be investigated in depth without undertaking a qualitative study (Flyvbjerg, 2006; Hoepfl, 1997; Noor, 2008). The quantitative approach does not provide a multi-dimensional and holistic view of empowerment because it does not allow one to capture how and why empowerment occurs (Pereznieto & Taylor, 2014). A qualitative study is

required to understand the complex multi-dimensional nature of empowerment (Hennink et al., 2012) which enables the researcher to obtain insights into situations from a participant's own narrations and accounts of his/her own life histories and successes, advantages and limitations in relation to their participation in a farmer group (Wrigley-Asante, 2012).

3.3 An overview of the case study design

Research design “is the logical sequence that connects the empirical data to a study’s initial research questions and, ultimately, to its conclusion” (Yin, 2003, p. 20). Yin (2003) has defined four basic types of case study designs: Type 1-single-case (holistic), Type 2-single-case (embedded), Type 3-multiple-case (holistic), and Type 4-multiple-case (embedded) (Table 3.2).

Table 3.2: Basic types of designs for case studies

	Single-case designs	Multiple-case designs
Holistic (single unit of analysis)	Type 1	Type 3
Embedded (multiple unit of analysis)	Type 2	Type 4

Source: Yin (2003, p. 40)

A holistic case design has a single unit of analysis, while an embedded case study design involves multiple units of analysis (Yin, 2003). A single-case design involves studying only one case, whereas a multiple-case design involves the study of more than one case (Gerring, 2007; Yin, 2003). Regarding single-case versus multiple-case designs, both designs have merits and demerits (Johnson & Christensen, 2012; Yin, 2003). However, a multiple-case design was applied in this research for the following reasons.

This research intends to build theory about the mechanisms of how participation in a farmer group, assisted by a public agricultural extension organisation, contributes to the empowerment of its members in rural Nepal. Scholars have argued that multiple-case studies provide a strong foundation for theory generation (Eisenhardt, 1991; Eisenhardt & Graebner, 2007; Yin, 2003). They permit the researcher to compare findings between cases that helps to ascertain whether an emergent theory is just idiosyncratic to a particular case, or replicated by other cases (Eisenhardt, 1991; Eisenhardt & Graebner, 2007; Miles & Huberman, 1994; Yin, 2003). The multiple-case design also yields a more robust theory than a single-case design (Eisenhardt & Graebner, 2007; Yin, 2003), because the emergent themes are more deeply grounded in diverse empirical evidence (Eisenhardt & Graebner, 2007). Moreover, multiple-case studies are also more likely to generate a more elaborate theory (Eisenhardt, 1991; Eisenhardt & Graebner, 2007). However, a demerit of the multiple-case design is that the depth of analysis has to be sacrificed at the expense of the breadth of analysis achieved from studying more than one case (Johnson & Christensen, 2012). The greater the number of cases studied, the lesser the depth of analysis for any single-case (Creswell, 2007). There is, thus, a trade-off between "depth and detail" and "breadth and comparative information" (Johnson & Christensen, 2012, p. 398) in determining the number of cases to study.

This study employed a multiple-case study design to obtain the benefits of this design as mentioned above. As there are no defined rules to determine the number of cases to be included in a multiple-case study (Chad, 1998; Creswell, 2007), this study attempts to answer the research question through the study of four cases. Four cases were chosen to ensure they

covered a diverse range of member characteristics (gender, socio-economic status and caste/ethnicity) in order to generate a more elaborate theory.

An overview of the multiple-case study design is shown in Figure 3.1. The research process can be divided into four stages: (i) planning, (ii) data collection, (iii) data analysis and (iv) reflection (Cepeda & Martin, 2005). A review of the extant literature was carried out in the design phase to develop an initial conceptual framework for this research. This framework also guided the development of the data collection protocol and the case selection criteria for the study. Once the cases were selected, data was collected by employing a number of methods such as semi-structured interviews, focus group discussions, field observations and documents (Hartley, 2004; Patton, 2002; Yin, 2003). During the study, new themes or concepts emerged which needed to be clarified from the literature. Thus, the literature review was ongoing throughout the research process to enable the researcher to match theory with empirical observations and update the theoretical framework accordingly (Cepeda & Martin, 2005; Dubois & Gadde, 2002; Patton, 2002). As data collection and analysis goes on concurrently in an iterative process, a preliminary data analysis was carried out during the researcher's field work (Hartley, 2004; Shin, Kim, & Chung, 2009). This provided an opportunity for the researcher to identify the key areas to focus on and to develop appropriate strategies to collect new data (Shin et al., 2009). However, a more detailed analysis was carried out after the completion of the field work. In a multiple-case study design, there are two stages of data analysis: within-case and cross-case (Eisenhardt, 1989; Eriksson & Kovalainen, 2010; Miles & Huberman, 1994; Yin, 2003). In-depth analysis of the data from each case was carried out separately. Once the within-case analysis was completed, cross-case analysis was carried out to identify similar constructs

and relationships across the cases, but also where the cases were theoretically different (Eriksson & Kovalainen, 2010). Finally, in the reflection stage, the results of the cross-case analysis were compared with the extant theory and a theoretical model explaining how participation in a farmer group, assisted by public extension organisation, contributes to the empowerment of its members was synthesized. In the following sections, this research design is described in more detail.

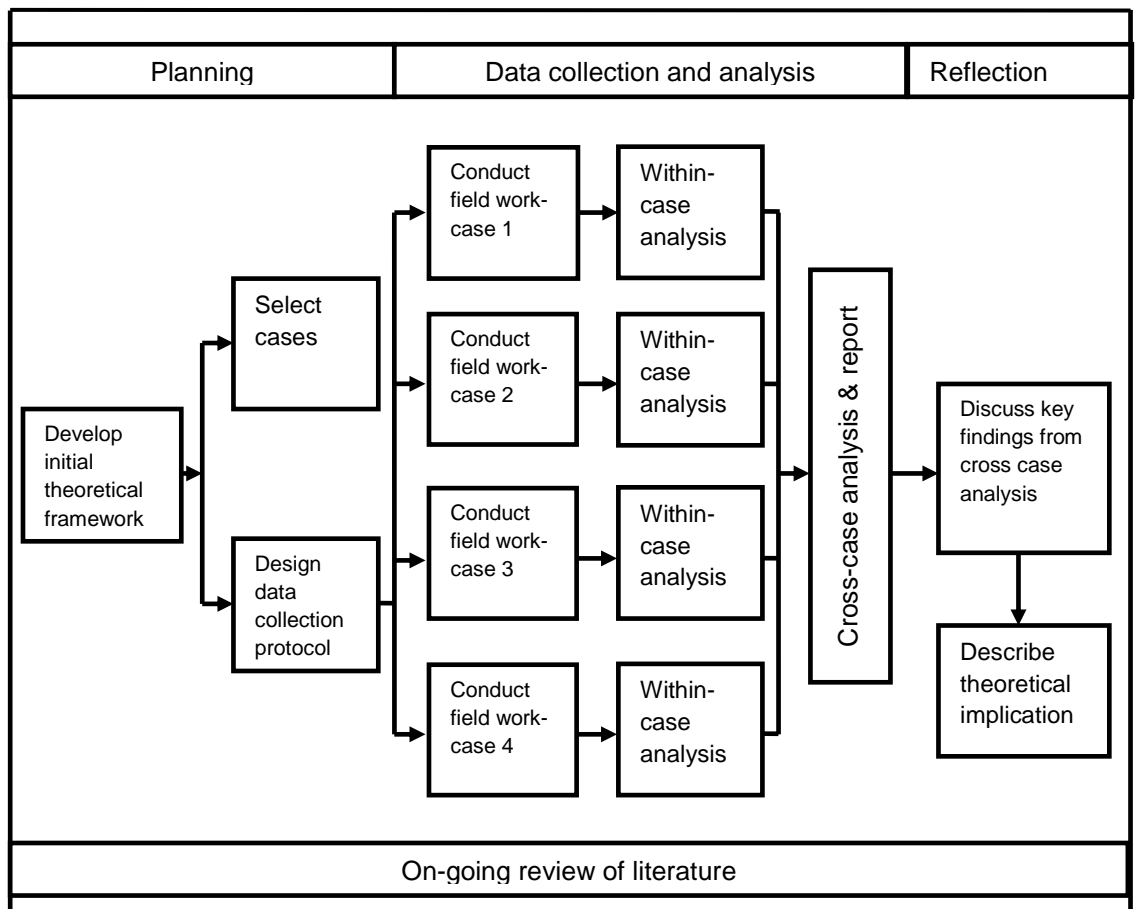


Figure 3.1: The research process (Adapted from Cepeda & Martin, 2005; Yin, 2003)

3.3.1 Case selection

Case selection has two dimensions: the criteria to be applied to select the case, and the number of cases to be investigated (Patton, 2002; Yin, 2003). In case study research, the definition of the unit of analysis and the case are

guided by the research questions (Yin, 2003). The researcher seeks to answer the question: *How does participation in a farmer group, assisted by the public agricultural extension organisation, contribute to the empowerment of its members in rural communities in Nepal?* Therefore, the unit of analysis is participation in farmer groups in this study.

In this study, the cases were selected purposively or based on theoretical logic (Miles & Huberman, 1994; Seawright & Gerring, 2008; Silverman, 2005). One of the important considerations for case selection is location. The present study was carried out in Chitwan district of Nepal. Although one of the limitations of purposive sampling is that the researcher tends to be subconsciously biased in the selection of the sample (Gray, 2009), this district was purposively selected for the following reasons. First, this district is one of the three districts (Chitwan, Tanahu, and Morang districts) where the farmer group approach was tested in a pilot phase by the Government of Nepal and based upon their experience in these districts, the group approach has been introduced throughout the country (Directorate of Agricultural Extension, 2009). Thus, it was expected that this district would provide richness of information and opportunities to learn a great deal about the phenomenon of interest (Patton, 2002; Yin, 2003). Second, the district is accessible and convenient for the researcher (Silverman, 2005; Yin, 2003): This is the home district for the researcher and thus he is familiar with the local culture, language, socio-economic and agro-ecological features of the district. It was expected that this would facilitate the investigation. Third, because the researcher had limited resources (time and budget), by operating in his home district, the time and financial costs associated with accommodation, food and travel were reduced.

In Chitwan district, there were two public agricultural extension organisations: (i) the District Agriculture Development Office (DADO) under the DOA who provides agricultural extension services in the crop and fishery sub-sectors, and (ii) the District Livestock Service Office (DLSO) under the DOLS who provides similar services to the livestock sub-sector. Farmer groups assisted by the DADO were selected purposively for this study. This was because the researcher had been working under the DOA (now on study leave for pursuing this PhD degree) for more than fifteen years and had already served as an agriculture extension officer in DADO across a range of different districts. As such, the researcher is quite familiar with the policies, guidelines, working modalities and extension provision of DADO, as well as the nature of activities carried out by farmer groups assisted by the DADO. The researcher had also developed good personal and professional relationships with many of the officials of the DOA including high ranking executives and the chief and staff of DADO at Chitwan. This enabled the researcher to access documents and farmer groups and to convince the staff of the DOA and DADO to participate in the study. As the researcher had little contact with the DLSO, it was decided that it was unlikely that he could obtain the same access to farmer groups, documents and extension staff that he would obtain at the DLSO. As such, the study focussed on farmer groups working with the DADO. However, the researcher had not worked in the case district and had no previous contact with the farmer groups of this district. This was important in removing one source of bias because the researcher was well known to extension personnel and farmers in the district he worked in. Such familiarity could have biased the opinions of the respondents during the study.

A sample cannot fully be pre-determined in case study, but often evolves after the actual fieldwork starts (Miles & Huberman, 1994). The actual case selection was initiated in February 2012 when this researcher went back to Chitwan from New Zealand for data collection. The researcher visited the DADO, Chitwan, a public agriculture extension organisation in the district responsible for the overall district level agriculture development in the crop and fishery sub-sectors. The objectives of this visit were to inform them about the research and obtain permission to conduct the study. A meeting was organised with the DADO to explain the purpose of the study and discuss the criteria for identifying suitable cases. The DADO staff at the meeting suggested the researcher select farmer groups from the Khairahani Village Development Committee (VDC)⁷. This was mainly because of the following reasons. First, the staff member assigned to this VDC was a very helpful person and could provide the necessary assistance required by the researcher to conduct the study. Second, the staff member had worked in this area for more than two years and he had a good knowledge of the local farmer groups. Third, the village had a wide range of farmer groups in terms of the heterogeneity of membership in relation to gender, social and economic status (for example, male, female and mixed gender groups; upper caste and *Tharu* ethnic people groups; poor and well-off groups) that would provide a rich source of information for the study topic. The researcher then met the staff assigned to the VDC on the same day to inform them about the study. The next day, the researcher visited the ASC⁸ in Khairahani to obtain an overview of the farmer groups in the VDC. It was

⁷ The VDC and municipality are the lowest political and administrative units constituted in Nepal.

⁸ The ASC is the field-based office under the DADO to provide day-to-day extension services.

informed to the researcher that there were 18 farmer groups that were being assisted by the DADO/ASC in the VDC.

There are no defined rules to determine the number of cases to be included in multiple-case studies (Chad, 1998; Creswell, 2007). However, the task of case selection should meet two objectives: representativeness and maximum variation (Gerring, 2007). These objectives of case selection must be fulfilled through purposive sampling (Gerring, 2007). A random sample may not be a suitable strategy when the aim is to get the maximum amount of information on the phenomena of interest (Flyvbjerg, 2006). In this study, case farmer groups were selected purposively or based on theoretical logic (Miles & Huberman, 1994; Seawright & Gerring, 2008; Silverman, 2005). The purpose was to select diverse cases (Gerring, 2007; Seawright & Gerring, 2008) to ensure farmers of different categories in terms of gender (male and female), caste/ethnicity (upper caste and *Tharu* ethnic people) and economic status (poor and well-off) are included in the case farmer groups in order to understand how different categories of farmers are empowered through farmer group membership. This is because the concept of empowerment applies to a wide range of people. For example, Malhotra and Schuler (2005) views empowerment in relation to disempowered people such as women, poor, ethnic minorities and so on. On the other hand, Lokshin and Ravallion (2005) suggest that the scope of empowerment should not be confined only to the poor.

Although the literature is not explicit on the association between ethnic homogenous farmer groups and empowerment of their group members, the JT of Khairahani ASC informed that the *Tharu* ethnic farmer group fostered a higher level of empowerment in comparison to the mixed caste farmer groups. He further suggested to include both the mixed caste farmer group

and the *Tharu* ethnic farmer group as case farmer groups. Thus, this was also considered while selecting the cases.

Group age is also another criteria when selecting the case farmer groups. The group had to be at least two years old because the literature (Anand, 2002) suggests that the performance of a group is best judged at least two years from its formation. This criteria has also been used by other authors such as Anand (2002) and Wrigley-Asante (2012) to study empowerment in relation to micro-credit.

By considering the above criteria, four farmer groups were selected to cover (i) a diverse range of group members in terms of gender, caste/ethnicity and economic status, and (ii) a mixed caste farmer group and a homogeneous *Tharu* ethnic farmer group. This number is also within the range of four to ten cases as suggested by Eisenhardt (1989) as a suitable number of cases for a multiple-case study design. Key characteristics of the selected cases are provided in Table 3.3.

Table 3.3: Key characteristics of the case farmer groups

Key characteristics of group members	Case farmer groups			
	Farmer group A ⁹	Farmer group B	Farmer group C	Farmer group D
Year of formation	2006	1997	2009	2006
Total members	17	12	16	30
Gender composition	Mixed: majority male	Male	Mixed: majority male	Mixed: majority female
Economic status	Smallholder	Majority poor	Majority smallholder	Mostly poor
Caste/ethnicity	Mixed: Mostly upper caste	Mixed: Majority <i>Tharu</i>	Mixed: Mostly upper caste	Homogenous <i>Tharu</i> ethnic

3.3.2 Data collection

Triangulation is a vital aspect for case study research (Verschuren, 2003; Yin, 2003) and is possible only through the use of multiple forms of evidence. The findings from case study research tend to be more accurate and convincing if they are derived from several sources of information (Yin, 2003). Data can be collected from various sources during a case study which can include documents, archival records, interviews, direct observation, participant-observation and physical artifacts (Stake, 1995; Yin, 2003). However, the following methods of data collection were employed for this study: semi-structured interviews, focus group discussions, field observations, and documents. As recommended by Bogdan and Biklen (2003), data was collected from cases in sequences, that is, data was collected from one case before the next case was investigated as working more than one case at a time can create confusion in management of data.

⁹ As per the suggestion of some of the respondents, the names of farmer groups are not disclosed to protect the privacy of the participants. Instead, farmer group A, B, C and D is written throughout this thesis.

Fieldwork for this study was carried out between February and July 2012. Prior to the fieldwork, a data collection protocol was developed to guide the data collection based on the conceptual framework developed for this study in Chapter Two (Taylor, Dossick, & Garvin, 2011; Yin, 2003). A research assistant, identified in consultation with the staff of ASC, Khairahani and key informants, helped in the data collection process such as arranging the date, time and venue for the data collection, note-taking and other administrative support. In the following sections, the different methods of data collection employed in this study are described in detail.

3.3.2.1 Semi-structured interviews

Various forms of interview can be used in social research: structured, semi-structured or unstructured (King, 2004). However, semi-structured interviews were chosen as the primary data collection method in this study for the following reasons. In semi-structured interviews, questions are open-ended. Thus, the semi-structured interview offers the investigator “access to people’s ideas, thoughts, and memories in their own words, rather than in the words of the researcher” (Reinharz, 1992, p. 19). This type of interview is believed to allow participants to respond in their own words which is not possible in a structured interview. At the same time, this also provides a better structure for comparison than that of the unstructured interview (May, 2001). The semi-structured interview also provides flexibility in that the researcher can ask questions that suit the participants (Noor, 2008). This type of flexibility was helpful in dealing with rural farmers with different status, background and ethnicity.

The selection of respondents for interviewing (who and how many) depends on the objectives of the study and the resources and time available to carry

out the research (King, 2004). Therefore, based on the research question, four categories of people were identified as important sources of information: (i) the group members from the case farmer groups, (ii) key informants such as leaders, social workers and others who had an in-depth understanding of the farmer groups but were not members of the case groups, (iii) the staff of the DADO who were working with these farmer groups and (iv) the staff of the DOA who were involved in policy formulation regarding farmer groups. A total of 36 interviews were conducted in this study. The concept of saturation (Mason, 2010; Merriam & Tisdell, 2016) was employed in this research, that is, data was collected until new data no longer provided further insights into the issues under investigation. Table 3.4 presents the research participants that were interviewed.

Table 3.4: The research participants that were interviewed in this study

Organisation/Category	Number of participants
<u>Case farmer group</u>	
Farmer group A	6
Farmer group B	5
Farmer group C	6
Farmer group D	7
<u>Public extension organisation</u>	
<u>District Agriculture Development Office, Chitwan</u>	
Senior Agriculture Development Officer	1
Subject matter specialist	1
Junior Technician	1
Agriculture Service Centre, Khairahani (Junior Technician)	1
<u>Directorate of Agricultural Extension</u>	
Senior Agriculture Extension Officer	1
Key informants	7
Total	36

The interviews with members of the case farmer groups constituted the major part of the primary data in this study. Once the case farmer group had

been identified, the chairperson of the respective group was contacted with the help of ASC staff assigned to the Khairahani VDC. Then a meeting was organised in each case group to brief them on the purpose of this research, build rapport with the group, obtain permission to carry out the study and then arrange times and dates for the interviews. The research assistant helped in this regard. An interview guide (Table 3.5) was used to guide the interview and ensure that all relevant topics were covered (Brinkmann, 2008; Morgan & Guevara, 2008). The group members were selected purposively on the basis of (i) willingness to be interviewed, (ii) gender, (iii) ethnicity and caste, (iv) economic status and (iv) roles and position in the groups (executives and general members). Purposive sampling was used to ensure the interviews covered the diversity within the groups (economic status, gender, social groups, roles in the group and so on). The case group comprised of members with different roles, position and authority such as the chairperson, secretary, treasurer and general members. Thus, a cross-section of members in different positions of authority were interviewed to understand the complete picture of how farmer group membership contributes to empowerment. Table 3.6 illustrates categories of interviewee by case farmer groups.

Table 3.5: The interview guide for the interviews with members of the case farmer groups

1	Personal information: Background, family size, age, education, farming system
2	General information about the farmer group Basic data such as name of a farmer group, year of establishment, total members, position in a group How was your farmer group formed? Objectives of the farmer group and activities carried out by it Reasons for joining a farmer group Decision-making process used in the group
3	Characteristics of community and group members Caste/ethnicity, gender, economic status Means of livelihood/occupation Nature of farming Interpersonal relationships between group members
4	External support provided to the farmer group Who provides support? Types and nature of the support and how do they provide this support? The effects of the support on the performance of the farmer group
5	Benefits of being a member of a farmer group Direct benefits of being a member of a farmer group Benefits sharing methods in the group The human, social and financial capital accumulation and the mechanisms of capital accumulation The impacts of farmer group membership on the empowerment of group members The economic, psychological, social and political empowerment and the mechanisms of empowerment

Table 3.6: Number of farmer interviewees

Categories of interviewees	Number of interviewees				
	Farmer Group A	Farmer Group B	Farmer Group C	Farmer Group D	Total
	A. Category by position				
Executives (Chairperson, secretary, treasurer)	2	2	2	2	8
General members	4	3	4	5	16
B. Category by gender					
Female	1		1	7	9
male	5	5	5		15
C. Category by caste/Ethnicity					
Upper caste (<i>Brahmin, Chetri</i>)	5		5		10
<i>Tharu</i> ethnic		4		7	11
Other caste	1	1	1		3
D. Category by economic status					
Smallholder	6	1	5	1	13
Poor		4	1	6	11

Another category of participants that were interviewed were the staff of the DADO and ASC who were directly involved in providing agriculture extension services to the farmer groups. The DADO is an important source of information related to (i) the group formation and mobilization process, (ii) their experiences with the group-based approach, (iii) their service and support to the case groups, (ii) functions of /activities carried out by case farmer groups and (iv) their perspectives on the case groups in relation to empowerment. As suggested by Jankowicz (2000) the staff at different levels of management in the DADO (top management level, supervisory

level and field level) needed to be interviewed to obtain a more accurate and holistic picture of how the organization works with the groups and the influence of their service on the empowerment of group members. Thus, the senior agriculture development officer (SADO: top management level), subject matter specialist (supervisory level) and extension workers (work directly with the farmer groups) of the DADO/ASC were selected for the interviews. The following criteria were used to select the subject matter specialists for the purpose of the interviews: (i) they had to have an in-depth understanding of the case farmer groups, (ii) they had to have been involved in the planning of extension activities for these groups and (iii) they had to have supervised the extension workers who were assigned to the case farmer groups. The field level extension workers (JTs) that were interviewed in this study were those that worked with the case farmer groups.

The Directorate of Agricultural Extension under the DOA is the central body responsible for the formulation of the overall policy and guidelines for the agriculture extension services in the country. Thus, their views and experience are pertinent to understanding the research topic. The focus of interview with the official of this organisation was on (i) the overall policy for farmer groups, (ii) his experiences with the group-based approach, and (iii) his perceptions on the role of the groups in terms of the empowerment of group members.

The key informants interviewed in this study were individuals such as local leaders, farmer leaders, social workers and other individuals who could provide the information about (i) the local context in terms of community and case farmer groups and (ii) the local farmer groups, their activities and the impact of these activities, particularly on empowerment. The following criteria were used to select key informants (i) they had to have an in-depth

understanding of the community, local culture and farmer groups, (ii) they were from the same community as the case farmer groups and (iii) they were not a member of the case group. The key informants were selected purposively in consultation with the staff of the ASC, VDC and the executives of the case farmer groups. An interview guide (Table 3.7) was used to set out the key subjects to be covered in the interviews and direct the interview of the key informants (Brinkmann, 2008; Morgan & Guevara, 2008).

Table 3.7: The interview guide for the interviews with key informants

1	Personal information: Household size, age, education, main and supplementary means of livelihood
2	Key characteristics of the case village Caste/ethnicity, gender, economic status Interpersonal relationship/trust level Means of livelihood/occupation Nature of farming and farm size Participation in collective action Discriminations against in the community on the basis of ethnicity/caste, religion, sex, race or economic status, if any
3	Information about farmer groups Type of farmer groups that exist in the community Activities carried out by the farmer groups Types/nature of services and support from external organisations to farmer groups
4	Benefits of farmer groups The human, social and financial capital accumulation and the mechanisms of capital accumulation The impact of farmer group membership on different dimensions of empowerment (economic, psychological, social and political) Mechanisms of empowerment

The time, date and venue of interview were agreed upon by the researcher and respondents in advance (deMarrais, 2004). Research assistant and staff of ASC helped the researcher to schedule appointments for interview with the members of case farmer groups and key informants. In the case of the staff of the public agriculture extension organisations, the researcher himself determined the time, date and venue through telephone contact or during a visit. The majority of interviews with group members and key informants were conducted in their homes while a few were held at the ASC as per the participants wish (Legard, Keegan, & Ward, 2003). In a few instances, they were also conducted at the local tea shop. The interview began with greetings at the meeting site (deMarrais, 2004). This was followed by light conversation to develop rapport (deMarrais, 2004). The nature and purpose of study and the commitment required of them was then explained and their consent was obtained (deMarrais, 2004; Legard et al., 2003). Although the researcher had an interview guide consisting of a list of the information he required in a logical order, the order and the way in which the questions were asked, was tailored to fit into the condition and experiences of each interview (deMarrais, 2004; Morgan & Guevara, 2008). The questions were asked in such a way that they could easily be understood by the respondents. Too abstract words and technical jargon were avoided while asking questions (deMarrais, 2004; Legard et al., 2003). Follow-up and probing questions were used where necessary for more elaboration and in-depth explanation (deMarrais, 2004; Legard et al., 2003). At the end of the interview, the researcher thanked the respondents warmly for providing time and valuable information contributing to the study (Legard et al., 2003). No participants refused to participate in the study. Most of the interviews were tape-recorded with their consent (Brinkmann, 2008; Legard et al., 2003).

However, a few group members were reluctant to be recorded and, in these cases, extensive notes were taken instead.

3.3.2.2 Focus group discussion

A focus group discussion is 'a carefully planned series of discussions designed to obtain perceptions on a defined area of interest in a permissive, non-threatening environment' (Krueger & Casey, 2000, p. 5). The focus group discussion has some advantages over individual interviews. For example, it is cost effective, because information can be captured from more participants in a relatively short period of time (Kontio, Bragge, & Lehtola, 2008). The quality of the information is improved because participants tend to act as checks and balances on one another, thus reducing extreme or false opinions (Patton, 2002). It "presents a more natural environment than that of an individual interview because participants are influencing and influenced by others- just as they are in life" (Krueger & Casey, 2009, p. 7). However, focus group discussions require careful preparation (Freitas, Oliveira, Jenkins, & Popjoy, 1998). When organising a focus group, it can be difficult to gather a group of people together at the same time and in the same place (Breen, 2006). Another limitation of focus groups is that some individuals are reluctant to share their experiences and thoughts in a group setting (Krueger & Casey, 2009).

The focus group discussion was useful for this study for a number of reasons. First, there were around 12-30 farmers in each group and it was not possible to interview all of these farmers, given the budget and time. Second, although interviews were conducted with the group members, it was necessary to cross-check the opinions of the rest of the group members. As recommended by Anandajayasekaram et al. (2008), a focus group of six to

seven participants was used for this research to ensure the full participation of all members present at the discussion. One of the fundamental considerations in focus group discussion is the composition of the groups (Grudens-Schuck, Allen, & Larson, 2004; Krueger & Casey, 2000) because participants are likely to censor their opinions in front of other influential people (Grudens-Schuck et al., 2004). Thus, this issue was duly considered while selecting who attended a focus group. For example, group executives were not included in the focus group discussion. One focus group comprising only poor women was made. This was because rural women in this culture may not want to openly discuss the behaviour of their male counterparts in their presence. Purposive sampling (Hennink, 2014; Patton, 2002) was applied to select participants of the focus groups based on gender, caste/ethnicity and economic status. Group members who were not involved in interviews (Lewis, 2003) and were willing to participate in discussion, were invited for focus group discussions.

The research assistant determined the time, date and venue for the focus group discussions in consultation with the participants. In this study, four focus group discussions, one in each case farmer group, were carried out. This researcher and a research assistant facilitated the focus group discussions in such a way that encouraged interactions between the participants rather than between the participants and facilitator (Bender & Ewbank, 1994). The focus group discussions were conducted in community settings such as the group meeting hall and local club, which was easily accessible for the participants (Hennink, 2014). A circular seating arrangement was used to conduct focus group discussions (Hennink, 2014; Streicher et al., 2011). It allowed the participants to have eye contact with other participants of the group that which encouraged them to converse with

each other and fostered interactions (Hennink, 2014). It also helped the researcher to manage the discussion effectively (Hennink, 2014).

Each focus group discussion began with welcoming the participants and the brief introduction of the researcher, research assistant and participants (Greenwood & Parsons, 2000), followed by a brief presentation on the research, its aims and the purpose of the discussion. The researcher then asked easy, non-threatening questions to build rapport (Kolb, 2008), such as queries relating to their crop situation. Once the rapport was developed, very simple and short questions related to the research subject that could be easily understood by the participants, were asked to create a comfortable and non-threatening environment (Hennink, 2014). Instead of academic language or technical jargon (such as, human capital, social capital, psychological empowerment and political empowerment) colloquial language suitable for the participants were asked, as far as possible (Hennink, 2014). This is because too formal and academic language could create unwanted distance between the participants and researcher (Hennink, Hutter, & Bailey, 2011). A focus group discussion guide (Table 3.8) was developed to direct the group discussion (Bender & Ewbank, 1994; Hennink, 2014; Streicher et al., 2011). Although the discussion guide consisted of questions in a logical order, the actual discussion followed a different order (Hennink, 2014). This was because the researcher proceeded according to the concerns raised spontaneously by participants (Hennink, 2014). A few group members in each group were reluctant to be recorded and thus the researcher and research assistant took hand-written notes (Hennink, 2014; Kolb, 2008). As suggested by Lewis (2003), in this study, focus group discussions were conducted after the completion of semi-structured interviews. This was because the focus group discussion was intended for those group members

who were not involved in interviews and that could only be identified after the completion of interviews. Moreover, it provided an opportunity to verify data generated through interviews (Lewis, 2003).

Table 3.8: The focus group discussion guide

-
1. How and when was your farmer group formed?
 2. What are the main objectives of your farmer group?
 3. Why did you join a farmer group?
 4. What are the main activities of your group?
 5. Who supports your farmer group? What kinds of support have you received from them? And how do they support your group? How does this support affect the performance of your farmer group?
 6. What benefits do you get from farmer group membership?
 7. What are the impacts of farmer group membership on empowerment and the mechanisms of empowerment
-

3.3.2.3 Field observations

Field observations provide a first-hand account of the phenomena of interest and thus offer a more holistic data set of the phenomenon of interest when employed in combination with other methods such as interviews and document analysis (Merriam, 1998; Merriam & Tisdell, 2016). The researcher observed monthly group meetings that allowed the researcher to obtain insights into the members' behaviour (Lindsay, 1997) related to their decision-making process, interactions among the members, their relationships with other members, the benefit-sharing methods used in the group and so on. These behaviours could not be captured through interviews or document analysis. The researcher also visited and observed some of the activities carried out by the case farmer groups and their members such as the construction of an irrigation system that was funded by grants from the DADO, group farming techniques, visits to demonstration

plots and so on. An observation checklist was used to provide clear guides for focusing field observation and recording data (Table 3.9). The observations were documented in field notes at the time of the field observations or immediately afterwards (Merriam & Tisdell, 2016; Miles & Huberman, 1994). The field observation supplemented the data obtained through interviews, focus group discussions and documents in this study. It also provided a form of data triangulation (Beeton, 2005; Merriam, 1998).

Table 3.9: A checklist for field observations

A.	Monthly group meeting
	<ul style="list-style-type: none"> • Attendance of participants (No.) • The role of leadership in the meeting • Participation level of group members in the meeting • The decision-making process • The agenda of meetings and decisions • The inter-personal relationship between (i) the members of the farmer group and the leaders and (ii) the members of the farmer group • The benefit-sharing methods used in the group
B.	Irrigation system constructed through the grants from the DADO
	<ul style="list-style-type: none"> • Basic data such as location and date and cost of construction (grants and farmers' contribution) • Present uses and mechanisms of operation • Benefits: Numbers of farmers benefitted and the command area irrigated • Impacts of it on farming
C.	Group farming
	<ul style="list-style-type: none"> • Basic data such as location, types of crops and cropped area • Participation level of group members in the group farming • Work divisions and benefit-sharing mechanisms • The benefits of group farming

Table 3.9: A checklist for field observations (Continued)

D. Demonstration plots

- Basic data such as location, technology demonstrated and area of the demonstration plots
- Nature of the involvement of farmers and extension worker in the demonstration plots
- Impacts of the demonstration plots

E. Community characteristics

- Participation in collective action (such as construction and maintenance of roads, community house, market shed, temple)
 - General trust levels
 - The extent of heterogeneity of the community in terms of caste/ethnicity and economic status
 - Relationships between the people of different socio-economic strata and caste/ethnicity
 - Social networks
 - Norms of cooperation and norms of reciprocity
 - The roles and position of women
 - Relationship between the farmers and the extension workers operating in the community
 - Impacts of technology disseminated through farmer groups
-

3.3.2.4 Documents

Documents are an important source of information for the case study because they supplement and compensate for the inadequacies of other data collection methods (Noor, 2008). In this research, documents were mainly used: (i) to obtain an understanding about the context of the case farmer groups, (ii) as a means of cross-verification of the information generated through other sources (Noor, 2008; Yin, 2003) such as the interviews and focus group discussions and (iii) to verify the correct spellings and names or titles of organizations, staff or specific activities (for example, name of training) that the participants indicated in the focus group

discussions or interviews (Yin, 2003). The main documents collected in this study included (i) government policies and guidelines related to agriculture extension and farmer groups; (ii) annual and progress reports of on farmer group activities from DADO and ASC; (iii) farmer group profiles and (iv) bylaws, meeting minutes and other records of case farmer groups.

3.3.3 Data analysis

Qualitative data analysis is a "process wherein researchers systemically organize data on particular topics and discover and interpret certain meanings, themes, and rules from that data so they can help facilitate the understanding of the topics in question and share the newly found information with the world" (Shin et al., 2009, p. 857). However, data analysis in a qualitative case study is difficult (Yin, 2003) and some authors (for example, Shin et al., 2009) argue that the existing literature does not provide sufficient guidance to the novice researcher, because of a lack of specific qualitative data analysis techniques. Although different authors (for example, Carney, 1990; Dey, 1993; Eisenhardt, 1989; Miles & Huberman, 1994; Patton, 2002; Strauss & Corbin, 1998; Yin, 2003) have suggested different methods of analysis, they tend to vary in its procedures they use and this often causes frustration and confusion to the novice researcher (Richards & Morse, 2007). As such, this researcher drew on a combination of approaches drawing on the work of Dey (1993), Merriam and Tisdell (2016), Stake (2006) and Strauss and Corbin (1998).

A preliminary data analysis was carried out during the researcher's field work because it provided an opportunity for the researcher to identify the best areas to focus on and to develop appropriate strategies to collect new data (Shin et al., 2009). However, a much more detailed analysis was carried out

after the completion of the field work when the researcher returned to New Zealand. Data was analysed both within and across the cases (Eisenhardt, 1989; Eriksson & Kovalainen, 2010; Miles & Huberman, 1994; Yin, 2003). For the within-case analysis, data from each of the four cases was analysed separately to identify theoretical constructs that emerged from data, whereas in the cross-case analysis, the findings from the four cases were further examined to find common and different constructs and relationships across cases (Eriksson & Kovalainen, 2010).

3.3.3.1 Within-case analysis

Data analysis began with the reading and re-reading of the raw data (Boulton & Hammersley, 2006; Dey, 1993). Careful examination of the data helped to discover the meaning and identify significant concepts. At the start of the analysis, as suggested by Boulton and Hammersley (2006), two information-rich transcripts from case one along with the written notes from: (i) the focus group discussion, (ii) some information-rich field observations and (iii) some information-rich documents were selected for the initial in-depth analysis. During this phase, important concepts were identified with assistance from the conceptual framework from the literature review (Carroll & Swatman, 2000). However, it was also important to identify important concepts that emerged from the data that were not in the conceptual framework. The data was then classified into well-defined categories sub-categories, and supra-categories relevant to the research focus (Dey, 1993). This is the coding of the raw data for which Dey (1993) called classifying. This process involved the identification of data-bits that were useful to describe the phenomenon of interest, naming it and defining it (Dey, 1993; Spiggle, 1994). The categories produced during the coding process may arise from a variety of sources (Boulton & Hammersley, 2006). In this

research, many of the coding categories were drawn from the literature deductively (Spiggle, 1994). That is, a data-bit was matched to a concept from the literature using the concept's definition to do this. However, during the analysis of data, new themes and concepts also emerged that were not in the initial literature review. Some of these concepts were matched to literature that the researcher had not identified in his initial literature review. Other concepts were new and did not exist in the literature and were added to the conceptual framework. Thus, the literature review was ongoing throughout the research process including the analysis phase. This process enabled the researcher to match theory and empirical observations and update the theoretical framework accordingly (Cepeda & Martin, 2005; Dubois & Gadde, 2002; Patton, 2002).

Each high level category was broken down into sub-categories to accommodate differentiation within the data (Dey, 1993). The researcher also combined a number of similar categories into more general supra categories if it was found to be useful theoretically (Dey, 1993; Strauss & Corbin, 1998). The coding process is an iterative process, continuously relating data to the categories which resulted in the renaming and redefining of the categories and emerging new categories (Dey, 1993; Merriam & Tisdell, 2016; Taylor-Powel & Renner, 2003).

The next step in the analysis was to identify and define the relationships between categories and sub-categories (Dey, 1993; Strauss & Corbin, 1998). This process is named differently in the literature such as axial coding by Strauss and Corbin (1998) and connecting by Dey (1993). This gave rise to the identification of important causal and explanatory relationships between the categories, for example, the influence of "human capital" on the "economic empowerment".

Data analysis is an iterative process in qualitative research (Crowley, 1994; Dey, 1993; Hanson, Balmer, & Giardino, 2011; Taylor-Powel & Renner, 2003). During this iterative process the data, categories and their relationships were re-analysed which helped to refine the categories and the connections. This initial analytical process continued (Dey, 1993) until a good description of the phenomena of interest for case one was developed. This provided the skeleton or preliminary conceptual framework that was used to guide the analysis of the remaining data (interviews, field observations, documents) on case one. The rest of the data from case one was then analysed (Boulton & Hammersley, 2006) using the same process. During this stage, the new data from the remaining data sources were compared with the already developed categories and relationships. This involved redefining the already developed categories or creating new categories if the data bits did not match the existing categories (Dey, 1993) or seeking out further literature that might define the category. It also involved naming and defining new relationships between categories if these did not match existing relationships (Dey, 1993), or seeking out further literature that had identified such a relationship. This iterative process was continued until the complete data set for case one was analysed, and saturation was reached, that is, the researcher felt that no new categories or relationships were emerging from the data (Morse, 1994). The above process was then repeated for case two, case three and case four separately. The researcher did not draw on qualitative data analysis software to analyse his data. This was mainly because the researcher wanted to analyse the raw data as it was written in the Nepali language and the software does not support this language. Rather, he used a manual method. A3 size paper, coloured sticky notes and highlighter were found to be useful to facilitate the manual data analysis process. Tables and

diagrams were used to organise category names and their evidence (data-bits) and their relationships.

3.3.3.2 Cross-case analysis

Once the within-case analysis was completed, the cross-case analysis was carried out between the four cases (Eisenhardt, 1989; Johnson & Christensen, 2012; Merriam & Tisdell, 2016; Miles & Huberman, 1994; Yin, 2003). However, there are no universally accepted rules for conducting a cross-case analysis (Helstone, Van Zuuren, & Houtkooper, 1999). Therefore, this researcher employed one of the procedures suggested by Stake (2006) in which similar findings across cases were identified and reported in the cross-case report. This cross-case technique is more appropriate when the researcher wishes "to move towards generalisation" (Stake, 2006, p. 58). The cross-case analysis also identified differences between cases and these were also reported in the cross-case report (Stake, 2006).

3.3.4 Reporting

Once the cross-case analysis was finalised, a cross-case report was prepared. There is no defined and universally accepted way of writing a case study report (Baxter, 2008; Hancock & Algozzine, 2017). However, Yin (2003) suggested six different types of compositional structures that a researcher can choose for reporting the results of a case study. They are: (i) linear analytic structure, (ii) comparative structure, (iii) chronological structure, (iv) theory-building structure, (v) suspense structure and (vi) unsequenced structure. Out of these six structures, a theory-building structure was selected for this study. This is because this structure is best suited for case studies that seek to develop theory (Yin, 2003) and this was

the aim of this study. In this structure, the sequence of sections follows the logic of theory building (Yin, 2003). For example, the empirical evidence in this study revealed that participation in farmer groups contributed to different forms of capital and then that led to different dimensions of empowerment. Therefore, while reporting the results (Chapter Five) in this study, sections related to the accumulation of different forms of capital were presented first and this was followed by how these lead to different forms of empowerment. Regarding the format for writing such a report, this study adopted a cross-case reporting style that did not portray the individual cases separately, a style suggested by Clarke and Reed (2010) and Yin (2003). In this reporting format, each section consisted of a separate cross-case topic that addressed the research question and the data and the evidences from the individual case were incorporated into each section (Yin, 2003).

As argued by Stake (2006, p. 83) that multiple-case study "is not a design for comparing cases", rather, it is designed to obtain a better understanding of the phenomenon. The focus of the results chapter was not a comparison across farmer groups, but a synthesis of the findings from the four cases. The multiple-case study, in this study, was selected specifically to reflect the different dimensions of the phenomenon (for example, members of different caste, class and gender). The cross-case report was developed to capture these dimensions using data from across the different cases to provide deeper understanding of the phenomena.

3.3.5 Comparison to the literature

Once the cross-case analysis yielded a general model that explains how participation in a farmer group, assisted by the public agricultural extension organisation, contributes to the empowerment of its members in rural Nepal,

this was then compared to the extant theory (Eisenhardt, 1989; Voss, Tsiriktsis, & Frohlich, 2002). This involved identifying the areas of similarities and differences between the findings and the literature (Cepeda & Martin, 2005). If the findings differed from the literature, the reasons for such differences were sought in relation to the case context to enhance the confidence in findings and obtain deeper insights (Cepeda & Martin, 2005).

3.4 Ethical considerations

Ethical considerations are of paramount importance for this research because it involved human beings. In this regard, the *Code of Ethical Conduct for Research, Teaching and Evaluations Involving Human Participants* of Massey University (Massey University, 2010) was followed. This provided a suitable frame of reference for the researcher to ensure that ethical problems were minimised. The following principles of research ethics were taken into consideration during the entire period of this study: (i) respect of persons, (ii) informed and voluntary consent, (iii) minimisation of harm to participants, and researcher, and (iv) respect of privacy and confidentiality. However, this research fell under the *low risk category* as per criteria of the code of ethical conduct of Massey University (Massey University, 2010).

In order to ensure informed and voluntary consent, the potential participants in the study were given adequate information about the research and the researcher. They were then consulted to find out whether they were willing to take part in the study. If they were interested in participating, a written consent (in Nepali language) was obtained from them before data collection was initiated. Regarding the minimizing harm to the participants, appropriate

measures were taken into consideration to ensure that participants felt comfortable and relaxed during the data collection phase.

3.5 Summary

In this chapter, a detailed description of research methodology used in this study is provided. A qualitative case study approach was employed to obtain deeper insights into how participation in a farmer group, assisted by the public agricultural extension organisation, contributes to the empowerment of its members across different dimensions. A multiple-case study design was selected as a suitable research strategy for this study. The case or unit of analysis was the farmer group assisted by the DADO. Four diverse farmer groups assisted by the DADO, Chitwan were selected purposively to ensure that group members of different characteristics were included in the study to obtain the maximum amount of information on the phenomena of interest.

Multiple sources of data collection were used in studying the cases, namely semi-structured interviews, focus group discussions, field observations and documents. Data was analysed both on a within- and cross-case basis. The qualitative data analysis process employed in this study involved an iterative process of coding data, identifying relationships between categories and linking data into common coherent explanatory models to answer the research question. A case description is presented in the next chapter.

CHAPTER FOUR

CASE DESCRIPTION

4.1 Introduction

In this chapter, a description of the case is provided, beginning with a brief introduction to the study district. The general characteristics of the case village and key agricultural extension service providers in the case village are then described. Finally, the characteristics of case farmer groups within the village are given.

4.2 A brief introduction to the study district Chitwan

Chitwan, one of the 75 districts of Nepal, is located in the central region of the country (Figure 4.1). It lies at 27°21'45" to 27°52'30" north latitude and 83°54'45" to 84° 48'15" east longitude. Its altitude varies from 121 to 1947 meters above sea level (District Development Committee, 2013). The district is divided into two municipalities and 36 VDCs¹⁰ (District Development Committee, 2013). It borders the Nawalparai and Tanahu districts in the west, the Gorkha and Dhading districts in the north, the Makwanpur and Parsa districts in the east and the Bihar State of India in the south (District Agriculture Development Office, 2010). The population of this district was 579,984 (male: 279,087 and female: 300,897) at the time of last census in 2011(Central Bureau of Statistics, 2014). The total number of households in

¹⁰ However, the restructuring of Nepal is occurring at the time of this study. A new constitution was promulgated in September 2015 that divided the country into seven states and completed the transition of the country from unitary to a federal system and from constitutional monarchy to republic. The Chitwan district is located in State No. 3 (Nepal Law Commission, 2015). More recently the government has adopted a local body system replacing the existing municipalities and VDCs and this district is divided into seven local bodies: one metropolitan city, five municipalities and one rural municipality (Statistical Office, 2017). However, the State government has not been implemented.

the district was 132,462 with an average household size of 4.38 (Central Bureau of Statistics, 2014).

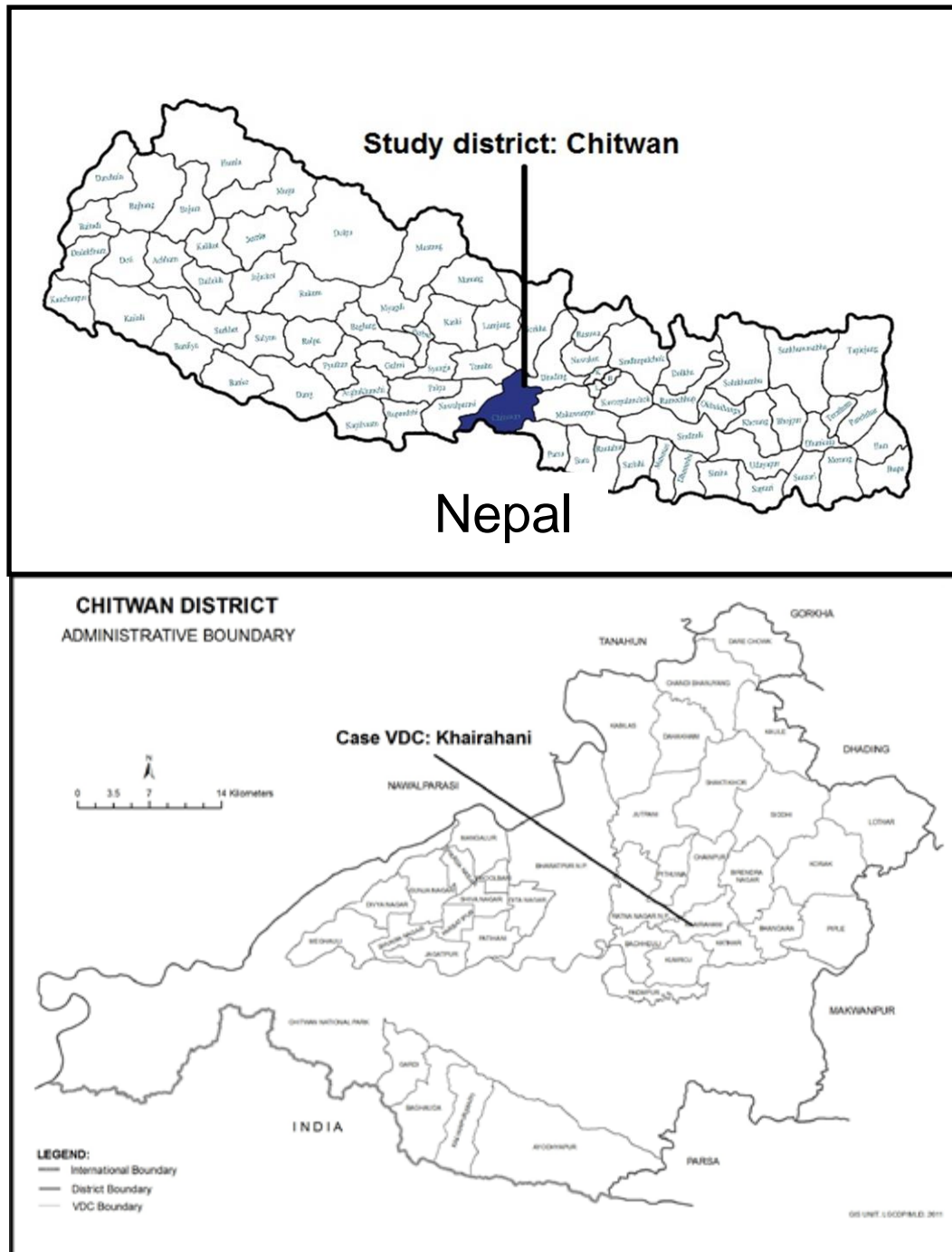


Figure 4.1: Location of the study (Source: <http://ddcchitwan.gov.np>)

The district covers an area of 2238.39 square kilometres, which is about 1.52 % of the total land area of the country (District Development Committee, 2013). A national park comprises about 40.6% of the district area (District Development Committee, 2013). The district has a tropical and subtropical climate with four seasons: summer, autumn, winter and spring (District Development Committee, 2013). The average minimum and maximum temperatures are 7°C and 37.9°C, respectively (District Development Committee, 2016). Average annual rainfall in the district is 2318 mm, and more than 75% of this occurs during the monsoon period that extends from June to September (Paudel & Matsuoka, 2009). With respect to the social composition of the district, it has a mix of upper caste (such as *Brahmins and Chetri*), lower caste (such as *Kami and Damai*) and ethnic groups (*Tharu, Kumal and Darai*). However, the predominant social group in the district is the *Brahmins* (28.56%), followed by *Chetri* (11.36%) and *Tharu* ethnic group (10.92%) (District Development Committee, 2013).

Agriculture is the main source of livelihood, income and employment for the majority of the households in the district. About 66.6% of the total households are agricultural households and some 64.08% of agricultural households are self-sufficient in terms of food production (District Development Committee, 2016). The major crops grown in the district included paddy, maize, wheat, oilseeds, legumes, beans, vegetables and fruit for household consumption and for cash income. Livestock is an integral part of these farming systems (District Agriculture Development Office, 2015). Cattle, buffalo, goats and poultry are the major livestock types farmed in the district. This district is renowned for its poultry industry and it contributes significantly to the national production of poultry products.

Tourism is another important sector that contributes to the economy of the district (District Development Committee, 2013).

The DADO of Chitwan under the DOA provides agriculture extension services to farmers in the district for the crop and fishery sub-sectors. It has adopted a farmer group approach to deliver its agricultural extension services. There were 447 farmer groups (with a total membership of 10,209 farmers) operating under DADO's guidance in the district (District Agriculture Development Office, 2010). Seventeen non-government organisations (NGO) also deliver agriculture extension services in different parts of the district (District Agriculture Development Office, 2015). As with DADO, the DLSO of Chitwan under the DOLS is responsible for the provision of extension services to the livestock sub-sector. This district is connected to other parts of the country through two major highways of national importance. Generally, farms in the district are well connected with suitable roading. Irrigation facilities are available for about 68.70% of the arable land in the district (District Agriculture Development Office, 2015). Key characteristics of the case village are described in the following section.

4.3 The characteristics of the case village

The case village, Khairahani VDC¹¹, is located in the Chitwan district that lies in the *Terai* (plain) region of Nepal (Figure 4.1). The VDC is the lowest political and administrative unit constituted in the rural areas in Nepal. It is situated in the north east Chitwan district with a mosaic of different castes and ethnic groups. This is the largest VDC in the district in terms of

¹¹ The Chitwan district was divided into two municipalities and 36 VDCs at the time of the field work for this study. However the country is in the process of restructuring its governance and institutional structure after the enforcement of a new constitution in 2015. Accordingly, the government divided Chitwan into one metropolitan city, five municipalities and one rural municipality replacing the previous municipalities and VDCs. Now, the study location is situated in Khairahani municipality. However, the information presented here is based on the previous Khairahani VDC, not the Khairahani municipality that covers a much larger area than the original Khairahani VDC.

population. At the time of the last census in 2011, the total population of the VDC was 21,530, out of which 11,375 (52.83%) were female and 10,155 (47.17%) were male. The total number of households in this VDC was 4,762 (Central Bureau of Statistics, 2012).

The village has a multi-caste population. The National Population and Housing Census of 2011 recorded 37 different caste and ethnic groups in this village (Central Bureau of Statistics, 2014), ranging from upper caste (such as *Brahmin* and *Chetri*) to low caste (*Damai*, *Kami*) and a range of ethnic groups (such as *Tharu*, *Kumal*, *Darai*). However, the most populous groupings in the village are the *Tharu* ethnic group (37.4%) and the upper caste (*Brahmin* and *Chetri*: 37.0%) (Central Bureau of Statistics, 2014).

The *Tharu* people are indigenous to the Chitwan district and have lived in the forest in this district for several hundred years (Müller-Böker, 1997). They have developed a natural immunity to malaria that was prevalent in the area up until the 1950s (Müller-Böker, 1997; Takahatake, 2001). In the late 1950s, the Nepalese government launched a malaria eradication programme. Once the malaria was eradicated, the government initiated a land resettlement programme in the late 1950s to relieve population pressure in the hilly regions of Nepal and offer new lands for cultivation to the growing population in this area (Müller-Böker, 1997). This encouraged people of different castes and ethnic backgrounds from the hilly districts of Nepal to migrate to this district as it provided them with better livelihood opportunities (Kadel, 2013). As such, the non-ethnic groups such as *Brahmin* and *Chetri* have only resided in the area since the late 1950s.

Although there has been a gradual reduction in caste-based discrimination in the case village, it still exists in some form, but not to the same extent as in

the past. For instance, some upper caste (*Brahmin*) people still do not allow low caste people to enter their homes and they will not eat food cooked by the low caste people. This village is patriarchal in nature where women occupy a subordinate position with respect to men within both the household and the community. However, traditional gender roles are changing and gender-based discrimination has been declining over the years in the case village.

Agriculture is an important source of livelihood for the majority of the households of this VDC. Crop-livestock mixed farming systems are the most common form of agriculture in the area. The major crops grown in the area included paddy, maize, wheat, oilseeds, legumes, potato and different types of vegetables and fruit. Commonly raised livestock included dairy cattle, buffalo, goats, pigs and poultry. Generally, farmers run a limited number of livestock for their livelihood needs and to supplement their incomes. However, farmers have initiated the commercial production of cattle, poultry, vegetables and bananas on a large scale. In addition to agriculture, other sources of income for the people of the case village were employment in the public and private sectors, trades, business and remittance. The landless and the poor earn their living from wage labour. The VDC has a good road network and the East-West highway of Nepal passes through the village. Key agricultural extension service providers in the case village are described in the following section.

4.4 Key agricultural extension service providers in the case village

The DADO in Chitwan and the ASC in Khairahani are the key agricultural extension service providers for the crop and fishery sub-sectors in the case village. In Nepal, the DOA has been entrusted with the responsibility of

providing public agriculture extension services in the crop and fishery sub-sectors (Thapa, 2010). The DOA has established DADO in each of the 75 districts of Nepal for the implementation of agricultural development programmes including the Chitwan district. The DADO in Chitwan is headed by the SADO and supported by subject matter specialists in various disciplines such as crops, horticulture, fisheries and plant protection.

In order to ensure effective extension services and to provide close technical support at the grass roots level, Chitwan district is divided into four sub-regions and, in each of these, an ASC (field level office) has been established (District Agriculture Development Office, 2015)¹². The ASC located at Khairahani was responsible for providing extension services to the case VDC under the direct technical and administrative control of the DADO in Chitwan¹³. This ASC was staffed by two field level extension workers (one JT and one JTA) who are responsible for assisting the farmer groups in the area through the provision of extension and technical support. The subject matter specialists at the DADO also provide technical advice on their particular subject to the farmers of the case village and supervise the work undertaken by the ASC. Generally, farmers need to be organized into a farmer group in order to access extension services and other grants from the ASC and the DADO.

In addition to the DADO and the ASC, MADE Nepal, a partner NGO from the Poverty Alleviation Fund also provides agricultural extension services to selected poor households of the case village through a farmer group approach. The Poverty Alleviation Fund is a fund established by the Nepalese government to finance poverty alleviation projects that aim to

¹² The ASC is located at (i) Khairahani, (ii) Ratnanagar, (iii) Basantapur, Madi and (iv) Gunjanagar (District Agriculture Development Office, 2015).

¹³ The ASC, Khairahani provides extension service to eight VDCs including Khairahani (District Agriculture Development Office, 2010).

improve the livelihoods and living conditions of the rural poor. It implements its programme through local partner organisations (Das, Suwal, Gurung, & Mabuhang, 2015). The MADE Nepal offers technical advice and other support, particularly for improving the livelihoods of the poor through the promotion of vegetable production. In the following section, the characteristics of the case farmer groups are provided.

4.5 The characteristics of the case farmer groups

This study investigated four farmer groups in Khairahani VDC. These farmer groups were registered with the DADO in Chitwan in order to access agricultural extension services and support from the ASC/DADO, but they were not a legal identity. As such, the case farmer groups can be categorised as informal groups (Anandajayasekaram et al., 2008). Biggs (2008) classified farmer groups into three categories: natural resource management groups, social mobilisation groups and service delivery groups. Using these categories, the case farmer groups can be classified as service delivery groups because the ASC/DADO mainly uses farmer groups as entry points to deliver extension services and other support to farmers. A general overview of these groups is provided in the following sections and their key characteristics are shown in Table 4.1.

Table 4.1: Key characteristics of the case farmer groups

Characteristics of farmer groups	Farmer group A	Farmer group B	Farmer group C	Farmer group D
Year of formation	2006	1997	2009	2006
Mode of origin	Self-initiated	Self-initiated	Self-initiated	Initiated externally
Legal status	Registered in DADO No legal status	Registered in DADO No legal status	Registered in DADO No legal status	Registered in DADO No legal status
Total members	17	12	16	30
Female	2	0	2	25
Male	15	12	14	5
Caste and ethnic composition of member				
Upper caste (<i>Brahmin, Chetri</i>)	15		14	
Tharu Ethnic group		8		30
Others (<i>Newar, Darai, Magar</i>)	2	4	2	
Land holding size of member, Ha				
Average (Range)	0.54 (0.23-2.00)	0.21 (0.03-0.50)	0.41 (0.03-1.0)	0.22 (0.03-1.33)
Age of member, years				
Mean (Range)	47.6 (33-70)	46.1 (35-55)	49.9 (35-66)	35.9 (22-55)
Education status of members				
Illiterate			6.2%	
< 10 years schooling	47.1%	83.4%	43.8%	80%
Literate	35.3%	8.3%	12.5%	20%
SLC holder	17.6%	8.3%	25.0%	
Higher degree holder				
Economic status of member				
Poor	0	8	3	28
Smallholder	17	4	13	2

(Continued)

Table 4.1: Key characteristics of the case farmer groups (Continued)

Characteristics of farmer groups	Farmer group A	Farmer group B	Farmer group C	Farmer group D
Key agricultural extension service provider	DADO/ASC	DADO/ASC	DADO/ASC	MADE Nepal and DADO/ASC
Participation in extension activities	Technical advice Training and workshops exposure visits demonstration plots	Technical advice training and workshops accessed high quality seeds	Technical advice Training exposure visits	Technical advice training and workshops exposure visits demonstration plots farmer field school, accessed high quality seeds
Grants received by group members			Construction and rehabilitation of small irrigation schemes; farm machinery	Construction and rehabilitation of small irrigation schemes; construction of fish ponds
Major means of livelihood	Agriculture is main occupation of the majority members; few involved in off-farm employment; practice crop-livestock mixed farming system	Agriculture, manual labour, rickshaw pulling, furniture making, government service practice crop-livestock mixed farming system	Agriculture is main occupation of the majority members; practice crop-livestock mixed farming system	Agriculture is main occupation of the majority members; vegetable production as a major source of income, but previously predominantly dependent on wage labour; practice crop-livestock mixed farming system

4.5.1 Farmer Group A: This farmer group was self-initiated and established in 2006. The size of the group has increased over time. It began with 14 members and grew to a total of 17 members (15 men and 2 women). All members of the group are smallholder farmers¹⁴. The average landholding size was 0.54 ha and ranged from 0.23 ha to 2.00 ha. About 47.1% of the group members were literate but had no formal schooling. Some 35.3% of the farmers had SLC and 17.6% had higher degrees. The mean age of the members was 47.6 years (range 33-70 years).

With respect to the agricultural extension services from ASC/DADO, members of this group have been involved in training and workshops related to maize, paddy, vegetable and potato production. The group also allowed a few members to participate in exposure visits. The ASC also established demonstration plots in members' fields to show farmers a range of technologies for the production of potatoes and vegetables. This group also received grants for the construction of small irrigation schemes.

Agriculture is the main occupation for the majority of the members in this group. The main crops they cultivated were paddy, maize, oilseeds and vegetables. They also kept a few livestock including cattle and also buffalo for milk production. A few farmers raised poultry for the home consumption

¹⁴ A participatory ranking was conducted to categorise group members in terms of their economic status in this study. The participants identified two wealth groupings in this study: "the poor" and "the smallholder". The important indicators group members used to categorise themselves into different classes included landholding size, income sources, food self-sufficiency, social status and other assets such as livestock and housing. They preferred the term "the smallholder" for households that were not considered "poor" because of the size of the landholding. No group members owned more than 2.0 ha of land in this study and, as such, they were classified as smallholders in line with the literature (Collett & Gale, 2009; Okidegbe, 2001; Thapa & Gaiha, 2011) which suggested that smallholders are farmers with less than 2.0 ha of land. Participatory wealth ranking has been widely used to categorize rural households into different wealth groups in the rural development literature (e.g., Béné et al., 2003; Dahal, Nyborg, Sitaula, & Bajracharya, 2009; Kuntashula, Chabala, Chibwe, & Kaluba, 2015).

and surplus birds were sold at the local market. A few of the farmers also obtained incomes from off-farm employment.

4.5.2 Farmer Group B: This was also a self-initiated farmer group consisting of 12 male members that was established in 1997. The primary motivation for the farmers to organise themselves was that rural people face numerous constraints that could easily be addressed through a collective approach. The majority of members (66.67%) belonged to *Tharu* ethnic group and the rest were other castes. Two thirds of the group members were classified as poor and the remaining members were smallholder farmers. The average farm size was 0.21 ha and ranged from 0.03 to 0.50 ha. The majority of the members (83.4%), in this group were literate but had no formal schooling. Some 8.3% had passed SLC and 8.3% were higher degree holders. The mean age of members was 46.1 years with the youngest 35 and oldest 55 years of age respectively.

In this group, the members also operated crop-based mixed farming systems. Some poor farmers rented land from other farmers primarily for vegetable cultivation to obtain income. Some members also derived income from other sources such as working for government services, manual labour, rickshaw-pulling and furniture-making.

In the early years, the group activities were mostly limited to collecting a fixed amount of monthly savings from each members and providing loans to needy members from the savings schemes. In 2005, the executives of this group identified that the extension organisation provided agricultural extension services and other support through farmer groups. They then visited the ASC and the group was registered so that it could access the extension services. Since then, it has received technical information through

personal contacts, training and workshops from the extension service. They also accessed high quality seeds for vegetables and potatoes through the extension service.

4.5.3 Farmer Group C: This group was established by farmers in 2009 to provide a common forum to share experiences, learn from each other, and to get access to agricultural extension services, agricultural inputs and to better access the local markets. The group was composed of 14 men and 2 women. Out of the 16 members, 13 (81.25%) were classified as smallholders and the rest (18.75%) were classified as poor. The average landholding size was 0.41 ha but the range spanned from 0.03 to 1.00 ha. Most of the members (87.5%) were from the upper caste in this group. The members in this group were diverse in terms of education status. The majority of them were literate (43.8%), followed by higher degree holder (25.0%), SLC holder (12.5%), less than 10 years of schooling (12.5%) and illiterate (6.2%). The mean age of members was 49.9 years with a range from 35-66 years of age.

Members of this group received technical advice on improved cultivation practices for paddy, maize, vegetables and insect pest management from the ASC and DADO. They also participated in training sessions on different crops and vegetables and exposure visits. This group also constructed and rehabilitated a few small irrigation schemes using grants from the DADO. Most of the members of this group earned their living from agricultural production using a combination of crops and livestock. They mostly cultivated paddy, wheat, maize and vegetables. They also had 1-2 cattle and a few small livestock such as goats.

4.5.4 Farmer group D: This farmer group was set up in 2006 by an external organisation, MADE Nepal, a partner NGO associated with the Poverty Alleviation Fund. It consisted of 25 females and 5 males from the *Tharu* ethnic group and most of the members of this group were poor. The average size of each landholding was 0.22 ha but the range spanned from 0.03 to 1.33 ha. The majority of the members (80.0%) in this group were literate, but had no formal schooling, followed by those that had passed SLC (20%). The mean age of members was 35.9 years and this ranged from 22 to 55 years of age.

The Poverty Alleviation Fund provided various services and support to the members of this group for income generation, particularly through vegetable production such as training, exposure visits, technical advice and grants. They also received agricultural extension services from the ASC/DADO. These included participation in training and workshops on vegetables, cereal crops, potatoes and plant protection, exposure visits and demonstration trials. Group membership also allowed them to obtain grants for the construction of small irrigation schemes and fish ponds.

Members of this group also operated crop-livestock mixed farming systems. Vegetable production on their own land or on leased land has emerged as one of the major means of generating cash income for the members of this group. They also reared a few small livestock such as goats and poultry. However, before joining the farmer group, most of the members possessed little or no land and were dependent predominantly on wage labour for their livelihoods.

4.6 Summary and conclusions

This chapter describes the case that was investigated in this study and provides the context which can be used to compare it to other studies (Hartley, 2004; Ragin, 1992). The study was carried out in Khairahani VDC of Chitwan district of Nepal. The village has a patriarchal and hierarchical caste-based culture. However, discrimination associated with caste and gender has been declining with time. Four farmer groups from this village have been selected to explore how participation in farmer groups contributes to the empowerment of their members. Three out of four case farmer groups (farmer group A, farmer group B and farmer group C) were self-initiated, whereas farmer group D was organised by an external organisation. The size of the case farmer groups ranged from 12 to 30 members. Farmer group A, farmer group B and farmer group C have much older farmers than farmer group D. Most of the case study groups (farmer group A, farmer group C and farmer group D) were mixed in terms of gender, except farmer group B that was of men only. In terms of the ethnic and caste composition of the groups, farmer group D was exclusively composed of *Tharu* ethnic group members whereas the remaining three groups (farmer group A, farmer group B and farmer group C) were mixed caste farmer groups (upper caste and ethnic members). The economic status of group members varied. Farmer group A comprised of smallholder farmers only, while the rest of the groups comprised a mix of smallholder farmers and poor farmers. However, farmer group D had mainly poor farmers whereas farmer group C had a higher proportion of smallholders. The majority of the ethnic members were poor while upper caste group members were smallholders.

With respect to participation in extension activities, all farmer groups received technical advice from the DADO/ASC and had opportunities to

participate in training and exposure visits. Farmer group A and farmer group D had conducted demonstration trials in their members' fields to show farmers a range of agricultural technologies. Farmer group B and farmer group D also accessed high quality seeds through the extension service. Farmer group A, farmer group C and farmer group D received grants for the construction of small irrigation schemes. Farmer group D also obtained grants to construct fish ponds, whereas farmer group C received grants for farm machinery. In addition to the extension service from the DADO/ASC, farmer group D also obtained extension services from the MADE Nepal. In the following sections, the results of the case study are presented.

CHAPTER FIVE

RESULTS

5.1 Introduction

In this chapter, the findings from the case study are reported. This study was carried out to understand how participation in farmer groups, assisted by the public agricultural extension organisation, contributed to the empowerment of group members within rural communities in Nepal. The empirical results demonstrated that farmer groups facilitated the empowerment of their members. Participation in farmer groups assisted the accumulation of three forms of capital (human, social and financial) and these contributed to empowerment across four dimensions (economic, psychological, social and political). The results in this chapter are organised into three sections. In Section 5.2, a high level overview of the interactions between farmer group membership, three forms of capital and four dimensions of empowerment is described. In Section 5.3, a detailed description is given of the means by which farmer group membership assisted the accumulation of three forms of capital. Section 5.4 then describes the mechanisms through which the three forms of capital gained by virtue of participation in farmer groups contributed to the four dimensions of empowerment.

5.2 The interactions between farmer group membership, capital accumulation and empowerment

The study found that participation in farmer groups contributed to the accumulation of three forms of capital by group members. These included human, social and financial capital with a feedback loop existing between the three forms of capital. Human capital accumulated through participation

in farmer groups contributed to financial capital accumulation, but not social capital. Financial capital accessed through farmer group membership facilitated the accumulation of social capital by group members, but not human capital. In contrast, social capital accumulated by virtue of group membership, contributed to both human and financial capital accumulation. The three forms of capital facilitated the empowerment of group members across the four dimensions: economic, psychological, social and political. Like different forms of capital, the dimensions of empowerment were also interconnected. Increased economic empowerment, by virtue of group membership, contributed to psychological and social empowerment, but not political empowerment. Psychological empowerment gained through farmer group membership influenced economic and political empowerment, but not social empowerment. On the other hand, social empowerment, by virtue of participation in farmer groups, contributed to enhanced psychological empowerment, but not economic and political empowerment. Furthermore, increased political empowerment gained through participation in farmer groups contributed to psychological and economic empowerment, but not social empowerment. The interlinkage between farmer group membership, three forms of capital and four dimensions of empowerment is shown in Figure 5.1 and described in the following sections.

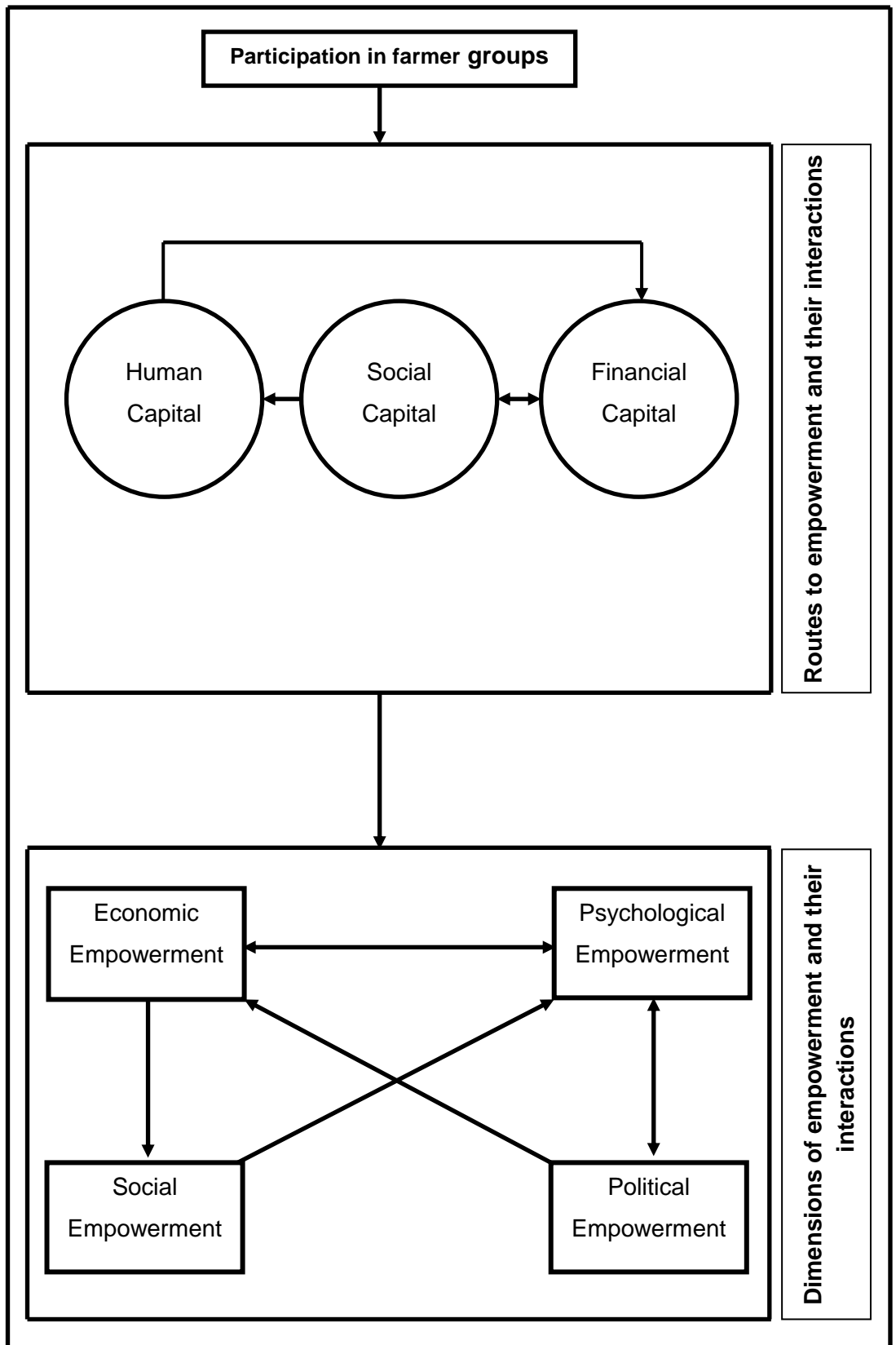


Figure 5.1: A model showing the linkage between the three key routes to empowerment through participation in farmer groups and their influence on the four dimensions of empowerment

5.3 The mechanisms of capital accumulation through participation in farmer groups

The study found that participation in farmer groups contributed to the accumulation of human, social and financial capital. Further, the findings showed that these forms of capital were interconnected and interdependent, as shown in Figure 5.1. This study has identified that human capital accumulated through participation in farmer groups contributed to increased access to financial capital, whereas financial capital accessed through farmer group membership facilitated the accumulation of social capital by group members. In contrast, social capital accumulated by virtue of group membership contributed to both human and financial capital accumulation. However, this study did not provide any evidence that acquired human capital led to social capital accumulation and financial capital accumulated through group membership contributed to the accumulation of human capital. Results concerning three forms of capital and their interactions are presented in the following section.

5.3.1 Human capital accumulation

Participation in a farmer group enhanced the knowledge, skills and attitudes of the group members. Human capital was accumulated through two mechanisms (Figure 5.2). They were (i) participation in extension activities and (ii) social learning. Participation in extension activities also facilitated social learning. These two mechanisms are discussed in the following sections.

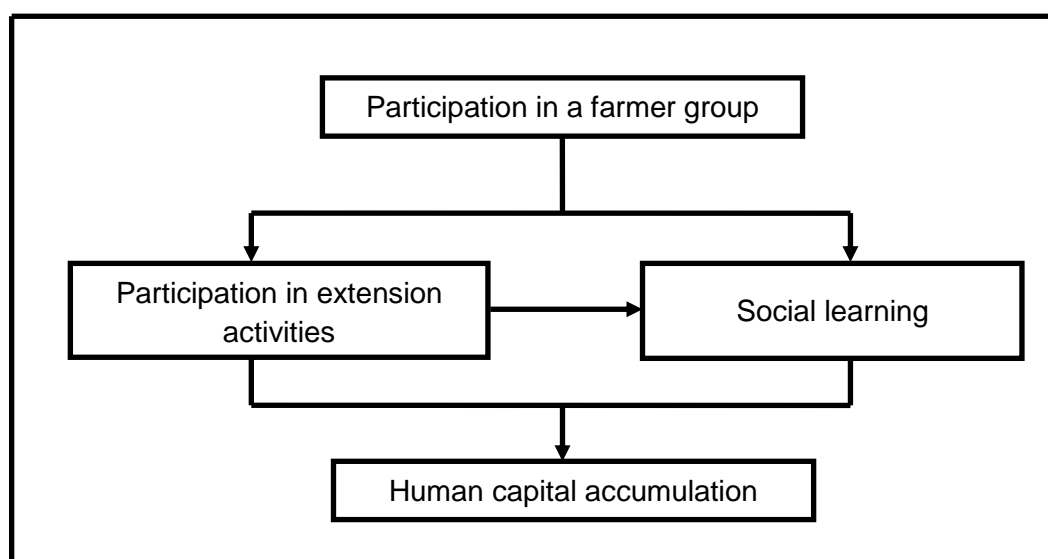


Figure 5.2: The mechanisms of human capital accumulation through participation in a farmer group

5.3.1.1 The acquisition of human capital through participation in extension activities

The first mechanism by which human capital was enhanced was through participation in extension activities. Group membership provided the farmers with increased access to participation in extension activities and this contributed to enhanced knowledge, skills and attitudes related to on-farm and off-farm enterprises. Expertise related to on-farm enterprises included high value marketable crops, such as vegetables, potatoes, paddy and maize, improved varieties, the use of high quality seeds, planting methods, fertilizer rates and methods of application, and pest management. With respect to the knowledge and skills related to off-farm enterprises, a few poor women members also acquired skills in cloth stitching. These extension activities included training courses, workshops, field demonstrations, farmer field schools, exposure visits and direct contact with extension professionals (Figure 5.3).

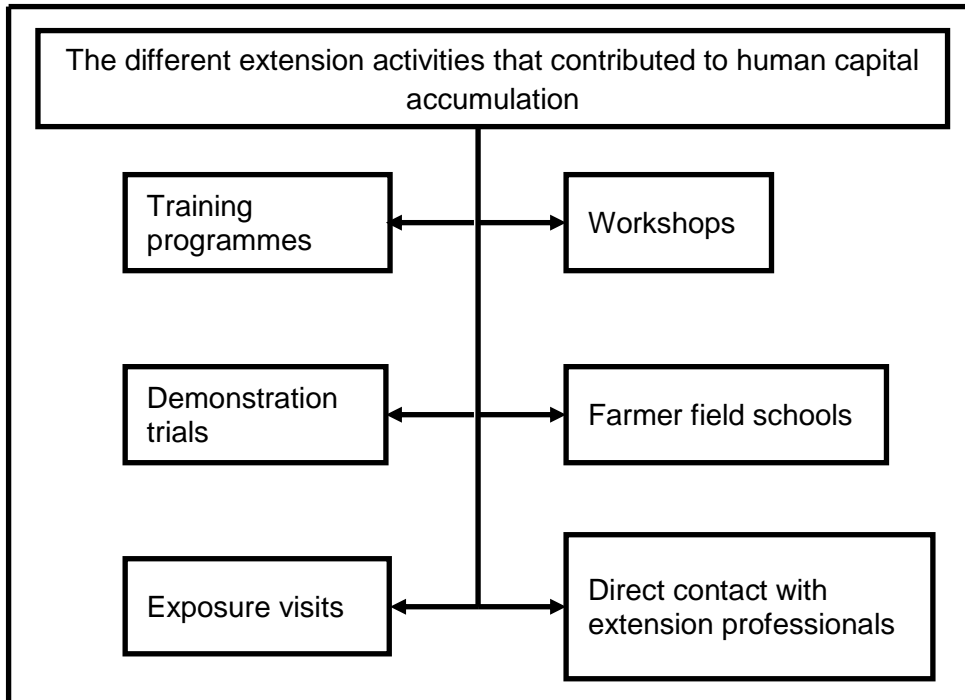


Figure 5.3: The different extension activities that contributed to human capital accumulation

The farmers had opportunities to take part in training sessions relating to paddy, wheat, maize, potato and vegetable cultivation, mushroom farming, pest and disease management, compost preparation, fertilizer management and cloth stitching. The following farmer's comments illustrate how participation in training enhanced human capital:

"We do farming from the very beginning but in our own way. After becoming member in a farmer group, I have received different types of training about insect, pest and pesticides, compost manuring, vegetable cultivation, potato. I also participated in a farmer field school. And I learned many good things about farming" (F8).

Farmer groups provided group members with opportunities to participate in workshops on various subjects such as agricultural marketing, crops and

seeds. These workshops also helped to enhance group members' knowledge and attitudes related to the subject of the workshop. The group members also had the opportunity to conduct result demonstration trials on different vegetable crops, potatoes and paddy. For the result demonstration trials on vegetables and potatoes, they compared the crop yield for the recommended fertilizer rate to that of their own practices and the impact on yield using high yielding quality seed to local seed. The following quote from a farmer provides an example of this:

"In the past I used to cultivate potatoes in our traditional way but produced little. Sir [extension agent] came to our group and told us about the improved methods of potato cultivation and provided some seeds of different varieties of potatoes. We conducted a trial in which we planted different varieties of potatoes along with the local seeds. We followed all those techniques like fertilizer application, irrigation, use of pesticides, etc. that sir advised to us. From this trial, we learnt about an improved way of potato farming" (F17).

Members of one farmer group participated in farmer field schools on paddy and potatoes. Participation in season-long farmer field school enhanced group members' knowledge and skills on paddy and potato production technologies, safe use of pesticides and plant nutrient management. Farmer groups also provided farmers with opportunities to attend an exposure visit. The DADO organised the exposure visit of group members to different research stations, government farms and best-practicing farmers. This provided opportunities for the group members to observe and gain hands-on experience with different agricultural technologies. The following quote from a farmer provides an example of learning from an exposure visit:

“After learning from the exposure visit that we went to, now I also cultivate mushrooms at my home. If you [referring to this researcher] come in the winter season, you can get mushrooms from all members' households” (F9).

Farmer groups also provided opportunities for group members to contact with extension professionals. Sometimes extension agents and subject matter specialists of the DADO visited group members' fields. During such visits, they advised on different aspects of farming such as use of quality seed, seed selection methods, soil and nutrient management, pest management and so on. The group members also learned from the advice they received. The following section describes how human capital was acquired through social learning within the farmer groups.

5.3.1.2 The acquisition of human capital through social learning

The second mechanism through which farmer groups members acquired human capital was through social learning. Farmer groups provided a platform for social learning. Social learning occurred in farmer group through (i) direct interactions between members and (ii) observation of other members' practices. Participation in a farmer group increased the members' opportunities to meet and interact with other farmers. During such meetings, they exchanged ideas and experiences and discussed various topics. Through this process of social learning, new knowledge was generated. Three key mechanisms provided opportunities for farmers to meet and interact. These were group meetings, extension activities and collective action (Figure 5.4).

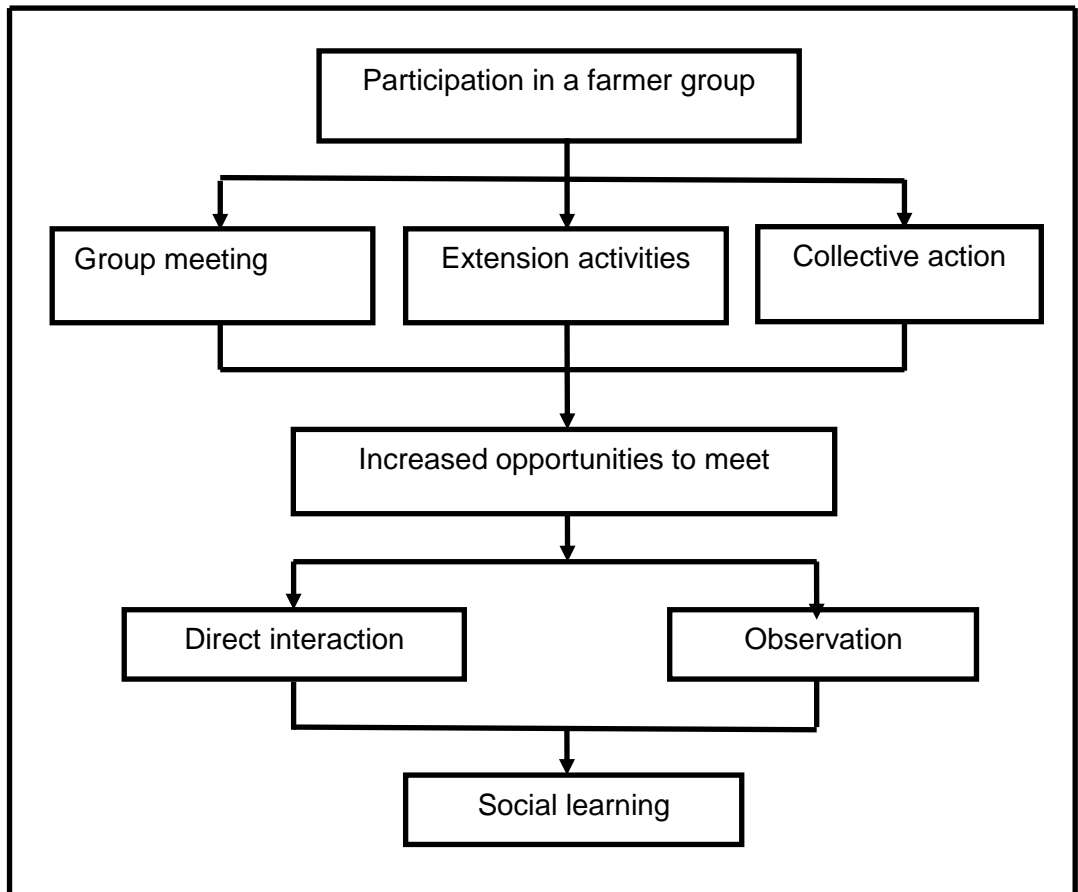


Figure 5.4: Key mechanisms of social learning through participation in a farmer group

Meetings, both monthly and ad-hoc meetings, provided opportunities for face-to-face interaction and dialogue between farmer group members. Similarly, participation in extension activities such as training, workshops, farmer field school days and exposure visits also provided farmers with opportunities to interact. During such meetings, they discussed their experiences and expertise and, through such dialogue, knowledge was passed from one farmer to another. The following remarks from a farmer illustrate this:

"We also learn many things from our fellow farmers. When we do meet during group meeting or at the time for training or workshops organized by the Agriculture Service Centre and District Agriculture Development Office, we talk about different matters concerning our farming, family life and society. One farmer might describe his experiences with a field of say tomatoes while another might describe his experiences with a field of potatoes" (F8).

This is also corroborated by another farmer who describes how membership in a farmer group facilitated social learning and that this was influential in changing his attitude about growing new vegetable crops:

"Previously I used to think that if I did not grow cereal crops like rice, maize and wheat I could not have enough food to survive. I had always a fear of how could I feed my family when I went to new crops like vegetables and if that could not produce as expected due to pest, disease, weather and so on. So I always grew cereal crops even though it is unprofitable. But when I became a member in farmer group, I participated in the vegetable training course offered by the office (District Agriculture Development Office) that increased my technical understanding of vegetable crops cultivation such as cauliflower, tomato, cucumber and bottle gourd. I had also contact and discussions with members of other groups who are already getting higher profit from growing vegetables. Their experiences changed my attitude towards vegetable farming and I decided to start it" (F15).

Collective action was another important mechanism that brought farmers together and allowed dialogue and discussion about their experiences in relation to farming. The major collective action activities carried out in this study included: the mobilisation of group welfare funds, the collective purchasing of seeds, the collective marketing of vegetables, and collective farming.

Social learning also took place through observation of behaviour and practices of others (Figure 5.4). Farmer group membership also provided an opportunity for the farmers to observe the farming practices of other farmers that also led to social learning. By observing the farming practices of other members, some members identified areas where they could improve their routines and they adjusted accordingly. For instance, one farmer observed a tomato variety used by a fellow member when attending a group meeting at his house:

"Some years ago when I went to the chairperson's house to attend a monthly meeting of our group, I saw a heavy fruiting of tomato crop in his field which encouraged me to learn more about that variety. I talked to him regarding the crop and observed keenly that each time when I went there for the meeting. I also planted tomato at that time but a different variety. I compared my crop with that but I was really impressed by what I saw in his field and decided to try that variety. From the following year, I was also using that variety"
(F10).

Knowledge, skills and attitudes acquired through social learning by virtue of farmer group membership were related to on-farm and off-farm enterprises,

discriminatory social norms, child care, health and sanitation, current affairs, local politics and so on. The following section describes how participation in a farmer group can contribute to the acquisition of social capital.

5.3.2 Social capital accumulation

Participation in farmer groups contributed to the building of social capital by farmer group members. This study identified three forms of social capital that had evolved as a result of membership in a farmer group. They are trust, norms and social networks (Figure 5.5) and are described in the following section.

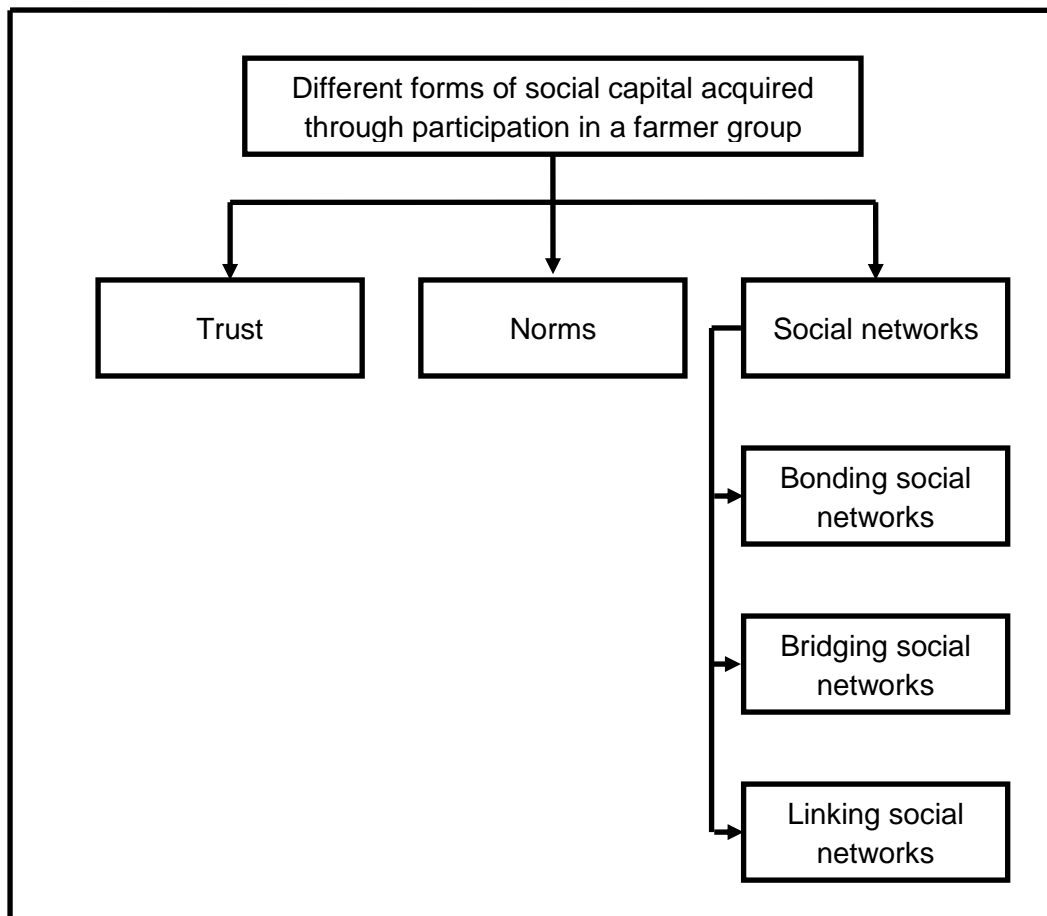


Figure 5.5: The different forms of social capital acquired through participation in a farmer group

5.3.2.1 Trust

Generally, it was observed that there was an increase in trust between members of a farmer group after their involvement in a farmer group. No participants reported that the level of trust among the fellow members was reduced because of participation in a farmer group. The following remark made by a farmer illustrates how membership in a farmer group generated trust between the group members:

"We all (referring to group members) have a similar objective, i.e., how to get a good harvest from our small pieces of land. We have been in this group for a long time to share joy and sorrow and help each other when needed. This builds trust among fellow farmers" (F2).

5.3.2.2 Norms

Across all farmer groups, the farmers reported that the norms of reciprocity between members strengthened as a consequence of the involvement in a farmer group. Farmer groups have emerged as an important means of helping and supporting farmers, particularly during emergencies. When a member of a farmer group suffered the death of a family member or faced a financial crisis, other members of the group came to their aid. The following remarks by a farmer illustrate that norms of reciprocity strengthened as a result of participation in a farmer group:

"The group really becomes the important means for sharing happiness and sorrow. When we have organized into a farmer group, life is a bit easy for us as compared to earlier days. When something happens such as death or illness

within the household of fellow group members, we do help each other. What happened for a farmer the other day could happen to me tomorrow" (F5).

In addition to emergency situations, group members also helped each other in terms of social functions, farming operations and other economic activities. The farmers shared information and experiences about agricultural technologies, and growing of crops. In one farmer group, the members practised a reciprocal labour exchange system, traditionally called *Parma*. One female member explained this:

"Before we didn't have any work, just to gossip. But after involvement in the group, mostly our fellow friends do vegetable farming and all are busy. We exchange labour for farming activities. One day we go to work for one member, whereas the next day for others" (F5).

5.3.2.3 Social networks

Joining a farmer group also expanded the social networks of farmers. Generally, ethnic poor and women benefitted more in this regard. It is because they had limited contacts outside their family and neighbours, but farmer groups provided them opportunities to establish relationships beyond their kinship and local networks. The following quotes of members provide examples of this:

"The farmer group enabled me to develop many new connections"
(F2).

"The farmer group provided me a good forum to connect with these people [extension agents, government staff, farmers,

traders]. One of my childhood friends who is currently studying a masters degree, phoned me some days ago and told me that I have made many new friends being a member in a farmer group and that is why I forget her" (F4).

Participation in farmer group allowed the farmers to expand three types of social networks. These were bonding, bridging and linking social networks. Bonding ties between the members of the farmer groups were strengthened after their involvement in a group. The unity between members in the group increased. Some group members were also able to expand their bridging social networks after they joined a farmer group. They established new relationships with farmers of other villages and districts by virtue of farmer group membership. Some farmers met with traders when the group either purchased agricultural inputs or sold its produce. Farmer groups also provided opportunities for farmers, particularly for its executives to establish relationships with staff of ASC, DADO, VDC and other public offices that developed their linking social networks with these organisations. The following quote from a women farmer provides an example of her situation with regard to linking social networks before and after participation in a farmer group:

"Even we did not know about the Agriculture Service Centre located nearby and the District Agriculture Development Office. But now I know them very well and have a good relationship" (F4).

The previous sections describe the different forms of social capital that were accumulated by virtue of group membership. In the following sections, mechanisms by which this social capital is built are presented.

5.3.2.4 Mechanisms for building social capital

Farmer groups provided a social space for fostering interactions and the development of new relationships between farmers, traders, extension agents and officials of public offices. This, in turn, helped to develop social capital in the form of trust, norms and social networks. This study has identified three key mechanisms by which farmer groups have enabled their members to develop new connections and have increased interaction, which has then enhanced their social capital. These mechanisms were: group meetings, collective actions and extension activities (Figure 5.6). These are described in the following sections.

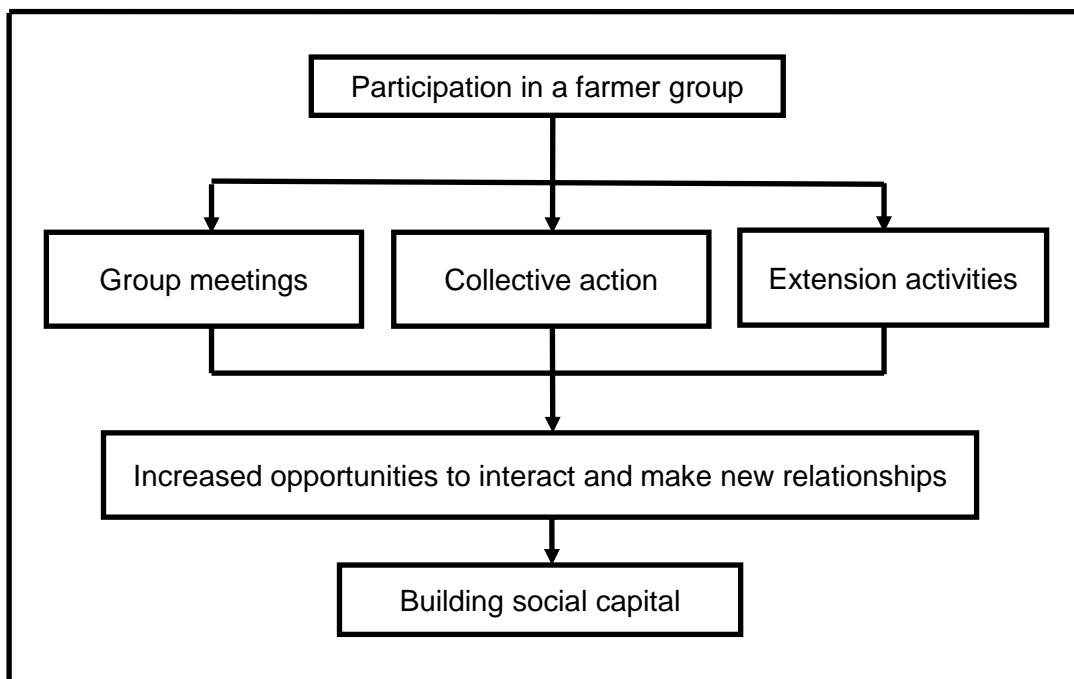


Figure 5.6: Key mechanisms for building social capital through participation in a farmer group

Group meetings were an important means of face-to-face interactions between fellow members that fostered social capital. The farmer groups conducted basically two types of meetings: monthly meetings and *ad hoc* meetings. All farmer groups in this study organized regular monthly

meetings. The key activity performed at this meeting was to collect the monthly savings from each member and lend credit to those members that needed it. The monthly meetings became the main regular forum for the farmers for face-to-face interactions. During these meetings, they also discussed various matters pertaining to their farming, family, social and community life. They also shared their experiences along with happy and sad events within their personal lives with their fellow members. These activities strengthened the bonding ties between the members and developed trust along with norms of reciprocity over time. In addition to the regular monthly meeting, members also met their fellow members at *ad hoc* meetings called by the farmer group to sort out urgent issues and problems as and when necessary. For example, such a meeting might be organised to: (i) select a candidate to participate in an extension activity, (ii) make a submission to the DADO or other development organisations about their requirements, and (iii) to organise relief and support to fellow members in case of an emergency. Such occasions also provided opportunities for the farmers to interact, share and discuss the many facets of their lives, further fostering the development of social capital, as explained by the following farmers:

"In our group, we meet on the very first day of every month. Collecting monthly savings from the members and lending loans to the fellow members are the major task of that day. But we do have opportunities to share our experiences, sorrow, joy and happiness" (F10).

"When we meet and share our pains and sorrow to our fellow members, this will bring emotional relief. Regular meetings, interaction and sharing our emotion between group members

reinforce our bond between fellow members and creates a trusting environment" (F1).

Collective action provided another important forum for interaction between members of a farmer group that also fostered the building of social capital. The most common collective action carried out by the farmer groups in this study was the mobilisation of the welfare fund. Some farmer groups also practised the collective purchasing of seeds, the collective marketing of vegetables and collective farming on leased land (in one farmer group). During the execution of a collective action, the farmers had an opportunity to chat with fellow members. This discussion and sharing of feelings and information further strengthened mutual trust, norms of reciprocity and their bonding relationships.

"When we work together in our collective farming, we share our knowledge, experiences and emotions. This ultimately enhances our intimacy and trust" (F1).

Participation at extension activities was another important forum for contact and interactions among farmers and between farmers and extension agents which, in turn, enhanced social capital. Farmers participated in various extension activities by virtue of group membership such as training, workshops, exposure visits, demonstration trials and farmer field schools. Participation in demonstration plots and farmer field schools provided opportunities to interact with their fellow members and thereby strengthened their bonding ties. On the other hand, when farmers went to participate in training, workshops and exposure visits organized outside their village, they were given the opportunity to contact and establish relationships with farmers from different locations and often with different socio-economic

status. Most of the participants attended training and workshops organized at local ASC or at the DADO, but some of them also went to other districts, particularly to attend training and exposure visits. In addition to bonding and bridging social networks, participation in the extension activities also helped the farmers to develop linking social networks. During participation in the extension activities, they had opportunities to meet and chat with the extension agents and the chief of DADO. The farmers also talked about informal topics in addition to the subject matter focus of the extension activities. Extension agents and the chief of DADO also visited the farmer groups to (i) conduct and monitor extension activities, (ii) advise farmers on farming techniques and (iii) collect data on farming practices and yield. Some of the members, particularly those on the executive such as chairperson, secretary and treasurer, frequently visited ASC, DADO and VDC to request services and advice. Frequent contacts with interaction between group members and the officials enabled the farmers to widen their linking social networks, as explained by the following farmers.

"In fact, farmer field school connected us with the District Agriculture Development Office" (F4).

"Previously I had very limited contacts. But now I am in samuha [group]. I have attended monthly meetings of our group regularly, training/workshops in Sewa Kendra [ASC] and Jilla [DADO]. I have also been invited to different social functions in the community, sometimes by the village development committee, sometimes by sahakari [cooperatives] because of the group. All these provide me with opportunities to meet many people and get acquainted with them"(F12).

Normally, in rural communities, poor and women have limited connections outside their family and community. They have little opportunity to attend official and formal gatherings except for social functions in their local community. But their participation in farmer groups extended their bridging and linking social networks significantly. The following section presents the results regarding financial capital accumulation.

5.3.3 Financial capital accumulation

Membership in farmer groups facilitated the accumulation of financial capital. This study identified that farmer groups allowed members increased access to financial capital through two mechanisms: (i) increased access to credit through group welfare funds and (ii) increased access to grants from the extension organisation (Figure 5.7). These mechanisms are described in more detail in the following section.

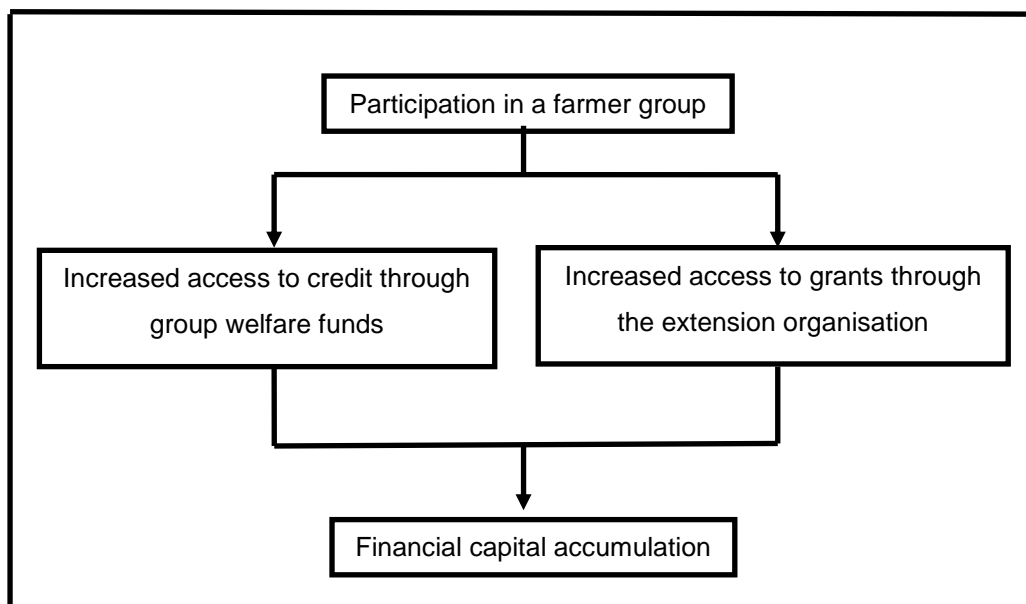


Figure 5.7: The mechanisms that foster financial capital accumulation through participation in a farmer group

5.3.3.1 Group welfare funds: Effective means of savings and credit for rural households

It was observed that group welfare funds set up in farmer groups have emerged as an effective means of internal savings and credit for its member households, particularly for the poor members and women who have limited access to credit through formal sources of finances, that is, banks. A group welfare fund was established by all the farmer groups in the study. Each group member deposited a small fixed amount of savings each month into the funds. Each group decided how much they would save on a monthly basis. The amount differed between farmer groups and ranged from NPR100.00 to NPR505.00 per month. However, the amount members saved changed overtime as described in the following quote by the treasurer of a farmer group in the study:

"Initially we deposited NPR100.00 per month per person in the group welfare funds at the start of this group in 1997, but now we deposit NPR505.00 per month per person, equivalent to a day's wage. So far, nearly NPR0.95 million has been deposited in the fund" (F21).

The monthly savings were the primary source of funds in the group welfare fund. However, other contributing sources of funds identified in this study included: rental income, money obtained from fundraising activities, interest earned on the capital, income from the sale of group products and fines and penalties imposed on group members. Rental income was found to be one of the means of increasing the group welfare fund in one farmer group. This farmer group purchased cooking and food service equipment using money from the group welfare fund. This equipment was available free of charge to

group members. However, the group rented out this equipment to other people and the revenue was placed in the group welfare fund, as mentioned in the following quote:

"Our group has purchased cooking and food service equipment at the cost of approximately NPR 70,000.00. We could use these utensils during social gatherings such as marriages, festivals, funerals and other social functions. At present, in the case of the group members, we provide it free of cost, but for others we have charged NPR2000.00 per programme and that has contributed to raise our funds [in the welfare fund] to some extent" (F22).

Some farmer groups also conducted fundraising activities to increase their group welfare funds. For example, one group organised a *Deushi Bhailo* programme during *Tihar* to raise funds. *Deushi Bhailo* is a traditional Hindu singing and dancing event held during *Tihar*. A group of people travel from house to house singing and dancing to bless each household for prosperity, happiness and wellbeing. In return, households offer the group cash and food. The cash was deposited into the welfare fund. Another means of increasing the welfare fund was through interest earned on loans. Farmer groups received interest on the group welfare funds lent to the members and the interest was then deposited back into the group welfare fund.

Another means of increasing the group welfare fund is through the sale of group products. Farmer groups conduct different types of demonstration trials and obtain financial and technical support from the extension organisation. However, in one farmer group, the produce harvested from such trials was sold and the money was put into the group welfare fund. The

other source of group welfare funds were the fines and penalties paid by group members. Each group has a set of rules pertaining to group management. These rules also set out the fines and penalties that would be paid by members if they break these rules. For example, members are fined if they fail to attend group meetings or either default on loans or fail to repay loans on time. In terms of meeting attendance, the penalty ranged from NPR.5.00 to NPR50.00 per meeting between groups. Generally, a group would increase the interest rate as a fine for loan defaulters and the rate increase varied between groups. For instance, one group increased the interest rate from 12% to 18%. It was found that very few group members failed to attend meetings or defaulted on loans. As such, the amount of money collected as fines and penalties was negligible for the group welfare funds. This also showed that the fines and penalties acted as a good deterrent for group members.

The total accumulated savings recorded during the study in 2012 ranged from NPR100,000.00 to NPR963,000.00 per group. The monthly savings rate, number of group members, duration of the savings scheme, total accumulated savings and total investment are shown in Table 5.1. The monthly savings rate, number of group members, duration of savings and additional means to increase group welfare funds such as fundraising activities determined the size of the group welfare funds. Group B has the largest amount of accumulated savings, mainly because the members have the highest monthly savings rate (NPR505 per month per member) and the longest period over which the scheme has been in operation (since 1997). On the other hand, Group C has the smallest amount of savings because it started the scheme in 2009 and members are saving only NPR100.00 per month per member with no other means of fundraising.

Table 5.1: Details of group welfare funds by farmer groups

Farmer Group	No. of group members	Amount of savings in the funds (in NPR)			
		Year of savings initiation	Savings per member per month	Total accumulated savings in 000 (by July, 2012)*	Total investment, in 000 (by July, 2012)*
A	17	2006	100	107	100
B	12	1997	505	963	928
C	16	2009	100	100	98
D	30	2006	200	502	449

Note: * The figure is rounded up

Source: Field work, 2012

This study found that compulsory savings in the group welfare funds promoted a savings culture especially with the poor women and men. The majority of the poor members in this study did not have a savings culture before joining the group. Although income is necessary for savings, this does not always lead to savings. Profligate behaviour and their attitude towards savings largely determine the ability of the group members to save. Previously, most of the poor women and men used to spend all the money they earned. However, they realized the value of savings and how to save money for their future after the establishment of the group welfare fund. This is described by a poor female member in the following excerpt:

"In the past, we just used to work as a labourer, often started work in others' fields soon after dawn and working until dusk, bought rice and vegetables from the wage received thereby and ate that and again repeated the same journey the following day. That's all, we didn't care about saving and we didn't even know how to save money. I did not know anything about the group. In the beginning, I was afraid that how could I save money to

contribute to the group welfare fund as you know it was really tough for us to even manage enough to eat! Initially, I told to them [extension agent and villagers] that I won't be a member in the group because I thought that I could not make savings. But finally we made it! Of course in the very first few months, I felt very difficult to manage it but now savings become the culture for the group members" (F6).

Most of the respondents reported that the group welfare fund improved their access to loans. Although there are a range of commercial banks operating in the study area, a lack of adequate collateral, such as land and jewellery, was the major barrier that prevented poor members from obtaining loans through the banks. Social norms related to property inheritance were also found to limit access to bank loans by women. This was because land has traditionally been registered to the male head of the family and inherited by male descendants in Nepal. As such, women could not offer land as collateral for security against a loan. The law relating to property inheritance was changed in 2002 to provide equal inheritance rights for unmarried daughters. However, the daughters are required to return their share of an inherited property to the natal family if they marry. Despite the law changes, the situation in rural areas has not changed in terms of property inheritance because of deeply embedded cultural beliefs and traditions.

Loan size was also found to be a practical constraint in obtaining finance from the local banks. Sometimes the size of the loan required by the farmers was less than the minimum loan size the banks administered. In addition to formal sources of finance, farmers in the study area also had access to an alternative source of credit through the local money lenders. However, these individuals charged very high interest rates on loans (up to 36%) and this

further limited local farmers' access to finance, as reflected in the following quotes:

"In the past, we used to borrow money from the local money lender. They charged very high interest rates: two to three rupees per hundred per month" (F1).

"Local money lenders also provide loans but sometimes they charge a very high interest rate, which is very high to afford" (F23).

Because of the problems associated with the banks' requirement for collateral and constraints placed on loan size along with the high cost of finance if borrowed through money lenders, the group welfare funds set up by the farmer groups have emerged as an important source of finance for farmers in the study area. The following quotes from farmers provide examples of this:

"At present, when we require money in any sort of emergency, we don't need to go to the moneylenders. Instead, we go to the group" (F24).

"Once we are in a group, we got a loan too. In the past, we didn't have access to loans as nobody believed and accepted us" (F6).

"For us [women] that would be like a dream as we do have neither a property in our name for collateral nor confidence to do that. But now, when we need money for whatever reason, the group provides us with it" (F11).

Members borrowed money from the group welfare funds to meet a diverse range of emergent needs. The loans were mainly used for (i) investment in assets such as land, irrigation pumps, rickshaws, tools for furniture making and house construction/improvement, (ii) working capital to cover operating costs such as seeds, fertilizer and labour, (iii) medical expenses, (iv) social functions such as marriages, festivals and funerals, (v) household consumption items such as food and (vi) children's education. The following excerpts provide some examples of what the farmers used their loans for:

"At that time the cost of a rickshaw was around NPR3000.00 which was beyond me! As per the advice of our colleagues, I took a loan from our group and purchased a rickshaw" (F3).

"We had a case that a member borrowed NPR150,000.00 that is huge money for us. The members have utilised the loans even for building a house and organising the marriage of their offspring" (F21).

"The group provided me with a loan at the time to purchase land" (F6).

"We don't need to depend upon money lenders who charge high interest rates. We take loans from the group when we need money for the purpose of farming" (14).

Although loans were granted for different purposes ranging from investment to consumption, as mentioned above, emergency needs such as a death in the family or a sick child, were the priority area for lending in all farmer groups. The following quote provides an example of this:

"In our farmer group, first we provide loans for emergency needs and for the neediest people. If the fund is still available, only then we do lend for other reasons. This is our norm"
(F7).

It was found that both smallholder and poor members were found to benefit from the group welfare funds, but its impact was more significant for poor members than for smallholders. The poor members rated the importance of the group welfare fund much more highly, compared to the smallholder members in this case study. This is because the group welfare fund is the main method by which the poor members can save or access credit particularly when they first join the group. However, the group welfare fund is not the main means of savings and credit for smallholders. These farmers have a history of using other finance options such as banks, even before joining the group. Furthermore, they do not require the small loans frequently requested by the members. If they require a larger loan, they will obtain this from the bank. Thus, surprisingly, this study found that the amount saved per person per month was higher in the groups with a greater proportion of poor members. The two groups (B and D) that had the highest proportion of poor members, had the highest monthly savings, that is, NPR505 and NPR200 per person, respectively. However, other groups (A and C) composed of mainly smallholder farmers, collected only NPR100 per person per month (Table 5.1). The intention of the poor members is not only to save money, but also to increase the size of the funds so that they can obtain the loans easily when needed. Thus, they contributed a higher amount of monthly savings than the other groups in order to increase the size of the funds in a relatively short time period. The following section describes results related to increased access to grants from the extension organisation.

5.3.3.2 Increased access to grants through the extension organisation

The second means by which group members could increase their access to financial capital was through grants from the extension organisation. Group members reported that one of the main benefits of membership in a farmer group was that it provided the opportunities for them to obtain grants from the extension organisations that were otherwise inaccessible to them. Group members received grants for different purposes. It was found that one farmer group that was originally established by the NGO, received approximately NPR0.5 million from that NGO in the form of grants at the beginning of its formation to provide loans for members as well as to implement income generating activities and so on. Many farmer groups also received grants from DADO to construct or rehabilitate irrigation canals or to install irrigation pumps, pipes and accessories to improve irrigation in the area and thereby to enhance agricultural production and productivity. A farmer remarked on this in the following quote:

"Membership in the farmer group is the first condition to be eligible to get any services and supports from the DADO. If I approach as an individual, I get nothing. Like this irrigation scheme [this conversation was held in the field where the irrigation pump was installed with financial assistance from DADO]. We came to know that the office invited proposals from farmer groups to construct small irrigation projects some two years ago. We discussed this matter with sir [extension official of the Agriculture Service Centre] who advised us to submit a proposal. Our group submitted the application along with the proposal. Our proposal was approved and a grant of

around NPR 40,000.00 was received. The grant money was used to procure an irrigation pump, pipe and accessories as well as materials to build a pump house while we contributed with labour and local materials for the construction of the well and pump house" (F13).

One farmer group also obtained grants to purchase a corn sheller that allowed substantial cost savings in relation to corn shelling, as explained by a farmer in the following quote:

"We were informed that Krishi [the District Agriculture Development Office] would provide some grants for the farmer group to buy it (corn sheller) that motivated us to buy it. The total cost for this machine was NPR73,000.00, out of which the office provided NPR 25,000.00" (F18).

Some members, particularly poor members, constructed small scale ponds for fish farming using the grants received from the DADO. This grant was provided for poor farmers with the objective of overcoming malnutrition by increasing the animal protein supply through fish production. The following quote from a poor farmer provides an example of this:

"Being a member in a farmer group, we received grants to construct small scale ponds for fish farming. Altogether ten fellow members received this opportunities in our farmer group" (F1).

In the above sections, different forms of capital acquired through participation in farmer groups are discussed. The following section presents

the results about the interconnections between different forms of capital that were accumulated as a result of farmer group membership.

5.3.4 Interaction between the three forms of capital

It was found that the different forms of capital were interdependent. As such, membership in a farmer group can facilitate the accumulation of one form of capital which, in turn, can facilitate the accumulation of another form of capital (Figure 5.1). First, human capital accumulated through participation in farmer groups contributed to increased access to financial capital. After joining a farmer group, farmers were better informed about different grants provided by the ASC/DADO and the procedures to follow to request the grants. This allowed them to access grants from the DADO. The following quote provides an example of this:

"After joining the farmer group, we are aware that the offices [the ASC/DADO] are for farmers and they provide us [farmers] different service and supports [grants, subsidies, training, seed and saplings], Then, we approach the office for this. We received grants too for the rehabilitation of irrigation canal" (F23).

Secondly, social capital accumulated by virtue of participation in a farmer group contributed to the development of human capital through social learning. The increased trust and stronger bonding relationships between members after joining a farmer group fostered a greater exchange of information. The following remarks of a farmer illustrate this:

"When you trust someone, you can talk and exchange views freely" (F2).

Third, social capital acquired by virtue of group membership facilitated increased access to financial capital. Farmer groups provided an opportunity for its members to establish linking social networks with the staff of ASC and DADO including the chief of ASC/DADO. This gave them increased access to grants from the ASC/DADO. This is reflected in the following excerpt from a leader of a farmer group:

"Even my degree holder childhood friend was surprised at how I can make so many new friends and relationships with those organisations and thereby obtain increased access to different grants and programmes from them" (F4).

Fourth, financial capital accumulated through farmer group membership also helped to foster social capital. Participation in a farmer group increased access to loans by members, particularly women and the poor farmers who were excluded from such services previously. When they obtained access to loans through the group welfare funds, they did not need to seek help from other people to manage their financial crises, as in the past. They could handle emergencies on their own. This further strengthened their bonding ties within the group members and enhanced mutual trust.

"Now, when we require money, we don't need to go to the rich man. Rather, we borrow from our own group welfare fund. This group welfare fund is possible only because of all members of the group as every member has deposited an equal amount into the fund. If I need money I can borrow from it, if another member needs she can borrow. This further reinforces our relationships and trust" (F9).

There was no evidence from the case study, however, that human capital acquired by virtue of membership in a farmer group contributed to the building of social capital. The following section describes the different dimensions of empowerment gained through participation in farmer groups.

5.4 The four dimensions of empowerment gained through participation in farmer groups

This study revealed that the accumulation of three forms of capital (human, social and financial) as a result of participation in a farmer group contributed to the empowerment of group members across the four dimensions of empowerment. These dimensions were economic, psychological, social and political. However, these dimensions of empowerment were not independent of each other. As such, an increase in empowerment in one dimension could also influence other dimensions of empowerment (Figure 5.8).

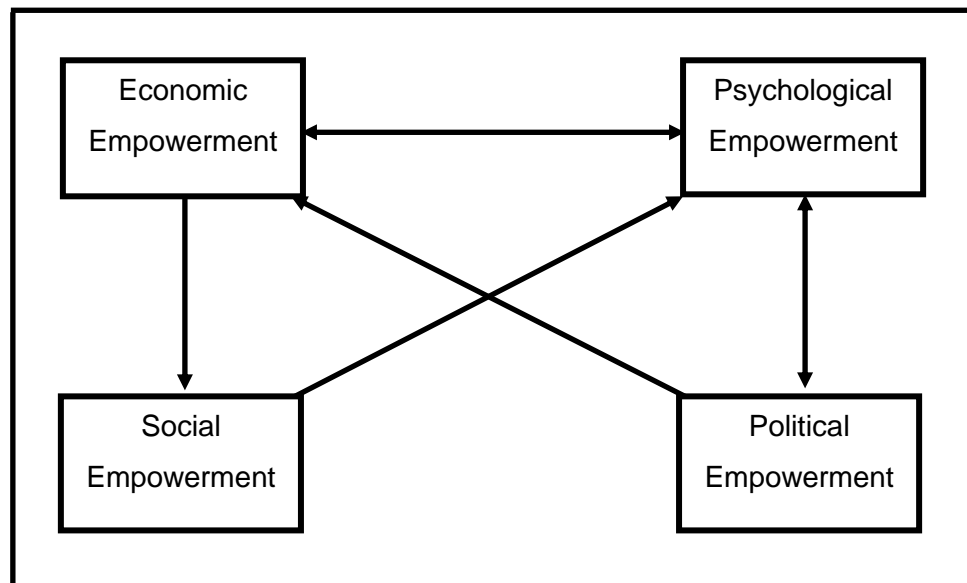


Figure 5.8: The four dimensions of empowerment accrued through participation in farmer groups and their interlinkages

Increased economic empowerment by virtue of group membership contributed to psychological and social empowerment. However, this study

did not find any evidence of the direct influence of economic empowerment on political empowerment. It also found that psychological empowerment gained through farmer group membership, influenced economic and political empowerment, but not social empowerment. On the other hand, social empowerment by virtue of participation in farmer groups, contributed to enhance psychological empowerment, but not economic and political empowerment. Furthermore, increased political empowerment gained through participation in farmer groups contributed to psychological and economic empowerment, but not social empowerment. The study also identified different indicators of empowerment across the four dimensions that are discussed in the following section.

5.4.1 Economic empowerment

This study identified two key indicators of economic empowerment as a consequence of farmer group membership (Figure 5.9). They were increased income and control over financial resources generated through group membership. The second indicator is only relevant to women farmers. This is because the case community is a patriarchal society where, by default, men have financial control over household finances.

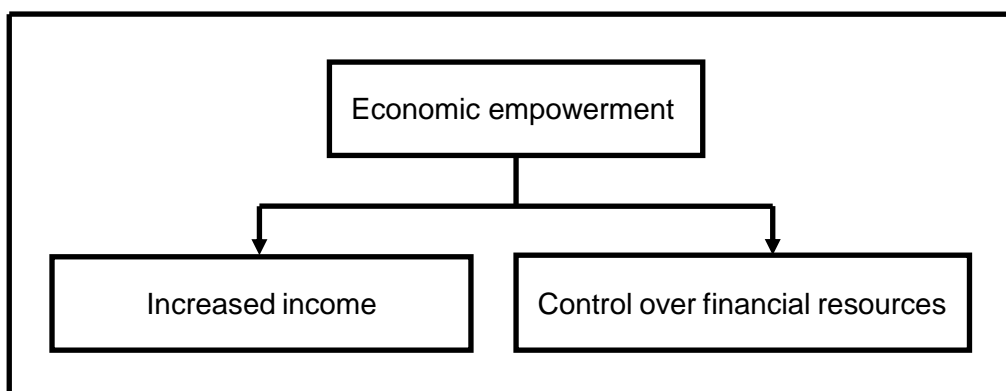


Figure 5.9: Indicators of economic empowerment identified in the study

It was found that many farmers increased their income by virtue of membership in a farmer group. Some farmers were able to generate additional cash income, whereas others increased their agriculture production and that was used for home consumption. It was observed that women had control over (i) the savings within the group welfare fund, (ii) the loans they obtained from the group welfare fund, and (iii) in most cases, the income they generated through group membership. In some cases, women and their male counterparts jointly made a decision related to the use of the loan and additional income. For example, they decided on the size of the loans they should obtain from the group welfare fund, where to invest the loan and also how best to use the additional income they generated through group membership. There were cases where the women spent the money they borrowed and earned on the household items such as food, children's education, health and so on, whereas, in other cases, the women also gave their money to their husband to spend on household necessities. In a few instances, the women also spent their earnings without prior consultation with their husbands and purchased personal items they liked, however, their husbands did not oppose them on this and neither did it lead to conflict in the household. However, in most cases, the women used the money for household necessities. This is because most of the women in this case study were poor and their first priority was to acquire household necessities rather than personal luxury items. This study also found that, in most cases, the women members who procured land using their loan and earnings, registered the land in their own name. The following excerpt by a woman farmer reflects her control over the finances she obtained from being a member of a farmer group:

"After involvement in the farmer group, I purchased land twice. For this, I took a loan from the group welfare fund; we also made some savings from the sale of vegetables by virtue of group membership and the earnings of my husband who is a carpenter" (F6).

No participants reported that their male counterparts compelled them to hand over the loans they obtained from the group welfare funds or the incomes they generated through participation in the farmer group. The following section describes different indicators of psychological empowerment.

5.4.2 Psychological empowerment

This study identified two key indicators of psychological empowerment. They were enhanced self-confidence and enhanced self-esteem of group members (Figure 5.10). Group membership allowed the farmers to develop confidence such that they could articulate their needs and demands to public organisations. Group members in particular, women and poor members, felt more confident to speak without fear in public forums. The self-esteem of group members, particularly, women and poor members, increased as a consequence of participation in a farmer group. The following section describes the findings in terms of indicators of social empowerment.

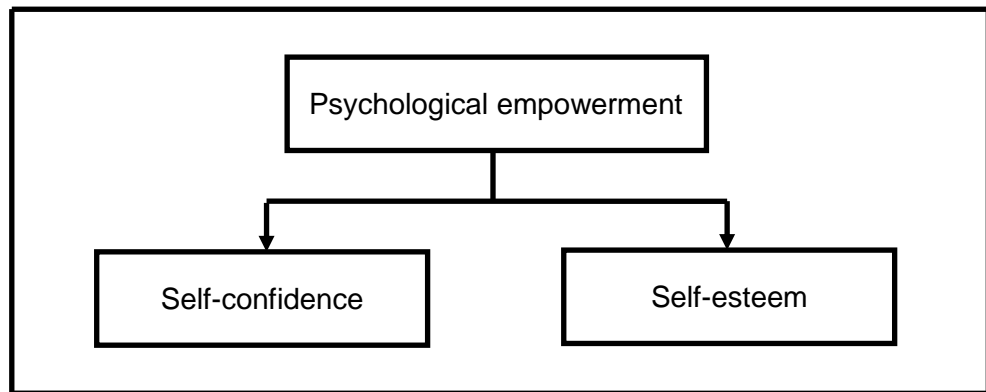


Figure 5.10: Indicators of psychological empowerment identified in the study

5.4.3 Social empowerment

It was found that participation in a farmer group contributed to change in power relationships both within the households and the community. This study identified two major indicators of social empowerment (Figure 5.11). First, group membership strengthened the position of women both within the households and the community. This is reflected in the following quote from a woman farmer:

"In the past, it was very difficult for women to go outside alone just being a woman. Society does not accept women sitting with new people and talking freely. But now, after involvement in a farmer group, nobody questions this, for example, if we say we need to go to attend a group meeting, it is not a problem" (F1)

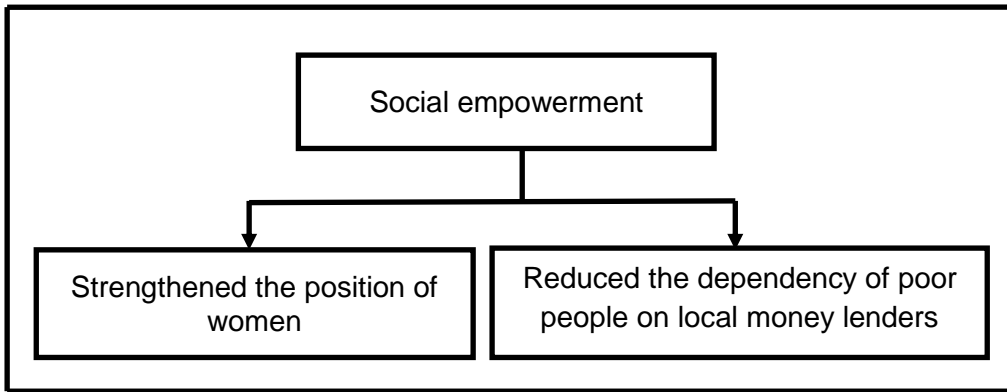


Figure 5.11: Indicators of social empowerment identified in the study

Second, farmer groups also contributed to a reduction in the power differentials between poor farmers and money lenders. Participation in a farmer group contributed to a diminished dependency by poor farmers on local money lenders, through increasing their ability to manage a financial crisis on their own. In the following section, indicators of political empowerment are described.

5.4.4 Political empowerment

Two key indicators of political empowerment were identified in this case study. They were increased political awareness and increased political participation (Figure 5.12). With respect to political awareness, it was found that the involvement of farmers in a farmer group enhanced their knowledge with respect to (i) the goods and services provided by public offices for the benefit of farmers such as ASC/DADO, Division Cooperative Office and VDC, (ii) the procedures and the instruments available to farmers to request these goods and services and (iii) the performance of these officials in providing for the goods and services. However, this study did not find any explicit evidence that group membership enhanced farmers' knowledge on rights and instruments available to them to make public officials more accountable.

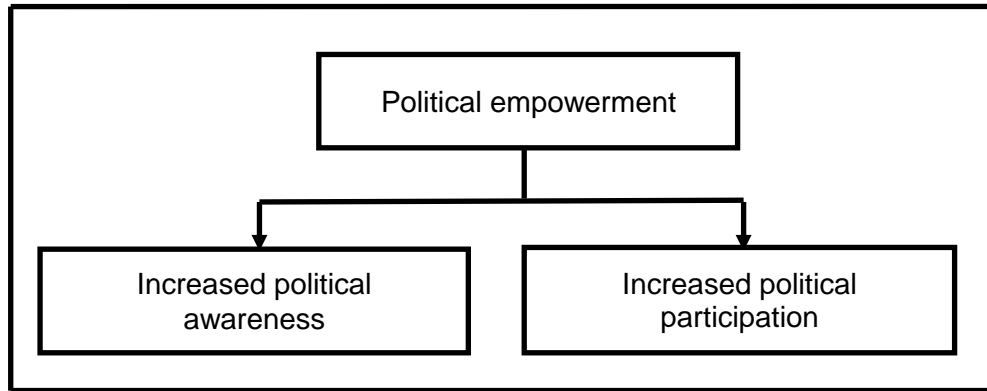


Figure 5.12: Indicators of political empowerment identified in the study

With respect to political participation, it was found that farmers, particularly the executives of farmer groups frequently made contact with the public officials working in ASC/DADO and VDC after they had joined the group. They visited the public offices to determine what goods and services were available to them and to inform the officials about their problems related to farming and their community. Sometimes they wrote a letter requesting action to solve a problem in relation to a farming issue (for example, seed quality, fertilizer use, irrigation management and insect pests and drought). In a few instances, they also made a phone call to discuss the issue with the official. However, they had limited opportunity to contact these public officials before joining the farmer group. In addition to increased contact with the public officials, the farmer group also provided a forum for organized collective action. Some of the farmer groups used collective action to resolve family disputes, protest about social issues and participate in a sanitation campaign. In the following section, results related to the variation in empowerment across its different dimensions are presented.

5.4.5 Variation in empowerment across the various dimensions

It was found that although participation in a farmer group contributed to empowerment across the four dimensions, the extent of empowerment varied across these dimensions. It was observed that, in the case of some farmers, group membership contributed to a greater degree of economic, psychological and social empowerment, whereas political empowerment was enhanced to a limited extent. A low level of political empowerment was observed in relation to the ordinary members of farmer groups who had little contact with public officials from ASC, DADO and VDC. They usually did not visit the public offices to seek information about the goods and services available to them. Instead, they relied on the group executives to do this thus limited their political empowerment in contrast to the executives. Generally, the group executives were the first point of contact for the ASC and DADO. The ASC and DADO also usually passed on information to the group executives who then circulated this to the other members at group meetings. This enabled the group executives to obtain a good understanding of the details of the goods and services provided by the ASC and DADO and the procedures they had to follow to obtain these (political awareness). The group executives also had to write letters to the public offices to submit their demands for inputs, services and grants on behalf of their group. They were also invited to participate at the village level planning workshops and planning and review workshops organised by ASC/DADO and sometimes VDC and other local organisations. During these workshops, they articulated their demands and reported on the issues facing farmers and the community on behalf of the group (political participation). In the following sections, the

role of human, social and financial capital in fostering the different dimensions of empowerment are discussed in more detail.

5.4.6 The role of human capital in fostering empowerment

Out of four dimensions of empowerment, this study revealed that human capital accumulated by virtue of group membership enhanced economic, psychological and political empowerment (Figure 5.13). However, this study did not find any evidence that human capital contributed to social empowerment.

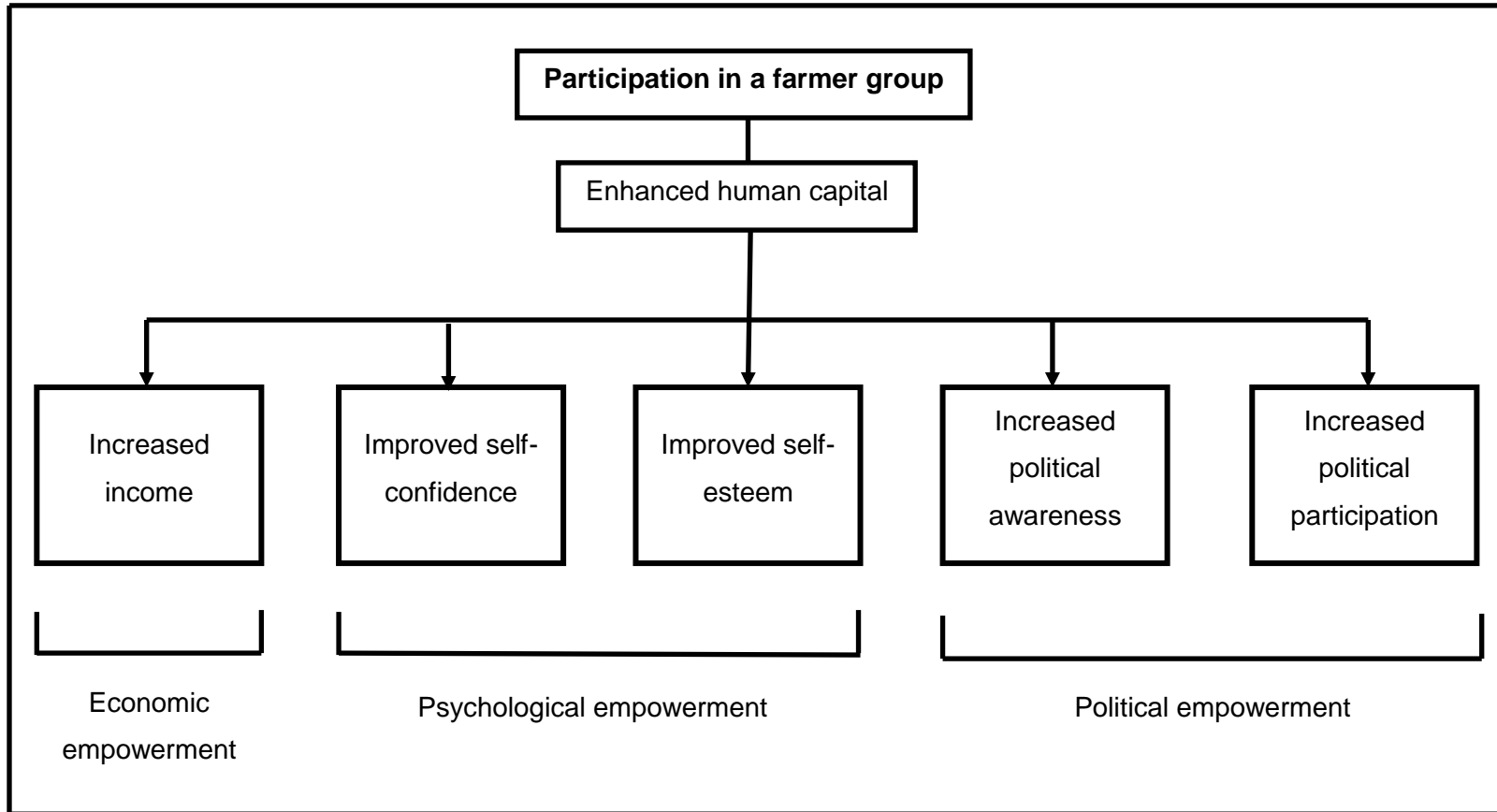


Figure 5.13: A diagram showing the different dimensions of empowerment that are influenced by human capital accumulated through participation in a farmer group

5.4.6.1 Economic empowerment

Human capital accumulated as a consequence of farmer group membership contributed to economic empowerment. Knowledge, skills and attitudes acquired by virtue of participation in farmer groups contributed to increased income. The acquired knowledge, skills and attitudes allowed group members to i) identify their problems and opportunities; ii) possess the technical know-how about enterprise/crop production; iii) select appropriate enterprises and crops, varieties and management practices suitable for their production system, and iv) make informed decisions about on-farm and off-farm enterprises. It was found that human capital acquired through group membership contributed to increased income through crop intensification and diversification (Figure 5.14). The following section describes results on increased incomes through crop intensification.

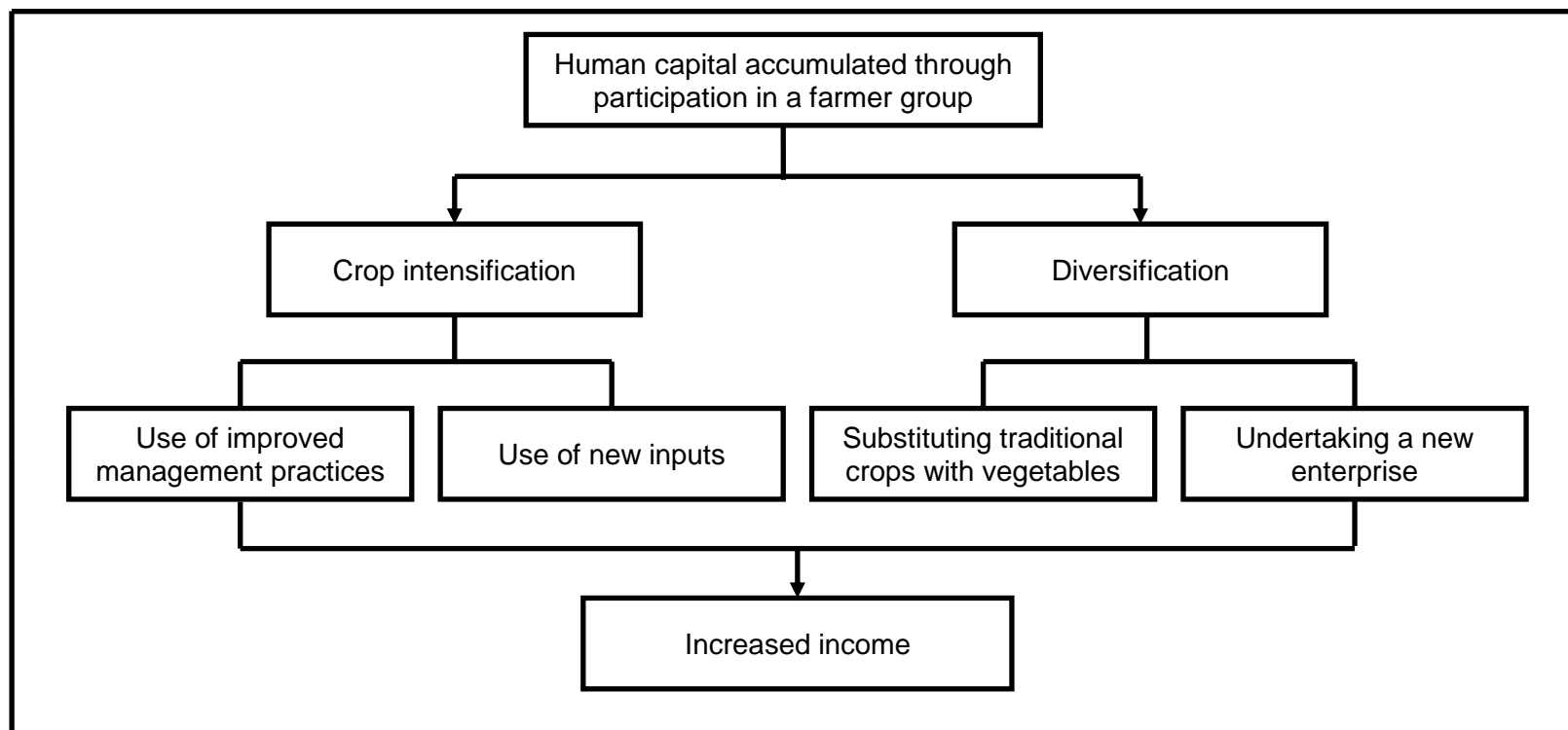


Figure: 5.14: Mechanisms through which income is increased through human capital acquired by virtue of group membership

5.4.6.1.1 Increased incomes through crop intensification

This study identified two different strategies of crop intensification that were adopted by group members in order to enhance incomes. The first strategy identified in this study was to use improved management practices. Some farmers acquired knowledge, skills and attitude related to improved management practices of paddy, vegetable crops and potatoes through participation in extension activities and social learning. Farmers were able to increase their incomes after using the improved management techniques, as illustrated in the following farmer quotes:

"In the past I used to cultivate potatoes in our traditional way but produced little. Sir [extension agent] came to our group and told us about the improved methods of potato cultivation and provided some seeds of different varieties of potatoes. We conducted a trial in which we planted different varieties of potatoes along with the local seeds. We followed all those techniques like fertilizer application, irrigation, use of pesticides, etc. that sir advised to us. From this trial, we learnt about an improved way of potato farming and follow it because it gives good results" (F17).

The second strategy of crop intensification that the group members adopted to enhance income was to use new inputs for the production of potato, maize, paddy and vegetables. This study identified three types of inputs that were used by farmers to enhance crop production and productivity as a consequence of enhanced human capital. They were fungicides, better quality seed and high yielding crop varieties. Group members reported that their potato crops were frequently damaged by diseases and this resulted in

low yields. After they conducted demonstration trials with the support of the extension organisation they understood why they were achieving low yields. They identified that the use of local potato seed was the major cause of disease infestation and the resultant low yields. They then used high quality seeds purchased from assured sources recommended by DADO. They also applied fungicides to protect their crops from disease infestation and this increased their potato yields. In addition, few group members increased the production of vegetables and maize through the use of high yielding hybrid varieties and that also contributed to an increase in income. The following remark by a farmer describes how social learning occurred and led to him changing to a high-yielding tomato variety that resulted in higher production and income:

"Some years ago when I went to the chairperson's house to attend a monthly meeting of our group, I saw a heavy fruiting tomato crop in his field which encouraged me to learn more about that variety. I talked to him regarding the crop and observed it keenly each time when I went there for the meeting. I also planted tomatoes at that time but a different variety. I compared my crops with his but I was really impressed by what I saw in his field and decided to try his variety. From the following year, I am also using that variety. Then onwards I have a very good harvest!" (F10).

The following section presents results on increased incomes through diversification.

5.4.6.1.2 Increased incomes through diversification

This study found evidence that human capital accumulated through group membership allowed farmers to increase incomes through diversification. Several group members adopted new income generation activities of which they were not previously aware or did not have the skills and knowledge to undertake. Two different strategies of diversification were adopted by the farmers in order to increase incomes. The first strategy was to initiate a new enterprise. Training and exposure visits organised by the extension organisation provided the poor women with knowledge and skills about mushroom farming. This allowed them to undertake mushroom cultivation on a small scale using space within their homes. The mushrooms produced by them were used for household consumption and surplus product was sold at the local market to supplement incomes. The following quote from one of these women provides an example of this:

"After learning from the exposure visit that we went to, now I also cultivate mushrooms at my home. If you [referring to this researcher] come in the winter season, you can get mushrooms from all members' households. I also sold some of it at the rate of NPR 250 per kg" (F6).

The second strategy of diversification that the farmers used to increase income was to substitute an existing crop for a higher value crop. Rice, maize and wheat are the traditional crops cultivated in the study area. These are the major cereal crops that have been grown in the country for a long time. Farmers usually prefer to grow these crops for meeting household needs and to ensure household food security rather than other alternative crops that have a higher market value. However, participation in the farmer

group changed this attitude. In addition, their knowledge and skills about vegetable farming increased because of their participation in extension activities by virtue of group membership. As a result, some farmers substituted their traditional crops with higher value vegetable crops. The vegetable crops they cultivated included cauliflower, cabbage, tomatoes, brinjal, okra, cucurbits, beans and cowpeas. Farmers reported that income from vegetable farming was significantly higher than from cereal crops because the market price of fresh vegetables was higher than cereal crops and it provided a much better cash flow. The following quotes from farmers provide examples of this:

"In the past, our farming practice was not very attractive, just planted paddy. But when we formed a farmer group and thereby we get a range of support and services through it. Now we mostly cultivate vegetable crops. This brings about a big change in our lives" (F5).

"Previously I used to think that if I did not grow cereal crops like rice, maize and wheat I could not have enough food to survive. I had always a fear of how could I feed to my family when I went to new crops like vegetables and if that could not produce as expected due to pest, disease, weather and so on... so I always grew cereal crops even though it is less profitable. But when I became a member in the farmer group, I participated in a vegetable training course offered by the office (District Agriculture Development Office) that increased my technical understanding of vegetable crops cultivation such as cauliflower, tomato, cucumber and bottle gourd. I had also contact and discussions with members of other groups

who are already getting higher profit from growing vegetables. Their experiences changed my attitude towards vegetable farming and I decided to start it. I am getting higher profit from it" (F15).

The following section describes the results about how enhanced human capital resulted in psychological empowerment for group members.

5.4.6.2 Psychological empowerment

Human capital accumulated through group membership also improved psychological empowerment. The acquired knowledge, skills and attitudes enabled group members to make informed decisions and to choose the best options suitable for them. For instance, group membership enhanced their ability to make decisions related to varietal and crop choice, crop management and to choose the best options for their livelihoods such as vegetable farming, group farming or mushroom farming. This in turn helped them to take control of their lives and their future. Finally this contributed to enhance their self-esteem and self-confidence in their decisions and farming practices. The following quotes illustrate the conditions in which the group members lived in the past and how the learning they obtained through the group improved their self-confidence.

"Our situation in the past and the present is like land and sky. Myself, when a new guest came to our house, I used to be shy even to speak and I would hide myself. But now, I can speak confidently in any sort of meeting and conference. I can express my own thoughts and even argue on a matter that I don't like" (F20).

"As a farmer, matters related to farming are important for us. When you gain a better understanding of farming, of crops, of crop varieties, of diseases and so on, you are in a better position to choose what is the best for you to do in your farming. This also provides you the confidence to do that" (F16).

This is also confirmed by the following quote of a key informant and the content of the quote explains that leaning through training and interactions among the fellow group members increased their self-esteem and self-confidence to do tasks:

"Through training, the inner strength of the rural people has been enhanced. That makes them clever. Their perception on self changes as they thought that Oh I got training; I haven't known this matter so far but I heard this today (referring to the themes of training delivered by extension professionals and/or matters discussed with fellow members of different groups who met at training). When they hear the things like that group or farmer achieves that; that group saves that much amount of money; that group produces that much amount of vegetable, that group starts fish farming, all these increase their self-confidence to do the things like that" (K7).

Moreover, participation in farmer groups also improved the communication skills of the farmers and that increased their confidence to speak to new people, public officials and in public forums. Increased participation in social gatherings such as group meetings, training programmes, workshops and exposure visits provided the group members with opportunities to observe how other fellow members and officials of ASC/DADO and VDC spoke and

communicated. They learnt the vocabulary, language and the way of speaking used by fellow members and the officials through observations during these gatherings. This led to the development of self-confidence in their ability to converse with others. The following quote exemplifies this observation:

"The group offers us the opportunity to meet different categories of people. When people like you sirs [referring to this researcher and others] come to the group and tell us something and express valuable thoughts, we learn from hearing that. We understood and realised that we should speak in a way how sirs speak" (F8).

In the next section, the results about how enhanced human capital resulted in political empowerment of group members are presented.

5.4.6.3 Political empowerment

Human capital acquired through participation in farmer groups also contributed to political empowerment. The human capital acquired by virtue of group membership contributed to the political awareness and political participation of group members, particularly those in the executive. Participation in a farmer group provided an opportunity for farmers to meet and interact with other farmers and officials working in various public offices such as ASC/DADO, Division Cooperative Office and VDC and this contributed to improve their political awareness. First, their knowledge about the different types of services and support provided by ASC/DADO, Division Cooperative Office and VDC was enhanced. For example, they understood that DADO offered training on different subject areas, conducted exposure visits and demonstration trials and provided grants for (i) the construction and rehabilitation of small irrigation schemes, (ii) the construction of fish

ponds and (iii) farm machinery. Second, they also learnt about the procedures they had to follow to obtain these services and support. Third, access to information about the performance of the officials of the ASC, DADO and VDC to provide these goods and services was improved. The following excerpts provided examples of the enhancement of group members' political awareness:

"Previously we did not know anything. We did not even know about the Agriculture Service Centre located nearby and District Agriculture Development Office. But when we became members of a group, we have learnt many things. Then, I know what services we can get from Agriculture Service Centre, Jilla [DADO] and like that" (F24).

"Now we know the process that we need to follow to obtain the services and support from the offices. We prepared a proposal for a small irrigation scheme and submitted it to the office. We received a grant of NPR 40.000 for this" (F13).

When farmers are better informed about their rights, the role of the state for their welfare, the functions of the different offices, the procedures to follow to request different services and support from ASC, DADO and VDC, they could then visit these offices to present their problems and request goods and services from ASC, DADO and VDC. It was also observed that members, who knew the procedure to obtain services and support, frequently visited the offices and submitted applications for assistance. This study found that group executives were more empowered politically as compared to ordinary members (see Section 5.4.5). The following section describes the role of social capital in fostering empowerment.

5.4.7 The role of social capital in fostering empowerment

Out of four dimensions of empowerment, it was found that social capital accumulated by virtue of group membership contributed to economic, psychological and political empowerment (Figure 5.15). However, this study did not find any evidence that social capital built through participation in farmer groups enhanced social empowerment. The different dimensions of empowerment that were influenced by social capital accumulation are presented in the following sections.

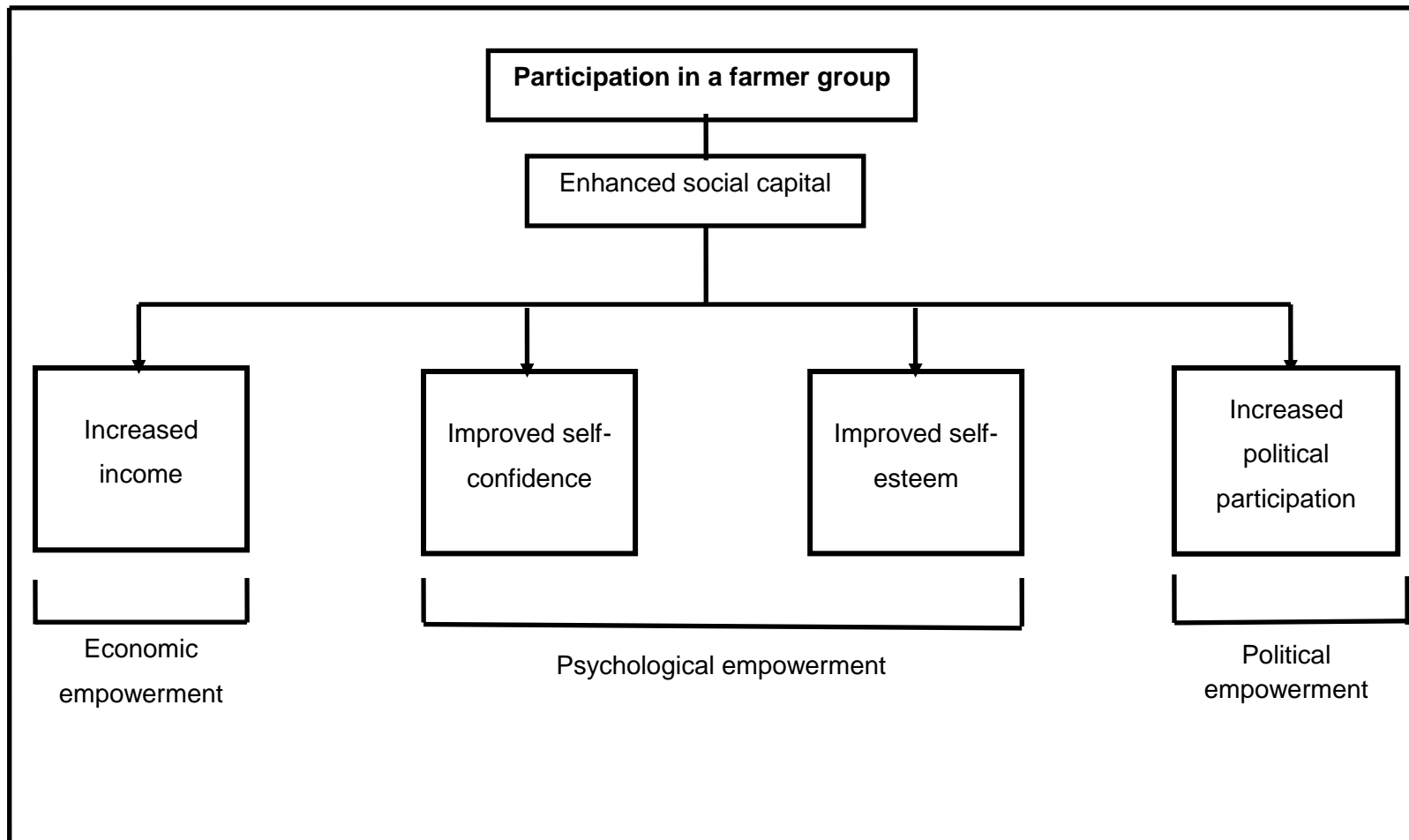


Figure 5.15: A diagram showing the different dimensions of empowerment that are influenced by social capital accumulated through participation in a farmer group

5.4.7.1 Economic empowerment

Social capital accumulated as a consequence of group membership contributed to economic empowerment. It was found that some group members were able to increase their incomes through accumulated social capital. Social capital accumulated by virtue of group membership contributed to increased incomes through three key mechanisms. They were exchange of seeds, collective action and access to quality seeds (Figure 5.16). This is presented in the following sections.

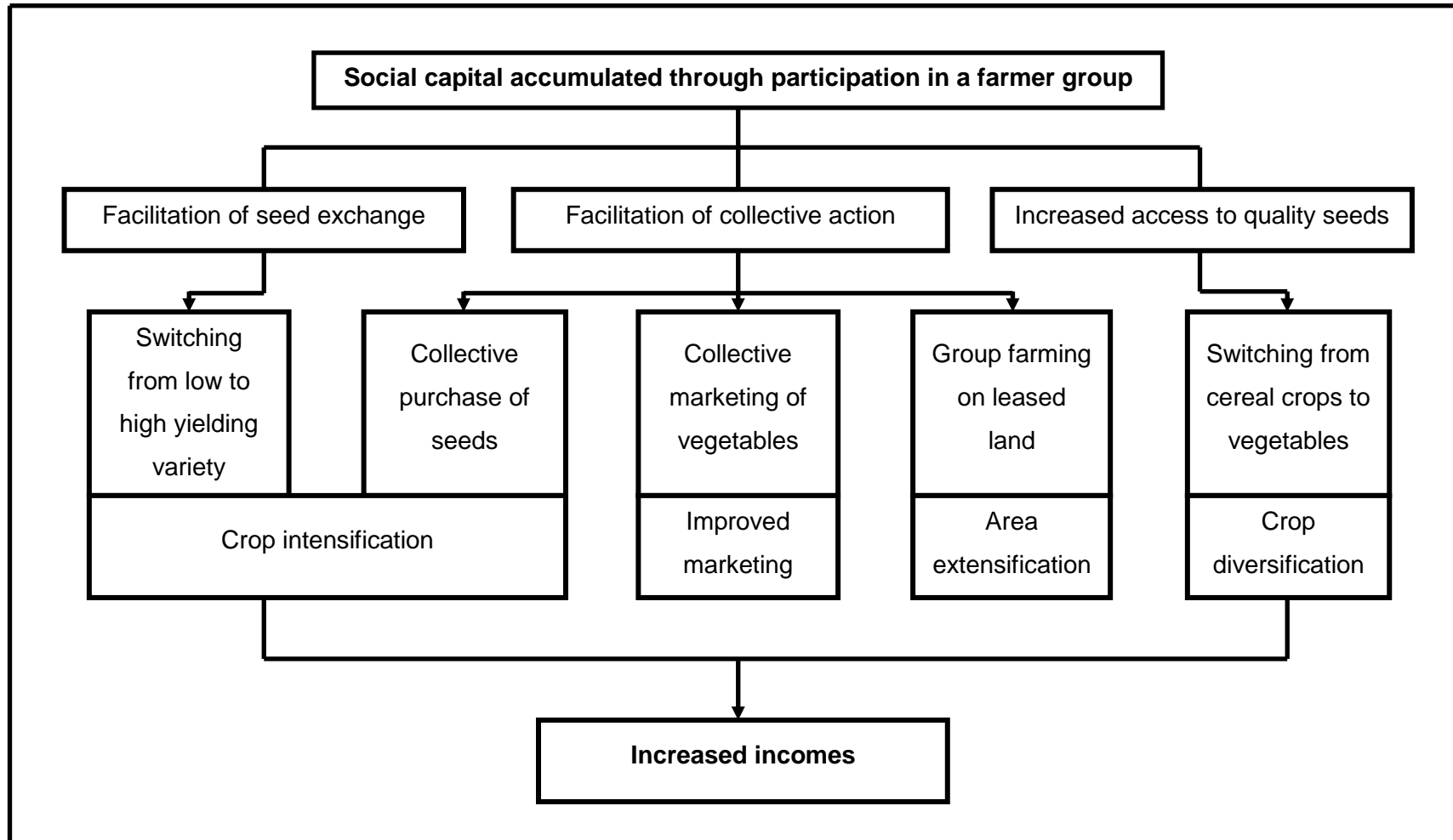


Figure 5.16: A diagram showing the mechanisms of incomes increased through social capital acquired by virtue of group membership

5.4.7.1.1 Increased incomes through exchange of seeds

In the study area the common practice was that farmers produced seed for themselves and preserved this for the next planting season. They also exchanged this seed with neighbours and relatives. It was found that social capital acquired as a result of farmer group membership facilitated the exchange of seeds between group members. Within a farmer group, the farmers talked about their experiences and current farming practices, including the crops and varieties they used and the yield they obtained. If a variety used by one member was superior to those used by other members in terms of yield and other qualities such as taste and maturity date, an exchange could take place between members. The trust and good interpersonal relationships developed between members fostered the flow of information about their farming practices and the exchange of seed. For example, a few members obtained seeds for a high yielding paddy variety from a fellow member and then cultivated it. This led to higher production that contributed to increased incomes for the farmers. The following section describes results on increased incomes through collective action.

5.4.7.1.2 Increased incomes through collective action

This study identified three main collective actions that contributed to an increase in incomes for farmer group members. They were (i) the collective procurement of seeds, (ii) the collective marketing of vegetables and (iii) group farming on leased land. It was observed that two farmer groups practised collective procurement of seeds. Farmers purchased seeds collectively when quality seed was not available at the local market. In such situations, farmers discussed the crop and the variety they wanted to purchase in a group meeting. They prepared a list of farmers who wanted to

buy quality seed. The group also assigned this task to one or two members. They then requested that the ASC and/or DADO obtain the seed on behalf of the group. Often, they submitted their demands in writing along with a copy of the group meeting's minutes. The DADO then procured the seed from a distant market, or resource centre, and provided it to the group. However, the cost of the seed was borne by the members. Finally, once the ASC/DADO had handed over the seed to the group, the group executive, or assigned members, distributed it to the members. It was reported that yields produced from high quality seed were higher than those from locally available seed. This contributed to an increase in incomes. This practice also reduced the transaction and transportation costs associated with the purchase of high quality seed. This is because the government officials (i) identified the most suitable seed types and the sources, then (ii) organised its purchase and (iii) transported it back to the ASC/district.

The second type of collective action practised by a farmer group that contributed to an increase in incomes was the collective marketing of vegetables. It was observed that one farmer group practised this. The group members produced small volumes of vegetables for sale. If individual farmers carried their small quantities of vegetables, that resulted in high transport and marketing costs and low bargaining power. Collective marketing of the vegetables through the farmer group allowed the farmers to achieve the economies of scale that strengthened their bargaining position and led to higher prices for their produce. It also reduced the transaction and transportation cost for the farmers. It was found that the group coordinated the harvesting of vegetables, identified a suitable trader, negotiated a price for the group's vegetables and delivered the produce to the distant market collectively. The vegetables from the farmers were gathered together and

one member travelled to the market to sell these on a rotation basis. In order to identify the product of each farmer, their produce was weighed, packed and marked separately before sending to the market. The proceeds from its sale were then distributed accordingly.

The third type of collective action practised by a farmer group that contributed to an increase in incomes was the group farming of leased land. This study identified that one farmer group leased two hectares of land for group farming activities. In the first year, all of the members collectively cultivated vegetables on the leased land. However, from the second year onwards, the group divided into sub-groups comprising four to five members in order to manage the collective action more effectively and the leased land was allocated to each sub-group proportionately. The participating households contributed their own labour on a reciprocal basis and inputs were purchased collectively. The following quote from a farmer illustrates how participating households managed the labour requirements for collective farming:

"Vegetable production demands intensive labour use; we need to do many activities such as nursery preparation, ploughing, seedling raising, transplanting, weeding, irrigating, harvesting and so on. We share our labour equally in all activities. The labour contribution of each member is recorded, often in a one hour unit. If someone is not available today, say two hours for weeding, she needs to spray pesticides tomorrow for two hours" (F6).

The costs and the profits associated with the collective farming were shared equally between the members of the sub-groups. Mostly, the sub-groups

cultivated fresh vegetables and potatoes on the leased land. The majority of the crops were sold to nearby markets that generated additional incomes for group members. This, in turn, contributed to a better living standard for group members. This is explained by a poor woman in the following quotes:

"Our condition was very miserable in the past. Once involved in the group, we started vegetable farming jointly on leased land. We earned good money from selling vegetables that really changed our life, to the point that we were even able to purchase land" (F6).

The following section describes results on increased incomes through increased access to quality seed.

5.4.7.1.3 Increased incomes through increased access to quality seed

The third mechanism by which accumulated social capital contributed to an increase in incomes was through increased access to quality seed. It was found that linking social networks extended through participation in farmer groups facilitated increased access to quality seed that could contribute to enhanced incomes. Participation in a farmer group brought its members in close contact with ASC and DADO that allowed the farmers to access quality seed. It was reported that one member obtained high quality bottle gourd seeds because of close contact with ASC. She cultivated bottle gourd in her field where she used to grow cereal crops. This diversification from cereal crops to the vegetable production increased her income, as mentioned in the following quote:

"This is the first time I have grown bottle gourd on 7 Kathas¹⁵ of land this season. I obtained seed for this from the Agriculture Service Centre. I have started picking the gourd from the last week of Jestha (second week of June) and hope to keep picking until the end of Bhadra (second week of September). So far, I am making around NPR70,000.00 by selling the produce and expect to earn a total of NPR200,000.00 from such a small piece of land within one season. This is more than what I used to get from my cereal crops" (F19).

The contribution of social capital to psychological empowerment is presented in the following section.

5.4.7.2 Psychological empowerment

Social capital accumulated through participation in farmer groups also contributed to psychological empowerment, particularly for women and poor farmers who have limited social connections. Generally, in the community, high caste and wealthy community members have wider bridging and linking social networks when compared to low caste, ethnic people and poor members. Similarly, men have wider social networks compared to women. However, the farmer groups were an important mechanism for expanding the social networks of members. Ethnic (*Tharu*) and women members perceived that their sense of identity and recognition increased as a consequence of expansion of their extra household social networks. This, in turn, enhanced their self-confidence and self-esteem. The following remarks made by a (ethnic) *Tharu* poor member illustrate how group membership

¹⁵ Katha is local unit of land area, 1 Katha=338.63 m²

allowed him to expand his social networks and how this enhanced his self-esteem.

"Previously I had very limited contacts. But now I am in samuha [group]. I have attended monthly meetings of our group regularly, training/workshops in Sewa Kendra [ASC] and Jilla [DADO]. I have also been invited to different social functions in the community, sometimes by the village development committee, sometimes by sahakari [cooperatives] because of the group. All these provide me with opportunities to meet many people and get acquainted with them. Now a lot of people know me which is a great achievement for me" (F12).

From the facial expressions of a female member who had limited formal schooling while saying the following remarks, it was obvious that she had gained self-esteem and self-confidence by acquiring social networks through participation in her farmer group:

"Even my degree holder childhood friend was surprised at how I can make so many new friends and relationships with those organisations and thereby increase my access to different grants and programmes from them" (F4).

In the following section, the contribution of social capital on political empowerment is presented.

5.4.7.3 Political empowerment

Social capital accumulated through participation in farmer groups also contributed to political participation. The trust and interpersonal relationships

that developed between the members of a farmer group facilitated organized collective action to resolve family disputes, protest about social issues and influence others. One farmer group organised a protest in front of the court in order to exert pressure for the judge to make a fair decision regarding the case of a family dispute, as illustrated in the following quote:

"Some time ago one couple quarrelled in our community. At the very start we blindly supported the woman simply for being a woman but later on we discovered that she was at fault and immediately we changed our way and did stand up for her husband. She divorced and subsequently filed a case in the district court for obtaining her husband's property and children from him. We the women including our group went to speak in favour of that man to the district court. Our claim is that ok she has the right to get her husband's property if they have parted ways but we believe that the children should be given to the parent who cares and loves them. In this case the father. The court was surprised because they had not ever seen and heard of group of women coming to advocate for a man. Our intention is always to work for justice" (F4).

In addition, a few of the farmer groups also attended rallies to observe a rice transplanting day and a sanitation campaign. The following section describes the role of financial capital in fostering empowerment.

5.4.8 The role of financial capital in fostering empowerment

Of four dimensions of empowerment, this case study revealed that financial capital accessed through participation in farmer groups contributed to the economic, psychological and social empowerment of the group members

(Figure 5.17). This study did not find any evidence that financial capital improved political empowerment. The following section describes results in relation to economic empowerment.

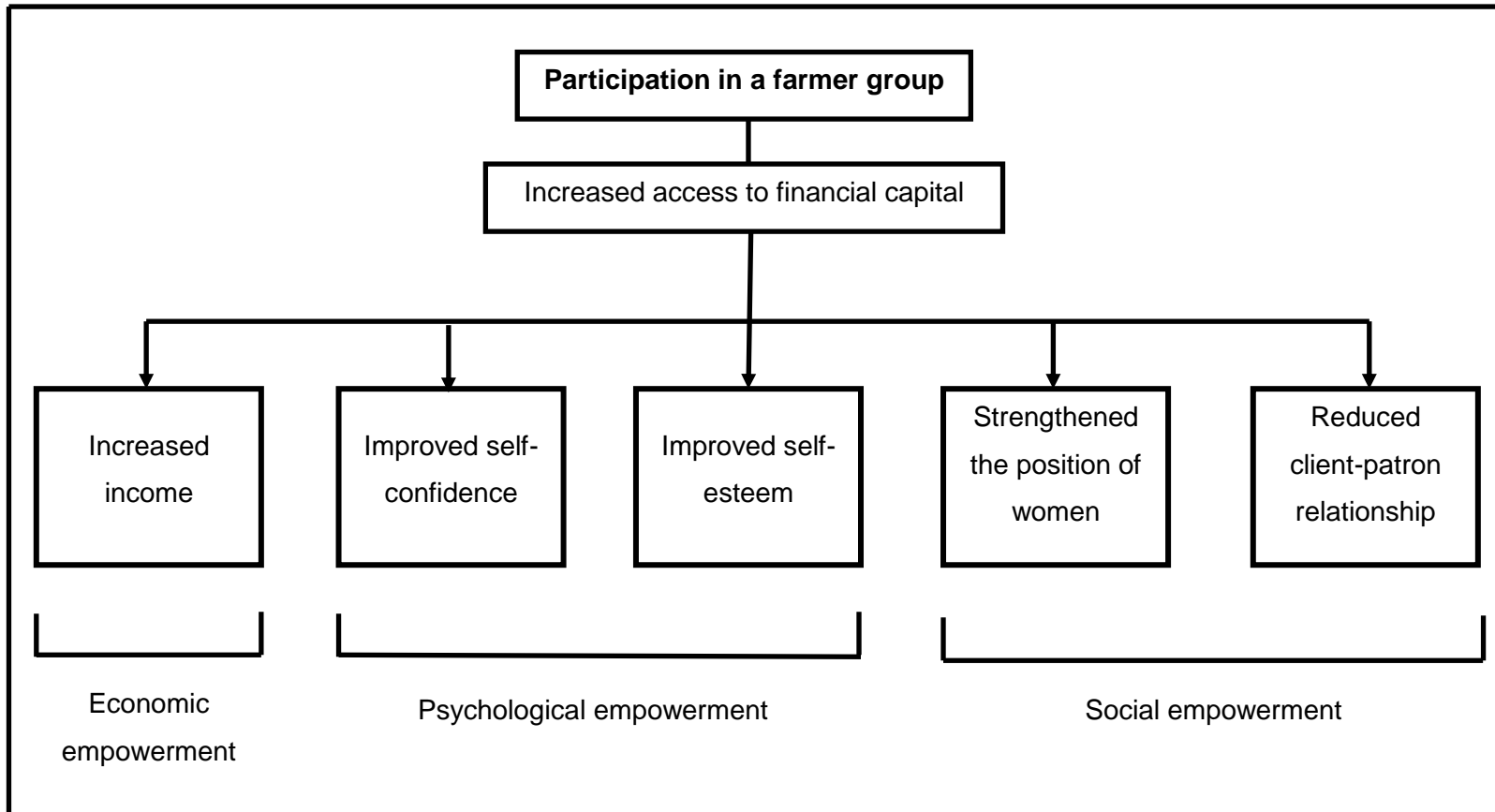


Figure 5.17: A diagram showing the different dimensions of empowerment that are influenced by financial capital accessed through participation in a farmer group

5.4.8.1 Economic empowerment

Financial capital accessed through participation in a farmer group contributed to economic empowerment. It was found that some group members were able to increase their incomes through increased access to financial capital. This allowed the members to invest in on-farm and off-farm enterprises to enhance their incomes. This study identified that financial capital accessed through the farmer group contributed to an increase in incomes through intensification, diversification, mechanization and area extensification (Figure 5.18). The following section describes results on increased incomes through intensification.

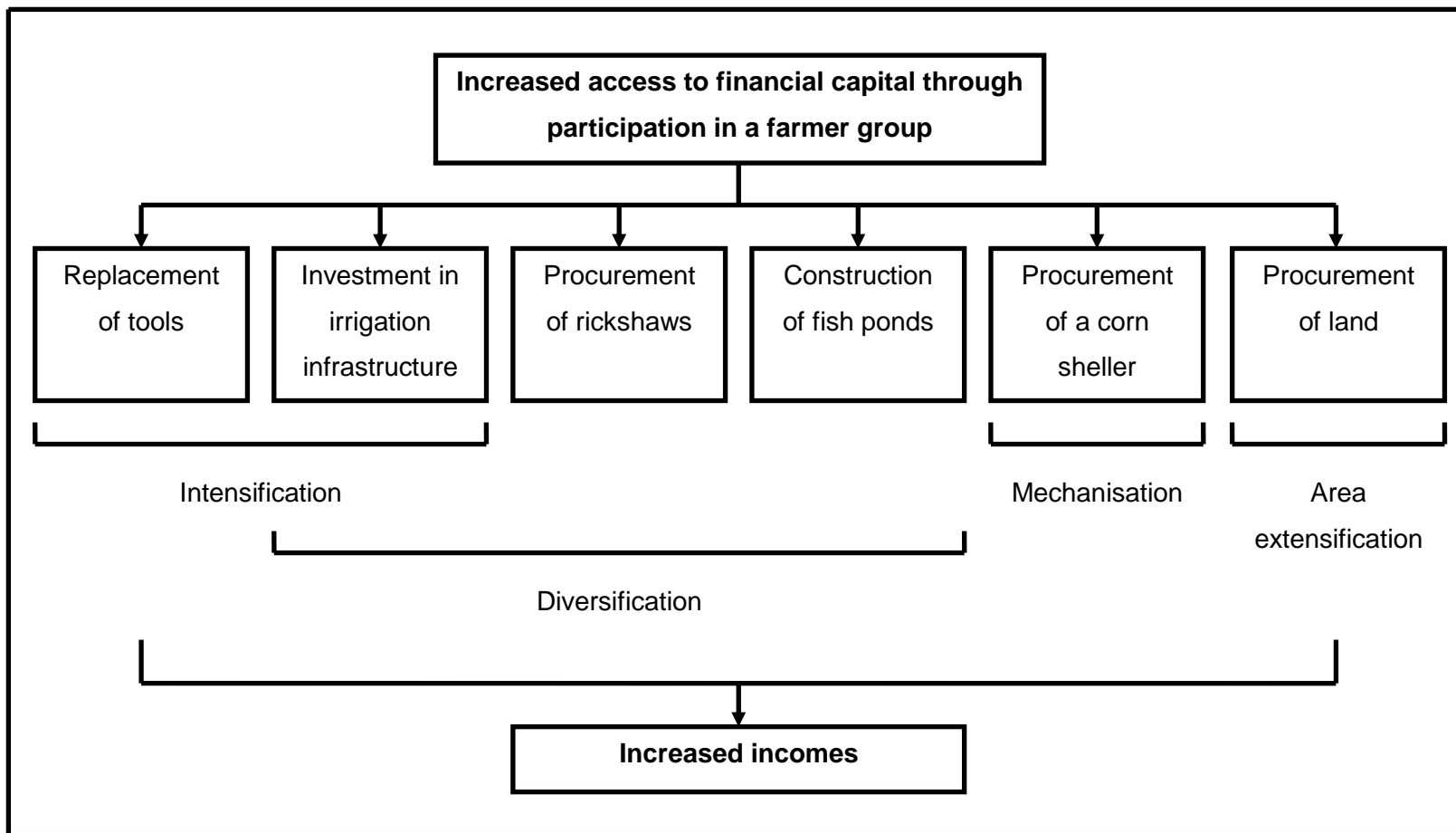


Figure 5.18: A diagram showing the mechanisms of incomes increased through financial capital acquired by virtue of group membership

5.4.8.1.1 Increased incomes through intensification

This study identified two different strategies of intensification that were used by group members to enhance incomes. The first was to increase incomes was to invest in irrigation infrastructure that increased crop yields. Irrigation is one of the major inputs for enhancing crop productivity, but degraded or inadequate irrigation infrastructures has prevented some farmers from obtaining good yields. However, participation in farmer groups enabled them to rehabilitate or develop irrigation facilities in two ways: increased access to grants from DADO and increased access to credit through the group welfare fund. Some farmers rehabilitated and/or developed irrigation canals using the grants received from DADO, whereas other farmers purchased irrigation pumps using loan money obtained from the group welfare fund. The following quote from a farmer provides an example of this:

"Our proposal was approved and a grant of around NPR40,000.00 was received. The grant money was used to procure an irrigation pump, pipe and accessories as well as materials to build a pump house while we contributed labour and local materials for the construction of a well and the pump house. After installation of the irrigation facility, 8 bighas¹⁶ of land can be easily irrigated. Five out of 16 members in our farmer group directly benefitted from this irrigation scheme. Before, we used to depend on unpredictable rain water to grow crops, but now we grow three crops all-round the year: paddy-vegetables-paddy. In the case of paddy, productivity has been increased by 10 to

¹⁶ Bigha is local unit of land area, 1 bigha=6772.63 m²

15% because of assured irrigation, but the yield increase is substantial in the case of vegetables" (F13).

The second strategy of intensification that members used to increase incomes was to replace the tools required to operate their off-farm enterprises. This study found that some of the poor members, who worked as carpenters, purchased new tools using the credit obtained from the group welfare fund. These new tools improved their productivity and this contributed to an increase in their incomes. The following section describes results on increased incomes through diversification.

5.4.8.1.2 Increased income through diversification

This study found that financial capital accessed through the farmer group contributed to an increase in incomes through diversification. The study identified three different strategies for diversification that were used by group members. The first strategy was to undertake a new off-farm enterprise through investing in capital items. It was found that some former wage labourers purchased rickshaws using credit obtained through the group welfare fund. They then earned income by offering a local rickshaw service. This enabled them to generate more off-farm income as reflected in the following quote:

"At that time the cost of the rickshaw was around NPR3000.00 which was beyond me! As per the advice of our colleagues, I took a loan from our group and purchased a rickshaw. This makes a lot of difference in my life, I am earning at least double what I used to" (F3).

The second strategy of diversification that group members used to generate additional income was to utilise unused land on their farms and introduce a new enterprise to their farming system. It was found that some poor farmers constructed small-scale fish ponds on unused land (under the tree or in a swampy area) using grants received from the DADO. Fish produced in the ponds were used for household consumption, while surplus fish was sold to the market to supplement incomes. This is reflected in the following quote:

"Being a member in a farmer group, we received a grant to construct small scale ponds for fish farming. Altogether ten fellow members received this opportunity in our farmer group. We could use it for our own consumption. If some guest arrives at home, we could offer it and also we could sell it"
(F5).

The third strategy of diversification that group members used to increase income was to substitute the existing crops with higher value crops by investing in farm infrastructure that is required for higher value crops. Irrigation is important for vegetable production and to ensure consistent high yields. This study identified that some group members grew high value vegetable crops once they had developed irrigation facilities using grants from DADO and/or credit from the group welfare fund. They obtained cash earnings from the sale of vegetables. The following section describes how increased access to grants contributed to an increase in income through mechanisation.

5.4.8.1.3 Increased incomes through mechanisation

This study identified that financial capital accessed through farmer group participation contributed to increased incomes through mechanization. Farm

mechanisation has helped farmers to reduce their labour costs and increase labour productivity. However, there have been several barriers to farm mechanisation on small farms such as the high cost of machinery and a lack of availability in the small local market. Farmer groups provided smallholders access to grants that encouraged them to invest in farm machinery. It was found that one farmer group obtained a grant that allowed them to purchase a corn sheller. This reduced the labour cost for corn shelling drastically and thus increased profit margin. The following quote from a farmer provide an example of this:

"This area is very popular for maize and the villagers have grown maize for a long time. Previously, maize kernels are removed manually from the cob and this is a very labour intensive activity, which is too tedious and costly. We were informed that Krishi [the District Agriculture Development Office] would provide some grants for the farmer group to buy it (corn sheller) and that motivated us to buy it. The total cost for this machine was NPR73,000.00, out of which the office provided NPR25,000.00. This machine saves a tremendous amount of time and labour for maize shelling compared to the existing manual shelling. It can shell 20-30 quintal of maize per hour and saves about 80% of the labour. It is unbelievable! Now, many farmers from this village as well as the neighbouring villages prefer to rent this machine to shell the maize" (F18).

The following section presents results on increased incomes through area extensification.

5.4.8.1.4 Increased incomes through area extensification

This study identified that financial capital accessed through farmer group participation contributed to increased income through area extensification. Loan money obtained from the group welfare fund was also used to purchase land by a few members, particularly poor women. They then cultivated different crops such as paddy and vegetables on that land. Rice produced on the new land was used for household consumption, while vegetables were mainly sold to generate additional income. The following quote from a poor woman farmer provides an example of this:

"I had just 10 Dhur¹⁷ of gadheri [homestead land] in terms of property. But after involvement in the group, I have bought 5 Katha¹⁸ of khet [low land suitable for paddy cultivation]. For the first time, I bought 3 Katha and then 2 Katha. I also utilised loans obtained from the group welfare fund, for example NPR50,000.00 to purchase 3 Kathas of land. Now we can eat a variety of fresh vegetables produced from our own land. I also sell these. In one season, I grew cow peas and okra from which I earned nearly NPR35,000.00. Then, I planted peas and got even more profit from the peas. But in the rainy season, paddy is grown in all 5 Katha and that produces enough food for our family" (F6).

In the following section, the results related to psychological empowerment as a consequence of increased access to financial capital are presented.

¹⁷ Dhur is local unit of land area, 1 dhur=16.93 m²

¹⁸ Katha is local unit of land area, 1 katha=338.63 m²

5.4.8.2 Psychological empowerment

Increased access to financial capital, through farmer group membership, also increased members' psychological empowerment. Financial capital accessed through participation in farmer groups contributed to increase self-confidence and self-esteem. This was especially the case for poor people and women who have limited access to formal financial services in rural Nepal because of cultural norms and a lack of collateral. Increased access to loans through the group welfare funds enabled the poor members to manage financial crises on their own without assistance from other individuals (money lenders or traders). Once they had achieved this level of economic security, they felt that their self-confidence in managing their household affairs on their own had increased.

The economic security obtained through increased access to credit also enhanced the poor members' feeling of self-esteem. The following quote from a poor female member of the *Tharu* ethnic group reflects how poor people's sense of self-esteem has increased because of their increased ability to cope with financial crises through access to loans from the group.

"At present, when we require money in any sort of emergency, we don't need to go to the elites keeping our head down. Instead, we go to the group. All are equal in the group; as equal as the chairperson. Whatever the class, caste, education, all make the same contribution to the group in terms of monthly savings and so we all have equal rights. Thus, now even the homeless people living on the street come directly to the group holding their heads high if they want money" (F9).

The content of the following quote from a poor group member also demonstrates how access to loans through the group can enhance their self-esteem:

"Once we are in a group, we got loans too. In the past, we didn't have access to loans as nobody believed and accepted us" (F6).

In the case of women, group membership allowed them to borrow money from the group welfare fund to fulfil their personal and family needs. This would normally have been undertaken by their husbands. This is because traditionally gender divisions of labour exist within rural communities in Nepal and women do not own property so they lack collateral to use as security for a loan from the bank. However, increased access to credit through the group welfare fund reduced their economic dependence on their male counterparts and allowed them to contribute to the household budget. This, in turn, strengthened both their self-confidence to manage their household affairs and their self-esteem, as explained by these woman group members:

"In the past this [obtaining a loan] is the business of men only. For us [women] that would be like a dream as we have neither a property in our name for collateral nor confidence to do that. But now, when we need money for whatever reason, the group provides us and we do manage our home successfully at any circumstances. When we do this [obtain a loan] like a man does, we feel proud and others also give value to us" (F11).

"In the past my husband obtained just a NPR25,000.00 loan from the bank even with collateral, but now I can get NPR70,000.00 without any security" (F4).

This is also confirmed by the following quote of a key informant who has been working with women on empowerment for several years:

"Now the women can get loans to manage their household without any collateral from their own organisation that they form themselves. Having their own money in their hands to manage the household and other things fostered self-confidence and self-esteem in women" (K1).

In the following section, the results related to social empowerment as a consequence of increased access to financial capital are presented.

5.4.8.3 Social empowerment

Increased access to financial capital as a consequence of participation in a farmer group also enhanced members' social empowerment. Increased access to credit through the group welfare fund contributed to a shift in the power dynamics within both the household and the community. Access to credit through the group welfare fund was found to be an important means by which the traditional gender roles of the women were transformed and their position vis-à-vis men within the household was strengthened. When women have access to loans through the group welfare fund, they can contribute to the household budget which was otherwise the responsibility of their husbands. This, in turn, increased their bargaining power within the household. Their voices were heard in the household and other family

members valued them as a consequence of being recognised as contributors to the household budget.

Increased access to credit through the group welfare fund also helped displace the vertical patron-client relationships and the associated ties of mutual obligations between the wealthy and the poor and landless classes which have been in existence for generations in rural Nepalese communities. Traditionally, rural people, particularly the poor and landless, were dependent on the local elite (such as money lenders or landlords) for their living, as well as monetary and material help in times of hardship such as illness, the death of a family member, floods or drought. In return for this patronage, the poor and landless people provided their labour as well as loyalty to the elite. However, after the establishment of the group welfare fund, the member farmers approached their own group for a loan to cope with an emergency and meet household needs. The following remarks by poor members demonstrate how they were exploited in the past and how the group welfare fund helps to breakdown this exploitative patron-client relationship in the case community:

"In the past, we used to borrow money from the local elites (such as a money lender or landlord). They charged us a very high interest rate: two to three rupees per hundred per month. On top of that, we have to fulfil other obligations in return for the loan, but we are no longer dependent on them. The group welfare fund is there for us in case of emergency...here the interest rate is also cheaper, just 12% per annum and we can pay back this on an instalment basis, monthly" (F5).

"Those days were very miserable. If something happened to our family like sickness with our children, we had to go to the wealthy people to beg money and we were not sure they would agree to give us any. They asked how I would return that money. Even if they agreed, they made us commit in advance to go to work on their farm/house the following day; what to do....no way except to obey but now that is changed, there is no such obligations as we are not dependent on them. We have our own group welfare fund for such crises" (F24).

The following quote from a social worker, one of the key informants, also confirmed the above mentioned view that the group welfare fund has reduced the poor's dependency on local money lenders or landlords:

"The group brings a very positive change to the community. Now the poor and marginal people do not go to the elites or landlords for help and support as in the past. They rarely go to borrow money from them. Rural people are organised into a diverse range of groups such as agriculture extension groups, forest user groups, women groups and so on. Although the objectives and scope of these groups differ widely, one thing is common in all groups. That is, they all operate savings and credit schemes in which they deposit a certain amount of money regularly and provide loans to the members" (K4).

This study also found that the dimensions of empowerment are interconnected and which are presented in the following section.

5.4.9 Interactions between the four dimensions of empowerment

It was found that interactions occurred between the different dimensions of empowerment (please see Figure 5.8). As such, membership in a farmer group can contribute to one dimension of empowerment which, in turn can lead to enhancement of other dimensions of empowerment. This study identified that increased economic empowerment by virtue of group membership directly contributed to two other dimensions of empowerment, namely psychological and social empowerment. Female members of the farmer groups perceived that the economic empowerment achieved through their participation in the groups helped to enhance their self-confidence and self-esteem (psychological empowerment), and heighten their position within the households (social empowerment).

Traditionally, gender divisions of labour have existed within the rural community of Nepal. This means women are supposed to undertake domestic and household chores which are often considered non-economic and inferior tasks. In contrast, men are viewed as the breadwinners and, as such, they are responsible for (i) undertaking the economic activities that bring in the household's income and (ii) the management of the household resources. This separation of roles makes women economically and socially inferior compared to their male counterparts. However, a number of women claimed that participation in farmer groups enabled them to have their own sources of income such as through vegetable farming, mushroom cultivation or through working as a seamstress. By having their own sources of income, women were able to contribute to the household budget and, consequently, they also had influence in terms of the household purchasing decisions. In other words, the women's economic dependence on men was reduced.

Women's economic independence subsequently strengthened their self-confidence and their ability to manage their family and household economic affairs increased. The women members also gained a greater sense of self-worth through increased economic independence. When women are able to contribute directly to the household economy, the other household members recognize that they are also an important source of income for the family. As a result, their bargaining power in the household increased, their voices were heard and other household family members also valued them. The following remarks by women group members illustrate how economic empowerment gained through membership in a farmer group influences other dimensions of empowerment:

"In the past, we women were limited to kitchen work and taking care of our kids. This confined us within the four walls of our houses. After involvement in the farmer group, we are also able to earn some money like our male counterparts do. When we can manage the economic affairs of the household alone, we are not less than them. We also receive respect from the family" (F11).

"When we support our families from the money that we earn, we have a dignified life" (F12).

This is also reinforced by the following quote from a key informant:

"If there is some dispute/quarrel in your neighbour, you [referring to women] can go to settle that dispute. This is because when you are economically empowered, society treats you differently and accepts you" (K1).

For poor members, the economic power achieved through their participation in farmer groups also contributed to enhance their self-esteem (psychological empowerment) and reduce patron-client dependency that existed between the rich and poor members of the community (social empowerment). Poor members felt an enhancement in their self-esteem when they engaged in their own enterprises instead of being dependent on income obtained from being an insecure casual labourer. This is because labouring for wages is viewed by society as socially inferior work. Poor members who were able to make a living by farming their land and, as a result, were no longer dependent on wages from a labouring job perceived that they had more respect within the community. As a result, their self-esteem increased, as explained by a former wage labourer:

"We were not respected and mistreated like animals when working as labourers. But now I stand on own my two feet, even though this is at a very small scale. I have my own small piece of land where I plant cauliflower, tomatoes, beans..... So my neighbour now sees me differently. I feel proud of being an independent self-worker rather than dependent on others for our survival" (F12).

Moreover, when poor farmers made their living through their own income generation activities, instead of relying on insecure casual labour, their economic dependence on the wealthy and elite members of the community was reduced. As a result, this weakened the existing exploitative patron-client relationship that existed between the rich and poor members of the community. One female farmer describes succinctly how their dependency on wealthy people for their livelihood gives rise to an asymmetrical patron-client relationship in the village:

"In the past we both husband and wife used to work in the house of thula thalu [literally great people-elite] as a labourer. The life was very hard and the work back-breaking...We had to work from dawn to dusk but we get nothing, a meagre wage, even not enough to lead a hand-to-mouth life. We were forced to work with them because neither of us had any other means of earning our livelihood to feed our children nor did we do have the skills to earn money. We had to accept what they gave us" (F6).

She further reveals how her involvement in farmer groups helped to diminish her reliance on the client/patron relationship:

"But farmer group opens up a new path to our life. Now we do our own vegetable farming year round. Traders come themselves in our field to buy our vegetables. Our life is changed as many benefits we get from this. The most is we don't need to go to the thula thalu [elites] to beg so they can't force us to do this and that" (F6).

However, this study did not find any evidence of the direct influence of economic empowerment on political empowerment. This study also found that psychological empowerment gained through participation in a farmer group influenced economic and political empowerment. It was found that some poor group members had low self-confidence prior to joining the group because they struggled to earn enough money to support their family. They always worried about meeting their basic needs and they did not have the confidence that they could change their life situations and control their own lives. However, group membership provided them with hope and aspirations

that they could improve their own situation and this enhanced their self-confidence (psychological empowerment). This, in turn, encouraged them to obtain a loan to purchase land to grow crops and engage in new income generation activities such as vegetable production and group farming on leased land. They then produced enough food from paddy and vegetables farming for their family from the purchased land. They also earned cash income through the sale of vegetables that they grew on their own land and also from vegetables farmed collectively on leased land. This contributed to an increase in their income (economic empowerment). The following excerpts from a poor women group member illustrate this:

"In the past, even if I got an opportunity to obtain a loan, I did not have confidence that I could pay it back. But the group provides us with inner power as I do have fellow friends to support us, we get many services from the offices and we do have the welfare fund for emergency needs. After belonging to a farmer group I obtained a loan from the group to purchase land that not only gives us enough food to eat but also generates cash earnings" (F5).

This study also found that increased psychological empowerment contributed to the political empowerment. The increased self-confidence of women members permitted them to speak more comfortably in public. This then enabled them to visit ASC, DADO and sometime the VDC too to ask for help and support, present their demands and raise issues related to their farming business and community (political empowerment). This study also identified that increased political empowerment, by virtue of group membership, contributed to psychological and economic empowerment. For example, some farmers did not know about ASC and DADO, or the goods

and services they offered to farmers, prior to joining a farmer group. However, belonging to a farmer group increased their knowledge of this (political empowerment). This led to an increase in their self-esteem and self-confidence (psychological empowerment). Moreover, increased political empowerment also reinforced economic empowerment. When group members were better informed about the services and goods offered by the ASC and DADO and the procedures to obtain these, they could go to them to ask for these benefits. It was found that the members who knew the procedures for requesting goods and services from ASC and DADO, submitted proposals to obtain them. Normally they were successful in obtaining them, which enhanced their incomes (economic empowerment), as explained by a farmer in the following quote:

"Previously I did not know that DADO supported farmers for irrigation. We learnt this only after involvement in the farmer group when I visited the ASC. I also asked about the process of getting this as this was a constraint for us. Since then, we frequently visit the ASC to obtain the goods and services it offers us. We also submitted an application for irrigation facilities as per their requirement and finally we got it. This helps us to produce more paddy and vegetables" (F19).

Finally the study also showed that social empowerment gained through farmer group membership contributed to enhanced psychological empowerment. It was found that participation in farmer groups contributed to strengthening the position of women both within the household and the community (social empowerment). This also contributed to improving their self-esteem and self-confidence (psychological empowerment). This is reflected in the following quote from a woman member:

"As compared to the past, we [women] do feel changes in our position. The husband, the family and the society behave differently towards us. This really makes us happy, proud and worthy" (F4).

This study also found that the extent of empowerment gained by farmer group members varied across farmer groups and this is presented in the following sections.

5.5 Difference in the level of empowerment between farmer groups: A function of social cohesion and resource flow

The above section describes how participation in farmer groups facilitated the empowerment of its members. Although this study demonstrated that group membership brought about changes in the four dimensions of empowerment, that is, economic, psychological, social and political, the degree of empowerment obtained by members varied between groups. In some groups, a greater number of group members were empowered and those members were empowered to a greater degree, whereas in other groups relatively few members were empowered. This study identified two main underlying factors that caused such a difference in the empowerment outcomes between the groups. These were (i) the degree of cohesion between group members and (ii) the volume of resources that flowed into the group. The following section describes these two factors in more detail.

5.5.1 The effect of the level of group cohesion on empowerment

It was found that the proportion of members within a group that were empowered and the extent of their empowerment was a function of the

cohesiveness of the group. A farmer group of *Tharu* ethnic people was found to be more cohesive in comparison to farmer groups of mixed castes. The *Tharu* ethnic people are the indigenous inhabitants of the case district. They shared a common culture, values, origin and socio-economic status. This ethnic tie engendered a high level of solidarity within the group. Trust levels among the members of *Tharu* ethnic group were also much higher than that among the members of farmer groups of mixed castes. They exhibited a greater sense of belonging and emotional closeness. The following remarks from farmers illustrate the above points:

"The most important thing is trust among the group members. When members trust each other, then there is unity in the group. In our group, when there is some collective work, all will come and participate like to meet sir [extension professionals] and perform any activities in the demonstration plot such as planting, weeding and harvesting. We have very good unity between members" (F5).

"All members of our group gather to do some collective works. Our group has a strong solidarity so we don't have any conflict among the members. Other people also told us that people in other groups do not work collectively like in our group" (F1).

The strong solidarity and high level of trust between the members of *Tharu* ethnic farmer group facilitated the organisation of collective actions and fostered the unimpeded flow of information within the group to a greater extent than was found in the mixed caste groups. This, in turn, fostered a higher level of empowerment in comparison to the mixed caste farmer

groups. For example, one *Tharu* ethnic farmer group leased land and practised group farming on it. This group also undertook the collective marketing of vegetables. These collective actions contributed to an increase in incomes that have already been discussed in Section 5.4.7.1. Since all group members were involved in group farming, all of them benefitted from it. If new information reached any group members such as information related to crops, varieties, technologies, opportunities, local affairs and so on, it was passed on to all members within the group.

The upper caste members of other groups also recognised the solidarity and trust among the members in the group composed of *Tharu* ethnic people and that facilitated collective action as illustrated in the following remark:

"Like that farmer group of Chaudhary [referring to the farmer group of Tharu ethnic group of this study], we noticed that when the members are informed once for doing something collectively like meeting with sir [referring to extension officials] tomorrow, all members would gather at a given time and given place. In such situation, the group can do a lot to progress" (F14).

This is also confirmed by the following quote from an extension professional working in the ASC:

"In comparison to the farmer group of upper caste (Brahmin and Chetri), the group comprising of ethnic homogeneous people is doing relatively well. They exhibit strong group solidarity. So they can do whatever they wish and whatever we advise. Like, we had a budget for construction of 10 small-scale fish ponds. We proposed this to them and they agreed

to make the fish ponds. And they show excellent performance from that" (S5).

In contrast to the *Tharu* ethnic farmer group, the trust level and solidarity between group members of mixed caste farmer groups were relatively low. The ties between group members were not as strong as that was observed in ethnically homogenous group. The members of mixed caste farmer groups (except *Tharu* ethnic people) migrated from different districts outside the study location. As such, there was a diversity of cultures, values, socio-economic status and origin. These mixed caste groups did not practise the collective marketing of vegetables and group farming as that observed in *Tharu* ethnic farmer group. However, some of them did engage in the collective procurement of seeds.

The following remarks from an upper caste member illustrate how migration brought diversity into his group and how this impeded collective action:

"Farmer group is a very effective means for the farmer to solve their common problems and arrange farming inputs. When we talk about group, members should have trust in each other. But the members should be identical in terms of their background, status, behaviour, objectives and occupation like that. If this is not the case, there is difficulty for collective action. But in our group, he [referring to chairperson of his group] came from Makwanpur, I from Dhading, another from Baglung, one from Parbat, other from Shyanjha. They have their own culture, own thinking, attitude and own obligation. This is like using different sized bullocks for an animal drawn plough" (F22).

This is also confirmed by the following remarks from an extension professional:

"I can't say about the situation in other district. But the village of Chitwan is very diverse and heterogeneous. People from different districts came and settled here. We could hardly find two neighbouring households alike in terms of race, caste, religion, culture and socio-economic status. It is not possible to make a farmer group comprising of members migrated from the same district, people coming from Gorkha district in one group and people coming from Lamjung district in another group. A farmer has to consider physical proximity as one of the key criteria when choosing group members. Thus values, attitudes, objectives, status, and the culture of group members are completely different here. The only similarity among the group members is that they share a common geography. One member turns his face to the north while another to the south" (S1).

The volume of resources that flowed into a group was the second factor that accounted for the fact that group members in some groups were empowered more than others. This is discussed in the following section.

5.5.2 The effect of the volume of resources on empowerment

The proportion of members within a group that were empowered and the extent of their empowerment was a function of the volume of the resources that flowed into a group. It was found that some groups drew on more resources from ASC, DADO and VDC than the others. The members of these groups had greater opportunities to take part in training, workshop and

exposure visits organised by ASC and DADO. As such, they had more access to information. They also received more grants from DADO and VDC, such as for the development of irrigation facilities and the construction of small fish ponds. That means that they had more access to financial capital. More access to information and more access to financial capital in turn contributed to empowerment of a greater number of group members and to a greater degree.

This study identified that group leadership was important in relation to resource access. When a leader of a group had a strong relationship with a political party, government organisation such as ASC, DADO, VDC and NGO, such group obtained more resources. The wider linking social networks of the group leader enabled the group to draw on more resources for the benefits of the group members. Farmer groups that had a leader with weak linking social networks received a lesser amount of support and services from government organisations and NGO. The following section provides a summary and conclusions for this chapter.

5.6 Summary and conclusions

In this chapter, the mechanisms by which a farmer group contributed to the empowerment of its members have been described. Participation in a farmer group contributed to the accumulation of three different forms of capital. They were human, social and financial capital. These three forms of capital generated empowerment across four dimensions: economic, psychological, social and political.

Group membership helped to acquire three different forms of capitals through different mechanisms. For instance, participation in farmer groups improved the human capital of group members through two mechanisms.

They were participation in extension activities and social learning. The knowledge, skills and attitudes acquired by virtue of farmer group membership were related to on-farm and off-farm enterprises, discriminatory social norms, childcare, health and sanitation, current affairs and local politics. Farmer groups also provided a social space for fostering new relationships and increased interactions for group members through group meetings, collective action and participation in extension activities. This, in turn, enabled them to build social capital in the form of trust, norms and social networks.

This study also found that farmer groups fostered increased access to financial capital for its members through two mechanisms. First, the farmer group welfare fund established in each farmer group increased access to credit for members. Second, the farmer group provided an opportunity for farmers to obtain grants from extension organisations that were inaccessible to individual farmers. The study also identified that these forms of capital were interconnected and that one form of capital reinforced the other.

The findings also showed that none of the three forms of capital accumulation alone contributed to empowerment across four dimensions. For instance, human capital acquired through group membership influenced economic, psychological and political empowerment, but not social empowerment. Similarly, social capital acquired by virtue of participation in a farmer group contributed to economic, psychological and, only one indicator of political empowerment (increased political participation, but not political awareness), but not social empowerment. On the other hand, financial capital accessed as a consequence of farmer group membership enhanced economic, psychological and social empowerment, but not political empowerment. This means that the farmer group can foster all four

dimensions of empowerment only when the individuals acquire all three forms of capital. Overall, empowerment is a function of not just an increase in one form of capital but synergistic improvement in all three forms of capital. Like different forms of capital, the dimensions of empowerment were also interconnected and reinforced each other.

The findings from this study also revealed that it is not simply group membership per se that generates empowerment, but the extent of farmer participation in group activities. Members who had a higher level of participation in group activities had a greater degree of empowerment than those who had a lower level of participation. The study found that the increase in incomes was significantly higher for members who engaged in group farming, collective marketing and participated in trainings and workshops related to their enterprises than those who had limited participation in these activities. Similarly, significant enhancement of political empowerment was observed in those members who frequently met extension professionals when compared to members who sought such information indirectly.

This study also identified that empowerment that occurred as a consequence of group membership varied between groups. A greater number of members were empowered, and they were empowered to a greater degree in some farmer groups in comparison to others. This study identified two factors that contributed to the variation in empowerment between farmer groups. They were level of cohesion among group members and the volume of resources that flowed into the group. This study also indicated that different group members benefitted to different degrees in terms of empowerment and this was associated with gender and social status. It was found that by virtue of group membership, women were more

empowered than men. The other finding was that poor farmers benefitted more from group membership than smallholder farmers in terms of empowerment. In the following chapter, the results presented in this chapter are compared with the literature.

CHAPTER SIX

DISCUSSION

6.1 Introduction

This study was carried out to understand how participation in farmer groups, assisted by the public agricultural extension organisation, contributes to the empowerment of group members within rural communities in Nepal. To gain more insight into the research question and the subsequent research sub-questions, the study utilised a multidimensional framework of empowerment. This chapter is separated into two sections. In the first section, the theoretically important characteristics of the case are described which provides the context to interpret and compare the results of this study with other studies. In the second section, findings from the present study related to the contributions of farmer groups to the empowerment of rural communities in Nepal are compared to those in the literature.

6.2 Important characteristics of the case

The objective of this section is to present theoretically important characteristics of the case that provide the context through which the findings of this case study can be interpreted and compared with other studies (Hartley, 2004; Ragin, 1992). The important characteristics of the case are provided in Table 6.1. The study is undertaken in a developing country, and the society in which the study took place is a patriarchal and hierarchical caste-based system. The village in which this study was conducted is heterogeneous in terms of caste, ethnicity and economic status. Although it has a mix of upper caste, low caste and ethnic groups, the predominant social group in the village is the *Tharu* ethnic group (37.4

percent) who are indigenous to the area (Central Bureau of Statistics, 2014). The village also has an upper caste comprising of *Brahmin* and *Chetri* that make up 37 percent of the population (Central Bureau of Statistics, 2014). This group migrated from other districts within Nepal. Prior to the 1950s, the district was populated by the indigenous inhabitants, that is, the *Tharu* and *Darai*. These ethnic groups had developed a natural immunity to malaria which was endemic in the district. In the late 1950s, the Nepalese government launched a malaria eradication programme. Once the malaria was eradicated, the government initiated a resettlement programme in the late 1950s which encouraged people of different castes and ethnic backgrounds from the hilly districts of Nepal to migrate to the case village, as it provided them with better livelihood opportunities (Kadel, 2013). As such, the non-ethnic groups have only resided in the area since the late 1950s. The government is the key agricultural extension service provider in the case village, but a few NGOs also provide extension input. Importantly, farmers are required to be a member of a farmer group to access extension services from both the government and the local NGOs.

The majority of the farmer groups within the study were self-initiated except for one that was formed by a development organisation (Table 6.1). In relation to legal status, the case groups can be categorised as informal groups (Anandajayasekaram et al., 2008) because they are not a legal entity. However, they must be registered in the local DADO to access extension services and support. Drawing on the typology of groups developed by Biggs (2008), the farmer groups within the study can be classified as 'service delivery' groups. Different types of groups can be found in the developing countries including Nepal for the purpose of agriculture and rural development, in addition to the farmer groups such as microcredit

groups and farmer field school groups. However, the fundamental difference between the farmer groups in this study and other types of groups, is the nature of intervention.

The major intervention, in relation to microcredit groups, is the provision of a small, collateral-free loan to poor people to help them generate additional income and/or facilitate self-employment. The group is jointly liable for the repayment of loans made to each member, despite some operational dissimilarities across implementing organizations and countries (For details see Girabi & Mwakaje, 2013; Islam, 2007; Lahkar & Pingali, 2012; Nawaz, 2010; Swain & Wallentin, 2009; Vaessen et al., 2012). In some cases, microcredit delivery institutions also provide different types of trainings for the capacity-building of the borrowers in addition to lending money (Swain & Wallentin, 2009; Vaessen et al., 2012). On the other hand, a farmer field school is a form of participatory extension method of learning in which a group of farmers sets up experimental plots for a crop and meets regularly (generally weekly) throughout the season to develop expertise on that particular crop through, ways such as observation, experimentation and discussion (for details, see David, 2007; Davis et al., 2012; Friis-Hansen & Duveskog, 2012; Noordin et al., 2001). However, the major intervention for farmer groups, the focus of this study, is the provision of public agricultural extension services. These include mainly: (i) different types of capacity-building activities organised by the DADO such as training, workshops and exposure visits; (ii) technology demonstration plots that are established in the field of group members; (iii) the provision of grants and subsidies in the form of kind and cash provided by the DADO and (iv) the provision of technical advice related to farming. Financial services (credit) is not provided to the case farmer groups by the extension organisation. However, to some

extent, they advise farmers about how to establish group welfare funds for the purpose of fulfilling their credit requirements. Each case farmer group has set up a welfare fund to provide for their credit needs. However, one case farmer group also received a one-off lump-sum grant from a NGO to help establish a welfare fund.

Table 6.1: Important characteristics of the case

Characteristics	Case study classification
Characteristics of case village: Khairahani	
Location	Developing country
Nature of society	Patriarchal and hierarchical caste-based system
Caste and ethnic composition	Mix of upper caste, low caste and ethnic groups; Ethnic group: mostly indigenous inhabitants Upper caste and low caste: migrated from other districts
Key agricultural extension service provider	Government
Other extension providers	NGO
Extension service delivery approach	Farmer groups
Characteristics of farmer groups	
Mode of origin	Both self-initiated and initiated externally
Legal status	Informal: no legal status but registered in the local DADO
Type of group	Service delivery
Group size	Small
Group composition	
Gender	Mainly mixed gender with one male only group
Ethnic/caste	Mixed and homogenous groups of the <i>Tharu</i>
Economic status	Smallholder only and mix of poor and smallholder farmers
Characteristics of farm	
Farm size	Small; 0.35 ha per household (average)
Farming system specialisation	Crop-livestock mixed farming system

The size of the case farmer groups varied from 12 to 30 members. As such, the farmer groups can be classified as small in size based on the criteria suggested by Rajasekhar (1996), Vuthy et al. (2014) and Wandschneider and Yen (2007). Gender, ethnic and socio-economic composition varied

across the farmer groups. Most of the case study groups were mixed in terms of gender, except one that was comprised of men only. In terms of the ethnic and caste composition of the groups, one farmer group was exclusively composed of *Tharu* ethnic group members, whereas three groups were mixed caste farmer groups (upper caste, ethnic and other). The economic status of group members varied. One group comprised of smallholder farmers only, while three groups comprised a mix of smallholder farmers and poor farmers.

The farm size of the group members within the study can be classified as small (on average 0.35 hectares per household) (Collett & Gale, 2009; Devendra, 2007; Okidegbe, 2001; Thapa & Gaiha, 2011) The farmers in the study area practise a crop-livestock mixed farming system to meet their household food requirements. The major crops grown in the area are paddy, maize, wheat, mustard, lentil, potato and different types of vegetables and fruits. Commonly raised livestock consist of dairy cattle, buffalo, goats, pigs and poultry. The sale of surplus produce provides a source of cash income for the majority of the farmers in this study. In the following section, the contribution of farmer groups to the empowerment of group members in rural Nepal is discussed.

6.3 The contribution of farmer groups to the empowerment of group members in rural Nepal

This study revealed that participation in farmer group facilitated the accumulation of three forms of capital (human, social and financial) that then contributed to the empowerment across four dimensions (economic, psychological, social and political) (Figure 6.1). Little has been written in either wider development literature or the agricultural extension literature

that has linked the three different forms of capital and four dimensions of empowerment. While some authors in the field of development studies have investigated empowerment using the four dimensions (for example, Fiorello & Bo, 2012; Khondkar, 2002; Magallanes-Blanco & Pérez-Bermúdez, 2009; Sangeetha et al., 2013; Scheyvens, 2000), they have not considered the process from a capital (human, social and financial) perspective. Although Bartlett (2004) in a study of farmer field schools in Bangladesh has reported explicitly on the three routes to empowerment through the accumulation of three different forms of capital, this author has not considered empowerment from the perspective of the four dimensions. The finding further demonstrated that although farmer groups facilitated the empowerment of group members through three distinct forms of capital accumulation, interactions occurred between the forms of capital (Figure 6.1). As such, membership in a farmer group can facilitate the accumulation of one form of capital (for example. social) which in turn can facilitate the accumulation of another form of capital (for example. human). The interconnected nature of different forms of capital accumulation that evolved as a result of farmer group membership is poorly reported in the literature. However, the wider social science literature such as Bourdieu (1986), Timberlake (2005) and Zorn (2004) suggested that feedback loops existed between the different forms of capital although their phenomenon of study was not in relation to farmer groups. Similar to the route to empowerment, this study illustrated that interactions occurred between the different dimensions of empowerment. The interconnected nature of the different dimensions of empowerment is poorly identified and explained in the existing literature with respect to farmer groups. However, such feedback loops have been highlighted in the broader development literature (for example, Bayulgen, 2008; Cheston & Kuhn, 2002; Kato & Kratzer, 2013; Mayoux, 2003, 2006,

2007; Moyle et al., 2006; Samanta, 2009; Wrigley-Asante, 2012) that mostly explore empowerment in relation to microcredit, rather than with respect to farmer groups. The present study also provided useful insights into the characteristics of farmer groups that are likely to influence the empowerment of group members. It was found that the degree of empowerment that occurred within a group was influenced by the level of cohesion among group members and the volume of resources that flows to a group. Another important finding that emerged from this case study was that the less empowered individuals within the community were likely to have the most to gain from membership within a farmer group. These findings are compared to the literature in the following sections. First, the insights related to the three capital routes to empowerment are discussed. Insights about the four dimensions of empowerment gained through participation in farmer groups are then compared to those in the literature. Thereafter, the variations in empowerment effects between the farmer groups and across group members are discussed.

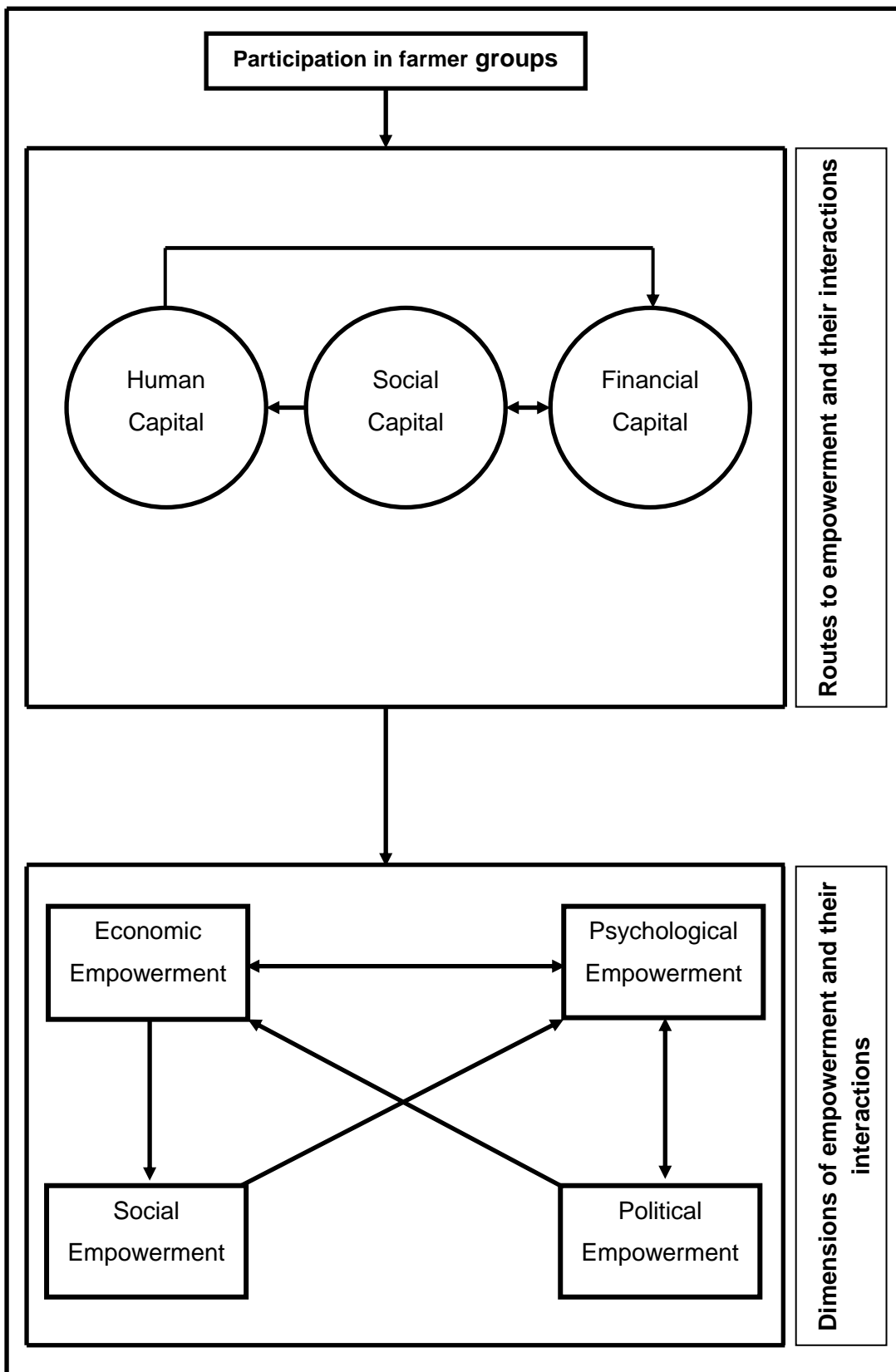


Figure 6.1: A model showing the linkage between the three key routes to empowerment through participation in farmer groups and their influence on the four dimensions of empowerment

6.3.1 Human, social and financial capital: the route to empowerment in farmer groups

An important finding that emerged from this study was that farmer groups can contribute to the empowerment of farmers in rural Nepal when the group enables farmers to accumulate human, social and financial capital. The research demonstrated that participation in farmer groups contributed to the accumulation of human, social and financial capital (Figure 6.1). Further, this research revealed that interaction occurred between the three distinct forms of capital. Few studies have identified and described a causal link between participation in a farmer group and the empowerment of members through accumulation of different forms of capital. In a study of farmer field schools in Bangladesh, Bartlett (2004) reported similar findings about the accumulation of three forms of capital through participation in farmer groups. However, Bartlett (2004) did not report the existence of interactions that occur between the three forms of capital as observed in this study. In a quantitative study of the impact of the "Lifelong Learning for farmers" programme on the overall empowerment of farmers, Carr et al. (2015) also concluded that integration of the three forms of capital (human, social and financial) had a positive impact on the empowerment of farmers. However, unlike the present study, their study has not provided an in-depth understanding of either how these different forms of capital can be enhanced, or which forms of capital can influence which dimensions of empowerment. How farmer group membership allows the accumulation of the three forms of capital by farmers and the interactions between these forms of capital, are discussed in the following section.

6.3.1.1 Human capital accumulation

Participation in farmer groups contributed to the accumulation of human capital by the group members. The literature (such as, Cramb, 2005; Jacobson, 2012; Kilpatrick, 2007; Mudege et al., 2015; Ngwira et al., 2014; Schroeder et al., 2013) also suggested that farmer groups can contribute to human capital development, although these authors rarely used the concept of human capital when reporting their analysis. This study demonstrated that participation in farmer groups contributed to the acquisition of human capital through two mechanisms: participation in extension activities and through social learning. Although scholars such as Cramb (2005), Jacobson (2012) and Ngwira et al. (2014) have also reported that group membership enabled farmers to enhance their knowledge and skills through participation in extension activities and social learning, they have not linked the enhanced knowledge and skills to the empowerment of farmers as in this study. A few scholars such as Mudege et al. (2015) and Schroeder et al. (2013) have demonstrated the causal relationship between participation in farmer groups and increased access to knowledge and skills and then linked this to empowerment. However, neither of these authors used the concept of human capital explicitly when reporting their observations.

The findings of the present study revealed that increased access to extension activities by virtue of group membership was an important means of the farmers acquiring knowledge and skills related to on-farm and off-farm enterprises. Similar findings were reported by Mudege et al. (2015), Njuki et al. (2008); Ngwira et al. (2014); Schroeder et al. (2013) and Wambura et al. (2007) from studies undertaken in various developing countries. In the present study, knowledge and skills enhanced through participation in extension activities were related to high value marketable crops such as

vegetables, potatoes and mushrooms, improved plant varieties, the use of high quality seed, planting methods, fertiliser rates and methods of application, pest management and cloth stitching. Similar findings have been reported elsewhere. For example, Ngwira et al. (2014) found that farmers enhanced their capacity to practise minimum tillage, plan more effective crop rotations and use crop residues as soil cover through increased access to extension services by virtue of farmer group membership in Malawi. Schroeder et al. (2013) found that farmers acquired knowledge and skills related to rice farming through participation in farmer group membership in Benin.

The major extension activities that contributed to the enhanced human capital of group members in the present study were training courses, workshops, farmer field schools, exposure visits, field demonstrations and direct contact with extension professionals. Jacobson (2012) has also identified that study tours, field visits, training, and field demonstrations were the major means of increasing human capital through farmer group membership in Kenya whereas Ngwira et al. (2014) found trainings, exposure visits and access to extension professionals enhanced the capacity of group members in Malawi.

The second mechanism by which human capital was enhanced in this study was through social learning that occurred as a result of being in a farmer group. This study revealed that group membership increased the members' opportunities to meet and interact (dialogue and observation of practices) with other farmers. Through this interaction new information was generated. This finding supports the work of various authors of the agricultural extension both in developing and developed countries (such as, Hennessy & Heanue, 2012; Jacobson, 2012; Morgan, 2011; Ngwira et al., 2014;

Schroeder et al., 2013) who reported that farmer groups provided structure for social learning. This study revealed that knowledge and skills acquired through social learning by virtue of farmer group membership were related to on-farm and off-farm enterprises, discriminatory social norms, child care, health and sanitation, current affairs, local politics and so on. This finding is very important for the agricultural extension literature because previous scholars have mostly reported the enhancement of knowledge and skills related to on-farm enterprises through social learning that take place as a result of membership within a farmer group.

While social learning has received considerable attention in the literature for agriculture development (such as, Bandiera & Rasul, 2006; Conley & Udry, 2010; Dessie, Wurzinger, & Hauser, 2011; Foster & Rosenzweig, 1995; Hennessy & Heanue, 2012; Kilpatrick, Bond, Bell, Knee, & Pinkard, 2003; Mekonnen, Gerber, & Matz, 2016; Munshi, 2004; Schroeder et al., 2013), such studies have tended to concentrate on the agricultural technology adoption or dissemination through social learning that occurs within the social networks of farmers. The following section discusses how membership in farmer groups contributes to the accumulation of social capital.

6.3.1.2 Social capital accumulation

Participation in farmer groups contributed to the acquisition of social capital by the farmer group members in this study. The works of previous authors (for example, de Haan, 2001; Jacobson, 2012; Kilpatrick, 2007; Kilpatrick & Bell, 2001; Schroeder et al., 2013; Vaarst et al., 2012) have also shown that farmer groups can be an effective means of building social capital. The present study demonstrated that participation in a farmer group

strengthened three forms of social capital, namely social networks, trust and norms. This finding provides the empirical support to the claims of Ashby et al. (2009). Participation in farmer groups in this study fostered bonding, bridging and linking social networks for the group members, although this varied within and across the groups. Similar findings were reported by Jacobson (2012) in Kenya. The results of a study conducted by Cramb (2005) in the Philippines also indicated that participation in farmer groups can contribute to the expansion of external linkages, that is, bridging and linking, although the longevity of a farmer group can reinforce cooperation and the trust embedded in the existing bonding networks.

The case study illustrated that the farmer group provided social space for fostering new relationships and increased interaction between farmers and between farmers and extension workers that can help to accumulate social capital in the form of social networks, trust and norms. This finding provides the empirical supports for the claim by Kilpatrick, Bell, and Falk (1999) that social capital is built up through repeated interactions between individuals. The empirical work of de Haan (2001) in Tanzania also suggested that farmer groups can create social capital only when there are more interactions among the members than they had prior to group formation.

Further, this study found three key mechanisms that provided opportunities for the farmers to have increased interactions and establish new relationships, which then contributed to social capital accumulation. They were meetings, collective action and extension activities. Kilpatrick and Bell (2001) found that meetings facilitated the building of social capital in farmer learning groups in rural Australia. Similarly, Cramb (2005) and Cramb (2007) in a study in the Philippines demonstrated that participation in extension

activities and collective action through farmer groups can help to build social capital.

The findings revealed that monthly meetings organized by each farmer group were an important means of fostering social capital. The meetings provided opportunities for face-to-face interaction and dialogue about various matters related to their farming, family, social and community life, which helped to strengthen the bonding ties among members. Such meetings also helped to gradually develop trust and norms of reciprocity over time. Although meetings are considered an important tool for the success of farmer groups in the agricultural extension literature (such as Anandajayasekeram et al., 2008; Groverman, 1994; Heemskerk & Wennink, 2004), few authors have highlighted the role of farmer group meetings in creating social capital. Kilpatrick and Bell (2001) found that farmer learning group meetings in their study in Australia provided opportunities for the members to get to know each other and that this eventually helped to build trust within the group. However, the acquisition of social capital through group meetings for micro-credit groups is reported in the wider social science literature (such as Feigenberg, Field, & Pande, 2010; Larance, 2001; Schurmann & Johnston, 2009).

The findings of this case study demonstrated that collective action was another important means of building social capital. Similar findings are reported in the literature such as Cramb (2005), Cramb (2007) and Schroeder et al. (2013). In this study, mobilising welfare funds was the most common collective action carried out in all the farmer groups. Other collective action that was practised in some farmer groups included collective purchasing of seeds, collective marketing of vegetables and collective farming (in one farmer group). These activities allowed the farmers

to come together to talk, discuss and exchange their experiences about the matters related to their mutual interests. This then reinforced mutual trust, norms of reciprocity and their bonding relationships. The fact that collective action can enhance social capital has been highlighted by many scholars working in the area of social capital (for instance, Leach & Sabatier, 2005; Meinzen-Dick, DiGregorio, & McCarthy, 2004; Ostrom, 1997; Resnick, 2001; Wagner & Fernandez-Gimenez, 2008). However, little is written about the types of collective action initiatives in farmer groups or how these foster social capital as that documented in the present study. In a study where farmer group established a community nursery, Catacutan et al. (2006) did report that this activity promoted interaction between farmers. They also found that it fostered a sense of belonging and greater cohesion within the group. Similarly, Schroeder et al. (2013) reported that collective farming in Benin fostered social capital by strengthening social ties. However, neither of these studies explained whether collective action helped to build other elements of social capital such as mutual trust and norms of reciprocity as identified in the present study.

This case study illustrated that participation in extension activities was another important means of building social capital. This is consistent with the findings of Catacutan et al. (2006), Cramb (2007) and Jacobson (2012). The present study demonstrated that increased access to extension activities such as training, workshops, exposure visits and farmer fairs provided opportunities for group members to meet and establish relationships with other farmers with different backgrounds and from different locations. This, in turn, expanded the bridging networks. Catacutan et al. (2006) in the Philippines suggested that group training helped to expand the bridging networks of group members and Jacobson (2012)'s work found that bridging

networks were developed through exposure visits in Kenya. Moreover, group membership in this present study allowed farmers to increase their access to public extension organisations, local government (VDC) and NGOs. The group members, particularly those who were in the executive, visited these offices frequently to seek services and advice. Extension workers, including the chief of DADO, also visited the group for the purpose of implementing and monitoring extension activities. Such frequent contacts with the officials were found to be crucial for building linking social networks. Hellin (2012) and Shiferaw, Hellin, and Muricho (2011) believed that farmer groups could play an important role in developing its members' links with different external actors such as extension service providers, researchers, NGOs, and so on. The study conducted by Davis (2006) in Kenya also showed that farmer group formation contributed to increased linkages with external service providers such as extension officials and local government.

A review of the social capital literature suggested that previous studies that utilised a social capital framework in agricultural development have tended to focus on analysing and measuring social capital embedded in the social networks that individual farmers can access and mobilize, rather than the social capital that has evolved as a result of membership in a particular type of community-based organisation such as a farmer group. While social capital can be analysed at individual, organisational and community levels, more recently Gómez-Limón, Vera-Toscano, and Garrido-Fernández (2014) have argued that most of the previous research has attempted to measure it at the latter level. Gómez-Limón et al. (2014) further claimed that limited research has been conducted to examine social capital accumulation at the individual farmer level and, thus, more empirical work is needed to understand fully the role social capital plays in agricultural development.

Literature review also suggested that the mechanisms and processes involved in social capital building through farmer groups assisted by public agriculture extension organisations in rural communities in Nepal, were rarely documented. This study goes some way to overcoming these limitations by describing the mechanisms that influence the accumulation of social capital at an individual farmer level through farmer group participation. In the following section, how participation in farmer groups contributes to the accumulation of financial capital is described.

6.3.1.3 Financial capital accumulation

An important finding that has emerged from this study is that membership in farmer groups facilitates the accumulation of financial capital. Similar findings have been reported from previous research (such as, Karaya et al., 2013; Mahato & Bajracharya, 2009; Murisa, 2011; Vaarst et al., 2012) carried out in various developing countries, although these authors have not used the concept of financial capital to explain this phenomenon. This research demonstrated that farmer groups fostered increased access to financial capital through two mechanisms: (i) increased access to credit through welfare funds and (ii) increased access to grants from the extension organisations. Karaya et al. (2013) also reported that participation in farmer groups increased access to credit and grants in Kenya, whereas a study by Murisa (2011) revealed that belonging to a farmer group in Zimbabwe enabled the farmer members to access credit through rotating saving schemes and to access grants from the government.

A further important finding from this study was that group welfare funds are an effective means of internal savings and credit for rural people in the case community, particularly for the poor and women who have limited access to

credit through formal sources of finance (for example, banks). Both normative and empirical studies in the field of agricultural extension (for instance, Anandajayasekera et al., 2008; Catholic Relief Service, 2007; Directorate of Agricultural Extension, 2009; Food and Agricultural Organization, 1995; Groverman, 1994; Hoang & Graham, 2006; Murisa, 2011; Schroeder et al., 2013; Thapa, 2010; Vaarst et al., 2012; Wambura et al., 2007) have highlighted the role of farmer groups to increase access to credit to fulfil credit requirements of smallholders and poor members through mobilizing their own resource base. Although different scholars have used different names for the mechanism of internal savings and lending activities set up by farmer groups, such as group savings funds (Achet & Fleming, 2006; Mahato & Bajracharya, 2009; Prayukvong, 2005), revolving funds (Danda et al., 2014; Hoang & Graham, 2006; Islam et al., 2011; Muhanji et al., 2011; Peacock, 2005), rotating savings scheme (Murisa, 2011) and welfare funds (Arki & Bauer, 2005; Directorate of Agricultural Extension, 2009; Nepal, 2013; Thapa, 2010), the term 'welfare fund' is used in this research for the following two reasons. The first is that the guidelines issued by the Nepalese Directorate of Agricultural Extension related to farmer group formation and mobilisation (Directorate of Agricultural Extension, 2009) referred to this fund as *hitkosh* in the Nepalese language. The closest corresponding word in English is "welfare fund". Secondly, almost all respondents of this study called it *hitkosh*.

The finding revealed that the second means of increasing access to financial capital through a farmer group was through increased access to grants through the extension organisation. This study found that farmer group membership provided opportunities for farmers to obtain grants from the extension organisations that were otherwise inaccessible to them as non-

group members. This is consistent with the previous results reported by Karaya et al. (2013), Murisa (2011) and Vaarst et al. (2012). In this study, farmers obtained grants to primarily construct irrigation canals, establish fish ponds or to purchase corn shellers. Although other authors have highlighted that one of the benefits of farmer group membership was increased access to grants, few of them (for example, Murisa, 2011) have explored further details about the utilisation of the grants by farmers. According to Murisa (2011), membership of farmer groups gave farmers increased access to grants from the government to secure irrigation pumps and pipes in Zimbabwe. However, unlike the present study, neither of these authors have analysed farmer groups through the lens of different forms of capital accumulation. The interaction between the three forms of capital is discussed in the following section.

6.3.1.4 Interaction between the three forms of capital

This study illustrated that interactions occurred between the three distinct forms of capital (Figure 6.1). As such, membership in farmer groups can facilitate the accumulation of one form of capital which in turn can facilitate the accumulation of another form of capital. The interconnected nature of different forms of capital accumulation that evolved as a result of farmer group membership, is poorly reported in the literature. However, authors in the wider social science literature such as Bourdieu (1986); Timberlake (2005); Zorn (2004) suggest that feedback loops exist between the different forms of capital. The findings from this study revealed that increased social capital through group membership can lead to enhanced human capital through social learning and increased financial capital by providing the farmer with access to grants through the extension organisation. These findings corroborate the fundamental claims of the social capital literature

that social capital provides access to resources (for example, Bantilan & Padmaja, 2008; Putnam, 2000; Sobels, Curtis, & Lockie, 2001); facilitates the flow of information (such as Bantilan & Padmaja, 2008; Katungi et al., 2008; Serageldin & Grootaert, 2000; Tatlonghari et al., 2012) and fostered social learning (Katungi et al., 2008). While examining farmer groups in western Uganda, Vaarst et al. (2012) found that much of the knowledge and experience gained by the farmers were through the social networking within the farmer groups. Bantilan and Padmaja (2008) observed that the social capital the farmers gained through membership of formal organisations, their neighbourhood, kinship and through farmer groups facilitated their acquisition of knowledge and access to resources in Maharashtra, India.

This study revealed that human capital accumulated through farmer group membership also allowed group members to increase access to financial capital. Enhanced knowledge about the goods and service provided by the ASC/DADO allowed group members to access grants from the DADO. The influence of human capital on the access to financial capital in relation to farmer groups is rarely covered in the literature. However, Ong'ayo (2010) also reported that knowledge facilitated increased access to grants in a study of Ethiopian diaspora organisations in the Netherlands. The present study, however, did not provide the evidence that human capital accumulated through farmer groups contributed to the enhancement of social capital. This is in contrast to the general proposition in the social science literature (for example, Boxman, De Graaf, & Flap, 1991; Lin, 2001) that social capital can be built through human capital. This might be an area for future research.

Financial capital accumulated through farmer group membership can also enhance social capital. Provision of a group welfare fund within a farmer

group allowed its members to help each other during emergencies. It was found that increased access to loans through the group welfare fund enabled the group members, particularly women and the poor, to manage financial crises on their own without the need to seek help from other people. Such mutual help through the group welfare fund further strengthened bonding ties and trust within the group. This finding can be linked to the theory of social capital (Leach & Sabatier, 2005; Meinzen-Dick et al., 2004; Ostrom, 1997; Resnick, 2001; Wagner & Fernandez-Gimenez, 2008) that argues that successful collective action can further strengthen social capital. Successful collective action "spawns further social capital when acts of reciprocity reinforce norms of reciprocity" (Leach & Sabatier, 2005, p. 234). Although the advantages of the group welfare funds are highlighted in both the normative and empirical agricultural extension literature, social capital accumulation resulting from increased access to credit through group welfare funds is rarely reported in the literature. In the following section, the four dimensions of empowerment accrued from farmer group membership are discussed.

6.3.2 The four dimensions of empowerment gained through participation in farmer groups

The results from this case study illustrated that the accumulation of these three forms of capital (human, social and financial) as a consequence of farmer group membership can contribute to the empowerment of group members across four dimensions: economic, psychological, social and political (Figure 6.1). Although, in the agricultural extension literature, there is a widespread conviction that organizing rural smallholders and poor farmers into groups has provided an effective institutional mechanism for their empowerment (Davis, 2006; Friis-Hansen & Webster, 2004; Garforth,

1994; Githaiga, 2007; Meena et al., 2008; Meinzen-Dick et al., 2014; Singh & Swanson, 2006), limited empirical research has been conducted to examine farmer groups in relation to empowerment explicitly (see Chapter Two for details). Rather, the empirical literature on farmer groups has tended to focus on easily measured direct outputs from agricultural extension such as technology adoption, innovation diffusion, yield increment, income and/or farm profit (For example, Adong, 2014; Cramb, 2005; Darr, 2008; Darr & Pretzsch, 2008; Davis, 2006; Desai & Joshi, 2014; Fischer & Qaim, 2012b; Hennessy & Heanue, 2012; Mwaura, 2014; Vuthy et al., 2014; Wambura et al., 2007) that does not provide an in-depth understanding about the mechanisms of how farmer groups facilitate empowerment. Limited research (for example, Schroeder et al., 2013) has been undertaken where farmer groups were examined from the perspective of the different dimensions of empowerment. Although Schroeder et al. (2013) investigated economic, social and psychological empowerment accrued from farmer group membership, they did not examine the political dimension of empowerment. Over the past decades, several authors (for example, Bartlett, 2004; Bartlett, 2008; Barzman & Desilles, 2002; Dzeco, Amilai, & Cristóvão, 2010; Fredrix, 2014; Friis-Hansen, 2008; Friis-Hansen & Duveskog, 2012; Westendorp, 2013) have investigated the effect of agricultural extension services on the empowerment of farmers. However, these studies have only investigated empowerment in relation to farmer field schools, and not other farmer group types. None of these studies have considered empowerment from the perspective of the four different dimensions (economic, psychological, social and political) as illustrated in this case study, nor, did they, with the exception of Bartlett (2004), report explicitly on the three routes to empowerment through the accumulation of the three different forms of capital (human, social and financial). Instead, these authors (for example,

Bartlett, 2008; Dzeco et al., 2010; Friis-Hansen, 2008; Friis-Hansen & Duveskog, 2012) demonstrated that participation in farmer field schools increased the ability of farmers to control their lives and make choices through experiential and/or transformational learning. In other words, these studies have concentrated on the human capital route to empowerment.

In contrast to the extension literature, several authors in the empowerment literature (for example, Constantino et al., 2012; Fiorello & Bo, 2012; Khondkar, 2002; Park & Kim, 2016; Sangeetha et al., 2013; Scheyvens, 2000) have investigated empowerment across the four dimensions: economic, social, psychological and political. However, these studies were not undertaken with farmer groups. For instance, Fiorello and Bo (2012) and Scheyvens (2000) explained the impact of ecotourism on the empowerment of local communities whereas Khondkar (2002) and Sangeetha et al. (2013) explored microcredit groups with respect to empowerment. Although these authors investigated empowerment using the four dimensions, they did not consider the process from a capital (human, social and financial) perspective. This study has identified various indicators of empowerment across the four dimensions which are discussed in the following section.

6.3.2.1 Economic empowerment

With respect to economic empowerment, two key indicators of economic empowerment were identified in this study: increased income and control over financial resources generated through group membership. The second indicator is only relevant to women farmers. This is because men have control over household finances by default in a patriarchal society. Although authors such as Aliguma et al. (2007), Bachke (2009), Fischer and Qaim (2012b), Msuta and Urassa (2015), Schroeder et al. (2013), Tolno,

Kobayashi, Ichizen, Esham, and Balde (2015) and Wambura et al. (2007) reported that group membership contributes to an increased income, only a few authors such as Fischer and Qaim (2012a) and Schroeder et al. (2013) analysed the impact of group membership on women's control over the financial resources generated through the group.

This research revealed that most of the women members have control over (i) income they generated through participation in the group, (ii) loans they obtained from the group welfare funds and (iii) the savings within the group welfare funds. Although Fischer and Qaim (2012a) and Schroeder et al. (2013) studied aspects of women's control over resources generated through farmer groups, these studies were limited to only income generated through participation in farmer groups, but did not include control over welfare funds. It was also found in this study that women have control over (i) decision-making regarding the use of the loan and the income generated through farmer group membership and (ii) the spending of the loan and income. In some cases, women and their male counterparts jointly made a decision related to the use of loan and income such as the size of the loan they should obtain from the welfare fund, where to invest the loan and also where to invest the additional income obtained from group membership. However, no participants reported that their male counterparts compelled them to hand over the loan they obtained from the group welfare fund or the income generated through participation in the group.

Previous studies that have examined the control over financial resources in relation to farmer groups (for example, Fischer & Qaim, 2012a; Schroeder et al., 2013) have investigated this from the point of view of who makes the decision about the additional incomes. As such, this study builds on this research (Fischer & Qaim, 2012a; Schroeder et al., 2013) by identifying

three additional means by which women gain control over financial resources through participation in farmer groups. These are (i) whether women make decisions related to loans they obtained from the group welfare funds, (ii) whether the women use the additional incomes they generated by virtue of group membership and the loan they obtained through the group welfare funds and (iii) whether the women keep the money (income, loan and savings) that was generated through participation in the group. Indicators of psychological empowerment are discussed in the following section.

6.3.2.2 Psychological empowerment

In relation to psychological empowerment, two key indicators of psychological empowerment were identified in this case study. They were enhanced self-confidence and enhanced self-esteem of both poor members (both women and men) and smallholders. Blissett et al. (2004) and Schroeder et al. (2013) have also reported that participation in farmer groups contributed to the development of self-confidence and self-esteem in group members. However, while Schroeder et al. (2013) investigated the impact of farmer groups on the self-confidence and self-esteem of women members only, the study by Blissett et al. (2004) did not differentiate between group member types as to who benefited in terms of self-confidence and self-esteem as a result of their participation in farmer groups. In the following section, indicators of social empowerment are discussed.

6.3.2.3 Social empowerment

From a social empowerment perspective, this research showed that participation in farmer groups contributed to changed power relationships within both the household and the community. Group membership helped

strengthen the position of women within both the household and the community. Farmer groups also contributed to a reduction in the power differentials between poor farmers and money-lenders/landlords. Little has been written about social empowerment and the role of farmer groups in this process in the agricultural extension literature. Although Schroeder et al. (2013) reported that participation in farmer groups strengthened women's roles within the household and the community in Benin, they did not investigate the power relationships between the rich and poor members within the community and how this was influenced by group membership. The indicators of political empowerment are discussed in the following section.

6.3.2.4 Political empowerment

With respect to political empowerment, two key indicators of political empowerment were identified in this case study. They were increased political awareness and increased political participation. Limited research has been conducted in the agricultural extension literature with regard to political empowerment through farmer groups. In contrast, a number of studies (Hashemi et al., 1996; Islam et al., 2014; Pitt et al., 2006; Sahu & Singh, 2012; Snijders & Dijkstra, 2011) have been conducted in the field of rural development that investigated political awareness in relation to micro-credit. These studies have measured the level of political awareness by using the indicator “knowledge of the name of the elected political officials”. However, this indicator of political awareness is not relevant to this case study. This is because there has been an absence of elected officials in the case village for a long time. The last local election was held in 1997 and, since then, Nepal has not had local elections due to a decade long Maoist insurgency and the resultant political transition (Khanal, 2013). In contrast to

the studies in rural development, this particular study uses the definition of political awareness suggested by the social scientist Bayulgen (2008) that comprises four indicators that relate to the level of knowledge individuals have about (i) publicly provided goods and services that are available to the community, (ii) the performance of the officials who provide these goods and services, (iii) the rights and instruments available to the community to make the public officials accountable and (iv) the rights and tools available to the community to obtain access to these goods and services from the public officials.

Out of the four indicators of political awareness proposed by Bayulgen (2008), three were identified in this study. It was found that participation in farmer groups in this study contributed to enhance the members' knowledge in relation to (i) the goods and services that were available to farmers at the local level, (ii) the procedure and the instruments available to the people to request those goods and services, and (iii) the performance of the public officials to provide the goods and services. However, this study did not find any explicit evidence that group membership enhanced the members' understanding about the rights and instruments available to the people to make their public officials accountable. Little has been written in the extension literature about the contribution that farmer groups make to the political awareness of their members. This study did not find any previous research in the literature that investigated farmer groups with respect to Bayulgen (2008)'s notion of political awareness.

Bayulgen (2008)'s definition of political awareness is useful to this case study because of the fact that if farmers are better informed about what they are entitled to from the government, they are more likely to seek it out and benefit from it. The agricultural extension literature (for example, Friis-

Hansen & Duveskog, 2012; Garforth, 2004) also suggested that farmers can fully benefit from the services of participatory agricultural extension approach only when they effectively articulate informed demands. Authors in the field of political science such as Attri (2014) and Putnam (2000) also highlighted that political awareness is a precondition for a more active form of political participation: “If you don’t know the rules of the game and the players and don’t care about the outcome, you’re unlikely to try playing yourself” (Putnam, 2000, p. 35).

With respect to political participation, farmer group membership in this study contributed to (i) increased contact (visited offices, wrote a letter and made a phone call) with public officials such as ASC, DADO, Division Cooperative Office, VDC and other local offices to discuss farming and community-related issues in order to influence decision-making within these public offices and (ii) an increase in organized collective action that was used to resolve family disputes and protest about social issues. Although voting has been considered as a fundamental form of political participation in the social science literature (for example, Banerjee & Ghosh, 2012; Bayulgen, 2008; De, 2013; Ekman & Amnå, 2012; Jirovec & Erich, 1992), this is not a relevant indicator for the respondents in the present study. This is because they have not participated in the local elections for a long time and this has already been discussed earlier in this section. Although the agricultural extension literature (for example, Christoplos, 2010; Friis-Hansen & Webster, 2004; Heemskerk & Wennink, 2004; Karaya et al., 2013) has highlighted the importance of farmer groups in enabling their member farmers to present demands and exert pressure on agricultural extension service providers to deliver the agricultural extension services efficiently, there has not been an explicit study on assessing the impact that the farmer

group approach can have on political participation. In the following section, findings related to the variation in empowerment across its different dimensions are presented.

6.3.2.5 Variations in empowerment across the various dimensions

An important finding that emerged from this study was that, although group membership contributes to empowerment across the four dimensions, it is not guaranteed that empowerment occurs simultaneously across all these dimensions. For instance, this study found evidence that participation in farmer groups enhanced the economic, social and psychological empowerment significantly, but political empowerment was enhanced to a limited extent for some members. These members had a little contact with ASC, DADO, VDC and NGOs. Rather, they depended on their respective group leader for information and other support provided by the different offices and this limited their political empowerment. On the other hand, the effect of group membership on empowerment was apparent across all dimensions for some group leaders (particularly, the chairperson, secretary and treasurer). The significant enhancement of political empowerment of group leaders is explained by the fact that the leaders tended to be the first point of contact for ASC and DADO. This enabled them to obtain a good understanding of the details of the services provided by ASC and DADO and the procedure they had to follow to obtain such services (political awareness). The leaders also wrote letters to different offices to submit their demands for inputs, services and grants on behalf of their group. They also obtained opportunities to participate at village level planning workshops and review workshops organised by different organisations such as ASC, DADO and VDC. In these workshops, they can raise the issues related to their

farming and communities to influence decision-making within these public offices (political participation). A limited number of authors have investigated farmer groups through the lens of multidimensional frameworks of empowerment (for example, Schroeder et al., 2013), but they have not analysed whether the degree of empowerment differs across the various dimensions. However, this findings is consistent with the theory of empowerment (for example, Mahmud et al., 2012; Malhotra & Schuler, 2005; Narayan, 2005; Roy, 2010) that states that the extent of empowerment can vary across different dimensions. A number of studies such as Carr et al. (2015), Sarumathi and Mohan (2011) and Weber and Ahmad (2014) also demonstrated that the dimensions of empowerment were not enhanced at the same rate. However, all of these studies investigated phenomena other than farmer groups. However, this finding implies that it is unwise to assume that a development intervention that enhances empowerment in one dimension may automatically bring empowerment in other dimensions. In the following sections, the roles of human capital, social capital and financial capital in fostering the different dimensions of empowerment are discussed in more detail.

6.3.2.6 The role of human capital in fostering empowerment

This study showed that human capital accumulated by virtue of group membership can enhance economic, psychological and political empowerment (please see Figure 5.13 in Result Chapter). Although in the agricultural extension literature, the study of Bantilan and Padmaja (2008); Bartlett (2004); Duveskog, Friis-Hansen, and Taylor (2011), Friis-Hansen (2008) and Schroeder et al. (2013) revealed that human capital contributed to the empowerment of farmers, few studies have investigated the impacts of human capital accumulated through farmer group membership in fostering

empowerment across the different dimensions. The work of a few authors such as Schroeder et al. (2013) and Friis-Hansen (2008) found that farmer group membership contributed to economic and psychological empowerment whereas other studies (for example, Hoang & Graham, 2006; Msuta & Urassa, 2015; Wambura et al., 2007) have mostly concentrated on incomes, one indicator of economic empowerment. However, these studies (Hoang & Graham, 2006; Msuta & Urassa, 2015; Wambura et al., 2007) have not examined farmer groups from the perspective of empowerment. Moreover, these studies have rarely used the concept, human capital, while reporting their observations. Economic empowerment, accrued through human capital accumulation by virtue of participation in farmer groups, is discussed in the following section.

6.3.2.6.1 Economic empowerment

This study revealed that human capital accumulated by virtue of farmer group membership contributed to economic empowerment. Knowledge, skills and attitudes acquired through participation in farmer groups contributed to increased income. Previous research in developing countries also demonstrated a positive relationship between farmer group membership, knowledge, skills and attitude enhancement and increased income (Friis-Hansen, 2008; Msuta & Urassa, 2015; Schroeder et al., 2013; Vaarst et al., 2012; Wambura et al., 2007), although few of these studies (for example, Friis-Hansen, 2008; Schroeder et al., 2013) have investigated it through the lens of empowerment. This study demonstrated that the accumulated human capital enabled group members to (i) identify their problems and opportunities; (2) possess the technical know-how about the enterprise/crop; (3) select appropriate enterprises and crops, crop varieties and management practices suitable for their production system and (4)

make informed decisions about on-farm and off-farm enterprises. This supports the view of Bartlett (2004) that learning enhances the critical thinking of farmers and that this leads to independent decision-making. On a similar note, Jacobson (2012) reported that acquired knowledge and skills through farmer group membership influenced the decisions and actions related to farming such as the use of inputs in Kenya, and Wambura et al. (2007) observed that it enabled farmers to plan and implement on-farm and off-farm income generation activities in Tanzania.

This study found that human capital acquired through group membership contributed to increased income through crop intensification and diversification. Two different strategies of crop intensification were adopted by the farmers in order to increase incomes. The first strategy was to use improved management practices, particularly for paddy, vegetable crops and potatoes. The second strategy was to use new inputs. Three types of inputs were identified in this study which were used by the farmers to improve production and profitability. They were fungicides, better quality seed and high yielding crop varieties. Similar findings have been reported by other researchers, although they don't always explicitly identify the intensification strategies. For example, Jacobson (2012) also reported that the human capital acquired through farmer group membership in Kenya allowed farmers to use improved management practices for the production, harvesting and post-harvest management of their crops. It also allowed them to identify and use appropriate inputs for their farming systems. In turn, these strategies led to increased yields and income (Jacobson, 2012). Schroeder et al. (2013) also found that participation in farmer groups enabled members to acquire knowledge and skills related to rice farming and that contributed to the generation of additional income in Benin. Similarly, Msuta and Urassa (2015)

reported that increased access to agricultural extension services through farmer groups provided them with knowledge about modern farming practices that enabled the group members to increase yields and incomes in Tanzania.

Human capital obtained through farmer group membership also allowed the members to undertake diversification by adopting new income generation activities that they were not aware of, or did not have the skills and knowledge to undertake. This study found that human capital accumulated through group membership enabled farmers to adopt two different diversification strategies in order to increase incomes. The first strategy was to initiate a new enterprise. The skills acquired through training and exposure visits allowed farmers and in particular the poor women, to initiate mushroom cultivation on a small scale, using space within their homes. The mushrooms produced by the members were used for household consumption and surplus product sold to the local market to supplement incomes. The second strategy was to substitute their existing crops for higher value crops. Rice, maize and wheat are the traditional crops cultivated in the study area. However, after participation in farmer group activities, some farmers substituted these crops for vegetable production. The vegetable crops they cultivated included cauliflower, cabbage, tomatoes, brinjal, okra, cucurbits, beans and cowpeas. Vegetable crops were more profitable than cereal crops and provided a much better cash flow because several crops could be grown in the time taken to grow a traditional crop. Previous research undertaken in Nepal (Brown & Kennedy, 2005; Tiwari, Nyborg, Sitaula, & Paudel, 2008) also reported that income from vegetable farming was significantly higher than from staple crops such as rice, maize and wheat. While other authors (for example, Hoang & Graham,

2006; Mishra & Swanson, 2009; Vaarst et al., 2012) also found that participation in farmer groups enabled the farmers to diversify and increase their income, they did not explicitly specify how membership in farmer group contributed to the adoption of a diversification strategy. Neither, did they link the benefits of farmer group membership to empowerment. In the following section, how human capital acquired through farmer group membership contributes to psychological empowerment is discussed.

6.3.2.6.2 Psychological empowerment

In this study, human capital accumulated through participation in farmer groups contributed to psychological empowerment in terms of self-esteem and self-confidence. The acquired knowledge, skills and attitudes that were a consequence of group membership increased the ability of the farmers to make decisions related to varietal and crop choice, crop management and to choose the best options to improve their livelihood and thereby to control their lives and future. This in turn enhanced their self-esteem and self-confidence in their work and action. Previous studies have provided limited understanding about this aspect of empowerment in relation to human capital through farmer groups. For example, Schroeder et al. (2013) claimed that group membership provided opportunities for capacity-building of women farmers through which they experienced increased self-confidence and self-esteem in Benin. However, Schroeder et al. (2013) did not explain how improved capacity brought about a greater sense of self confidence and self-esteem. On the other hand, Paris, Singh, Cueno, and Singh (2008) observed that women farmers gained self-confidence and self-esteem as a consequence of gaining knowledge through participation in agricultural research in India, but this study did not involve farmer groups. Trompf et al. (1998) found that increased understanding through group learning that took

place during group meetings increased self-confidence to use production technologies appropriate for their farms and to change farming practices in Australia. However, their study did not mention self-esteem, the other indicator of psychological empowerment identified in the present study.

In addition, the present study also highlighted that communication skills gained through participation in farmer groups gave the confidence to speak to new people and public officials. They learnt the vocabulary, language and the way of speaking used by observing other better-educated members and the officials with whom they were in contact. Few authors in the agricultural extension literature have highlighted the relationship between communication skills learned through participation in farmer groups and psychological empowerment. The present findings are similar to the observations made by the Danish International Development Agency (2004b) that Ugandan farmers learnt to express their opinions through participation in group meetings and that this enhanced their self-confidence. However, the Danish International Development Agency (2004b) did not report on whether or not the farmers used these meetings to learn about the vocabulary, language and/or ways of speaking used by more knowledgeable and articulate group members and officials. The following section discusses how human capital acquired through farmer group membership contributes to political empowerment.

6.3.2.6.3 Political empowerment

In this study, human capital acquired through participation in farmer groups also contributed to political empowerment in terms of political awareness and political participation. The study illustrated that increased interaction with other farmers and officials through farmer group membership improved

farmers' understanding about (i) the goods and services that were provided by the ASC, DADO, VDC and other public offices at local level to the farmers, (ii) the procedures and the instruments available to them to request those goods and services and (iii) performance of the various public officials to provide such goods and services. As already mentioned in Section 6.3.2.4 of this chapter, this notion of political awareness as suggested by the social scientist Bayulgen (2008), has not been reported in the literature with respect to farmer groups.

Increased awareness about the rights of the people, the role of the state for the welfare of the people, the functions of different offices, the goods and services they offer to farmers and the procedures to follow to receive these goods and services, all contributed to political participation in this study. Such knowledge gained through farmer group membership enabled the farmers to present their farming and community problems to officials and demand goods and services from them. For this purpose, they visited different public offices such as ASC, DADO and VDC, wrote letters to the appropriate officials and sometimes telephoned them to raise their concerns and request services. Although political participation is poorly articulated in the agricultural extension literature, the findings from this study are consistent with the theory in social sciences (for example, Galston, 2004; Ondercin & Jones-White, 2011) that political knowledge positively influences political participation. Social scientist Bayulgen (2008) also argued that informed people are more capable of taking advantage of opportunities, exercising their rights, accessing services and negotiating for them effectively. The following section discusses how social capital accumulated through farmer group membership contributes to different dimensions of empowerment.

6.3.2.7 The role of social capital in fostering empowerment

The findings of this study showed that social capital acquired as a consequence of farmer group membership enhanced economic, psychological and political empowerment (please see Figure 5.15 in Result Chapter). Few authors such as Schroeder et al. (2013) have examined this aspect with respect to farmer groups and found that it contributed to economic empowerment. Psychological and political empowerment gained through social capital that has been built as a result of farmer group membership, is rarely reported in the literature. The different dimensions of empowerment that were influenced by social capital are discussed in the following sections.

6.3.2.7.1 Economic empowerment

This study found that social capital accumulated by virtue of group membership contributed to economic empowerment. Acquired social capital facilitated an increase in income. Incomes were increased because social capital facilitated the exchange of seeds, collective action and increased access to high quality seeds. This study showed that the bonding social networks developed within a farmer group facilitated seed exchange. The trust and interpersonal relationships developed within the members of the farmer group allowed the exchange of seeds. Other authors such as, Badstue et al. (2006), Badstue et al. (2007), Scurrah, Andersen, and Winge (2008) and Seboka and Deressa (2000) have reported similar findings in relation to seed exchange between farmers who know and trust each other. It was found that a few farmers in the present study acquired seed for a high yielding paddy variety from a fellow member and then cultivated it. This led to higher production that contributed to increased incomes. Although the

literature (for example, Badstue et al., 2006; Badstue et al., 2007; Delêtre, McKey, & Hodkinson, 2011; McGuire, 2008; Scurrah et al., 2008; Seboka & Deressa, 2000) has highlighted the role of social networks such as friends, relatives, neighbours in seed exchange among the rural farmers in developing countries, seed exchange within members of a farmer group and its linkages with the empowerment of farmers, is scarcely documented in the literature.

The main types of collective action observed in this case study that contributed to an increase in incomes were (i) the collective procurement of seeds, (ii) the collective marketing of vegetables and (iii) group farming on leased land. The first type of collective action that contributed to an increase in income was the collective procurement of seeds. Similar results have been reported by Lapar et al. (2006) and Praharaj et al. (2013), although they have not examined this phenomenon through the lens of empowerment. In the present study, in some farmer groups, when high quality seed was unavailable in the nearby market, the group coordinated the bulk purchase of seed and the task of sourcing the seed was delegated to one or two group members. These members then approached the ASC and/or DADO to obtain seed on behalf of the group. Although the cost of the seed was borne by the farmers, the DADO procured the seed from a distant market or resource centre and provided it to the groups as per their demands. Once obtained, the assigned group members distributed the seed to the other members of the group who required the seed. Crop yields from high quality seed were higher than that obtained crop grown using locally grown seed and this contributed to an increase in incomes. This type of collective action also reduced the transaction costs for the farmers that were associated with the purchase of high quality seed. This is because the

DADO (i) identified the most suitable seed types, (ii) organised its purchase and (iii) transported it back to the ASC. These findings support the view of Kariuki and Place (2005) who argued that farmers can benefit from the collective purchasing of inputs such as seeds where they are constrained by limited access to inputs and high transport costs. Similarly, Hellin, Lundy, and Meijer (2009) reported that the collective procurement of seed reduced the cost of the seed for smallholders in Mexico. The bulk order purchasing of seed enabled the smallholders to negotiate with the traders to reduce the seed price (Hellin et al., 2009). Praharaj et al. (2013) also found that the collective purchasing of seed reduced the production cost for cotton in India. While empirical studies in Asia, Africa and Latin America (such as, Barham & Chitemi, 2009; Fischer & Qaim, 2012b; Hellin et al., 2009; Lapar et al., 2006; Praharaj et al., 2013) have demonstrated the advantages of farmer group facilitated collective procurement of seed, they have mostly described a collective procurement where the farmers undertook all stages within the procurement process for example, searching for a source of seed, negotiating the price of the seed, procuring the seed, transporting and distributing it to group members. However, in this study, government officials undertook all these tasks, except for the distribution of seed to members, for the farmer groups, considerably reducing their transaction costs.

The second type of collective action that contributed to enhanced incomes was the collective marketing of vegetables. In line with these findings, several scholars (for example, Fischer & Qaim, 2012b; Lapar et al., 2006; Mwangi et al., 2012; Shiferaw et al., 2009) have also demonstrated a positive relationship between the collective marketing of produce through farmer groups and incomes. However, neither of these studies examined it from an empowerment perspective. In the present study, only one group

practised collective marketing, In this case, smallholder and poor members produced small volumes of vegetables for sale. Sending small quantities individually to the distant market resulted in higher marketing costs for the farmers. The small volume also gave the farmers limited bargaining power and resulted in lower prices for their produce. In order to overcome this limitation, the group coordinated the harvesting of vegetables, identified a suitable trader, negotiated a price for the group's vegetables and delivered the produce to the distant market collectively. The group developed a system in which the produce from each farmer was weighed, packed and marked separately, and each week one farmer travelled to the market to sell the crop on a rotational basis. The proceeds from the sale of the vegetables was then distributed back to the members according to the quantity each members provided. This practice of the collective marketing of vegetables through the farmer group allowed the farmers to achieve economies of scale that strengthened their bargaining position and led to higher prices for their produce and reduced the transaction and transportation cost for the farmers. This, in turn, contributed to increased incomes. Kariuki and Place (2005) argued that when farmers produce small quantities of produce for sale, the market is far from the production area and transport costs are high due to poor infrastructure, farmers can take advantage of the benefits of collective marketing. They argued that by taking advantage of economies of scales, farmers reduced their marketing costs and also enhanced their bargaining power which led to higher prices (Kariuki & Place, 2005).

There are many examples of the impact of collective marketing, from various parts of the world, reported in the literature (such as, Chauvin, Porto, & Mulangu, 2017; Fischer & Qaim, 2012b; Lapar et al., 2006; Mwangi et al., 2012; Robbins et al., 2004). However, the literature also warned that

collective marketing is not always lucrative for the farmers. Kaganzi et al. (2009) reported that when the market is very competitive, many traders are actively looking for produce, scale is not important and market access is easy, it is more convenient or effective to sell individually rather than collectively through farmer groups. A similar finding was reported by Hellin et al. (2009) for the marketing of maize in Mexico where the government fixed the price for maize; many traders sought it and farmers received the government fixed price regardless of the volume of maize sold.

The third type of collective action that contributed to increased incomes was group farming on leased land. In this study It was found that one farmer group undertook group farming after farmers organised a farmer group. The literature (for example, Agarwal, 2010; Chauvin et al., 2017; John, 2009; Sajesh & Ramasundaram, 2013) also provided some notable examples of collective farming through farmer groups that offered substantial benefits, particularly to the poor, women and disadvantaged people. A study by John (2009) also demonstrated group farming on leased land as a viable means of earning extra income for poor women and reducing rural poverty in Kerala, India. In this study, group members provided an equal amount of family labour and, on this basis, the profits from the operation were shared equally. This contrasts with a study by Murisa (2011) of farmer groups in Zimbabwe who observed that a group failed to coordinate family labour contribution and about only 40 % of group members contributed labour consistently to the collective farming. However, returns from group farming were equally shared among the members irrespective of the labour contribution. This made the collective action less successful (Murisa, 2011). In a review of different forms of collective farming in different parts of the world, Agarwal (2010) identified that the fair and equitable distribution of

benefits from collective farming was one of the key factors that created conditions conducive for collective farming.

This study showed that linking social networks extended through participation in farmer groups can facilitate increased access to high quality seed that could contribute to enhanced incomes. This is consistent with the social capital theory that linking social networks allow people to tap into different types of productive resources (for example, Hanson et al., 2008; Njuki et al., 2008; Pretty & Smith, 2004; Westlund, Andersson, & Karlsson, 2013; Woolcock, 2001). In this study, close contact with DADO through farmer groups enabled one farmer to source high quality bottle gourd seed. After obtaining the seed, the farmer cultivated bottle gourd in her field where she used to grow cereal crops. This diversification from cereal crops to the vegetables increased her income substantially. van Bastelaer and Leathers (2006) argued that access to high quality seed enabled the farmers to introduce new crop enterprises that could enhance crop profitability. A study by Winters et al. (2006) carried out in Ethiopia found that farmers with links to organisations had better access to seed and that extended linking social networks led to an increase in crop diversity. The following section presents how social capital acquired through farmer group membership contributes to psychological empowerment.

6.3.2.7.2 Psychological empowerment

This study demonstrated that the social capital accumulated through participation in farmer groups can contribute to psychological empowerment. The farmer groups allowed members to extend their social networks and this had a positive effect on their self-confidence and self-esteem of group members, particularly women and poor farmers who had limited social

connections. This increased psychological empowerment occurred because these farmers perceived that their sense of identity and recognition increased as a consequence of the expansion of their extra household social networks. This finding provided empirical evidence to the view of Pronyk et al. (2008) that individuals with larger social networks may have a higher sense of self-confidence and self-esteem. Little is published in the extension literature on the impact of farmer groups on members' social networks and the influence of this on their psychological empowerment. However, this effect in relation to micro credit groups has been investigated in the social science literature. For example, Hashemi et al. (1996) found that participation in micro-credit groups in Bangladesh allowed women to develop an identity beyond their family. Increased connections and interaction with people outside of their family group, including authority figures enhanced their self-respect and self-confidence (Hashemi et al., 1996). In a study of women micro-credit groups in Ghana, Wrigley-Asante (2012) reported that expanded networks of social relations as a consequence of group activities is one of the main channels through which the self-confidence and self-respect of women was enhanced. Similarly, Krenz et al. (2014) observed that increased social interaction and respect through participation in micro credit programmes reinforced self-esteem of women in India. In the following section, how social capital acquired through farmer group membership contributes to political empowerment is discussed.

6.3.2.7.3 Political empowerment

The study showed that the social capital accumulated through participation in farmer groups also contributed to political participation. It was found that the trust and interpersonal relationships developed by the members within farmer groups facilitated organized collective action to resolve family

disputes, protest about social issues and influence others. One farmer group organised a protest in front of the court in order to exert pressure to make a fair decision regarding the case of a family dispute. A few of the farmer groups also attended rallies under the banner of their group to observe women's day and a sanitation campaign in order to influence other people. Despite the well established links between farmer groups and social capital, little has been written about the potential role that social capital developed through farmer group membership can play in fostering political participation. However, these findings support other studies in social science (for example, Bayulgen, 2008; Klesner, 2007; Krishna, 2002) that show that social capital may promote political participation, although the context of this study is quite different. In the following section, the role of financial capital in fostering empowerment is discussed.

6.3.2.8 The role of financial capital in fostering empowerment

This study illustrated that financial capital accessed through participation in farmer groups can contribute to economic, psychological and social empowerment (please see Figure 5.17 in Result Chapter). Although empirical studies by different authors in various developing countries (such as Hoang & Graham, 2006; Karaya et al., 2013; Mahato & Bajracharya, 2009; Msuta & Urassa, 2015; Murisa, 2011; Ngwira et al., 2014; Vaarst et al., 2012) revealed that participation in farmer groups contributed to increased access to financial capital (access to credit and/or grants), little is described in the literature regarding the impact that increased access to financial capital through farmer groups can have on empowerment across the different dimensions. While the work of Mahato and Bajracharya (2009) and Wambura et al. (2007) demonstrated economic empowerment gained through increased access to credit through farmer groups, they are not

explicit about its association with other dimensions of empowerment. However, the financial capital route to empowerment has been extensively examined in relation to micro-credit groups in developing countries in the rural development literature; to name a few are Al-Amin et al. (2013); Cheston and Kuhn (2002); Islam et al. (2014); Kato and Kratzer (2013); Mayoux (2001); Mayoux (2006); Swain and Wallentin (2009) and Wrigley-Asante (2012). The different dimensions of empowerment that were influenced by financial capital are discussed in more details in the following sections.

6.3.2.8.1 Economic empowerment

This study found that financial capital accessed through participation in farmer groups contributed to economic empowerment. Financial capital contributed to an increase in income. This findings are in line with the observations of Mahato and Bajracharya (2009) and Wambura et al. (2007), although they have not used the concept of financial capital. The findings further revealed that financial capital access through farmer group membership enabled the farmers to invest in on-farm and off-farm enterprises in order to enhance their incomes. It was found that financial capital accessed through farmer group participation contributed to increased incomes through intensification, diversification, area extensification and mechanization. Although some authors (such as, Mahato & Bajracharya, 2009; Msuta & Urassa, 2015; Wambura et al., 2007) have shown that incomes are enhanced through increased access to credit by virtue of farmer group membership, they have not provided a detailed explanation of how this has contributed to the enhancement of incomes. For instance, the empirical studies carried out by Msuta and Urassa (2015) in Tanzania suggested that services, including loans received from farmer groups,

contributed positively to increasing farmers' income. However, they did not explain how the loans were used to generate additional incomes. Mahato and Bajracharya (2009) also reported that increased access to loans through group funds enabled the farmers to purchase water buffalo that contributed to increased incomes in Nepal. However, their study was not explicit as to whether the increased access to loans allowed them to increase the number of animals they were raising (intensification) or if they were used to start a new enterprise (diversification).

This study showed that financial capital accessed through farmer group membership enabled the farmers to use two different strategies of intensification to enhance incomes. The first strategy of crop intensification that members used to increase incomes was to invest in irrigation infrastructure that helped farmers to increase crop yields. This included investment in irrigation canals and/or irrigation pumps. Although Murisa (2011) found that membership in farmer groups increased farmers' access to loans and grants that allowed them to invest in irrigation pumps in Zimbabwe, they did not look at the impact of these investments on farmers' incomes.

The second strategy of intensification that members used to enhance incomes in this study was to replace the tools required to operate their off-farm enterprises. It was found that credit obtained through the group welfare fund allowed a few poor members that ran a carpentry business to purchase new tools that improved their productivity and thereby contributed to an increase in income. The use of loans from group welfare funds to invest in off-farm activities contributing to income generation is poorly reported in the extension literature.

With respect to an increase in incomes through diversification, financial capital accessed by virtue of belonging to the farmer groups allowed the farmers to use three different strategies to enhance on-farm and off-farm incomes. The first strategy of diversification that group members used to generate incomes was to initiate a new off-farm enterprise through investing in capital item. It was found that credit obtained through the group welfare fund enabled a few former wage labourers to purchase rickshaws. Instead of being wage labourers, they then earned their living by a local rickshaw service that substantially increased their off-farm incomes when compared to earnings from previous work. The second strategy of diversification that group members used to generate additional income was to utilise unused land on their farm and introduce a new enterprise to their farming system. The finding that emerged from this study was that grants accessed through participation in farmer groups allowed poor farmers to construct small-scale ponds on unused land (under the trees or in swampy areas) for fish farming. Fish produced in the pond were used for household consumption, with surplus fish sold to the market to supplement incomes. A study on the impact of small-scale aquaculture projects implemented in the Chitwan and Nawalparasi districts of Nepal by Shrestha, Pant, and Bhujel (2012) indicated that 30-50% of the fish produced through small-scale aquaculture was used for household consumption and that this had a significant impact on the nutritional status of the participating households. The remaining 50-70% of the produce was sold to the market and this generated additional income for the households thereby contributing to poverty reduction (Shrestha et al., 2012).

The third strategy of diversification that group members used to increase incomes was to substitute the existing crops for higher value crops by

investing in farm infrastructure that is required for higher value crops. The findings showed that the grants accessed through farmer groups, allowed farmers to develop irrigation canals and the loans obtained through farmer groups, let them purchase irrigation pumps. These capital items enabled the farmers to grow high value vegetable crops that required irrigation. This, in turn, resulted in increased incomes for group members. The use of irrigation for crop diversification to increased incomes has been highlighted in the literature (for example, Bhalsing, 2009; Hussain & Biltonen, 2001; Mandal & Dutta, 1993). However, irrigation facilities developed through increased access to financial capital by virtue of farmer group membership and their linkages with farmers' incomes and empowerment, are poorly reported in the literature.

Access to financial capital allowed farmers to also increase their incomes through mechanization, It was found that access to grants through farmer groups enabled one farmer group to procure a corn sheller that allowed substantial cost savings on corn shelling which then contributed to an increase in the farmers' incomes of the farmers. A few authors, such as Jacobson (2012) have reported that farmer groups provide opportunities for farmers to access grants for farm machineries. However, they did not explain the impact of this on farmers' incomes.

With respect to increased income through area intensification, this study found that access to credit through group welfare funds enabled some farmers, particularly poor women, to procure land. This land was used to cultivate crops, including vegetables which, in turn, generated additional incomes. In a study of farmer groups in Tanzania, Wambura et al. (2007) also observed that loans accessed through farmer groups enabled members to invest in additional land that increased incomes. However, this study did

not examine farmer groups from the empowerment perspective. The following section presents how financial capital access through farmer groups contributes to psychological empowerment.

6.3.2.8.2 Psychological empowerment

This study also demonstrated that increased access to financial capital through farmer group membership can influence psychological empowerment. Financial capital accessed through farmer groups contributed to increase self-confidence and self-esteem. This was particularly so for the poor and women who have limited access to formal financial services in rural Nepal, because they lack collateral and also owing to prevailing cultural norms. In this study, it was found that increased access to loans through the group welfare funds enabled the poor members to manage financial crises on their own without having to approach money lenders for financial assistance. The economic security obtained through this increased access to credit increased their sense of self-esteem on the one hand and self-confidence in managing their household affairs on the other.

In the case of women, findings from this study revealed that increased access to credit through group welfare funds reduced their economic dependence on their male counterpart and allowed them to contribute to the household budget. This, in turn, strengthened their self-confidence and self-esteem. Little is written in the literature about the influence of credit accessed through group welfare funds on psychological empowerment. However, the micro-credit literature of developing countries (such as Kato & Kratzer, 2013; Nader, 2008; Singh, 2014) demonstrated that increased access to credit as a result of participating in micro-credit programmes enhanced the psychological empowerment (self-confidence and self-

esteem) of the poor women. The contribution of financial capital on social empowerment is discussed in the following section.

6.3.2.8.3 Social empowerment

This study revealed that increased access to financial capital as a consequence of farmer group membership, has had an impact on social empowerment. Increased access to credit through group welfare funds contributed to a shift in power dynamics within both households and the wider community. In terms of households, increased access to credit by women through group welfare funds strengthened their position vis-à-vis men within the household. When women are able to obtain loans and thereby contribute to the household budget, their bargaining power within the household is increased. Their voice was then listened to in the household and other family members valued them as a consequence of being recognised as a contributor to the household budgets. This dimension of social empowerment in relation to farmer groups is poorly described in the agriculture extension literature. However, the causal pathway between access to credit through micro-credit programmes and women's position in relation to men is studied in the rural development literature and the present finding supports previous research in this area (for example, Hashemi et al., 1996; Kabeer, 1998; Kato & Kratzer, 2013; Wrigley-Asante, 2012). On the other hand, the present study has also shown one important means by which asymmetric power relations within rural communities can be reduced. This is by reducing the dependency of the poor on local money lenders through access to credit from group welfare funds. Rai (2007) observed that the traditional money lending system forms a patron-client relationship between the local money lenders and the rural poor in Nepal. In line with the finding of this study, Kabeer (2003) identified that increased access to micro-

credit is one of the major forces that weakened long-existing patron-client relationships in the rural society of Bangladesh. Increased access to credit through the micro-credit group also reduced the dependency of group members on moneylenders in India (Galab & Rao, 2003).

In the above sections, the contribution of the three different forms of capitals on the four different dimensions of empowerment is discussed. This demonstrated that the enhancement of different forms of capital through farmer group membership can result in different combinations of empowerment across the four dimensions. In other words, human capital accumulated by virtue of group membership enhanced economic, psychological and political empowerment, but not social empowerment. In contrast, financial capital accessed through participation in the farmer groups contributed to economic, psychological and social empowerment, but not political empowerment. On the other hand, social capital acquired as a consequence of group membership influenced economic, psychological and only one indicator of political empowerment (increased political participation, but not political awareness), but not social empowerment. These results suggest that none of the forms of capital can contribute to all of the dimensions of empowerment and the three forms of capital act as complementary constituent elements which contribute to overall empowerment. This implies that farmer groups can foster all four dimensions of empowerment when the members acquire all three forms of capital. The causal link between farmer group membership, the three forms of capital and the four dimensions of empowerment are very poorly reported in the literature. However, while exploring the economic empowerment of women with respect to poverty and trade in Sub-Saharan Africa, Randriamaro (2008) argued that the accumulation of different forms of capital is a

precondition for economic empowerment. A quantitative study of the impact of the Lifelong Learning for Farmers programme on the overall empowerment of farmers in Uganda by Carr et al. (2015) also showed that holistic intervention packages that enhance all three forms of capital (human, social and financial) can generate empowerment among farmers. However, unlike the present study, their study did not provide how these three forms of capitals can be enhanced and which forms of capital can influence which dimensions of empowerment. The results of this study also support an emerging argument in the micro-credit literature (Banerjee & Ghosh, 2012; Dash, 2003; Holvoet, 2005; Nawaz, 2010; Sinha, 1998; Swain & Varghese, 2009; Swain & Wallentin, 2009; Uddin, 2013) that access to financial capital (micro- credit) alone may not be sufficient to improve the lives of rural people or empower them. The above mentioned authors further argued that improved access to credit has to be accompanied by other non-financial services, such as training and workshops that enhance the ability of poor people to make choices and control their lives.

An important insight gained from this study is that it is not simply group membership per se that generates empowerment, but the extent of farmer participation in group activities. This study demonstrated that members who had a higher level of participation in group activities had a greater degree of empowerment than those who had a lower level of participation. It was found that incomes were increased significantly for members who engaged in group farming, collective marketing and participated in training and workshops related to their enterprises relative to those who had limited participation in these activities. Similarly, significant enhancement of political empowerment was observed in those members who frequently met extension professionals when compared to members who sought

information about extension services from their respective group leader, rather than directly from extension professionals. The relationship between the level of participation in farmer group activities and empowerment is poorly described in the literature. Fischer and Qaim (2012b) also found that farmer group membership contributed significantly to increased incomes, but only for those members who sold their produce collectively in Kenya. This author, however, did not study farmer groups through the lens of empowerment. In the following section, interactions between the four dimensions of empowerment are discussed.

6.3.2.9 Interactions between the four dimensions of empowerment

The results from this study suggest that there are feedback loops between the dimensions of empowerment (Figure 6.1). An enhancement of one dimension of empowerment through participation in a farmer group can also lead to the enhancement of other dimensions of empowerment. This type of interaction between the different dimensions of empowerment in relation to farmer groups has been poorly reported in the literature. However, it has been highlighted by many authors (such as, Bayulgen, 2008; Cheston & Kuhn, 2002; Kato & Kratzer, 2013; Mayoux, 2006; Mayoux, 2007; Moyle et al., 2006; Samanta, 2009; Wrigley-Asante, 2012), who have studied empowerment in relation to micro-credit.

This study found that increased economic empowerment by virtue of group membership can contribute to psychological and social empowerment. For instance, group membership enabled women members to generate additional income over which they had control (economic empowerment). This allowed them to contribute to the household budget, reducing their

economic dependence on their male partners. This, in turn, enhanced their self-confidence and self-esteem (psychological empowerment) and their position within the household (social empowerment). Another example where increased economic empowerment contributed to social empowerment is where the increased incomes of poor members reduced their economic dependence on the rich and the landlords within the community. This contributed to a reduction in the patron-client relationship that existed between the rich and poor members of the community (social empowerment). The influence of economic empowerment on other dimensions of empowerment in relation to farmer groups, is rarely reported in the literature. However, this linkage is well studied in the case of micro-credit programmes in the rural development literature (such as, Kato & Kratzer, 2013; Moyle et al., 2006; Nader, 2008; Samanta, 2009; Wrigley-Asante, 2012) and the present findings are consistent with these studies. In other words, women of low economic status can benefit psychologically and socially when they are economically empowered. However, this study did not find any evidence of the direct influence of economic empowerment on political empowerment.

This study also found that increased psychological empowerment led to improvements in both economic and political empowerment. It was found that some poor group members had low self-confidence prior to joining the group because of their low economic situation. However, group membership provided them with hope and aspirations that they could improve their own situation and this enhanced their self-confidence (psychological empowerment). This encouraged them to engage in new income generating activities such as vegetable production and group farming which increased their income (economic empowerment). Duveskog et al. (2011) in a Kenyan

study of farmer field schools also reported that prior to joining a farmer field school, the poor farmers lacked the power to improve their situations. However, involvement in farmer field schools increased their self-confidence significantly and this provided the basis for their economic advancement (Duveskog et al., 2011). Results from this study further demonstrated that the women members felt more comfortable speaking in public because of their increased self-confidence (psychological empowerment). Thus they were able to visit public officials and put their demands before them and raise issues related to their farming business and their communities (political empowerment). Mapila, Makwenda, and Chitete (2010) also observed that self-confidence enabled the farmers to better interact with policy-makers and donors and to better articulate their demands in Malawi.

The study also found that increased political empowerment through participation in farmer groups led to psychological and economic empowerment. For example, group membership enhanced the political awareness of the members (political empowerment) which, then enhanced their self-esteem and self-confidence (psychological empowerment). Little has been written about these types of interactions with respect to farmer groups in the agricultural extension literature. However Sahu and Singh (2012) reported that political awareness gained through participation in micro-credit groups gave self-confidence to women in India.

Finally, the study found that increased social empowerment also contributed to psychological empowerment. For example, this case study demonstrated that the position of women within the household and the community was strengthened through group membership (social empowerment) which enhanced their self-esteem and self-confidence (psychological empowerment). The interactions between social empowerment and

psychological empowerment in relation to farmer groups are poorly reported in the literature.

In this study, the extent of empowerment gained by farmer group members varied across groups and this is discussed in the following sections below.

6.3.3 The difference in the level of empowerment between farmer groups: A function of social cohesion and resource flow

This study provided useful insights about the influence of the characteristics of the groups and how this influenced the empowerment of their members. It was found that the degree of empowerment that occurred within a group was influenced by the level of cohesion among group members and the volume of resources that flowed into the group. The variation in the level of empowerment between farmer groups and its underlying causes, are poorly reported in the literature. The following sections discuss these two factors in more detail.

6.3.3.1 The effect of the level of group cohesion on empowerment

This study found that the farmer group that was homogeneous and comprised the *Tharu* ethnic people, the indigenous inhabitants of the case district, was more cohesive when compared to farmer groups of mixed caste. A high level of solidarity and trusts were observed between members of the *Tharu* ethnic farmer group when compared to mixed caste farmer groups. Although a number of scholars in the field of social capital (for example, Leigh, 2006; Putnam, 2007) contended that ethnic homogeneity engendered a higher level of trust and strong bonding social networks, whereas higher ethnic diversity resulted in a lower level of trust, little is

written about this in the context of farmer groups or in relation to empowerment. The members of the *Tharu* ethnic farmer group shared a common culture, values, origin and socio-economic status that contributed to the development of group solidarity in this study. The strong solidarity and high level of trust between the members of the *Tharu* ethnic farmer group facilitated the organisation of collective action, and fostered the unimpeded flow of information within the group to a greater extent than was found in the mixed caste groups. It was found that the members of *Tharu* ethnic farmer group engaged in different types of collective action, such as the collective purchasing of inputs, the collective marketing of vegetables and the group farming. If any members heard new information, that was circulated among the members. This fostered a higher level of empowerment in comparison to the mixed caste farmer groups. Although the literature (such as, Hoang & Graham, 2006; Reid & Salmen, 2000; Sabhlok, 2011; Sseguya, 2009; Sseguya, Mazur, Wells, & Matsiko, 2014; Stevens & Terblanche, 2004; Vuthy et al., 2014) has highlighted the importance of trust and solidarity between the group members for effective group functioning, research into the relationship between the level of trust and/or solidarity between farmer group members and their influence on empowerment is limited. In a study of farmer field schools in Bangladesh, Bartlett (2004) also reported a positive association between group solidarity and empowerment. However, he did not link group solidarity to the homogeneity of the group. Nega, Mathijs, Deckers, and Tollens (2009) in a study in Ethiopia also found that the degree of empowerment varied with the level of trust within a group. However, they included all sorts of formal and informal groups that an individual belongs to in a community in their analysis. This included women's associations, religious groups, political parties, cooperatives, finance groups, natural resource management groups, education groups, health groups and so on.

Moreover, because this study used a survey, they could not explain how trust developed within the groups. Neither of the two studies mentioned above (that is, Bartlett, 2004; Nega et al., 2009) compared the variation in empowerment between ethnically homogenous groups and mixed caste groups. The volume of resources that flowed into the groups is the second underlying factor that caused a difference in the level of empowerment between farmer groups. This is discussed in more detail in the following section.

6.3.3.2 The effect of the volume of resources on empowerment

The second factor that explains why members in some groups are empowered more than others is the volume of resources that flows into a group. The study found that where a farmer group can draw on a wide range of resources from development organisations such as information, grants and so on, a greater number of group members are empowered and those members are empowered to a greater degree than farmers in groups that have limited access to resources. Although the importance of resources in the process of empowerment are highlighted by the theorists of empowerment such as Malhotra and Schuler (2005), who view resources as an enabling factor which has the potential to foster empowerment, little research has investigated the relationship between access to resources by farmer groups and empowerment. Some work on this has been done in the micro-credit area. For example, in a study of micro-credit groups in India, Banerjee and Ghosh (2012) observed that group members who received more resources through the group appeared to be more empowered.

The mechanism by which farmer groups can enhance their access to resources is through leaders who build strong linking social networks with a

wide range of development organisations. Farmer groups that had a leader with strong linking social networks received a greater amount of support and services than farmer groups who had leaders with weak linking social networks. Although the literature (such as, Flores & Rello, 2003; Megyesi, Kelemen, & Schermer, 2011; Qi, Wu, & Wu, 2013) has highlighted the crucial role that the social networks of leaders play in sourcing external resources for the benefits of members, this advantage has not been linked to empowerment.

6.4 Summary and conclusions

In this chapter, the theoretically important characteristics of the case and the important insights gained through this study in relation to the contributions of farmer groups in empowerment in the rural context of Nepal have been provided. This study illustrated that farmer groups can contribute to the empowerment of rural people. Participation in farmer groups facilitated the accumulation of three forms of capital (human, social and financial) and that contributed to empowerment across the four dimensions: economic, psychological, social and political.

The study develops complex linkages between farmer group membership, three forms of capital and the four dimensions of empowerment, which are not reported in the previous study. Detailed mechanisms of how participation in farmer groups facilitated the accumulation of human, social and financial capital and the interactions between different forms of capital are provided. Similarly, how three forms of capital influenced different dimensions of empowerment and the interactions between the various dimensions of empowerment are provided. However, this study illustrated that the pathway to empowerment is complex and multifaceted. The important insight gained

from this finding is that there exists no simple one-way street through which farmer groups can generate empowerment of rural people. In conclusion, this chapter provides an improved understanding of how participation in a farmer group, assisted by the public agricultural extension organisation, contributes to the empowerment of its members, which is not clearly described in the literature. In the next chapter, the conclusions and the implications of the findings are described, the research methodology is evaluated and suggestions for future research are provided.

CHAPTER SEVEN

CONCLUSIONS

7.1 Introduction

Agricultural extension has been considered as one of the most important instruments for agriculture and rural development in Nepal (Thapa & Ojha, 2004). In the past, various approaches to agricultural extension were adopted such as the conventional extension system, the integrated rural development project, the training and visit system, the Tuki system, the farming systems research and extension approach, and the block production programme (Dongol, 2004; Suvedi & McNamara, 2012; Thapa, 2010). However, because of the failure of these approaches to address the problems faced by the vast majority of small and marginal farmers and thereby to contribute to agriculture and rural development, the Government of Nepal adopted a farmer group approach as the official extension approach for Nepal since 1988/89 (Central Agriculture Training Centre, 2002; Sharma & Khanal, 2009; Sinha, 2014) and, since then, this has been the major strategy of the Government for the provision of agricultural extension services (Sharma & Khanal, 2009; Suvedi & McNamara, 2012).

Farmer groups have been widely used as a farmer-centred agricultural extension approach to transform the agriculture sector in developing countries, including Nepal. Moreover, the agricultural extension literature (for example, Anandajayasekaram et al., 2008; Chamala & Shingi, 1997; Davis, 2006; Friis-Hansen & Webster, 2004; Githaiga, 2007; Qamar, 2005b) has shown that organizing rural smallholders and poor farmers into groups has provided an effective institutional mechanism for the empowerment of farmers. However, limited research has been conducted, in either Nepal or

other developing countries, to investigate farmer groups through the lens of empowerment theory. Rather, the empirical literature on farmer groups has tended to focus on easily measured direct outputs from agricultural extension such as technology adoption, innovation diffusion, yield increment, income and/or farm profit (for example, Adong, 2014; Cramb, 2005; Darr, 2008; Darr & Pretzsch, 2008; Davis, 2006; Desai & Joshi, 2014; Fischer & Qaim, 2012b; Hennessy & Heanue, 2012; Mwaura, 2014; Vuthy et al., 2014; Wambura et al., 2007) that do not provide useful insights into the impact that farmer groups have on the empowerment of their members. This study is intended to answer how participation in a farmer group, assisted by the public agricultural extension organisation, contributes to the empowerment of group members in rural communities in Nepal. To this end, farmer groups that were assisted by the DADO in Nepal were studied using a qualitative case study research approach.

This chapter summarises the main research conclusions and sets out the contributions of this study to the body of knowledge. The implications and recommendations that emerged from this study for relevant stakeholders are then discussed. The research methodology is evaluated and areas for future research are suggested in the final section.

7.2 Research conclusions

This study revealed that farmer group membership allowed farmers to accumulate human, social and financial capital which fostered economic, psychological, social and political empowerment of group members. The results from this study provide a comprehensive model of the relationship between farmer groups, the three different forms of capital accumulation and the four dimensions of empowerment. Other studies in the wider

development literature and agricultural extension literature did not incorporate all of these concepts into a single model. While some authors in the field of development studies have investigated empowerment using the four dimensions, they have not considered the process from a capital (human, social and financial) perspective. Although Bartlett (2004) in a study of farmer field schools in Bangladesh has reported explicitly on the three routes to empowerment through the accumulation of the three different forms of capital, he did not describe the interactions that occur between the three forms of capital, as was reported in this study. Neither did Bartlett (2004) consider empowerment from the perspective of the four dimensions. This more comprehensive model is an important contribution from this research to the body of both empowerment and agricultural extension literature.

The present study also illustrated the interconnected nature of different forms of capital accumulation. The findings from this study showed that human capital accumulated through membership in a farmer group also led to increased financial capital resulting in the empowerment of members. In contrast, social capital accumulated by virtue of group membership contributed to both human and financial capital accumulation that, in turn, facilitated empowerment. The findings further revealed that financial capital accessed through farmer group membership also helped group members build social capital. These types of feedback loops that exist between the different forms of capital in relation to farmer groups are rarely described in the literature.

This study identified and described different indicators of empowerment across the four dimensions. Two indicators of economic empowerment were identified in this study: (i) increased income and (ii) control over financial

resources generated through group membership such as income, savings and credit. The findings from this study showed that most of the women members had control over (i) income they generated through participation in the group, (ii) loans they obtained from the group welfare funds and (iii) the saving within the group welfare funds. The study demonstrated that women had control over (i) decisions-making with respect to the use of the credit and the income they generated from participation in farmer groups and (ii) the spending of the credit and the income. These findings add significantly to our knowledge. Previous authors who investigated women's control over financial resources in relation to farmer groups, studied this from the point of view of who makes the decision about the incomes women generated through farmer group membership.

In this study, psychological empowerment was manifested through increased self-confidence and increased self-esteem. Two indicators of social empowerment that emerged from this study were (i) a change in power relationships between male and female, and (ii) a change in power relationships between the poor and landlords/money-lenders. Although some authors have examined the transformation of power relationships between male and female by virtue of farmer group membership, the influence of farmer groups on a change in the power dynamics between the poor and traders/money-lenders, had not previously been reported in the literature.

In this study, increased political awareness and increased political participation are the two indicators that provided the evidence of an increase in political empowerment. The present study has measured political awareness using indicators that have been suggested by the political scientist Bayulgen (2008). This included the level of information farmers

have about (i) publicly provided goods and services that are available to the people, (ii) the performance of officials in the delivery of these goods and services, (iii) the rights and instruments available to the people to make the public officials accountable and (iv) the rights and tools available to the people to request services and goods from them. However, most studies in the field of rural development (for example, Hashemi et al., 1996; Islam et al., 2014; Pitt et al., 2006; Sahu & Singh, 2012; Snijders & Dijkstra, 2011) have measured the level of political awareness by using the indicator: knowledge of the names of the elected political officials. The use of Bayulgen (2008)'s notion of political awareness in this study is an important contribution, not only to the discipline of agricultural extension, but also to the discipline of rural development, as this study has extended the definition of political awareness in these disciplines.

The present study illustrated that the definition of political awareness used in this research is more useful when considering the empowerment of rural people. It showed that one of the main characteristics of disempowerment, particularly of women and the poor, was limited access to public resources. This is because these individuals did not know what publicly provided goods and services were available to them, nor the procedures to obtain them. Increased awareness of the availability of publicly provided goods and services enabled women and the poor to obtain resources from different organisations that were vital in fostering their empowerment. This had not been previously reported in the literature. With respect to political participation, this study revealed that farmer group membership contributed to (i) increased contact with the public officials such as ASC, DADO and VDC that enabled them to influence decisions made by these public offices regarding farming and community related issues and (ii) an increase in

organised collective action in order to resolve family disputes and protest about social issues. These findings make an important contribution to the discipline of agricultural extension by showing the relationships between farmer groups and political participation because there had been no previous explicit study on political participation with respect to farmer groups.

This study illustrated that farmer groups can foster all four dimensions of empowerment when the individuals acquire all three forms of capital through participation in farmer groups. For instance, this study found that human capital accumulated by virtue of group membership enhanced economic, psychological and political empowerment, but not social empowerment, whereas financial capital accumulated through participation in the farmer groups contributed to economic, psychological and social empowerment, but not political empowerment. On the other hand, social capital acquired as a consequence of group membership, influenced economic, psychological and only one attribute of political empowerment (increased political participation, but not political awareness), but not social empowerment.

This study also provides empirical evidence of the usefulness of the four dimensional (economic, psychological, social and political) framework of empowerment to study empowerment in relation to farmer groups. The four dimensional framework of empowerment has been used to investigate different sectors of rural development initiatives such as eco-tourism (for example, Fiorello & Bo, 2012; Park & Kim, 2016; Scheyvens, 2000), micro-credit (for example, Khondkar, 2002; Sangeetha et al., 2013) and media and publication (for example, Magallanes-Blanco & Pérez-Bermúdez, 2009). However, it has not been used to investigate empowerment in relation to the farmer group approach to extension. While some authors have investigated the economic, psychological and social empowerment that accrued from

farmer group membership, they did not examine the political dimension of empowerment. This study is believed to be the first of its kind to use a four dimensional framework of empowerment for a study of farmer groups in Nepal in the discipline of agricultural extension. This is an important contribution to the literature in the broader discipline of social science.

The findings from this study revealed that feedback loops existed between the dimensions of empowerment. Increased economic empowerment by virtue of group membership contributed to social and psychological empowerment whereas increased psychological empowerment led to increased economic and political empowerment. On the other hand, while increased social empowerment facilitated an increase in psychological empowerment, increased political empowerment contributed to economic and psychological empowerment. The interconnected nature of different dimensions of empowerment with respect to farmer groups is rarely described in the literature. These findings suggest that a lack of empowerment in one dimension can limit empowerment in other dimensions.

An important contribution from this study was to make explicit the mechanisms by which membership of farmer groups empowered farmers. More specifically, this study described and documented different mechanisms of how: (i) participation in farmer groups contributed to human capital accumulation, (ii) participation in farmer groups facilitated the acquisition of social capital, (iii) participation in farmer groups contributed to increased access to financial capital, (iv) acquired human capital led to economic, psychological and political empowerment, (v) accumulated social capital contributed to economic, psychological and political empowerment, (vi) increased access to financial capital led to economic, psychological and social empowerment, (vi) enhanced economic empowerment contributed to

psychological and social empowerment, (vii) increased psychological empowerment led to economic and political empowerment, (viii) increased social empowerment helped to enhance psychological empowerment and (ix) increased political empowerment facilitated an increase in economic and psychological empowerment (details in Chapter Five). Previous research in agricultural extension has provided limited insights into these processes and mechanisms; rather it has focussed on easily measured direct outputs from group membership such as technology adoption, innovation diffusion, yield increment, income and/or farm profit (details in Chapters Two and Six). Work in relation to farmer field schools has looked at the role of capacity building through experiential and/or transformative learning and its role in increasing the ability of farmers to control lives and make choices. However, it did not consider the four dimensions of empowerment. On the other hand, the micro-credit literature has mostly concentrated on the financial capital route to empowerment, particularly economic empowerment through increased access to micro-credit, the most extensively studied phenomenon in relation to empowerment. This literature is also not sufficient to provide in-depth insights into how group membership can contribute to empowerment across the four dimensions. For instance, it does not provide a detailed understanding about how members accumulate human capital through participation in different agricultural extension activities and how that increased human capital can enable them to make decisions and choices related to their farming practices leading to empowerment. As such, previous studies have not provided a complete view of how farmer group membership can empower farmers across the four dimensions. Thus, the present study fills this gap in the literature on both agricultural extension and rural development.

This study also provides a more detailed understanding about how different categories of members (gender and socio-economic status) benefited from group membership. An important finding that emerged from this study was that the impacts of the participation in farmer groups on empowerment are different across various categories of farmers based on gender and socio-economic status. Women benefitted more from group membership than men in terms of empowerment. Similarly, the poor farmers benefitted more from group membership than the smallholder farmers in terms of empowerment. While most authors who have investigated group-based rural development approaches (for example, micro-credit groups, self-help groups and farmer groups) through the lens of empowerment have focussed on either one gender (women) or one socio-economic class (the poor), this study investigated both gender and socio-economic status. Inclusion of both gender and socio-economic status provided greater insights into how different categories of members benefit through farmer group membership in terms of empowerment, a point rarely reported in the literature.

This study demonstrated that the degree of empowerment obtained by group members varied between groups. The variation in the level of empowerment between farmer groups was explained by two major underlying factors. They were the degree of cohesion between group members and the volume of resources that flowed into a group. The proportion of members within a group that were empowered and the extent of their empowerment was a function of the cohesiveness of the group. The homogeneous farmer group that comprised the *Tharu* ethnic people was more cohesive when compared to farmer groups of mixed caste. The cohesiveness of the *Thrau* ethnic farmer group facilitated the organisation of collective actions and fostered the unimpeded flow of information within the group. This fostered higher

levels of empowerment in comparison to the mixed caste farmer groups. Similarly, the proportion of members within a group that were empowered and the extent of their empowerment was a function of the volume of resources that flowed into a group. This study identified that diverse linkages between a farmer group and several development organisations resulted in greater empowerment of members than a situation where farmer groups were dependent on only one organisation for services and support. The role of leaders was found to be crucial for establishing linkages with the development organisations and thereby sourcing external resources for the benefits of the members. The implications of these findings are described in the following sections.

7.3 Implications of the findings

The results from this research provide useful insights into why farmer groups remain important for rural development in a country like Nepal where a large sector of the population depends on agriculture. This study confirms that a group based approach to agricultural extension can lead to the empowerment of rural people. Participation in farmer groups can allow farmers to accumulate three forms of capital (human, social and financial) that contributes to their empowerment across the four dimensions: economic, psychological, social and political. Thus, the findings of this study strongly support the current policies in developing countries including Nepal, that emphasise the implementation of rural development programmes through a farmer group approach. This study has shown that farmer groups can be an effective means of empowering people in rural communities.

The model developed through this study would be useful for the Government of Nepal, extension organisations, donor agencies and any other

development partners to provide the justification for using the farmer group approach in agriculture extension with respect to the empowerment of farmers. In particular, this study provides evidence for the DOA to advocate that the impact of the existing extension service delivery strategy of the DOA can go far beyond the direct outputs such as technology adoption, innovation diffusion and yield increment. Being an extension professional working under the DOA for more than 15 years, this researcher is aware of the lack of such evidentiary documents.

The findings from this study suggest that improvement in one form of capital by itself is not sufficient to ensure the empowerment of farmers across the four dimensions unless the other two forms of capital are already present. Policy makers, donors and extension organisations that want to empower rural people, should conceive and plan extension services in a holistic way that will enable them to enhance all three forms of capital, rather than focusing on programmes that promote the enhancement of one or two forms of capital such as the provision of credit or capacity building activities.

The findings from this study demonstrate that farmer groups are more beneficial for women as opposed to men and for the poor, as opposed to wealthier farmers. These findings suggest that the current group-based extension approach can serve as an effective strategy for providing agricultural extension services to women and poor farmers who have limited financial and personal resources (such as social capital) on their own. This suggests that future group-based rural development interventions should target the most disempowered sector such as women and the poor who have limited access to extension services. The results also suggest, however, that uniform packages of interventions that are currently being practised by agricultural extension organisations in Nepal, may not be

suitable for catering to the different needs of the different categories of farmers. Rather, agricultural extension organisations should tailor their programmes to the different needs of the different categories of farmers to ensure that all can benefit from membership of farmer groups.

Another important insight gained from this research is that the pre-existing stock of social capital (such as trust and bonding ties) is a crucial factor in understanding why some farmer groups are able to generate more empowerment for their members than others. This study revealed that strong solidarity and a high level of trust among members are important characteristics of a farmer group that determine the improvement in the level of empowerment by members. This implies that a careful analysis of the pre-existing stock of social capital in a community is essential before designing any group-based rural development programme. These results also suggest that policy makers and development professionals need to think about and include in their programmes, methods by which trust is developed among the members of a group if the initial stock of social capital is low.

This study has clearly shown that participation in farmer group helps members to build social capital. This is because it provided opportunities for the farmers to have increased interactions and establish new relationships through group meetings and participation in extension activities and collective action. This finding has an important implication for the government and policy makers in that external interventions through a group-based approach can contribute to the building of social capital in rural areas.

Another important insight gained from this study is that mere membership in a farmer group may not empower rural people by itself. The degree of

empowerment that occurs within the group is heavily dependent upon the amount of resources the group can access. This finding is important from a policy and practice perspective. It suggests that the formation of farmer groups alone will not empower farmers. The extension organisation must also provide sufficient resources to facilitate empowerment. However, at present, the DADO registers as many farmer groups as apply, without consideration of the resources available to support such groups. This study recommends that this existing system, in terms of registration and budget allocation, needs to be reformed and the budget allocation to the DADO for agricultural extension services should be tied to the number of farmer groups the DADO has to serve.

The findings from this study suggest that development strategies that target the empowerment of rural people through farmer groups should put in place training and other activities that allow the groups to establish strong networks with the organisations working within the local area. Extension organisations should analyse whether the group has the capability to establish relationships with a wide range of development organisations in the area. If the leadership of farmer groups is weak in this aspect, training related to leadership development and networking for the leaders (executives) of farmer groups should prove beneficial. The researcher's reflection on the methodology is presented in the following section.

7.4 Methodological reflections

The adoption of a qualitative case study approach for this study was found to be useful in obtaining a deeper understanding of the complex and interconnected relationships between farmer group participation, the three forms of capital (human, financial and social) and the four dimensions of

empowerment (economic, psychological, social and political). For example, self-esteem and self-confidence are abstract concepts and changes in these indicators of empowerment in many instances were manifested in participants' behaviour and expressions rather than words. Other authors (Hennink et al., 2012; Parsons, 2003; Pereznieto & Taylor, 2014) have also reported that qualitative methods better allow researchers to capture the complex and multidimensional nature of empowerment.

This study highlighted the importance of flexibility in research design and the use of multiple sources of evidence in order to obtain a rich description of the phenomena. For instance, some respondents who were illiterate and/or had no formal schooling and limited contact with the outside world were hesitant about being tape recorded. In such instances, the opinions of the respondents were recorded by hand in a field note book and this allowed them to express their views freely. Multiple sources of evidence were important in obtaining a more holistic view of the phenomena of interest. Field observations supplemented the data collected through formal interviews and focus group discussions. There were several instances where field observations identified important mechanisms of empowerment. Informal talks and interactions with the farmers, along with field observations, allowed the researcher to obtain insights into the relationships between farmer group members, their farming practices and empowerment that was difficult to obtain through formal interviews taken inside an interview room. The next section discusses areas for future research.

7.5 Future research

This study has identified three forms of capital (human, social and financial) that farmers accumulated as a result of their participation in farmer groups

and that contributed to the four dimensions of empowerment: economic, psychological, social and political. Mechanisms by which participation in a farmer group contributes to empowerment across four dimensions are described. Future research could investigate the relative importance of these different mechanisms in different contexts and in enhancing the different dimensions of empowerment. Likewise, it would be useful to establish the relative importance of the different dimensions of empowerment on the overall empowerment that a farmer can achieve through membership of a farmer group.

This study demonstrated that feedback loops exist between the different forms of capital. For instance, increased social capital through group membership led to human and financial capital accumulation, whereas human capital accumulated as a consequence of farmer group membership increased access to financial capital. Furthermore, financial capital accessed through farmer group membership also contributed to social capital accumulation. However, there might be more feedback loops than that identified in this study. For instance, the broader development literature (for example, Boxman et al., 1991; Lin, 2001) suggested that human capital can also contribute to the enhancement of social capital, although their phenomena of study was not in relation to farmer groups. However, this might be an area for future research.

The study has also highlighted that the dimensions of empowerment are interlinked and interdependent. The results of this study demonstrated that while increased economic empowerment through participation in farmer groups contributed to social and psychological empowerment, increased psychological empowerment also facilitated economic and political empowerment. Furthermore, increased social empowerment led to

psychological empowerment, whereas increased political empowerment contributed to economic and psychological empowerment. However, the broader development literature (for example, Amrutha & Maruthakutti, 2015; Hennink et al., 2012; Mayoux, 2003, 2006, 2007; Nyaupane & Poudel, 2011) suggested that there might be other feedback loops that exist between the dimensions of empowerment, in addition to the ones that were identified in this study. For instance, Mayoux (2003) argued that economic empowerment can facilitate or be dependent upon political empowerment while explaining empowerment in relation to the micro-credit. On the other hand, Amrutha and Maruthakutti (2015) suggested that political empowerment can augment social empowerment. As such, further research is required to find out whether these feedback loops exist in relation to farmer groups.

This study is the first of its kind to provide a more comprehensive model of the complex relationship between farmer groups, the three different forms of capital (human, social and financial) accumulation and the four dimensions of empowerment (economic, psychological, social and political) based on the analysis of four farmer groups of a single village. To test and broaden the theory, it is recommended that future case studies be undertaken in different contexts.

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APPENDICES

Appendix 1



**Empowerment of farmers through agricultural extension: A case study
of farmer groups in Khairahani, Chitwan, Nepal**

INFORMATION SHEET

The research project entitled “**Empowerment of farmers through agricultural extension: A case study of farmer groups in Khairahani, Chitwan, Nepal**” is being carried out by Prakash Raj Bista, a doctoral student of the Institute of Natural Resources, Massey University, New Zealand, in order to fulfil one of the requirements for the degree of Doctor of Philosophy (PhD) in Agricultural Extension and Rural Development. The researcher is under the supervision of Dr. David Gray and Ms. Janet Reid, who are affiliated with the Institute of Natural Resources.

The main purpose of this research is to gain an improved understanding of how participation in a farmer group, assisted by the public agricultural extension organisation, contributes to the empowerment of its members in the rural context of Nepal.

You are cordially invited to participate in this research project. You are kindly requested to participate voluntarily in the interview for nearly two hours in order to provide information related to a farmer group you are involved in.

You are under no obligation to accept this invitation. If you decide to participate, you have the right to:

- decline to answer any particular question;
- withdraw from the study at any time;
- ask any questions about the study at any time during participation;
- provide information on the understanding that your name will not be used unless you give permission to the researcher;
- be given access to a summary of the project findings when it is concluded and
- ask for the recorder to be turned off at any time during the interview.

If you have any query with regard to this research, please contact the researcher or his supervisors in the address mentioned below:

Researcher's address in New Zealand

Institute of Natural Resources, PN 433

College of Sciences,

Massey University,

Private Bag 11-222,

Palmerston North

New Zealand

Email: [REDACTED]

Telephone Number: [REDACTED]

Mobile: [REDACTED]

Fax number: [REDACTED]

Researcher's address in Nepal

This researcher will be available in following address from February to June 2012

Bharatpur 12/39,

Chitawan,

Nepal

Telephone Number: [REDACTED]/Mobile: [REDACTED]

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Supervisors' address in New Zealand

Dr David Gray

Institute of Natural Resources, PN 433
College of Sciences,
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Ms. Janet Reid

Institute of Natural Resources, PN 433
College of Sciences,
Massey University,
Private Bag 11-222,
Palmerston North.
New Zealand

This project has been evaluated by peer review and judged to be low risk. Consequently, it has not been reviewed by one of the University's Human Ethics Committees. The researcher named above is responsible for the ethical conduct of this research.

If you have any concerns about the conduct of this research that you wish to raise with someone other than the researcher, please contact Professor John O'Neill, Director, Research Ethics, telephone 06 350 5249, email humanethics@massey.ac.nz.

Appendix 2



**Empowerment of farmers through agricultural extension: A case study
of farmer groups in Khairahani, Chitwan, Nepal**

PARTICIPANT CONSENT FORM

I have read the Information Sheet and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.

I agree/do not agree to the interview being sound recorded.

I agree to participate in this study under the conditions set out in the Information Sheet.

Signature: **Date:**

Full Name - printed



**Empowerment of farmers through agricultural extension: A case study
of farmer groups in Khairahani, Chitwan, Nepal**

FOCUS GROUP PARTICIPANT CONSENT FORM

I have read the Information Sheet and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.

I agree not to disclose anything discussed in the Focus Group.

I agree to participate in this study under the conditions set out in the Information Sheet.

Signature:

Date:

.....

Full Name- printed

.....