University of Reading

REAL ESTATE AND PLANNING, HENLEY BUSINESS SCHOOL

Land Administration and Its Impact on Economic Development

A thesis submitted to the fulfillment of the requirements for the degree of Doctor of Philosophy

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April, 2016

Declaration

I confirm that this is my own work and the use of all material from other sources has been properly and fully acknowledged.

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Abstract

This thesis investigates the relationship between land administration and economic development. More specifically, it assesses the role of land tenure security in productivity and that of land administration services in revenue generation. The empirical part of the study was undertaken in Nepal, Bangladesh and Thailand. A mixed method approach was employed for data collection, analysis and interpretation. The information was gathered using questionnaires, interviews, observations, informal discussions and documentation analysis.

This study demonstrates that land administration plays a crucial role in providing security of land tenure. It also evidences that the use value, collateral value and exchange value of land is increased after registration which has benefitted the occupation, investment and finance sectors of the case study economies. Specifically, it was found that land use activity became more productive. With regard to financial services, banks more readily accepted land as loan security for debt finance and did so at an interest rate that was lower than that offered by private lenders. Land-related investment and income also increased and these effects are found to be positively correlated with tenure security. However, access to credit is not enough to increase investment unless it is communicated properly.

This study demonstrates that quality of land administration services affects on tenure security and revenue generation. Poor land administration, improper land valuation and inefficient and unscrupulous employees threaten tenure security and reduce the amount of revenue that can be generated from land. The establishment of land administration systems and security of land tenure is beneficial for the government as it supports economic development by increasing production and generating revenue to some extent. It may also enhance efficient use of scarce resources, increase household income and play an important role in maintaining distributive justice and reducing poverty. The findings of this study indicate a need for further research on the contribution of land administration in the real estate sector as well as changes to the livelihoods of civilians.

Acknowledgement

At the moment of completing my dissertation, I dearly extend my thanks to everyone who have supported financially and morally, shared information and devoted their valuable time during my study. My first and foremost acknowledgement goes to Henley Business School, University of Reading for providing financial support for this research and the Government of Nepal for approving my study leave and allowing me study here. I am also thankful to the Royal Institute of Chartered Surveyors, UK and Cushman and Wakefield for funding my fieldwork.

I would like to express my profound gratitude to my supervisors Prof. Peter Wyatt and the late Prof. Peter Byrne for accepting my proposal and providing an expert supervision of my research. I am especially indebted to Prof. Wyatt for reading my numerous revisions and guiding me throughout my study. I would like to thank him for his support in finding funding during my stay and field work and also for giving me an opportunity to give some tutorials to the MSc students. I highly appreciate the supervisory contribution of the late Prof. Byrne as well.

I am thankful to the staff of Henley Business School, particularly Dr. Gianluca Marcato, Dr. Angelique Chettiparamb, Dr. Anupam Nanda and Dr. Tommaso Gabrieli for their support and encouragement. I am equally thankful to Ms. Mary Williams, Ms. Caroline Breede, Ms. Katie Brincat, Ms. Helen Clark, Ms. Nicole Gilham and Mr. Phill as well.

I am highly indebted to many informants from Nepal, Bangladesh and Thailand who shared their views without which this research could not have been completed. I would like to express my sincere thanks to the residents of Chulachuli and Gharinda for their warm hospitality and valuable information. I am equally indebted to those key informants who shared their experience and knowledge from which I became able to shape my research; particularly, Mr. Lila Mani Joshi, Mr. Jeet Bahadur Thapa, Mr. Madhu Sudan Adhikari, Mr. Drona Pokharel, Mr. Bhesh Raj Lohani, Mr. Suvash Ghimire, Mr. Revati Dhakal, Mr. Thakur Prasad Niraula and Mr. Kiran Bhattarai from Nepal, Mr. Shamsul Huda and Ms. Khushi Kabir from Bangladesh and Ms. Wanna Rakayo, Ms. Somying Soontoonwong and Mr. Teetat from Thailand.

I am indebted to Assistant Prof. Masud Ibn Rahman, Head, Real Estate Department and Prof. Rafiqul Islam, Dean, Faculty of Business and Economics, Daffodil University Dhaka for their warm hospitality and support during my field visit in Dhaka. I would like to wish my gratitude to those without whose support it would be very complicated to collect required data. I am highly indebted to Prof. Arefin Siddique and Prof. Abul Bakrat for their support. My special thanks goes to Mr. Bijaya Adhikari, Mr. Hem Sharma, Mr. Amrit Khanal, Mr. Farhan Uddin Khan, Mr. Md. Tamzid Siddique and Mr. Kishan Neupane and Ms. Chinnapan Charoenkalunyuta, Ms. Natchaya Patwichaichoat, Ms. Piyanute Kotsan, Ms. Ratchanee and Mr. Gosh for their efforts and time contributed to support my field work without which I could not carry out my fieldwork smoothly. I am also thankful to Mr. Ganesh Bhatta, Mr. Kamal Timilsina, Mr. Shiva Lamsal, Mr. Prakash Acharya, Mr. Gopal Giri, Mr. Ramesh Gyawali, Mr. Dina Bandhu Subedi, Mr. Pitambar Bhandari, Mr. Basu Dev Adhikari, Mr. Suman Aryal, Mr. Rajesh Shah, Mr. Leo Dewri, Mr. Anil Chaudhari, Mr. Abu Talib Khan, Ms. Man Rupa Rai, Mr. Dhan Bahadur Phago, Mr. Abhi Narayan Khanal and Mr. Niraj Adhikari.

I wish to express my appreciation to Dr. Bharat Devkota for his guidance and encouragement during my research. I am also thankful to Dr. Keshav Bhattarai, Dr. Krishna Adhikari, Dr. Hari Timilsina, Dr. Ganga Dahal and Mr. Dinesh Gurung helped in some ways. I would like to thank Mrs Maggie Sanderson for her help in copy-editing and proofreading my thesis.

I am indebted to my mother Sharada and father Bhuwani Shankar for allowing me to come to study and being a continuous source of inspiration. My sincere thanks goes to my brothers Ganga, Jhalak and Deepak and sister-in-laws Hari, Laxmi and Shanti for taking care of my parents and encouraging me to continue study. I am grateful to Mr. Bishwo Adarsha Pandit, Mr. Krishna Gurung, Mr. Bhuvaneshwar Paudel, Mr. Ram Bhattarai and Mr. Basant Thapa who always inspired me for my study.

I extend my sincere thanks to my wife Sita Subedi, for her hard work to fulfil the financial needs and her moral support at difficult times without which this study would remain incomplete. I highly appreciate my son Aavash and daughter Sindhiya for their affection and patience throughout this study.

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Abbreviations

AusAID	Australian Government's Overseas Aid Program
BDT	Bangladeshi Taka
BS	Bikram Sambat
CAISPSC	Chulachuli Area Informal Settlement Problem Solving Committee
CARE	CARE Rural Livelihoods Programme
DOLIA	Department of Land Information and Archive
DOLRM	Department of Land Reform and Management
FAO	Food and Agriculture Organisation of the United Nations
FIG	International Federation of Surveyors
FMV	Fair Market Value
GDP	Gross Domestic Product
GTZ	German Technical Cooperation
HLCSLR	High Level Commission on Scientific Land Reform
IDB	Inter-American Development Bank
ISO	International Organization for Standardization
LANDac	Land Governance for Equitable and Sustainable Development
MOLJAPA	Ministry of Law, Justice and Parliamentary Affairs
MOLRM	Ministry of Land Reform and Management
NLHDA	Nepal Housing and Land Developers Association
NORC	National Opinion Research Center
NPR	Nepali Rupees
OECD	Organisation for Economic Cooperation and Development
QSR	Software for Qualitative Research
REHAB	Real Estate and Housing Association of Bangladesh
SPSS	Statistical Package for the Social Sciences
UNCED	United Nations Conference on Environment and Development
UNECE	United Nations Economic Commissions for Europe
UN-HABITAT	United Nations Human Settlement Programme
UNNIP	United Nations Nepal International Platform
USAID	United States Agency for International Development
VDC	Village Development Committee
WCED	World Commission on Environment and Development

Glossary

Abal	Land of the best quality in terms of agricultural production
Abusus	Right to dispose
AC-Lands Office	Office of the assistant commissioner of land
Ana	Unit of land measurement; equals to 31.8 square meters in Nepal
Badi	A tribal community living in Western Nepal
Baht	The currency of Thailand
Bai-Chong (NS-2)	Pre-emptive certificate
Balam Book	Book recording deeds in Bangladesh; Book No. 1 of the sub-registry office in which deeds are registered
Bargadars	Sharecroppers
Bhumi	Land; jagga
Bigha	A land measurement unit comprising 6,772.63 square meter in Nepal and 1,337.8 square meters in Bangladesh; 20 kattha
Bikram Sambat (BS)	Calendar used in Nepal associated with King Bikramaditya which is 56 years, 8 months and 15 days ahead of AD
Birta	Land grants made by the state to individuals; abolished in 1960
Chahar	Lowest grade of land in terms of agricultural production
Chanod (NS-4)	Title deed
Char Land	Land left behind after a flood
Charuwa	A herder who looks after landlords' cattle
CNG	A caged, motorized tricycle run from compressed natural gas
Dewani	Right to collect revenue
Dhani Purja	Land ownership certificate
Diara Surveys	Settlement operations in an alluvial area
Doyem	Second grade land in terms of agricultural production
Fructus	Right to the fruits
Grundbuch	Land register
Guthi	An endowment of land made for any religious or philanthropic purposes; trust land
Haliya	A person who ploughs the land of landlords to pay bay back his loan and interest
Haruwa	A person who ploughs the land of landlords in an annual contract to pay bay back his loan and interest

Jagera	Raikar lands not assigned as Jagir
Jagera Lagat	A record of Jagera land
Jagga	Land; bhumi
Jagir	Raikar lands assigned to government employees and functionaries in lieu of their emoluments
Jhora	Land cultivated by cutting bushes or forest
Kamaiya	A traditional system of bonded labour practiced in Western Terai of Nepal
Kanungo	Sub-assistant settlement officer or a position junior to AC-Lands based in AC-Lands office
Kattha	A unit of land measurement practiced in Nepal and Bangladesh; equal to 338.63 square metres in Nepal and 66.89 square metres in Bangladesh
Khaja	Lunch
Kharka	Pasture land
Khas Land	State land under administration of Ministry of Lands arising either from new formation or seizures in excess of 33.3 acres ceiling under land reform legislation
Khasra Operation	Survey of temporarily settled areas
Khas Water Bodies	State-owned water bodies
Khatiyan	Records of rights
Khet	Irrigated land; rice land
Kipat	A system of communal land ownership prevalent among the Limbus and other Mongoloid communities in the hilly region
Lagat	Land record
Lakh	Unit of measurement practiced in Nepal equal to one hundred thousand
Lekhapadhi Byabasayee	Deed writer (Nepal)
Mahalla	An optional and non-elective unit of a city corporation or municipal corporation, for ritual and representative purposes
Mangsir	A Nepali colander month from mid-November to mid-December
Mouza	A revenue village, somewhat larger than several actual villages
Mutation	Actions of tehsildars and AC-Lands to update record of rights reflecting changes in land rights and physical alterations
Niji Guthi	Guthi endowment by individual(s)
Nor-Sor-Lor	Titled public land

Nor-Sor-Sarm (NS-3)	Certificate of Use
Nor-Sor-Sarm Kor (NS-3K)	Exploitation Testimonial
Numbari	Freehold land; raikar
NVivo	A qualitative data analysis computer software package produced by QSR International
Pakho	Un-irrigated land
Parcha	Field note
Pota Registration Adda	Land Registration Office
Quinquennial settlement	Land settlement carried out from 1772 to 1777 in Bengal to replace the traditional zamindars with the highest bidding revenue speculators
Raikar	State landlordism; land on which taxes are collected and appropriated directly or through intermediaries by the state
Raiyat	Cultivator; subject of the state
Raj Guthi	Guthi endowments which were administered by the state, now by Guthi Corporation
RAJUK	Rajdhani Unnayan Kartipakhha; Capital Development Authority of Bangladesh
Rakam	Unpaid and compulsory labour services due to the government from peasants cultivating Raikar, Jagir, Kipat and Raj Guthi land; abolished in 1964
Revisional Settlement	A periodic survey which updates a settlement survey
Rupee	The currency of Nepal; NPR
Settlement	Initial area survey and establishment of land boundaries and rights
Sim	Third grade land in terms of agricultural production
Sor-Kor-Neung (SK-1)	Claim certificate
Sor-Por-Kor (SPK)	Usufruct certificates
STK	Temporary cultivation rights
Taka	The currency of Bangladesh; BDT
Talukdar	A village level revenue-collection functionary; an intermediary landholder responsible for collecting land tax
Tehsil	Lowest or union-level revenue unit comprising several mouza
Tehsildar	Sub-assistant settlement officer; a position junior to assistant commissioner (land)
Terai	Low-lying land at the foot of the Himalayas south to the border with India; covers 17 percent of total land area of Nepal

Thakbast Survey	Demarcation survey of village and estate boundaries
Ukhada	A form of landownership under which lands of zamindar or intermediary landowners used to be let out to tenants on low cash rents; abolished in 1964
Union Parishad	A geopolitical subdivision of a sub-district
Upazila	A geopolitical subdivision of a district; a collection of mouzas
Usus	Right to use
Waqt	A religious form of land tenure practiced in Bangladesh
Withholding Tax	Deduction from payments made to suppliers who provide a service
Zamindar	An individual responsible for land-tax collection at the village level; practiced in Nepal and in Bangladesh
Zamindari System	A system of land tenure assigning the task of collecting land tax to zamindars; practiced in both Nepal and Bangladesh

Chapter 1: Introduction

1.1 Introduction

Accelerating the pace of economic development is one of the main political goals of developing countries. Increasing the level of production, financing development activities, alleviating poverty and enhancing the wellbeing of the people are their common challenges. These challenges cannot be overcome unless their resources are mobilised properly.

Land is a fundamental resource without which life on earth cannot exist. It provides space and materials for the existence of all living beings. Access to land is very important for human beings as it provides shelter and the means for their livelihood. It is in line with the view of Simpson (1976:3) who argues, "The availability of land is the key to human existence, and its distribution and use are of vital importance".

The distribution and use of land are determined by land policy, which has been defined as the rules governing access to land and the distribution of the benefits from land (Deininger, 2003). It consists of complex socio-economic and legal prescriptions that dictate how land and land related benefits are allocated (UNECE, 1996:58).

Land policy of a country is guided by its national political objectives. GTZ (1998) presents (a) efficiency and promotion of economic development, (b) equality and social justice and (c) environmental preservation and a sustainable pattern of land use as the three main objectives that guide land policy. Similarly, van der Molen et al. (2008) believe that land policy is concerned with the objectives of a government related to economic, social and environmental development. In their words:

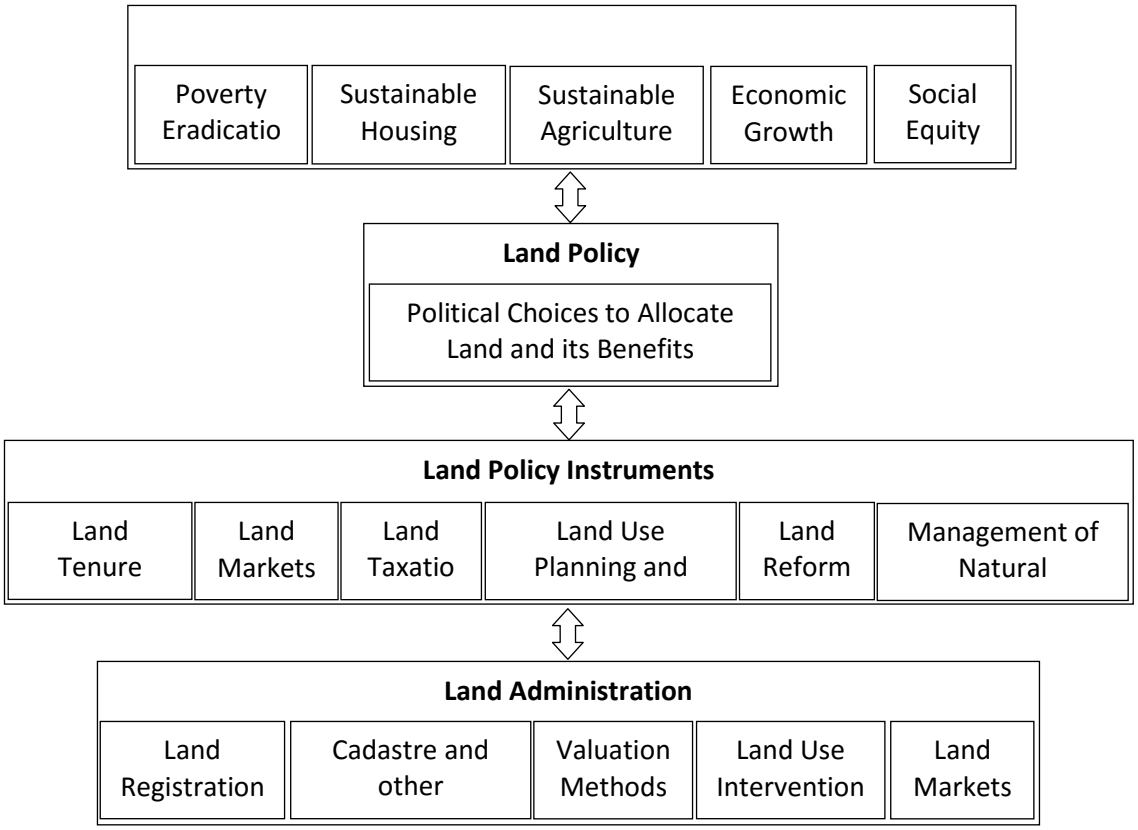
> *"Political objectives such as economic growth, poverty reduction, sustainable housing and agriculture, social equity and fairness, protection of vulnerable groups in society, require a policy of the government how to deal with the allocation of access to land and land related benefits." (p.5)*

Thus, land policy is a highly political document that concerns with the economy, society and the environment. Specific tools and techniques are required for its implementation.

As argued by van der Molen et al. (2008), it requires intervention measures of a more technical nature which concern the application of property rights regimes and security of those rights, access to credit markets, regulations of land sales and rental market, and measures to enhance sound land use planning, land reform, land taxation and management of natural resources.

Land administration serves as a suite of tools that operationalise the instruments of land policy. It has been defined as 'the process of determining, recording and disseminating information about the ownership, value and use of land when implementing land management policies' (UNECE, 1996:14). This definition encapsulates the relationship between tools and policies very well (van der Molen et al., 2008). A model that depicts the role of land administration in achieving national objectives is presented in Figure 1-1. There is a two-way relationship between political objectives and land administration. Land policy is formulated in accordance with national political objectives that are likely to include the eradication of poverty, promotion of sustainable housing, sustainable agriculture, economic growth and social equity. A government operates the instruments of land tenure security, land market, land taxation, land use planning and development regulation, land reform and management of natural resources to fulfil these objectives. Land registration, cadastre and other inventories, valuation methods and land use interventions are the land administration tools that operationalise these land policy instruments.

Figure 1-1: Relationship between land administration and political objectives



Source: Adapted from van der Molen and Lemmen (2005:3) and van der Molen et al. (2008:6)

Fulfilment of the political objectives outlined above will contribute to the economic development of a country. Economic development was traditionally seen as a sustained increase in national income. This term is interchangeably used with economic growth, which refers to a rise in national or per capita income and product (Perkins et al., 2001). Economic development, on the other hand, implies fundamental changes in the structure of the economy in addition to a rise in per capita income. Todaro and Smith (2006) state that development has traditionally meant the capacity of a national economy, whose initial economic condition has been more or less static for a long time, to generate and sustain an annual increase in its gross national income at rates of five to seven per cent or more; but during the 1970s, economic development came to be redefined in terms of the reduction or elimination of poverty, inequality, and unemployment within the context of a growing economy.

Recent development theories emphasise quality of life in addition to economic growth as a determinant of development. The World Bank (1991) considers development as providing a better quality of life. A similar view is held by Sen (1999:14) who argues, "Economic growth cannot be sensibly treated as an end in itself. Development has to be more concerned with enhancing the lives we lead and the freedoms we enjoy". Similarly, Todaro and Smith (2006) believe that any realistic analysis of development problems necessitates the supplementation of strictly economic variables such as incomes, prices, and saving rates with equally relevant non-economic institutional factors, including the nature of land tenure arrangements, the influence of social and class stratifications, the structure of credit, education and health systems, the organisation and motivation of government bureaucracies, the machinery of public administrations, the nature of popular attitudes toward work, leisure, and self-improvement, and the values, roles and attitudes of political and economic elites. Likewise, Thirlwall (2011:173) considers high investment, fast export growth, macroeconomic stability, high levels of human capital formation and an institutional framework conducive to growth as major determinants of rapid growth and development. He states that secured property rights and rule of the land provide a favourable environment for economic growth. It indicates that organisational and institutional factors also play important role in the production process.

To sum up, land administration serves as a tool to operate the instruments of land policy which aim to fulfil the national political objectives that are likely to include the eradication of poverty, promotion of sustainable housing, sustainable agriculture, economic growth and social equity. Fulfilment of these objectives will contribute to the economic development of a country. In a broader sense, economic development comprises not only economic growth and purely economic variables but also the quality of life and non-economic institutional factors like the nature of land tenure arrangements that provide a favourable environment for economic growth.

1.2 Research Context

Land is a major source of wealth. It accounts for 50 to 75 per cent of the national wealth in many developing countries (Bell, 2006). An estimated 20 per cent or more of Gross Domestic Product (GDP) of any nation comes from land, property and construction

(UNECE, 1996). It provides the foundation for most economic activities. Fundamental needs of human beings like shelter, food and clothing are fulfilled from land. Thus, the allocation, use and management of land are vital for society.

The relationship between land and society is established through property rights. Rights and titles to land or real property are created by the state. The state decides whether the rights and/or titles to property may be kept personal or assigned to any person or group of persons. Based on who hold the rights and titles, property can be categorised as state, public, common or private. In state property, both rights and titles are vested in the state whereas they are held by a person or a group of persons in private property. The title to public land is kept by the state or a public agency but its rights are available to the public. On the other hand, the rights and titles to common property are vested in a community.

The selection of property regimes mainly depends on the social, cultural and political context of the society. For instance, the customary tenure system, which is widely adopted in many parts of Africa, is a communal type of property. There is a private property system in most of the Western democratic countries whereas there is state or communal type of property regime in some countries like China, North Korea and Vietnam.

The type of property rights depends on the type of land tenure regime. There are four main types of land tenure regime; statutory, customary, religious and informal. The highest level of property rights under the statutory tenure system is called freehold. Landowners can enjoy the rights of ownership, transfer, inheritance, mortgage, lease and use in freehold land. Customary and religious tenure have limited rights such as use rights.

Property systems may be classified as formal or informal. In a formal property system, property interests are legally recognized by the state but informal properties are not. Dale and McLaughlin (1999:26) define and distinguish these two property systems as follows:

> *"Formal property systems are those where property rights are explicitly acknowledged and protected by law. [...] Informal property interests are those that are recognised by the local, informal community but which are not formally acknowledged by the state."*

They also observe that formal property systems exist in most of the developed countries and informal systems in most of the developing countries. In developed countries, every unit of landed property is represented in a property document but developing countries do not have such processes. In the words of de Soto (2001:6):

> *"In the West, [...] every parcel of land, every building, every piece of equipment or store of inventories is represented in a property document that is a vast hidden process that connects all these assets to the rest of the economy. [...] The Third World and former communist nations do not have such representational process".*

Thus, the representational process of land administration connects the assets of real property to the rest of the economy. Williamson et al. (2010:98) presents five core land administration processes common to most nations as (a) formally titling land, (b) transferring land by agreement (buying, selling, mortgaging, and leasing), (c) transferring land by social events (death, birth, marriage, divorce, and exclusion and inclusion among the managing group), (d) forming new interests in the cadastre, generally new parcels or properties (subdivision and consolidation), and (e) determining boundaries. These processes ensure security of land tenure. Consequently, land rights can be used as a commodity in the land market. They can also be sold, transferred and used as collateral to obtain a loan from the bank. These processes generate money for the government in terms of land tax and stamp duties as well. They also provide a basis for conducting economic activities.

The process of land administration begins with the adjudication of land rights. After adjudication, land comes under the scope of the land administration system. Many countries have established land administration systems and have started the process of property registration but there are still some parts of the world where land administration institutions are not fully operational. De Soto (2001:33) projects that around 85 per cent of urban parcels and 40 to 55 per cent of rural parcels in the Third World and in former communist countries are held in such a way that they cannot be used to create capital. He also estimates that out of 387 million urban dwellings, 329 million (85 per cent) are informal. Also, out of 3,926,044 hectares of land in rural areas, 1,840,049 hectares (47 per cent) is informal. This means that a formal process of land administration has not yet begun in large parts of the developing world.

To summarise, the processes of land administration connect the assets of real property to the rest of the economy. Formalisation of property rights is the initial step in these processes. It means that real property would not be connected with the economy unless it has been formally registered. Most developed countries have formalised their property rights and brought them into the mainstream of their economy. However, many parts of developing countries lack such opportunities.

1.3 Research Problem, Research Aim and Rationale of Study

1.3.1 Research Problem

The discussion in the Section 1.2 makes it clear that the process of land administration links real property to the rest of the economy and that property which is not formalised is not included in this process.

The early economic and development theories recognises land as a major factor of production and an ingredient for development. It produces goods, provides a foundation for economic activities and generates capital for investment. The role of property rights and institutions on economic performance has been realised by the economists mainly after 1960s. Some development theorists (for instance, Todaro and Smith, 2006; Thirlwal, 2011) have given emphasis on the rules of the land and the security of property rights in the development process and considered them as non-economic institutional factors of economic development.

The role of land tenure security and management of land in the development process has also been emphasised in the recent decades, especially after 1990s. Writings of some authors, for instance, Feder et al. (1988) and Platteau (1996) recognises land tenure security as a supporting factor for the economic performance. According to the land tenure theory, the process of land titling promotes economic outcomes by increasing ability and willingness to invest and hence higher land related investment, more efficient land use, increase in production, income and land value, reduction on transaction costs and increase in government revenue (for instance, Platteau, 1996; Feder et al., 1988).

The Agenda 21 published by the United Nations Conference on Environment and Development (UNCED, 1992) emphasises on the importance of land management for

agricultural and rural development. Likewise, the publication of de Soto's Mystery of Capital (2000) emphasises in the formalisation of informal areas and establishment of the land administration system in order to get benefit from land and described it as a hidden capital. Also, van der Molen (2003) tries to link the quality of land administration services with economic growth. Likewise, Enemark et al. (2005) develop a concept of land management paradigm that relates the land administration functions to the sustainable development which has been proposed as the land administration theory by Williamson et al. (2010). The theory states that land administration functions support sustainable development, which includes economic, social and environmental development.

Some writers argue that a good land administration is essential to obtain benefit from land. For instance, Dale and McLaughlin (1999:5) discuss how good land administration contributes to economic development. In their words, "[a good land administration] provides security to investors and permits real estate to be traded in the market place. It also allows government to raise taxes on the basis of the value of land and property". Similarly, de Soto (2001) advocates that secure private property rights and a good land administration system can mobilise the hidden capital from land. Likewise, Zakout et al. (2006) opine that good land administration, coupled with secure land tenure, supports economic growth. They consider land tenure security to be a means of linking land administration with economic development and argue that merely secure tenure and access to land is not enough to attain the objectives of economic growth. Rather, a good land administration system is required to secure land tenure and hence to achieve these goals.

The theories and arguments discussed above link land tenure security to economic development. However, findings of the empirical studies from different parts of the world are not the same. Some studies (for example, Feder et al., 1988; Salas et al., 1970; Deininger and Jin, 2006) observed a positive correlation between tenure security and production while other studies (for example, Bugri, 2008; Braselle et al., 2002; Jacoby and Minten, 2007) found its impact to be negligible. No differences on land productivity as a function of land rights were also observed (Ouedraogo et al., 1996). Also, a weak effect of property rights on access to credit is observed by Markussen (2008). Some studies also concluded that tenure security is a necessary but not sufficient condition for

improvement in agricultural production and environmental management (Bugri, 2008). It is also identified (for instance, Galiani and Schargrodsky, 2010) that land titling supports poverty reduction by means of increased physical and human capital investment but not through access to credit. There are few studies to date that investigate the economic impact of land tenure security in Asia, especially in the South Asia.

Also, the theory of land administration has not been tested widely. A study by van der Molen (2003) analyses the macroeconomic effect of land administration in the Netherlands. He calculates the added value in the field of land-based taxation, the land market, secure tenure and land use planning resulting from secured rights through registration and cadastre at the national level. He concludes that the presence of good land administration is responsible for growth of 5.9 per cent of the GDP in the Netherlands. However, he did not assess the quality of land administration and has not fully explained the changes in economic activities and production induced by good land administration at the local level.

Thus, there is a lack of empirical research that studies the relationship between land administration and economic development. Theories that postulate a good land administration, coupled with secured tenure, increases economic growth are not widely tested. Although some studies have examined the role of tenure security on the economy, findings from different studies are not convergent. This study aims to fill this gap in knowledge and to investigate the role of land administration in economic development.

1.3.2 Research Aims, Objectives and Research Questions

The overall aim of this study is to investigate the role of land administration in economic development. It focuses on two aspects in particular. First, it aims to investigate the role of land tenure security in productivity and, second, it aims to assess the role of land administration services in revenue generation.

This research mainly seeks to answer how the land administration supports economic development. The following research questions are raised in order to examine whether or

not the above aims and objectives are achieved and the main research question is answered.

1. How does land administration ensure land tenure security?
2. Does land administration promotes efficient land use and land-related economic activities?
3. Is there any relationship of land tenure security with land value, access to credit, investment and income?
4. What is the status of service delivery in land administration organisations?
5. How does the efficiency of land administration services affect revenue generation?

1.3.3 Rationale and Significance of the Research

The importance of land administration in society is growing because of its role in the management of one of the world's essential resources. Access to land and land-related benefit is still connected with the livelihood of most of the people in the world. It is one of the major concerns of most governments, especially in the developing world.

Formalisation of informal settlement, providing shelter for people, poverty reduction, sustainable and productive land use and revenue generation are some of the challenges related to land management faced by many governments. International development organisations, academic and research institutions and researchers have undertaken wide-ranging investigations of these issues. International organizations like the World Bank, the Food and Agriculture Organization (FAO), the United Nations Centre for Human Settlement (UN-HABITAT) and the Asian Development Bank have carried out research and organised conferences and workshops to address land related problems. They have also provided technical and financial support to many countries. Likewise, numerous organisations are involved in the advocacy for land rights for landless people, informal settlers and indigenous people. This highlights the importance of research related to land.

Thus, the discipline of land administration and property has attracted many scholars and international organizations in recent decades in spite of the lack of research that directly investigates the joint contribution of a good land administration and secure land tenure on economic development. It is anticipated that due to the significance of land to society, and also the increasing number of land disputes and problems associated with access to land, this research will be of interest to scholars, land-related government organizations and non-government organizations, land professionals and land rights activists. It is believed that this research may contribute to a revision of the land policy of governments, especially of countries facing the challenges of property formalization and land governance. The findings of this research could be critical for those countries which still have to establish a land administration system or improve their existing system while deciding on investment in land administration systems and the formalisation of property rights.

The discipline of land administration gained popularity after the publication of Land Administration Guidelines by the United Nations in 1996 although its intellectual roots are much older (Williamson et al., 2010). Writings of various scholars and researchers (for example, Dowson and Sheppard, 1952; Simpson, 1976; Dale and McLaughlin, 1988 and 1999; Deininger, 2003 and Williamson et al., 2010) contributed to conceptualizing the theory of land administration. Publications of the FAO, International Federation of Surveyors (FIG), UN-HABITAT, and efforts by academic institutions like the Land Tenure Centre of the University of Wisconsin-Madison, Department of Land Economy of the University of Cambridge, International Centre for Land Policy and Training (Taiwan) and the Faculty of Geo-Information Science and Earth Observation (The Netherlands) also contributed to shape this discipline.

This research has selected the cases of land administration in Nepal, Bangladesh and Thailand. It provides a comparative study of the land administration and land tenure systems of the selected countries, which would be useful for the researchers and land professionals of those countries. It is also expected that this research will be a good source for scholars who do not know the local languages but are interested to learn about the land administration systems of those countries. This research also documents the problem of property formalization in the selected case study areas of Nepal and

Bangladesh, and the changes caused by formalization, and it is hoped that lessons learnt from this study will be useful in similar case studies in other parts of the world.

1.4 Conceptual Framework

Land administration is the process of determining, recording and disseminating information about the ownership, value and use of land (UNECE, 1996). It can be considered to refer to those public sector activities required to support the alienation, development, use, valuation, and transfer of land (Dale and McLaughlin, 1999:1).

The relationship between human beings and land is established through property rights. As argued by Dale and McLaughlin (1999:1), this relationship evolved from full state control, through communal forms of tenure, to individual property rights. Occupation and accession were the original methods of acquiring land in a primitive society. These properties were used commonly in the beginning. Private property rights emerged as land became scarce and valuable.

Individualisation, titling and registration are considered as prerequisites to land development and improvement as well as to the management of land-related conflicts (for example, Demstez, 1967; Johnson, 1972; Alchian and Demstez, 1973; Ault and Rutman, 1979). Platteau (1996) discusses two effects of land titling: firstly, the static effect resulting from the chances of land consolidation and more efficient cropping choices; and secondly, the dynamic effect resulting from increased willingness and ability to invest. Likewise, Feder et al. (1988) highlight two sources of linkage between titles and economic performance measured in terms of increase in income and land value, namely the effect of titles in enhancing tenure security, and the role of titles in collateral arrangements and facilitating access to institutional credit. They identify that security of landownership has a substantial effect on the agricultural production in Thailand resulted mainly from better access to long-term institutional credit and increased agricultural productivity. Similarly, Deininger (2003:42-43) presents three main elements of tenure security that can affect household behaviour as greater security against eviction, greater ability to transfer land and greater access to credit. He explains:

> *"First, greater security against eviction, [...] will reduce the need to spend resources on defending resource rights and the probability of getting caught up in land conflicts. This is*

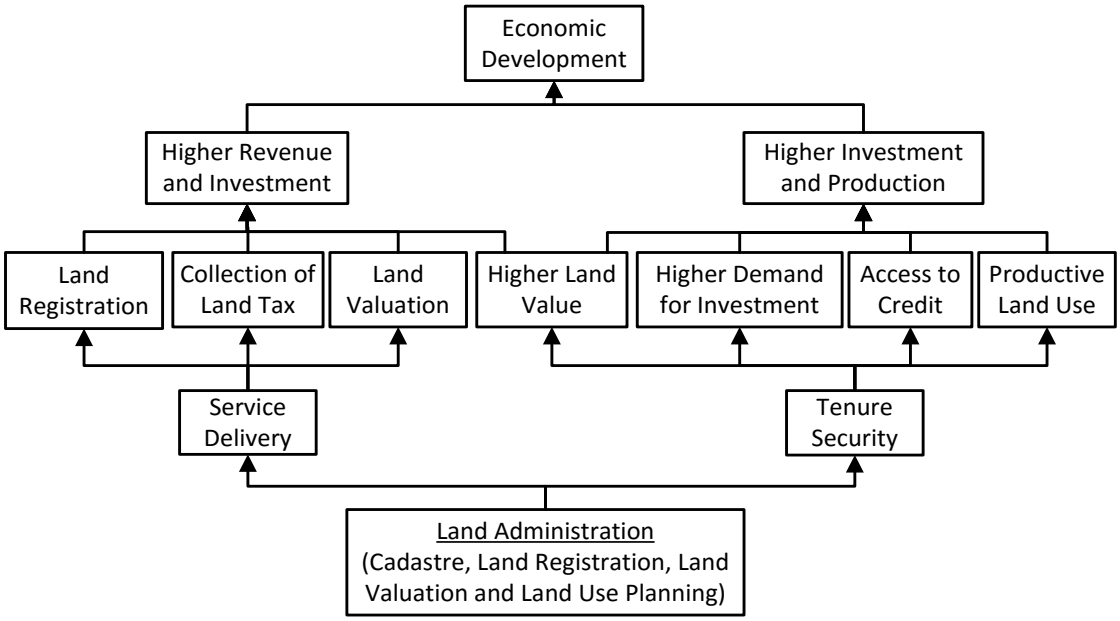
> *likely to increase the demand for land-related investment. Second, greater ability to transfer land, [...] will increase the payoff from investments linked to the land because it will allow the person who made the investment to benefit from it even if, for some unforeseen reason, he or she will not be able to personally use the land. Third, greater tenure security can enhance access to credit, thereby increasing the value of investment undertaken in situations in which limited credit supply constrains investment."*

Thus, tenure security can increase demand for land-related investment and its pay-offs. Better credit supply also increases the agricultural performance of farmers.

There is another view that good land administration contributes to economic development in a number of ways. For instance, Dale and McLaughlin (1999) argues that it provides security to investors and permits real estate to be traded in the market place, and allows government to raise taxes on the basis of the value of land and property. Similarly, de Soto (2001) argues that secure private property rights and a good land administration system can mobilise the hidden capital in land. Likewise, Wyatt (2011:506) argues, "Within a framework of national land policies, good land administration will facilitate and stimulate the private sector real estate market". Williamson et al. (2010) also state that land administration functions support sustainable development, which includes economic, social and environmental development.

A conceptual framework is developed in Figure 1-2 based on the analysis of the theories discussed above which visualises the relationship between land administration and economic development. Cadastre, land registration, land use planning and land valuation are the functional components of land administration. For the purpose of this study, functions of these components are grouped in two categories; firstly, they ensure security of land tenure by means of land titling. Land value, credit opportunity, investment demand and productive land use promotes as land tenure becomes secure. Consequently, investment and production will be increased. Secondly, land administration provides land registration services, collects land tax and determines land value, which generates revenue to the government. As a result, the government will have more funds, which may be invested in development programme.

Figure 1-2: Conceptual framework



Thus, land administration supports the economic development through two channels of tenure security and service delivery. This conceptual framework is used as a guideline for this research.

1.5 Research Methodology

Qualitative and quantitative methods are generally applied in social science research. The quantitative approach assumes that knowledge can be objectively measured. It focuses on objective realities that can be measured or counted in numbers (Silverman, 2000). It uses statistical processes and produces quantifiable, strength, objective and reliable results that can be generalized from the sample to the larger population (Cagdas and Stubjkaer, 2009). It involves the testing of known theories against hard empirical evidence with the help of statistical procedures (Bryman, 2008; Creswell, 2009). On the other hand, qualitative research can focus on subjectivism where realities are interpreted by the people involved (Creswell, 2003). It is a highly self-aware acknowledgement of social-self or a researcher's position in the society (Neuman, 2006).

Both quantitative and qualitative methods are used in the field of land administration. As observed by Cagdas and Stubjkaer (2009), quantitative approach is usually appropriate for research in the field of cadastral development which aims to inquiry correlations

between variables or studied phenomenon and qualitative research is more appropriate for research which aims to explore and understand nature of a being studied phenomena.

This research aims to establish a correlation between studied phenomena and to study their nature. It consists of the study of land administration and tenure security, which cover a wide range of issues related to economics, politics, law and public administration. A single methodological perspective may not be sufficient to study these multi-disciplinary issues. Quantitative data are required to examine the relationship of land tenure security with land value, investment and income as mentioned in the third research question. Other research questions are answered using qualitative data. Also, each method may have weaknesses if used separately. A mixed method approach overcomes the limitations of a single method approach and provides more comprehensive and stronger results (Cagdas and Stubjkaer, 2009). Therefore, a mixed method approach is applied in this research.

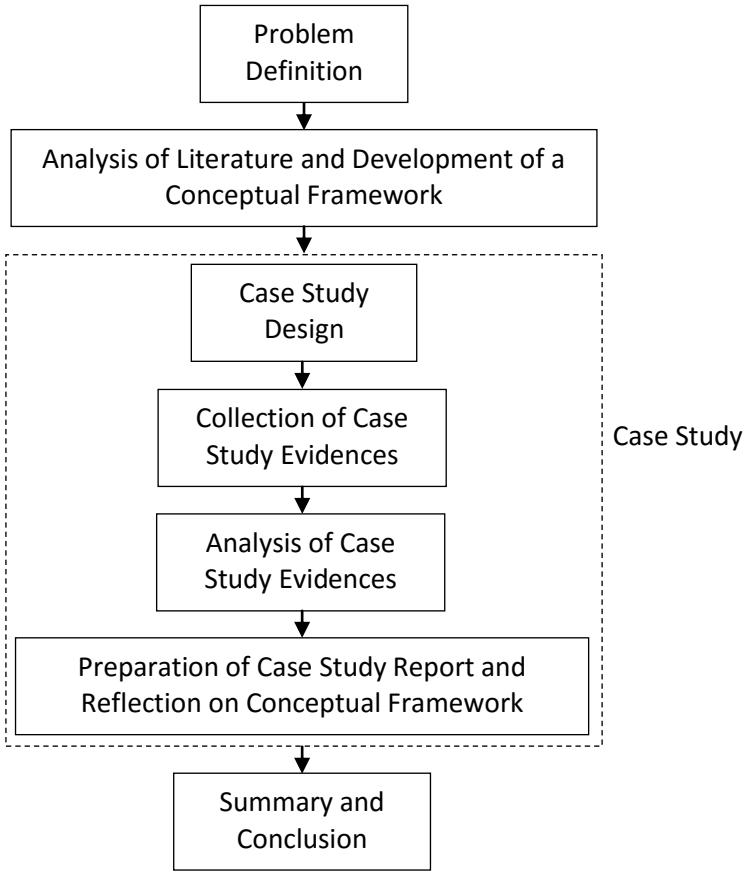
Various methods are applied to collect data in social science research. Brewer and Hunter (1989) consider fieldwork, survey research, experimentation, and non-reactive research as the principal methods employed by the social researcher. Case study is a method that is widely used in the field of land administration research (for example, Zevenbergen, 2002; Nkwae, 2006; Rakai, 2005; Silva, 2005). It involves an empirical investigation of a particular contemporary phenomenon within its real life context using multiple sources of evidence (Yin, 1994). A combination of case studies and survey methods is applied in this research to collect both qualitative and quantitative data.

The techniques of data collection also vary according to the type of research. Blaikie (2000) listed structured observation, questionnaires, structured interviews, and content analysis as quantitative techniques, and semi-structured and unstructured observation, participant observation, interviews (focused, in-depth, group, oral-life histories) and content analysis as the qualitative techniques of data collection. Similarly, Yin (2003) observes documentation, archival records, interviews, direct observation, participant observation and physical artefacts as data collection techniques often used in case study research. In this research, multiple techniques of data collection are applied in order to triangulate evidence from different sources. They are survey, interview, observation, field

note and documentation. The data collected from the case studies are analysed using computer software Microsoft Office, Statistical Package for the Social Sciences (SPSS) and NVivo[1].

The research framework applied in this study is presented in Figure 1-3. The research problem, aim and objectives of the research are defined, and the research questions are formulated. The rationale of this study is also discussed. Proceeding that, literature concerned with the economic aspects of land administration is analysed and a theoretical framework is developed. This is followed by the case study design, collection of case study evidence and its analysis. A case study report is then prepared and reflections on the conceptual framework are discussed. Finally, a summary and conclusions are drawn from the whole study.

Figure 1-3: Research framework



[1]A qualitative data analysis computer software package

To sum up, a mixed method approach is applied in this research and a survey within a case study environment is selected as a strategy of inquiry. Multiple methods of data collection including documentation, questionnaires, interviews and observations are employed in order to triangulate data from various sources. The data collected from case studies are analysed using qualitative and quantitative data analysis software.

1.6 Structure of the Thesis

This thesis is structured into seven chapters. Chapter One introduces the research project. It presents the context of the research, the research problem, aim and objectives, the rationale and significance of the research, and the conceptual framework of this research. The methodology applied in this research is discussed in brief after that.

Chapter Two reviews the literature concerned with land administration and its interaction. The concept of land, property rights and their administration is presented first. It then discusses the functions and practices of land administration. After that, theories related to land-based economic development and some empirical studies from different parts of the world are presented and the implications of theoretical and empirical studies are outlined. It then highlights the issues under investigation in this research.

Chapter Three describes the case study design and methodology applied in this research in detail. Research approaches and the strategies of inquiry are discussed first. Then a brief description about the case study areas of Nepal and Bangladesh is presented. This chapter also describes the procedure of the field study, which includes logistical arrangements, and initial meetings and preparation. It also involves collection, recording and management, presentation, analysis and interpretation of data, and units of analysis measurement of variables. Then it discusses some issues concerned with research quality, ethics, reflections on the field study and the limitations of the case study.

Chapter Four outlines the existing practices of land administration in the selected countries. It presents some general background of Nepal, Bangladesh and Thailand first. It then outlines the system of land tenure and the status of access to land in these countries. After that it discusses the systems of land administration, which include the

organisational structures, registration processes, cadastral surveying and property valuation.

Chapter Five discusses the status of land tenure security and analyses its economic outcomes based on the data collected mainly from Nepal and Bangladesh. First it discusses the role of land registration on tenure security. Then it examines its economic outcomes specifically, its role on land use and economic activities, land value, access to credit and investment, and income.

Chapter Six assesses the status of land administration services in Nepal and Bangladesh and examines their role on revenue generation. Firstly, the effectiveness of land administration services, especially the process of land registration, record management and information dissemination, land valuation and revenue collection is discussed. Then the justification for the establishment of land administration is outlined.

Chapter Seven concludes the research. A summary of findings is presented first based on the research questions outlined in Section 1.3.2 above. It also examines the reflection of research findings on the conceptual framework developed above. After that, the contribution of the research to knowledge and its implications for policy and practices are discussed. It also outlines the limitations of the research and areas for further research.

Chapter 2: Land Administration and Its Interaction

2.1 Introduction

The importance of land as a factor of production and an ingredient for development highlights the role of land administration in the economic development of a country. This chapter aims to review and analyse the literature related to land administration and its role in economic development. A brief description of land, property rights and their administration is presented first followed by a discussion of functional components and practices of land administration. Then a theoretical underpinning of land-based economic development is presented. It reviews and analyses theories related to economic development, land administration and land tenure security. Existing studies related to the economic aspects of land tenure security from different parts of the world are also reviewed. Then the implications of theoretical and empirical studies are discussed followed by the explanation on the measurement of variables.

2.2 Land, Property Rights and Their Administration

2.2.1 Land and Property

In a narrow sense, land can be considered as the surface of the earth but, in a broader sense, it not only covers the surface of the earth, but also anything underneath and above the surface, buildings and plants attached or fixed on the surface and the area covered by the sea. Henssen (1989:2), following the United Nations Ad Hoc group of Experts on Cadastral Surveying and Land Information (1985), defines land in the following way:

> *"Land is defined as an area of the surface of the earth together with the water, soil, rocks, minerals and hydrocarbons beneath or upon it and the air above it. It embraces all things which are related to a fixed area or point of the surface of the earth, including the areas covered by water, so including the sea."*

Similarly, the Law of Property Act, 1925 of the United Kingdom includes tangible physical property as well as intangible rights in land within the definition of land. Accordingly, land includes land of any tenure, mines and minerals, buildings or its parts, a manor, a rent, and an easement, right, privilege, or benefit in, over, or derived from land. Thus, land

includes tangible physical property on the surface of the earth or underneath and above it as well as associated intangibles rights. It is important not only for human beings but also for all living species. It provides the foundation for life and fundamental resources for their livelihood.

Property is generally known as the term denoting tangible things, relationships, or rights to the use and ownership of those things (Obeng-Odoom, 2012). It can be classified as personal and real property. Personal property refers to movable properties, for instance a pen, laptop or a sofa. Real property refers to land and the associated rights. Land has unique characteristics that make it a fundamental object of property in every society (Nichols, 1993). It is immovable, theoretically indestructible and easily recoverable. Common law classifies land as real property to reflect this real action of recovery (Walker, 1980). This study deals with land and land-related property or real property.

Property is a social relation that defines the relationship of property holders with other individuals regarding a piece of land. In the words of Bromley (1991:2),"Property is not an object but rather a social relation that defines the property holders with respect to something of value (benefit steam) against all others". It involves certain kinds of rights, duties, powers, privileges and forbearance (Halowell, 1943 in Feder and Feeney, 1991) that determine the relation of the property holder or owner to the rest of the society.

Different types of property regimes exist throughout the world, reflecting different kinds of social relations regarding the real property. Macpherson (1978:4-5) classifies property into three categories; common, individual and state. Feder and Feeny (1991) classify property rights to land into four categories; none (or open access), communal or common property, private and state (or crown) property. Bromley (1989) also classify property regimes as state, private, common and none property (open access).

The classification of property can be better understood in terms of the holding of ownership and rights. Property rights are rights of individuals created by the state. As argued by Macpherson (1978:5), each individual has a right of non-exclusion from the use or benefit of a property in the case of common property whereas in private property an individual has the right to exclude others from using or obtaining benefit from it. The

ownership of a common or communal property is vested in the community and that of private property is vested in an individual. If both rights and ownership of a property are vested in the hands of the state, it is called state property. Individuals can use such property but only in the forbearance of the state (Bromley, 1991:23). If use rights are available to the public but its title is vested with the government or a public agency, it is called a public property.

Public, common or communal property and open access property are sometimes referred to as if they were the same since they prevent the existence of private property; however, there are some significant distinctions between them. The use rights of community or common property seem similar to that of public property but such rights belong to a specific group of people or community, not to the general public. The title of such property may or may not be vested in that community. The title of public property, on the other hand, may be vested in the state or a public agency but use rights are available to everyone. There are no exclusive and transferrable rights in an open access property (Bromley, 1991).

There is a great debate among social scientists and philosophers about private and common property. The debate primarily concerns whether property rights should be provided to individuals or kept in common. Philosophers like Aristotle, Jean Bodin, Thomas Hobbes and Jean Jacques Rousseau were in favour of private property. The French Revolution also defended private property. Article 2 of The Declaration of the Rights of Man and of the Citizen made on 26thAugust, 1789 (in Schlatter, 1951:205) states, 'The aim of every political association is the preservation of the natural and imprescriptible rights of man. These rights are liberty, property, security, and resistance to oppression'. Similarly, the wise-use or property rights movement of America defended the absolute ownership system and put forward the slogan, 'it is my land, I can do what I want with it' and demanded that every public action that impacts on private property rights should be compensated (Jacobs, 1998).

In the nineteenth century, David Hume and Jeremy Bentham popularised the principle of utility. As noted by Schlatter (1951:239), Hume argued that 'private ownership and its laws had no other origin or justification than utility'. On the other hand, social scientists

like Plato, Herbert Spencer, Henry George, Karl Marx, Frederic Engels and Sir Henry Maine criticised the system of private property and advocated the common property system on various grounds. The common property system was advocated as an ideal, attributed to the primitive condition of mankind, held to be suitable only to man before the Fall, and recognised as existing alongside private property in such forms as public parks, temples, markets, streets, and common lands (Macpherson, 1978:10). As observed by Schlatter (1951), Plato considered communism as the best scheme for managing property; Hume considered an absolutely equal division of property as a means of the greatest happiness; and Henry George regarded private property in land as robbery. Similarly, Marx and Engels considered that the primitive form of common ownership was negated into private property and argued that the inevitable 'negation of the negation' would be common ownership, or socialism (Engels, 1878 cited by Schlatter, 1951). Thus, private property is advocated on the grounds of natural law, liberty and utility, and common property from its historic origin and management scheme.

Social scientists have also presented diverse opinion regarding the origin of property. Occupation and accession are considered as original methods of acquiring property in primitive society. Smith (1978 in Reeve, 1986) presents three stages of property development: first, possessions were treated as property, then animals became objects of property, and later land itself. He considers the move from a hunting society to a shepherd and pastoral society as the first extension of property and the introduction of agriculture as another major extension. He also raises the possibility of its extension with the introduction of the commercial age. Marx and Engels followed with a similar historical account of the development of property. As quoted by Reeve (1986:67-68), they discussed the tribal (hunting and fishing), shepherd and agricultural arrangements in The German Ideology. They characterised the ancient, feudal and capitalist modes of production as private ownership whereas there is no private ownership in the future society. According to them, the general movement is from common property through private property and back to common property, known as 'the law of the negation of the negation'.

Like the diverse views presented by the social scientists, different countries have adopted different type of property regimes. Property (real) can be privately owned in most of the

Western democratic countries. However, a common or state property system is in practice in some countries influenced from socialist ideology like China, Vietnam and North Korea. This type of system was also in practice in the former Soviet Union, however a private property system was introduced after its dissolution in 1990s. All or some of these categories of property regimes may exist in every country. State and publicly owned properties are commonly found in all countries. The customary tenure system adopted by most of the African and some Asian countries is a communal type of property.

As mentioned earlier, the choice of the property regime is made by the state. However, selection of a particular system may affect the rights of the individual. The property owner under a private property system can enjoy more rights than the owner of common or customary property, which may influence the behaviour of the owner regarding his property.

To sum up, land and land-related property are called real property. A property is a social relation that defines the relationship of a property holder with other individuals regarding that property. Social scientists and philosophers have diverse views on whether property rights should be provided to individuals or kept in common. Private property is mainly advocated on the grounds of natural law, liberty and utility, and common property is considered as the original form of ownership and as the best scheme for managing property in which the rights of everyone are ensured. The choice of property regime may influence the behaviour of the property holder regarding his or her property.

2.2.2 Property Rights

A property right is the right to use a particular item of property in a particular way (Needham, 2001:12205). In this research property rights has been regarded as the property rights to land which define the way land is used.

A property can be used in more than one way. It indicates that more than one right can be attached to a single property. In civil law, property is considered as having a bundle of rights in which each stick of the bundle represents a separate kind of right. The ancient Roman law describes ownership as consisting of *usus* (right to use), *fructus* (right to the fruits) and *abusus* (right to dispose). Property having such rights is considered as absolute

ownership. UNECE (1996) provides a list of elements that can be involved in property rights including occupy, enjoy and use; cultivate and use productively; restrict or exclude others; transfer, sell, purchase, grant or loan; inherit and bequeath; develop or improve; rent and sublet; and benefit from increased property values or rental income. The rights can also be classified as use rights (rights to use the land for grazing, growing subsistence crops and gathering minor forestry products), control rights (rights to make decisions how the land should be used including deciding what crops should be planted and to benefit financially from the sale of crop), and transfer rights (right to sell or mortgage the land, to convey the land to others through intra-community reallocations, to transmit the land to heirs through inheritance, and to reallocate use and control rights) (FAO, 2002).

A property right is a claim to a property that the state will agree to protect through the assignment of duty to others who may covet or interfere with it. This implies that a property right has no meaning without correlated duties (Bromley, 1991:2). Thus, certain institutions are required in order to enforce those duties and allow a property owner to exercise his or her rights. There was no need of such institutions when the population was very low and land was abundant. However, as argued by some property right theorists, increase in value, population pressure, market integration and technical advances contributed to the evolution of property rights. For instance, Krier (2009) considers the primitive society as hunter-gatherer, which changed to an agricultural society; then, with the emergence of agriculture, the population increased enormously, leading to the development of small, organised groups followed by the development of large, organised nation states. He opines that property rights emerged from the combination of two approaches as intentional design and unintentional consequences.

Similarly, Demstez (1967) argues that property rights develop to internalise externalities when the gains of internalisation become larger than the cost. He further states that the emergence of new private or state-owned property rights will be in response to changes in technology and relative prices. Deininger (2003) also identifies response towards increased payoffs from investment as a reason for the evolution of property rights. According to him, one reason property rights evolved was to respond 'to increased pay-offs from investment in more intensive use of land resulting from population growth or opportunities arising from greater market integration and technical advances'.

The Evolutionary Theory of Land Rights proposed by Platteau (1996) states that demand for private property rights emerges from the combined impact of population growth and integration of the market, which has to be addressed by the state. In his words:

> *"A central tenet of this theory [Evolutionary Theory of Land Rights] is that under the joint impact of increasing population pressure and market integration, land rights spontaneously evolve towards rising individualisation and that this evolution eventually leads rights holders to press for the creation of duly formalised private property rights- a demand to which the state will have an incentive to respond" (p.29).*

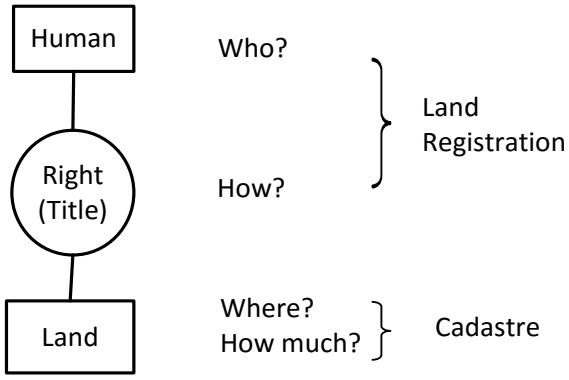
Thus, property rights emerged as the benefits of internalisation outweighed the costs due to the change in economic values and technology. Increased pay-offs from investment due to population growth or greater market integration and technical advances and the imposition of property rights in developing countries from outside world are also considered as reasons behind the emergence of property rights.

2.2.3 Administration of Property Rights

Many societies introduce individual control over land, trees, plants, and buildings when they have or when they develop a market economy (Zevenbergen, 2002:32). However, control of these real properties is not as easy as controlling personal or movable property like a pen or a computer. Possession is usually enough to prove the ownership of movable goods but land cannot be possessed in a similar manner. It is property rights that establish a relationship between humankind and land.

The rights may not be realised unless there is some evidence to prove it. Documents evidencing property rights should include the location and area of the land, the name of the owner and the way he acquired such land. Land registry and cadastre document such evidence and establish a link between humankind and land. As shown in Figure 2-1, the land registry gives an answer to 'who' and 'how' and the cadastre gives an answer to 'where' and 'how much' (Henssen, 1989; Henssen and Williamson, 1990). Thus, the cadastre provides information about the spatial attributes including location and area of land, and the land registry provides information about legal attributes about the owner, associated rights (and duties) and the means he or she acquired such rights.

Figure 2-1: Humankind-land relationship



Source: Adapted from Henssen and Williamson (1990)

Land administration involves both land registration and cadastre. It comprises textual records that define rights and/or information, and spatial records that define the extent over which these rights and/or information apply (Burns et al., 2006:8). UNECE (1996) defines land administration as 'the process of determining, recording and disseminating information about the ownership, value and use of land, when implementing land management policies'. It further states that the processes of land administration include the determination or adjudication of rights and other attributes of the land, the survey, and description of these, their detailed documentation and the provision of relevant information in support of land markets. Similarly, in ISO 19152 (Geographic Information-Land Administration Domain Model), land administration has been defined as the 'process of determining, recording and disseminating information about the relationship between people and land' (ISO, 2011). Thus, land administration is a process that deals with information about the relationship between human beings and land, as observed by Tjia and Coetzee (2012).

Land administration as a discipline has evolved out of the cadastre and land registration areas with their specific focus on security of land rights (Enemark et al., 2010:3). The cadastre was developed in different European countries at different times. For instance, a land survey in England was completed in 1086, the records of which are called the Domesday Book. Similarly, the initial tasks of the Swedish Land Survey, established in the early seventeenth century, was to make maps for taxation purposes and to record

acreages and land productivity (Larsson, 1991). In the Austro-Hungarian Empire, the Theresian Cadastre was established in 1748 as the basis for unique valid guidelines for land taxation (Mayrhofer, 1992 cited by Steudler, 2004) which was later developed as the *Grundbuch* [land register) system. Whenever and wherever they developed, their main purpose was to assist the collection of land tax.

Establishment of the French Cadastre by Napoleon I in 1807 is a major breakthrough in cadastral development. The arguments behind the development of the cadastre were very much focused on land as an asset capable of producing an income over time and therefore being the basis of all wealth (Steudler, 2004). The revenue necessary for administering the state should be derived from a land tax. Partly due to the dominating position of France during that time, the French Cadastre became the model for similar efforts in other European countries. The purpose of this cadastre according to the directives given by Napoleon I was:

> *"To survey [...] more than 100 million parcels, to classify these parcels by the fertility of the soil, and to evaluate the production capacity of each one; to bring together under the name of each owner a list of the separate parcels which he owns; to determine on the basis of their total productive capacity, their total revenue and to make of this assessment a record which should thereafter serve as the basis of future assessment [...]" (Dreux, 1933 In Larsson, 1991:24).*

Most of the countries in continental Europe established systematic cadastral systems during the nineteenth century, although of widely varying quality and content. However, the Anglo-Saxon world did not develop the French cadastre model and the word itself was hardly known there (Larsson, 1991).

The system of land registration evolved with the development of society. Larsson (1991:17) presents four types of transaction; oral agreement, private conveyancing, deeds registration and title registration, which can be considered as the order of the development of the registration system. As argued by Zevenbergen (2002), the transactions would be based on oral agreements in a paperless and close-knit society and societies started to use paper to 'witness' the transfer when writing became normal. He further mentions that these documents witnessing a transfer are often called deeds and traditionally used to be left in the hands of the new owner that used to be handed over to the next new owner over and over again during transactions. He further describes the

system of private conveyancing developed in order to check all of those documents; however, there were risks of losing and/or falsification of deeds while leaving them in the hands of owners. The system of deed registration developed in order to minimise those risks although this system does not guarantee the title. The title registration system developed to minimise the risks of the deed registration system. It provides a guarantee of registered transactions.

Thus, land administration involves cadastre and land registry, which establish a link between people and land by means of rights. The main purposes of the development of the land registration and cadastre were to collect taxes from land and to provide security to land owners.

2.3 Functions and Practices of Land Administration

2.3.1 Functional Components

Land administration is concerned with three interdependent components; ownership, value and use of land. Ownership refers to the possession of rights in land but does not necessarily imply physical occupation since a leaseholder may be the actual occupant in the case of leased property (UNECE, 2005). It should be understood as a relationship between people concerning land (van der Molen, 2006). Value refers to the actual or assessed capital or rental value at which the land may be sold or leased. Alternatively value may be equated with construction costs so that the value of a building for insurance purposes may be the cost of rebuilding if it were destroyed by fire (UNECE, 1996). Land use may refer to the use to which the land can be put or a description of land cover (van der Molen, 2006). It relates to the rights to use the land and the manner in which it is used to generate income or meet social needs UNECE (2005).

Land administration serves various functions in society. Dale and McLaughlin (1988:6) identify three main functions of land administration as regulating the development and use of the land, gathering revenue from the land and resolving conflicts concerning the ownership and use of the land. They classify those functions into four components; juridical, regulatory, fiscal and information management. The juridical component includes processes concerned with the original determination or adjudication of existing

land rights, the allocation of land, delimitation of parcels, demarcating boundaries on the ground and describing them graphically, numerically or in writing. The regulatory component includes land development and use restrictions; the fiscal component includes revenue collection and production, and the information management component integrates land related information collected and managed by different agencies. Similarly, Wyatt (2011), following Burns (2007) and Enemark et al. (2005), classifies typical land administration functions into four categories; ownership registration and transfer, land use planning, taxation and market support. Likewise, Burns et al. (2006) consider land administration as a system implemented by the state to record and manage rights in land and argue that it may include the aspects of management of public land, recording and registration of private rights in land, recording, registration and publicising of the grants or transfers of those rights in land, management of the fiscal aspects related to rights in land, and control of the use of land.

Thus, various authors present the functions and components of land administration in different ways. However, the widely accepted definition of land administration given by UNECE (1996) includes three basic elements of land administration as ownership, value and use of land, which signifies that land registration, land valuation and land use planning are the three components that summarise its objectives. Steudler (2004) adds cadastral surveying and mapping as another component that provides a link to land information, an addition that is also supported by van der Molen et al. (2008). A brief description of these components is presented below.

Cadastral Surveying

Cadastre is an inventory of land and property information based on a survey of land parcel boundaries (Wyatt and Ralphs, 2003). Cadastral surveying has been defined as the definition, identification, demarcation, measuring and mapping of new or changed legal parcel boundaries (FIG, 1995). It provides information about the location, area and boundary of a land parcel usually in the map form.

Cadastral surveying is the initial process of land administration. Adjudication and definition of property boundaries and their legal delineation and monumentation, surveying relevant data and preparing descriptions of the properties are the basic

processes of initial property formalization and the subsequent use and transfer of formal property (Dale and McLaughlin, 1999). These processes provide information required in initial registration of title and delimitation and registration of boundaries. The information thus provided can also be used in land market activities, land valuation, taxation, planning and policy-making, and dispute resolution.

Land Registration

Land registration is one of the main functional components of land administration. It is the process of recording legally recognised interests in land (FIG, 1995; Nichols, 1989). These interests include rights of ownership and/or use in land (Nichols, 1989) and are recorded in a land register (Larsson, 1991). The land registries also record charges and liens, and provide documentary evidence for resolving land disputes.

The system of land registration provides the means for recognising formalised property rights and regulating the character and transfer of these rights (Dale and McLaughlin, 1999). It can be classified as oral agreement, private conveyancing, registration of deeds, and registration of titles (Larsson, 1991). The oral agreement and private conveyancing system are less controlled by the government and less secure than the other two. In a deed registration system, the deed itself is registered which can be considered as evidence of a transaction but is not proof in itself. It does not provide proof of the legal rights of the parties to conduct that transaction. However, it provides a certain level of security to owners since a registered deed takes priority over an unregistered one. In a title registration system, the right is registered rather than the deed. In the words of Henssen and Williamson (1990:17), “A title registration system means that the deed is not registered but the consequence of that transaction, that is, the right itself (=title)".

Thus, each type of registration system provides different level of security. Oral agreement and private conveyancing are not recognised by the government and hence the government is not liable for the security of transactions held under these systems. The deed registration system provides a certain level of security as the registered deed takes priority over unregistered one. The title registration system has been considered as most secured form of land registration.

Land Valuation

Determination of land value is another function of the land administration organisations. The value of land is used for many purposes including taxation, land transaction, mortgage, investment, insurance and compensation.

Three approaches to valuation are normally applied in land valuation. They are a comparative sales approach, an income approach and a cost approach. Computer programmes have been developed to ease the process of valuation. Computerization can reduce the costs of valuation to a considerable degree and make the valuation process more transparent and less subject to undue influence from the taxpayers (Muller, 2002). Use of geographic information systems and statistical techniques such as regression and other automated valuation methods have lowered the cost and increased the speed of undertaking mass valuations of real property for taxation purposes. Nevertheless, whichever approach is applied, reliable information about land and land value factors is required to determine value.

Land Use Planning

Land use planning is the process of allocating resources, particularly the land itself, in order to achieve maximum efficiency while respecting the nature of the environment and the welfare of the community (UNECE, 1996). The objective of land use planning is to determine or to influence the use of land (Evans, 2004:75). It aims to select and put into practice those lands that will best meet the needs of the people while safeguarding resources for the future (FAO, 1993). It may affect society in many ways such as availability or access to land, intervention on private property rights and change in land value. It is strongly related to private property rights because imposing a certain land use on private owners interferes with their rights, which may be justified on the grounds of public interest.

Land use planning is an essential component of sustainable development. All landscapes change over time, whether through human interference or by natural processes (Dale and McLaughlin, 1999). These changes should be monitored and understood to ensure that the uses to which the land is put are sustainable and that development meets the needs

of the present without compromising the ability of future generations to meet their own needs (WCED, 1987).

To foster socially desirable and environmentally sustainable land use, a government has several policy instruments available including regulations for the land market, farm restructuring, land reform, land taxation, managing state land, land use regulation and zoning (Deininger, 2003). Land administration systems provide reliable information for every step of the land use planning process. They register implementation measures and chain conditions pursuant to private law, and provide information to citizens on the legal status of land including public orders, basic data for monitoring, control and enforcement procedures, and information on the process of the public acquisition of land, ultimately for expropriation purposes (van der Molen, 2008).

Thus, proper management of land is essential to ensure efficient and productive use of land resources, environmental protection and maximum social welfare and land use planning is one of the functional component of land administration which support to achieve these goals.

2.3.2 Land Administration Practices

The practices of land administration differ between countries although the purpose of their establishment is similar. Land administration organizations were traditionally developed in order to prepare land records that could be used to collect land tax. Modern land administration systems are not only concerned with the collection of land tax but also include issues of management and use of land for sustainable development. The main practices of land administration in different countries are briefly discussed below from the political, legal, organizational, financial and technological aspects as proposed by Bogaerts (1999).

The distribution of land and land-related benefits is determined by the land policy of a country. It may be influenced from the political ideology adopted by that country. For instance, Western democratic countries have provided private property rights whereas countries like China and North Korea still adopt a state ownership system. The private ownership of land was abolished and all private land was nationalised in the former

Soviet Union and Eastern European countries during the communist regimes. After the fall of the Soviet Union and the end of communism, all of these countries de-collectivised the land tenure pattern and restored private property rights. Colonialism also influenced the system of land administration. In countries with a colonial background there is often a dual land administration system; imported systems based on western models operate in urban areas and areas formerly occupied by colonial landholders, and customary systems operate elsewhere (Burns et al., 2006:13).

The system of land administration also depends on the nature of the legal regime adopted by a country. In some Western societies land is considered as having bundles of rights, each stick of which represents one form of right, such as the right to sell, build, sub-let, take minerals, draw water, cut down trees and keep animals (Dale and Mahoney et al., 2009). These rights can be used jointly or separately.

The type of rights offered to landowners depends mainly on the type of tenure system adopted by the country. Many countries like Albania, Armenia, Australia, Austria, Finland, Denmark, Germany, France, and the Netherlands have statutory land tenure systems where the system of land tenure is guided by written laws. Freehold is the highest level of ownership under this system. In some Canadian provinces like Alberta, British Columbia, and Ontario fee simple ownership exists although they have the statutory tenure system. Customary land tenure is in practice in many African countries like Surinam and Ghana and in some Asian countries as well. Under this system, land is held, occupied or used under customary laws and practices. Allodial right is the highest level of ownership under customary tenure in which the land is free from any superior landlord. Other forms of ownership can also be found in some other countries; for instance, communal land in Belize, family land in Grenada and Saint Lucia, and Crown land in Grenada and the Bahamas. Also, there is religious land in some countries like Pakistan. The rights are very limited on land under informal tenure systems where people possess land without having legal evidence of the right to do so.

A land registry registers the legal rights and rightful claimants to land but the consequences of registration and the level of security depends on the nature of registration. For instance, in some countries, the transfer of a property becomes legally

effective after it has been registered (for example, Germany, the Netherlands) whereas in other countries the legal registration is only needed to get priority against others (for example, France). Similarly, some countries (for example, Nepal, the Netherlands, South Africa) are adopting a deed registration system in which the registered deeds take priority over unregistered or subsequently registered deed but it does not prove the title. Whereas other countries (for example, the UK and many of the Commonwealth and central European countries) have title registration systems in which the rights are registered in a land register and are normally warranted by the State.

A registration system can also be categorised as negative or positive. In a negative system, rights are merely evidenced in the land registry whereas in a positive system, title is constituted by registration, that is, registration dispossesses the previous owner and vests the rights in the new owner. A positive system may be backed by a government guarantee that the registered information is true (Palmer, 1996:65). The deed system is very often characterised as negative and the title system as positive. Each system may have its strengths and weaknesses but it is hard to say which one is better. Bogaerts and Zevenbergen (2001) opine that there are good and bad systems in registration of deeds as well as in registration of title and agree with the statement made by Palmer (1996:64) that the real protection of land ownership is in the quality of information in the registers. They also argue that the integrated system of deed registration with parcel based cadastre in the Netherlands led to 99 per cent reliability of the cadastral system.

Cadastral systems also differ between countries. Larsson (1991:78) describes three main goals for the establishment of cadastre; to use the system mainly for general land information, for certain additional administrative purposes such as tax determination and collection, and to establish a multipurpose cadastral or land information system. The cadastre may also be classified as fiscal or legal cadastre based on the purpose of its establishment. Most cadastres, such as the Napoleonic cadastre in Europe, were fiscal cadastres established for collecting property tax. Such cadastres were based on a full survey of the ownership parcels, which were then changed into legal cadastres after a few decades (Bogaerts and Zevenbergen, 2001).

Land administration functions are usually administered by central and local government and typically include a land registry, physical planning authority, land and property management and taxation organisations. However, planning and development control are often regarded as separate from the 'core' land administration functions of identifying, registering and transferring property rights and real estate taxation (Wyatt, 2011). In many countries, the cadastral and land registration functions are operated by different government agencies; they may be structured under different departments of the same ministry (for example, Nepal) or even in separate ministries. On the other hand, both land registry and cadastre are unified under a single organisation in some countries like the Netherlands and Sweden. In much of Europe and Latin America, registry offices and cadastral offices are separated, with the former usually linked to local courts or administrative districts (Burns et al., 2006:9).

Centralisation and decentralisation is another criterion for comparing land administration organisations. Most of the states of Australia have a centralised system whereas most Asian countries have decentralised systems. Centralised systems operate successfully because of established links through intermediaries such as lawyers, surveyors and financial institutions, whereas decentralised systems facilitate direct access by the public (Burns et al., 2006:9).

Land administration can be organised on different levels of government. At the national level, a ministry usually has overall responsibility. However, in some federal countries, for instance India, overall responsibility for land administration is vested in the state level government. Based on the main purpose of the cadastre, this may be structured within separate ministries such as land, finance, agriculture, physical planning or law. Some countries avoid any discussion of ministerial responsibility and have a separate authority directly under the responsibility of the government or the president (for example, the Czech Republic and Moldova) (Bogaerts and Zevenbergen, 2001). In the Netherlands, however, the cadastral system is an independent administrative body that is no longer part of the personnel and financial organisation of the state service and carries out its own entrepreneurial policy under the guidance of an Executive Board (Bogaerts, 1999). In several European countries there is one provincial level cadastral office in the capital of each province. There are only two levels of land administration organisation in some

countries, at the central level and at the local level (for example, Nepal). The task of land registration, cadastral surveying and mapping, and land information dissemination are decentralised to the local level. In Sweden, the transaction of land is registered in the district court. Cadastral information may also be provided through municipalities, as in the Netherlands, which gives a closer connection to the end-users (ibid). Local property shops also provide some property information. Many countries now provide online information and online registration of land transaction has also been introduced in some countries (like Denmark and the Netherlands).

The process of land registration also varies among countries; however, some common components can be found among them. Three types of professionals are usually involved in the transfer process; a notary or lawyer, a land registrar or the land registry staff and a surveyor. Professionals prepare documents for transfer who, in most countries, have special licences and may have different titles like solicitor, notary and deed writer. Their role may also be different to some extent. For example, in the Netherlands, the notaries are appointed by the Crown and have authority to verify a client's signature, whereas in some countries like Nepal a simple licence holder called a deed writer prepares deeds and documents. In Denmark, Finland and Sweden, real estate agents or conveyancers usually prepare deeds and clients' signatures are verified by the municipality, a witness and banks respectively. On the other hand, in Thailand, title deeds are prepared officially and the clients' signatures are verified by a land officer and there is no role for notaries in the transfer process.

The surveying responsibility is assigned to a private licensed surveyor in some countries (for example, Denmark) whereas government surveyors carry out these works in other countries, like the Netherlands. In Finland and Sweden cadastral survey work is undertaken by government as well as municipalities. The timing of parcel sub-division also differs among countries. For instance, in the Netherlands it is done after confirmation of registration, in Denmark before registration and in Sweden and Nepal during registration.

The process of land registration is quick and straightforward in some countries whereas it is cumbersome and lengthy in others. The World Bank has ranked the property registration process of most countries in terms of the number of steps, duration, and

costs of registration. According to the Doing Business Report (World Bank, 2013), the process of registering property is completed in 26 days in the Organisation for Economic Cooperation and Development (OECD) region whereas it takes up to 100 days in South Asia. Similarly, the average cost of registration is lowest in Eastern Europe and Central Asia (2.7 per cent of property value) and is highest in Sub-Saharan Africa (9.4 per cent). The report has ranked Georgia in first place where the registration process has only a single procedure, usually completed within two days and only 0.1 per cent of property value is spent during the transaction. Uzbekistan has the highest number of procedures (15). In Kiribati, it takes up to 513 days to complete a registration process which is the longest time required for registration. Similarly, the most costly transaction process is in Syria where up to 27.8 per cent of the property value is spent during the transaction.

Significant investment is required to establish and operate a land administration system and this may be financed from different sources. Bogaerts (1999) presents three basic types of financing for a cadastral system with all kinds of variation. According to him, in many countries, the cadastre belongs to the government and hence is financed by government and income generated by it goes directly to the government. The second option is a financially independent body with some supervision by the responsible ministry, like in the Netherlands. These types of organisation are more business-like and user-oriented. The third possibility is a fully privatised cadastral system (not the land registration) common in the United States of America. In this country, the negative aspects of deed registration are overcome by title insurance. The title insurance companies are fully privatised cadastres with title plans of cadastral land parcels that reflect the full history of such parcels. Land registration and cadastre in some countries like Albania, Cyprus, Iceland, Malta, Nepal, Poland, and Alberta in Canada are fully funded by the government, whereas those of Austria, Belgium, Denmark, Ireland, the Netherlands, Slovenia, Spain, England, Wales, Northern Ireland, Scotland and some provinces of Canada are fully financed by the customer fees. There are other countries such as Armenia, Bosnia-Herzegovina, Croatia, the Czech Republic, Finland, Germany, Hungary, Italy, Latvia and Lithuania that apply mixed funding models, that is, some of the costs are funded by government and some by customer fees. In Croatia, for instance, land

registration is fully funded by the government whereas 95 per cent of the cadastral cost is covered from the government fund and five per cent from customer fees.

A variety of tools and techniques are used to collect, record and disseminate land-related data. The selection of tools and techniques affects the quality of data and services provided by the land administration organisations. The establishment of a geodetic reference system, surveying and mapping procedures, land information system, spatial data infrastructure, digitisation of records, electronic data transfer, online information system, and electronic services are the main functional areas of the land administration system where technology matters. The establishment of a geodetic reference system, for example, guarantees the geometrical consistency of all surveying activities within a well-defined coordinate system. Many developed countries have established such a system; however, some developing countries have yet to establish it. Similarly, a number of methods are available for surveying and mapping. Larsson (1991:91) classifies such methods into ground survey methods including a plane table, orthogonal and polar methods, and photographic methods like aerial and satellite photography.

The use of more advanced technology such as total stations and satellite positioning systems like Global Positioning System and notebook computers can provide efficiency gains. The use of (geo)-information and communication technology has made surveying work more comfortable and reliable. Updating cadastral maps in the field and sending back the results to the database of the cadastre is now possible due to wireless technology. However, many developing countries still use the traditional methods of surveying and paper-based systems. Digitisation of textual records and cadastral maps, integrating databases and establishing land information systems or spatial data infrastructure, digitising business processes and providing electronic services are the main challenges facing these countries.

Thus, there are different practices of land administration in different countries which can be studied from many aspects including the nature property rights offered to the land owners, land tenure system, organisation structure, registration system and level of security it provides, registration procedure, cadastral system, information system and application of technology. Countries are at different stages in the development of their

land administration systems. These criteria can be used to compare the status of land administration.

2.4 Land-Based Economic Development: Theoretical Underpinnings

This section presents the theoretical underpinnings related to land-based economic development. It also discusses some empirical studies from different parts of the world. After that implications from theoretical and empirical studies are drawn.

2.4.1 Conceptualisation of Land in Economic and Development Theories

The role and conceptualisation of land and property rights has changed considerably over time. Land and property rights were given high priority in pre-classical and classical economic theories. The mercantilists considered land and labour as two basic elements of production and the objects of commerce (Polanyi, 1957:69). During mercantilism, land was an important source of wealth, as it allowed the feeding of a growing population and served as a source of precious material (Hubacek and van den Bergh, 2006).

The Physiocrats emphasised the importance of land in the agricultural production process. Cantillon regarded land as the only original unit of production (ibid). Quesney also advocated the security of ownership as a means of ensuring investment in land and its cultivation (Currie, 1981).

The classical economists considered land, labour and capital as three factors of production. Their economic system was based on three socio-economic groups- landowners, capitalist tenant farmers and landless labourers. Smith (1909:627) considered the produce of the land as the principal source of the revenue and wealth of every country.

Neo-classical economists did not pay much attention to land. Gray, Jevons, Frank Knight and even Solow (in his later model) excluded land from the factors of production. Solow (1956) does not include land in his production function $Y= f(K, N)$, where K is capital, and N is labour. In a later model, Solow (1974), inquiring about the long-term prospects for an

economy that uses exhaustible natural resources, gives the production function the form *Y= f(D, K, N)*, where, D= exhaustible natural resources. Later development reduced the production function to only one factor: *Y=f(K)*, that is, no fundamental distinction between capital and labour is assumed (Hubacek and van den Bergh, 2006). Marshall (1961) introduces organisation as a fourth factor of production, keeping land as a distinct factor. He considers that land has a special role in the production process because of its unique features and argues that it yields a permanent surplus, while perishable things made by man do not. Likewise, Walras (1954) establishes a distinction between land and other capital by defining land as natural, indestructible and in fixed supply. He saw fixity as theoretically important since it could provide a rationale for differential ownership conditions of land versus other forms of capital.

The role of property rights and institutions in economic performance is also emphasised by the economists in the recent decades. The importance of property rights heightened after the publication of Demstez paper entitled 'Toward a Theory of Property Rights in 1967. Demstez (1967) explains the evolution of property rights from the cost-benefit principle. According to him, "[...] property rights develop to internalize externalities when the gains of internalization become larger than the cost of internalization" (p.350). That is, property rights would be developed when the benefits gained from it becomes larger than that of its costs. He sought to explain why a private ownership system would come into existence (Demstez, 2002).

North (1990) considers the total costs of production as consisting of the resource inputs of land, labour, and capital involved both in transforming the physical attributes of a good and in transacting it. He argues that motivation and ability of the organisation along with the complexity of the environment determines how well the problems of coordination and production are tackled. In his words:

> *"Institutions provide the structure for exchange that (together with the technology employed) determines the cost of transacting and the cost of transformation. How well institutions solve the problems of coordination and production is determined by the motivation of the players (their utility function), the complexity of the environment, and the ability of the players to decipher and order the environment (measurement and enforcement)." (p.34)*

Development theories have also recognised the role of land ownership and property rights in the development process. Security of property rights is an essential condition for investment in land and real property: it has been considered as a non-economic institutional factor of development by some development economists (for example, Todaro and Smith, 2006; Thirlwal, 2011). Griffith-Charles (2004) considers land as one of the primary ingredients of the development theories and many development programmes are structured around land and property rights. She further argues:

> *"Development programmes structured around land [...] introduce the technology and capacities required to install or elevate land administration institutions into modern entities and attempt to establish a land market, whereby capital can be generated from land, to fund growth and development" (p.15).*

It indicates that land-related development programmes are directed towards establishment or improvement of land administration institutions and land market so that capital required for growth and development can be generated from land.

The agendas of sustainable development and Millennium Development Goals have also recognised the importance of land in economic development. The policies for sustainable development contain three pillars of equal importance: protecting the natural environment, improving the social situation for the poor, and combating poverty (FIG, 2001). The Agenda 21 of the UNCED focuses, among others, on an integrated approach to the planning and management of land and underlines its importance for agriculture and rural development (UNCED, 1992). It stresses the link between land management and the protection of bio-diversity, forests and water resources, emphasises the need for reliable information for decision-making and calls for a stronger role for non-governmental organisations as partners in sustainable development (FIG, 2001).

The Millennium Development Goals of the United Nations of eradicating extreme poverty and hunger, ensuring environmental sustainability and developing a global partnership for development are related to the management and distribution of land. Land administration plays a crucial role in achieving these goals as well. The Joint FIG and World Bank conference on Land Governance in Support of the Millennium Development Goals: Responding to New Challenges, 2009 concluded that effective and democratised land governance is at the heart of delivering the global vision of our future laid out in the

Millennium Development Goals, and the land professionals have a vital role in understanding and responding quickly to the ever-changing route to this vision (Enemark et al., 2009).

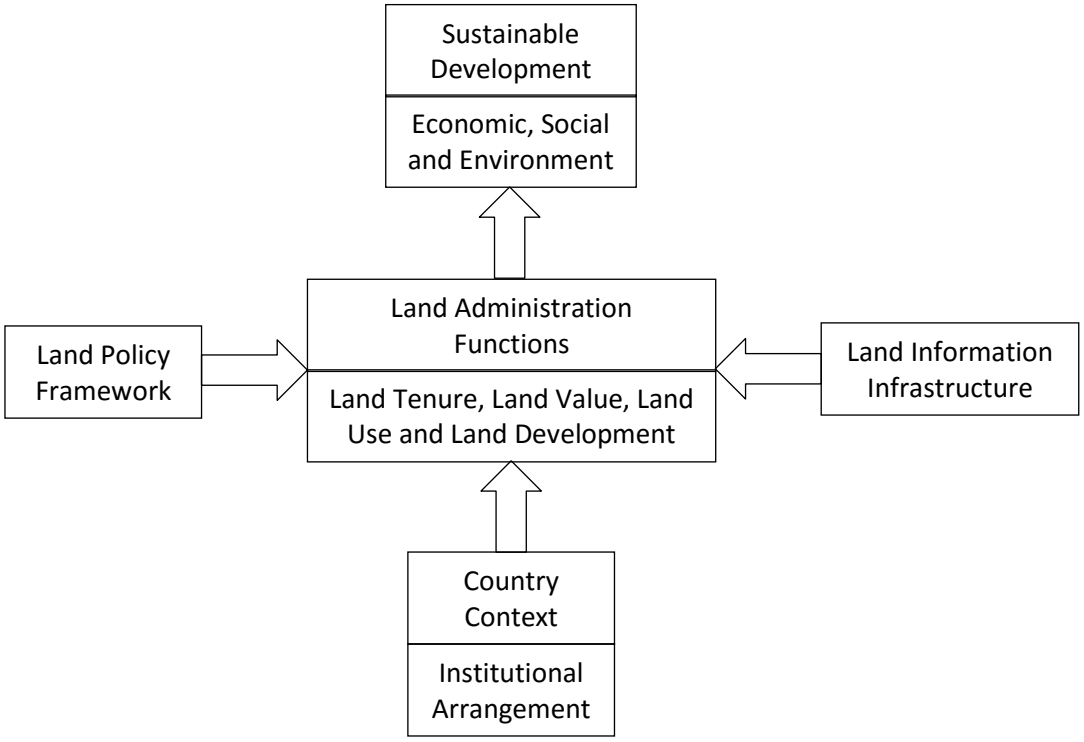
Thus, land was considered as one of the major factors of production until the classical economic period. The role of property rights, transaction costs and institutions in the production process is recognised by economists especially after 1960s, which is also equally applicable in the field of land management. Recent development theories consider land as a primary ingredient for development and security of property rights as one of the non-economic institutional factors of development. Proper management of land is essential to tackle the global challenges of protecting the natural environment, improving the social situation for the poor and combating poverty.

2.4.2 Land Administration as a Means for Economic Development

Land administration as a discipline gained popularity after the publication of Land Administration Guidelines in 1996 (UNECE, 1996), though the intellectual root of the discipline in the management of the people-to-land relationships and the specialised tool of surveying are much older (Williamson et al., 2010:71). Writings of various scholars, researchers and reports of international organisations and academic institutions, and conference presentations supported to conceptualise this discipline. Williamson et al. (2010) incorporate the views expressed in earlier literature and conceptualize the modern theory of land administration. The cornerstone of their theory is the land management paradigm, which asserts that proper design of land management components and their interaction will lead to sustainable development (Figure 2-2). They argue that the land management paradigm makes possible to design systems capable of undertaking the core functions of land administration to achieve the goal of sustainable development. In their words:

> *"The [land management] paradigm invites LAS [Land Administration System] designers to build systems capable of undertaking the core functions of tenure, value, use, and development for the purpose of specifically delivering sustainable development, in addition to implementing national land policy and producing land information. The key tenet of the paradigm is that proper design of the land management components and their interaction will lead to sustainable development." (p.116)*

Figure 2-2: Land management paradigm



Source: Enemark et al. (2005:53)

The structure of land management organisations may vary among countries and the institutional arrangements may be changed over time to incorporate new policies and the land management activities to support sustainable development within such contexts. In the words of Enemark et al. (2005:52):

> *"The organisational structures for land management differ widely between countries and regions throughout the world, and reflect local cultural and judicial settings. The institutional arrangements may change over time to better support the implementation of land policies and good governance. Within this country context, land management activities may be described by three components: land policy, land information infrastructure, and land administration functions in support of sustainable development."*

Thus, proper design of land policy, land information infrastructure and land administration functions (land tenure, land value, land use and land development) supports sustainable development.

The policies of sustainable development contain three pillars of equal importance- protecting the natural environment, improving the social situation for the poor, and

combating poverty, which are often referred to as the environmental, social and economic aspects of sustainable development (Steudler, 2004). Land policy is one of the national policies directly related to the goals of sustainable development. As argued by Enemark et al. (2005), it is a part of the national policy on promoting objectives including environment sustainability, economic development, social justice and equity, and political stability and may be associated with security of tenure, land markets, real property taxation, sustainable management and control of land use, natural resources and the environment, the provision of land for the poor, ethnic minorities and women, and measures to prevent land speculation and to manage land disputes.

The Bathurst Declaration on Land Administration for Sustainable Development declares that 'sustainable development is not attainable without sound land administration' (FIG, 1999). It calls for a commitment to provide effective legal security of tenure and access to property for all men and women, including indigenous peoples and those living in poverty or other disadvantaged groups, identifies the need for the promotion of institutional reforms to facilitate sustainable development, and for investing in the necessary land administration infrastructure which gives people full and equal access to land-related economic opportunities.

The role of land administration in economic development has been emphasised by some other writers on many grounds. For instance, de Soto (2001) considers the representational process of recording property information connects the land assets to the rest of the economy in Western countries; however, the poor inhabitants of the Third World and the former communist nations lack the process to represent their property and create capital. That is, registration of land in the Western countries has made it possible to obtain loans using land as collateral and it has supported the economy in an invisible way which is not the case in many developing countries the land is not registered yet. Thus, the process of land administration has been considered as a means of generating capital from land.

A good land administration may contribute to the economy in other ways too. Dale and McLaughlin (1999) argue that good land administration provides security to investors and permits real estate to be traded in the market place, allowing government to raise taxes

on the basis of the value of land and property. Likewise, Zakout et al. (2006) consider secure property rights to be a means of linking land administration with economic development and argue that secure tenure and access to land alone is not sufficient for attaining the objectives of economic growth; however, a good land administration system is required to protect property rights and hence achieve these goals. Similarly, van der Molen (2003) identifies and quantifies the importance of land administration from a macro-economic perspective. He uses the income approach to measure the contribution of secure tenure, land market, land use planning and land taxation on gross domestic product. The study concludes that the presence of good land administration (or security of land tenure) is responsible for a growth of 5.9 per cent of the gross domestic product in the Netherlands. Thus, good land administration provides security to land related investment and income, which increases the gross domestic product of a country. It also facilitates land transactions and generates revenue which may be utilised for development purposes.

To sum up, the theory of land administration asserts that proper design of land management components, that is, land policy framework, land information infrastructure and land administration functions contribute to achieve the goals of sustainable development, which include economic, social and environmental development in support of the institutional arrangement of each country. The process of land administration has been considered as a means of generating capital from land. A good land administration supports the economy by increasing land-related investment and income and generating more revenue for the government.

2.4.3 Land Tenure Security and Economic Performance

Definition and Conceptualization

Land tenure is the way land is held or owned by individuals or groups (Knights, 2010:19). It defines how the land is allocated, managed, used and transferred in a society (FAO, 2002). It has also been described as a social construct that describes the relationships between individuals and groups of individuals by which rights and obligations are defined with respect to control and use of land (Economic Commission for Africa, 2004:21). A more comprehensive definition is given by Dekker (2005), who considers land tenure as

the 'perceived institutional arrangement of rules, principles, procedures, and practices, whereby a society or community defines control over, access to, management of, exploitation of, and use of means of existence and production.' This definition serves as a working definition for this research.

Different types of land tenure system exist in different parts of the world. They can be classified as formal (freehold, leasehold, public and private rental, shared equity and cooperative tenure), customary, religious or informal (UN-HABITAT, 2008). Formal land tenure is documented and provides high degree of security. Customary tenure normally includes the right to use or to dispose of use rights over land within their community. This type of property is neither recorded nor guaranteed by law but is recognised as legitimate by the community (United Nations, 1966). None of the legal rights are available on land under informal tenure systems. A concept known as legitimate tenure is also emerging which states that individuals and communities occupying land or property to fulfil their right to adequate housing, and who have no other adequate option, have legitimate tenure rights that should be secured and protected. This concept is underlying in the guiding principles of the security of tenure for the urban poor and extends beyond mainstream notions of private ownership and includes multiple tenure forms deriving from a variety of tenure systems (Rolnik, 2013). It is in line with the voluntary guidelines on the responsible governance of tenure (FAO, 2012:6) which proposes that 'states should protect legitimate tenure rights, and ensures that people are not arbitrarily evicted and that their legitimate tenure rights are not otherwise extinguished or infringed'.

Level of land tenure security depends on the nature of tenure associated with land. The registered freehold has been considered as the most secure form of land tenure. UN-HABITAT (2008) presents a continuum of land tenure ranging from informal to formal land rights, which considers perceived tenure approaches as the least secured and the freehold as the most secured tenure. Similarly, Payne (2001:419) presents a range of urban land tenure categories by the degree of tenure security in a hierarchical order as pavement dwellers, squatter tenant, unregistered squatter owner, tenant in unauthorised sub-division, regularised squatter owner, owner of unauthorised sub-division, legal owner of unauthorised construction, tenant with contract, lease-holder and freeholder ranging

from low to high. Durand-Lasserve and Selod (2009) state that long-term leaseholders and freeholders have access to the full bundle of rights. Thus, property of this type has a high degree of security, freedom to dispose or use as collateral and maximum commercial value. Registered leasehold may be as secure as freehold but only for a specified period of time.

Land tenure would be secured if the landowner can own and use his land on a continuous basis without any interference from others. The land tenure security has been conceptualised in many ways. Van Gelder (2009) classifies the concept of land tenure security into three categories as legal, perceived and *de facto* tenure security. The legal land tenure security refers to protection and enforcement of rights or interests in land (Shimbizi, et al., 2014) by means of known set of rules. As argued by Knights (2010), legal system provides certain rules and norms that define the rights and obligations of individuals, families and communities in relation to land, dictate how citizens and officials must behave in the pursuit and enforcement of land rights, and manage how land rights are administered and enforced and how the rules that make land tenure secured are applied. Thus, from legal perspective, the land tenure is secured if the law protects rights and interests in land and provisions for their invocation in case of infringement.

The *de facto* tenure security emphasizes on the factual situation on the ground regardless of its legal status. It is based on the notion that the property belongs to him who has actually controlled it. In the words of van Gelder (2009:41), "The *de facto* view of security of tenure is based on the actual control of property or, in other words, the factual situation on the ground, regardless of the legal status in which it is held."

Some writers consider tenure security as a perception of landowner towards continuity of his rights and eviction from outside sources. For example, Place et al. (1994) define land tenure security as when an individual perceives that he or she has rights to a piece of land on a continuous basis, free from imposition or interference from outside sources, and the ability to reap the benefits of his investment. In his words:

> *"Land tenure security exists when an individual or group is confident that they have rights to a piece of land on a long-term basis, protected from dispossession by outsider sources, and with the ability to reap the benefits of labor and capital invested in the land, whether through direct use or upon transfer to another holder." (p.19)*

Likewise, Knights (2010) considers it as the degree of confidence that land users will not be arbitrarily deprived of the bundle of rights they have over particular lands. Dekker (2005) also regards tenure security as the perceived certainty of having rights to land for a certain period of time. Thus, the perceived tenure security refers to the perception of a landowner towards the risks of eviction or losing his land by third party and the ability to reap the benefits from it.

Land tenure security has been measured in different ways. Simbizi et al. (2014) identify three schools of thought related to land tenure security as the economic or market oriented school, legal based school and adaptation paradigm oriented school. According to them, these schools regard land tenure security as the individual full ownership of land supported by titles, protection and enforcement of someone's rights or interests in land, and transferable and legally recognized land rights and the assurance of the right holder that his or her land rights are recognized and enforced within the community norms and values respectively. This research aims to analyse the economic role of land tenure security and hence views tenure security more from an economic viewpoint. The legal viewpoint is also considered as the protection and enforcement of land rights also matters in obtaining benefits from land.

To sum up, land tenure is a set of rules and practices that defines the method of allocating, managing, using and transferring land in a society. Land tenure would be secured if the landowner can own and use his land on a continuous basis without any interference from others. The registered freehold has been considered as the most secure form of land tenure. Registered leasehold may be as secure as freehold but only for the specified period of time. Land tenure security can be viewed from economic, legal and adaption viewpoints. This research mainly considers the economic aspects of tenure security and, to some extent, the legal aspects as well.

Tenure Security and Economic Performance

Land tenure security has been considered as one of the means of improving economic performance. Land tenure theorists, who view tenure security from the economic perspective, associate tenure security with economic outcomes. For instance, the Evolutionary Theory of Land Rights put forward by Platteau (1996) states that rapid

population growth and commercialisation of agriculture induces demands for more specific and more secure property rights, which forces the government to launch program of land titling. This theory presents three consequences of land titling: firstly, it enhances land tenure security which increases agricultural production by means of increased ability and willingness to invest and promotes efficient use of resources by means of more efficient cropping choices, reallocation of land to the more dynamic agents and consolidation of land holdings; secondly, it reduces public expenditure on court litigation and provides a base for land tax revenue, resulting in positive effect on government budget; and thirdly, land titling promotes social peace and political stability.

A causal relationship of land titling with land value and income is established by Feder et al. (1988). They identify two sources of linkage between land titling and economic performance, namely the effect of titles in enhancing tenure security and the role of titles in collateral arrangements and facilitating access to institutional credit. They observe better access to cheaper and longer-term institutional credit as the main source of greater productivity on land. Their study shows that land price and income are increased after land titling and a clear relationship is established between them.

Deininger (2003) also presents three main elements of tenure security that can affect household behaviour: greater security against eviction, greater ability to transfer land, and greater access to credit. He argues that greater security against eviction will increase demand for land-related investment, greater ability to transfer land will increase the payoff from land related investment and greater access to credit will increase the value of investment in cases of limited credit supply. Similarly, de Soto (2001) argues that land titling can contribute to the economy by generating capital from land. He advocates for the recognition of existing land rights by means of property formalisation.

The economic theory of property rights also asserts that there is a causal relationship between property rights and economic performance. As argued by Reeve (1986), the economic approach to property rights aims to specify the set of such rights that provides the greatest incentive to use resources efficiently. Posner (1973) also argues that the function of property rights is to create incentives to use resources efficiently. A bundle of rights is offered in the case of formally registered land, which may be regarded as such an

efficient set of rights. Land tenure security is associated with the property rights as the type of rights available in a piece of land determines the level of tenure security. For instance, the registered freehold land is considered as most secure as it offers highest form of property rights including sale.

From the views presented above it is clear to see that the process of land titling, land registration or property formalisation is a means of providing tenure security. The impacts of tenure security are: (a) increase in agricultural production and land related income by means of increased investment induced from higher ability and willingness to invest, efficient cropping choices, relocation of land and land consolidation (b) higher land price, (c) positive contribution on government budget by means of reduced public expenditure on court litigation and increased government revenue and (d) promotion of social peace and political stability. This research mainly studies the economic aspects of land titling and focuses on its effect on land related investment, production, income, land value, land use and revenue generation.

Some empirical studies are carried out in different parts of the world that examine the role of secured land tenure in the economy. Most of those studies are concerned with measuring the impact of tenure security on land value, access to credit, land related investment, income and agricultural production. A mixed result is found from those studies as discussed below.

A positive correlation between the degree of ownership security and farm investment per unit of land is observed in Costa Rica by Salas et al. (1970). Similarly, Villamizar (1984) finds substantially greater investment on titled land than on undocumented or encroached land in three Brazilian states. Likewise, granting full legal ownership to squatters and undocumented occupiers in the state of Maranhao in Brazil increased their income by approximately 200 per cent (IDB, 1986). The study also found that the income level of titled farmers in Ecuador was twice that of untitled farmers holding the same amount of land.

A mixed result is found from studies in Africa where most of the land is still held under the customary tenure system. Deininger and Jin (2006) identify that government action to

increase tenure security and transferability of land rights can significantly enhance rural investment and productivity in Ethiopia. Similarly, Ahmed et al. (2002) observe that sharecropping and borrowing are less technically efficient than owner-cultivation or fixed rentals in the highlands of Ethiopia. Likewise, the Evolutionary Theory of Land Rights was supported by empirical research from Kenya that indicated a shift from sales that were redeemable by the original seller to sales that were increasingly irredeemable (Barrows and Roth, 1989).

A study by the World Bank (Migot-Adholla et al., 1991) in Sub-Saharan Africa concludes that tenure security has a positive impact on investment in the region of Anloga but a less noticeable impact in Wassa in western Ghana, and no impact at all in Ejura in central Ghana. Besley (1995) reworks the data collected by the World Bank on Ghana to assess the sensitivity of the results to the estimation methodology used and concludes that such sensitivity is considerable since the results have been simply inverted. He reaches the opposite conclusion, that better land rights facilitate investment in Wassa but not in Anloga. Also, a study of 36 villages in central Uganda found that investment enhances tenure security, yet the converse relationship is not true (Baland et al., 1999). Moreover, Bradstock (2005) identified that per capita incomes for most households has increased in the Northern Cape Province of South Africa; however, the contribution that land tenure has made to these increases is limited. Furthermore, survey-level evidence from 128 smallholder oil palm blocks from Papua New Guinea, Chand and Yala (2009) observes that greater security of the proceeds of investment for an individual grower or household has the potential to induce increased investments and effort, both of which would raise income and farm-level productivity. They also identify that agricultural productivity can be raised through land reform if, and only if, land tenure type has a causal impact on farm-level productivity.

Some studies from African countries have demonstrated that land registration has had a negligible or zero impact on investment behaviour (Ho and Spoor, 2006). For instance, Bugri (2008) investigates the role of tenure security and the implications for agricultural production and environmental sustainability in two districts of north-east Ghana and concluded that tenure security is a necessary but not a sufficient condition for improvement in agricultural production and environmental management. Likewise,

Jacoby and Minten (2007) observe that having a title has no significant effect on plot-specific investment and little effect on land productivity and land value in Madagaskar. Similarly, Brasselle et al. (2001), in their study in Houet Province in southern Burkina Faso, also expresses doubt about the existence of a systematic influence of land tenure security on investment. They conclude that the traditional village order provides the basic land rights required to stimulate small-scale investment. Likewise, Ouedraogo et al. (1996) state that land rights of farmers are generally quite stable and secure, even in the absence of formal land titles. They conclude that farming practices do not significantly depend on the form of land rights that cultivators possess, and no differences in land productivity as a function of land rights were found in Burkina Faso. Berry (2009) also mentions that privatisation may also work in the opposite direction—reinforcing inequalities within communities, and encouraging claims to land based on origin and indigenousness in Ghana and other West African countries.

A mixed result is also found from studies in Asian countries. The land-titling programme of Thailand is considered to be a successful example of a land-titling project based on its impact on agricultural productivity. Feder et al. (1988) compare the economic performance of two groups of farmers; one without legal title operating in the forest reserves, and another having legal titles and operating outside the forest reserve boundaries in rural Thailand. They found that the effect of land registration on farmers' access to credit was clearly established, as were differences in economic performance between titled and untitled farmers. Similarly, Markussen (2008) observes that plots held with a paper documenting ownership were found to have higher productivity and land values than other plots in Cambodia, while property rights have weak effects on access to credit. Also, Thu and Parera (2011) identify that intermediate levels of property rights were the driving forces behind the thriving housing market in Ho Chi Minh City. Similarly, Lin (1992) identifies that moving from collective to household farming led to a big increase in agricultural productivity related to the acquisition of property and land rights in China. However, a study by Dong (1996) observes a different result. He examined the nature of the problems in land allocation, credit rationing and land investment in post-1978 rural China in the context of imperfect information and multiple market failures. He concluded that in the presence of multiple market distortions, land is unlikely to provide a

solution to the agricultural problems; rather, an approach that refines the existing framework of the two-tier ownership system offers more promise.

Some studies have associated secure property rights with poverty reduction and economic development. A study by Galiani and Schargrodsky (2010) evaluate the causal effects of property rights on the economic development in Buenos Aires. They identify that entitled families substantially increased housing investment, reduced household size, and enhanced the education of their children relative to the control group. However, these effects did not take place through improvements in access to credit. They came to the conclusion that land titling can be an important tool for poverty reduction, albeit not through the shortcut channel of credit access, but through the slow channel of increased physical and human capital investment, which should help to reduce poverty in future generations. Cotula et al. (2006) state that rural poverty is strongly associated with poor access to land and increased land access to the poor can bring direct benefits of poverty alleviation. They also observe that experience of several East Asian countries (South Korea, Taiwan) shows how a reform resulting in more equitable land distribution is fundamental in creating the basis for sustained economic development. Similarly, Deininger and Squire (1998) identifies a positive relationship between equitably distributed land and economic growth. Similarly, Reerink (2011), from his study about land tenure security under different tenure arrangements among Indonesian urban poor, identifies that landholders with formal tenure lived in somewhat more consolidated dwellings than those with informal tenure but no significant differences were found between formal and semi-formal landholders. He also observes that dwellers with formal or semi-formal tenure, who enjoy a high level of perceived tenure security and/or have a high household income tend to invest more into their housing than those with informal tenure, who enjoy a lower level of perceived tenure security and/or have a lower income. Likewise, Deininger (2003) observes that giving secure property rights to land can greatly increase the net wealth of the poor and makes them less reliant on wage-labour thereby reducing their vulnerability to shocks.

Griffith-Charles (2004) studies the role of land titling on land market and identifies that, as posited in the Evolutionary Theory of Land Rights, the presence of a comprehensive registration system did not induce a large volume of formal transactions. She came to the

conclusion that land titling and land registration are only two of several supportive factors that create an environment in which land markets would grow.

To summarise, some of the studies discussed above observed a positive relationship between land tenure security and economic performance, specifically, land related investment, income and agricultural production (for instance, Salas et al., 1970; Villamizar, 1984; IDB, 1986; Deininger and Jin, 2006; Feder et al., 1988). A positive effect of land titling on productivity, land values and access to credit is observed by Markussen (2008) as well. However, some studies (for instance, Bugri, 2008; Brasselle et al., 2001; Berry, 2009) expresses doubt on the positive relationship between land tenure security and level of economic performance. Traditional village order is found enough for basic land rights required to stimulate investment in a study by Brasselle et al. (2001). No differences on land productivity as a function of land rights were also observed (Ouedraogo et al., 1996). Also, a weak effect of property rights on access to credit is observed by Markussen (2008). Some studies also concluded that tenure security is necessary but not sufficient condition for improvement in agricultural production and environmental management (Bugri, 2008). It is also identified (for instance, Galiani and Schargrodsky, 2010) that land titling support for poverty reduction by means of increased physical and human capital investment but not through access to credit. Likewise, land titling and land registration are found as only two of several supportive factors that create an environment in which land markets would grow (Griffith-Charles, 2004).

2.4.4 Implications of Theoretical and Empirical Studies

Literature reviewed in the above sections of this chapter provides a theoretical foundation for this research. Land was considered as a factor of production in the early economic theories but the role of property rights, institutions and tenure security on economic performance has been recognized especially after 1960s. The role of land management for sustainable development has been emphasised after the publication of Agenda 21 (UNCED, 1992) which has been further conceptualised by Enemark et al. (2005) and Williamson et al. (2010).

The relationship between human beings and land is established through rights. The land administration is a system that administers these rights. The land administration theory

asserts that a good land administration supports economic development by providing tenure security, generating revenue for the government and utilising capital from land which would otherwise remain hidden. Similarly, the land tenure theory sates that there is a positive relationship between tenure security and level of economic performance via increased incentives for more efficient land use and higher willingness and ability to invest.

The theory of land administration has not been widely tested to date, although a study by van der Molen (2003) observes a positive impact of a good land administration on the gross domestic product of the Netherlands. On the other hand, findings from the empirical studies examining the role of land tenure security in the economy from different parts of the world do not reach unanimous conclusions. Moreover, land tenure theory is not widely tested in case of South Asian countries like Nepal and Bangladesh. Thus, this study aims to investigate the role of land administration on economic development and fulfil the gap of knowledge in this sector.

The conceptual framework depicted in Figure 1-2 shows the relationship between land administration and economic development, which states that land administration supports the economic development in two ways: firstly, it ensures tenure security which increases land related investment and income; secondly, it facilitates land market, land taxation and land valuation which generates more revenue to the government.

2.5 Issues Under Investigation

The aim of this research is to investigate the relationship between land administration and economic development. Five research questions are designed to meet this aim. Both qualitative and quantitative data are required to answer these questions. The techniques applied to investigate the underlined issues required to answer these questions are discussed below.

The first question posed in this research is how the land administration supports the advancement in land tenure security. This research question will be answered analysing the role of land administration functions, specifically, the initial registration of land. Various criteria are proposed to measure the security of land tenure. The Evolutionary

Theory of Land Tenure (Platteau, 1996) regards maximum tenure security as full ownership of land supported by written evidence known as title and the land information generated through land surveying as the part of the proof of ownership. Simbizi et al. (2014) also consider the individual full ownership of land supported by titles as tenure security from the economic perspective and the protection and enforcement of rights or interests in land from the legal viewpoint. Similarly, ownership of land, degree of exclusivity to use land, transferability of land rights, duration of land rights, and proof of ownership are the main components of the tenure security as described by Platteau (1996). Bruce and Migot-Adholla (1994) added the perception of the land right holder and the bundle of rights as other components of tenure security.

Place et al. (1994) suggested three measurements of land tenure security as the breadth, duration, and assurance of land tenure. The breadth refers to the number of the rights and the quality thereof; the duration measures the length of the land rights; and assurance is the certainty of the extent and the duration of land tenure, especially with regard to the law and the law enforcement. Some researchers for instance, Ping and Posterman (2009) and Huong (2014) apply these factors to measure the land tenure security. Huong (2014) suggests including transferability of rights under breadth. Likewise, Brasselle et al. (2002) propose measuring land tenure security with the help of a discrete variable reflecting the category or bundle of rights held by each household along two dimensions when they apply, namely, 'the range of the rights held, distinguishing between rights of use and rights of transfer', and 'the extent of autonomy afforded by the landholder in exercising these rights, especially transfer rights'. They further define nine types of rights that encompass rights of use and rights of transfer to assess the tenure security as the right to (a) choose which crop to grow, (b) put one's land into fallow and to re-cultivate it once the fallow is over, (c) bring improvements to the land, (d) freely dispose of crop output, (e) prevent the grazing of others' livestock (f) lend the land along traditional lines, (g) give, (h) bequeath, and (i) to rent the land against cash.

In this study, tenure security is measured from two angles: rights and risks, based on the approach argued by Place et al. (1994) with some modifications in the type of rights used by Brasselle et al. (2002). The rights include ownership, use, transfer, mortgage, and leasing of the land. The risks include aggression or interference from other people and

not obtaining appropriate compensation in the case of acquisition of land by the government. These rights and risks are employed to measure tenure security before and after registration of land. Moreover, the effect of other land administration services, for instance, management of land records and valuation of land as well as the behaviour of employees will also be discussed.

This research also seeks to examine the extent to which land administration promotes land use and land-related economic activities. A land owner can use his land mainly in three ways as residential, agricultural and commercial. Thus, the land use type is measured in these three ways. Also, the land related economic activities include the activities carried out to use their land for these purposes. Construction of a new house or renovating old house are the activities involved in using land for residential purposes. Griffith-Charles (2004) has used eight activities to measure the investment and improvement in land. They are (a) improvement of soils through application of organic matter, rotation of crops, (b) tillage practices that avoid erosion, terracing on slopes, (c) planting trees and orchards, (d) purchase farm animals, (e) installation and maintenance of wells and/or irrigation systems, (f) purchase of agricultural machinery, (g) construction of farm buildings, and (h) property boundary markers: fences, trees or boundary monuments.

In this research, a list of activities are applied to measure the land related economic activities promoted by the land administration. They are: (a) construction of a new house, (b) renovation of the existing house, (c) land levelling, (d) construction of irrigation canal, (e) fencing, (f) using new tools and farming techniques, (g) cash cropping, (h) planting trees, (i) planting fruits, (j) animal husbandry, (k) using land for commercial purposes like renting out or using the house as a shop or for a cottage industry.

This research also seeks to determine whether there is any relationship between land tenure security and land value, investment and income. The relationship between them is measured analysing the changes in these factors after changes in the status of tenure security.

It also studies the extent to which the land administration services affect revenue generation. Various criteria are proposed to assess the performance of land administration organisations. Bogaerts (1999) classifies critical success factors of a well-functioning cadastral system into five aspects: political, legal, organisational, financial and technological. Likewise, Manthorpe (2002) classifies performance measures and indicators used by the Land Registry of the United Kingdom as efficiency, financial, speed, accuracy, customer satisfaction, developmental and fees. Also, the FIG Statement on Cadastre (FIG, 1995) recognises seven criteria for measuring the actual or potential success of cadastre as security, clarity and simplicity, timeliness, fairness, accessibility, cost and sustainability. Similarly, Zakout et al. (2006) propose eight basic principles of good governance in land administration as (a) efficiency, (b) effectiveness, (c) transparency, consistency and predictability, (d) integrity and accountability, (e) subsidiarity, autonomy and depoliticisation, (f) civic engagement and public participation, (g) equity, fairness and impartiality, and (h) legal security and rule of law. Similarly, FAO (2007) presents some good governance values embodying in land tenure and administration. The values, among others, include: land administration systems should be efficient, effective, and competent; land information should be available freely; land administration services should be provided for all without discrimination; land services should be provided close to the user; land registration and legal systems should provide security of tenure; and land administration officials should behave with integrity and give independent advice (p.10-11). Likewise, the World Bank (2013) uses number of procedures, time and costs to evaluate the doing business of registering property.

All of the criteria presented above cannot be studied in this research because of the limitation of time and costs. Efficiency, effectiveness and competency of land administration services, access to land information, fairness and impartiality, integrity and accountability and security of land tenure are the measures applied in this research to assess the land administration services. The process of land registration is analysed from procedure, time and costs of registering property as proposed by the World Bank (2013). In addition to these factors, the system of land administration is assessed from the perspective of land record management and property valuation as well.

The status of registration of transactions, collection of land tax and valuation of land before and after registration is also discussed in order to measure the role of land administration on revenue generation. National level time series data on the amount of land tax and registration fee are also presented in order to see the overall scenario. Also, details on the status of registration of transactions and revenue generation are collected from the land administration organisations. Moreover, the structure of land administration organisations and the status of land record management and dissemination of land information are also assessed.

The effectiveness of land administration services is discussed based on the performance of land administration organisations, amount of revenue generated from these organisations and their capacity to generate more revenue, and the benefits they can provide to the government, household and a society.

2.6 Summary

This chapter reviews literature related to land administration, tenure security and their role on economic development which provide a theoretical foundation for this research.

The relationship between human beings and land is established through rights. Land administration is a system that administers these rights. Cadastre, land registry, land valuation and land use planning are the tools that carry out the functions of land administration. The system of land administration may be structured and practiced in many ways but the main purposes of its establishment are similar. Land administration organizations were traditionally developed to prepare land records for taxation purposes but modern land administration systems incorporate the issues of management and use of land for sustainable development.

The issues of economic aspects of land have been discussed in some theories related to economic development, land administration and security of land tenure. Land was considered as one of the major factors of production until the classical economic period. The role of property rights, transaction costs and institutions in the production process is recognised by economists especially after 1960s. Recent economic and development theories recognises land as a major factor of production and an ingredient for

development. Proper management of land is essential to tackle the global challenges of protecting the natural environment, improving the social situation for the poor and combating poverty.

The land administration theory asserts that a good land administration supports economic development by providing tenure security, generating revenue for the government and utilising capital from land which would otherwise remain hidden. Similarly, the land tenure theory establishes a positive relationship between tenure security and level of economic performance via increased incentives for more efficient land use and higher willingness and ability to invest. A combined assertion drawn from the analysis of these theories is that a proper administration of land increases production from land by ensuring tenure security, and generates revenue allowing the government more fund which may be used for development purposes. This assertion is not widely tested so far. On the other hand, findings from the empirical studies shows a positive role of land administration on economic development and some other establishes a positive relationship between land tenure security and economic performance, specifically, land related investment, income and agricultural production. However, some studies expresses doubt on the positive relationship between land tenure security and level of economic outcome. The findings from different parts of the world are not converged. Nevertheless, none of the studies have covered the cases of South Asian countries. This study seeks to fulfil the gap of knowledge in this field by answering five research questions outlined in Chapter One applying the methodology developed in the next chapter.

Chapter 3: Case Study Design and Research Methodology

3.1 Introduction

This chapter explains how this research is designed and implemented. It discusses the methodology and procedures applied. Research approaches and strategies of inquiry for social science research are discussed first. Then, a brief introduction to the selected cases and study areas of Nepal, Bangladesh and Thailand is presented. The next section describes the procedures for field study including the preparatory works of logistical arrangements, initial meetings and pilot studies. It also discusses the procedures applied for collection, recording, management, presentation, analysis and interpretation of data. This section also discusses the units of analysis and measurement of variables. Finally, the issues of research quality and ethical issues are reflected on, and the limitations of the field studies are identified.

3.2 Research Approach and Strategy of Inquiry

Knowledge comes either from existing theory or empirical studies. Observation and explanation are two basic elements of sociological research. De Vaus (2002:9) states, "The development of good explanations involves two related processes: theory construction and theory testing. These two processes are not alternative ways of arriving at good theories but represent two stages with different starting points."

Theory construction begins with the collection of facts or observations and then generates a theory based on the facts whereas theory-testing starts with a theory, deduces a hypothesis from it and tests the hypothesis against the facts. In the words of de Vaus (2001:5), "Theory building is a process in which research begins with observations and uses inductive reasoning to derive a theory from these observations." He further argues, "[...] a theory testing approach begins with a theory and uses that theory to guide which observations to make: it moves from general to particular" (p.6). Usually, the quantitative researches adopt the deductive reasoning or theory verification approach and the qualitative researches adopt the inductive reasoning or theory development

approach. However, it is rare to purely construct or test a theory. In the words of de Vaus (2002:10), “In practice, there is a constant interplay between constructing theories and testing them. Rarely we are purely constructing a theory or purely testing a theory.” Thus, theory testing and theory building are both part of an ongoing process.

There are diverse views regarding the epistemological issues concerned with the question of whether the social world can be or should be studied in the similar way of natural sciences. Positivism is an epistemological position that advocates the application of the methods of the natural sciences to the study of social reality and beyond (Bryman, 2008:13; 2004:11). It embraces the methods and techniques of enquiry similar to that of natural sciences, such as surveys and experiments, and entails the conviction that valid knowledge can be obtained from the facts objectively through the application of rigorous scientific research methods (Bryman, 1988). In contrast, interpretivism is based on social research focusing on how people perceive and understand their own actions and world, and seeks to explore the deeper understandings possible from these perspectives (Travers, 2001). This approach is associated with qualitative research. There is another paradigm called pragmatism, which can be used in mixed method researches. Creswell (2009:10) states that pragmatism arises out of actions, situations, and consequences rather than antecedent conditions in which the researchers emphasise the research problem and use all approaches available to understand the problem instead of focusing just on methods. He further argues that it opens the door to multiple methods, different worldviews, and different assumptions, as well as different forms of data collection and analysis for the mixed methods researcher.

Research can be classified into three categories: quantitative, qualitative and mixed method research. The quantitative approach assumes that knowledge can be objectively measured and involves the testing of known theories against hard empirical evidence with the help of statistical procedures (Bryman, 2008; Creswell, 2009). It uses statistical processes and produces quantifiable, strong, objective and reliable results that can be generalised from the sample to the larger population (Cagdas and Stubjkaer, 2009). From the qualitative approach, reality can be understood by studying people’s beliefs, perceptions and reactions to various situations (Neuman, 2007). Qualitative research refers to the meanings, concepts, definitions, characteristics, metaphors, symbols, and

descriptions of things; in contrast, quantitative research refers to counts and measures of things (Berg, 2004:3).

Qualitative and quantitative both methods may have weaknesses when used alone (Geist and Lahman, 2008). Recognising that all methods have limitations, researchers felt that biases inherent in any single method could neutralise or cancel the biases of other methods (Creswell, 2009:14). Methodological triangulation reduces such biases. Nachmias and Nachmias (1996:206) state that researchers can minimise the degree of specificity of certain methods to particular bodies of knowledge by using two or more methods of data collection to test hypotheses and measure variables, and consider it as the essence of triangulation. The mixed methods approach uses both qualitative and quantitative approaches and thereby reduces the weaknesses. As stated by Creswell and Clark (2007), it involves the use of both approaches in tandem so that the overall strength of a study is greater than either qualitative or quantitative research alone.

Both quantitative and qualitative approaches are applied in the field of land administration. As observed by Cagdas and Stubjkaer (2009), the quantitative approach is appropriate for research in the field of cadastral development which aims to investigate the correlations between variables or studied phenomena, whereas the qualitative approach is more appropriate for researchers who aim to explore and understand the nature of the phenomenon being studied. This research aims to establish the correlation between studied phenomena and study its nature as well. Similarly, the first and second research questions posed in Chapter One require more descriptive explanations and can be answered from qualitative data whereas quantitative are required to answer the third research question and both qualitative and quantitative data to answer the fourth and fifth research question. Thus, a mixed method approach is applied in this research.

There are several ways of doing social science research. Surveying and experimental researches are commonly used strategies of inquiry in quantitative research whereas ethnography, grounded theory, case studies, phenomenological research and narrative research are some strategies widely applied in qualitative research (Creswell, 2009). Yin (2003) classifies strategies of inquiries of social science research into five categories: case study, experiments, surveys, histories, and the analysis of archival information. He states

that three conditions consisting of the type of research question posed, the extent of control an investigator has over actual behavioural events, and the degree of focus on contemporary as opposed to historical events distinguish the strategies of inquiry. These conditions should be considered while selecting the strategies. Relevant situations for different research strategies proposed by Yin (2003) are shown in Table 3-1.

Table 3-1: Relevant situations for different research strategies

Strategy	Form of Research Questions	Requires Control of Behavioural Events	Focuses 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 (2003:5)

The main research questions posed in this study are of the 'how' and ’what’ type. This study focuses on contemporary events and does not require control of behavioural events. Situational factors are appropriate to a case study strategy. Case studies can be applied in both quantitative as well as qualitative research. Bryman (2008:52) argues:

> “There is a tendency to associate case studies with qualitative research, but such identification is not appropriate. It is certainly true that exponents of the case study design often favour qualitative methods, [...] however, case studies are frequently sites for the employment of both quantitative and qualitative research.”

Case study is a strategy for doing research that involves an empirical investigation of a particular contemporary phenomenon within its real life context using multiple sources of evidence (Yin, 1994). As stated by Bott (2006), it provides in-depth examination of entities that seeks further theoretical understanding and practical knowledge of some phenomena. Similarly, Creswell (2009) states that in a case study the researcher explores in depth the programme, event, activity, or process, of one or more individuals. Thus, a

case study strategy is applied in this research in order to understand some phenomena in depth.

The case study strategy has been increasingly used as a research tool (Yin, 2003:2). It is widely used in the field of land administration research (for example, Zevenbergen, 2002; Nkwae, 2006; Rakai, 2005; Silva, 2005). In the words of Williamson and Fourie (1998:2), “The studies, reviews, or investigations undertaken to date by consultants such as land surveyors, lawyers, and others working in the area of cadastral reform have often been termed case studies”.

This study has adopted case study and survey as a strategy of inquiry. The survey strategy is embedded within the case study. Yin (2003) points out the possibility of a quantitative case study and a combination of survey and case study in a single research task. In his words, “Case studies can include and even be limited to quantitative evidence" (p.14) and "you can use multiple strategies in any given study (e.g., a survey within a case study or a case study within a survey)" (p.9). He further argues, “When an embedded design is used, each individual case study may in fact include the collection and analysis of highly quantitative data, including the use of surveys within each case” (p.53).

In this research, the land administration system of Nepal, Bangladesh and Thailand are the main cases and the property formalisation programme of Chulachuli, Nepal, surveying settlement programme of Gharinda, Bangladesh and the land titling programme of Thailand are the embedded cases. Both qualitative and quantitative data are required to answer the research questions posed in this research. It seeks to answer questions about the extent of land use and land-related economic activities promoted by land administration, relationship of tenure security with land value, investment and income and effectiveness of land administration services in revenue generation, which requires the information on the changes caused by the land administration activities at the household level. Thus, selection of multiple case studies having embedded cases indicates that the survey within case study strategy is appropriate for this study.

Case study is often criticised for its lack of generalisability. The conclusions made from the findings from a single case may not be applicable in other cases. Being aware of those

limitations, this study does not aim to generalise the findings but to contribute to the contemporary knowledge about the role of land administration on economic development in the selected countries. The main research question of this research is how does land administration support economic development. This research question is answered from the case studies of Nepal and Bangladesh as there is lack of researches that cover these issues. Both Nepal and Bangladesh are least developing countries where the livelihood of a vast majority of people is related to land. Moreover, recently launched land registration programme in both countries has made possible to answer the research questions posed in Chapter One. The case study of Thailand provides information from the already completed research and gives an opportunity to throw light on those findings. It helps to compare the cases of Nepal and Bangladesh. Selection of multiple cases makes the study more robust and overcome from the limitations of case study approach.

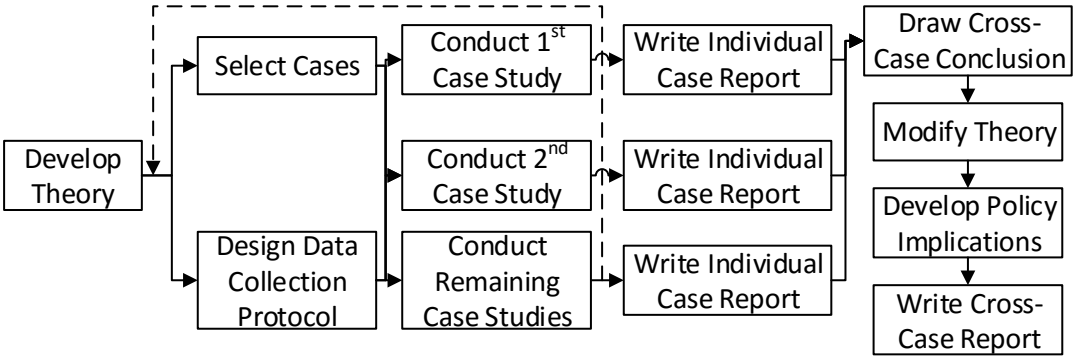
Questionnaires and interviews are usually used to collect both types of qualitative or quantitative data in survey research. As stated by Bryman (2008:43), survey research comprises a cross-sectional design in relation to which data are collected, predominantly by questionnaire or by structured interview, on more than one case and at a single point in time in order to collect a body of quantitative or quantifiable data in connection with two or more variables which are then examined to detect patterns of association. Similarly, Robson (2002:230) presents three typical central features of surveys: the use of a fixed, quantitative design, the collection of a small amount of data in standardised data form from a relatively large number of individuals, and the selection of representative samples of individuals from known populations.

The field of investigation consists of setting and case study. The setting is a named context in which phenomena occur that might be studied from any number of angles; a case is those phenomena seen from one particular theoretical angle (Hammersley and Atkinson, 1983). Williamson and Fourie (1998) describe that while studying a cadastral system, the entire cadastral system would be a setting and the case study would be a particular problem area being examined in more detail. They further state that a body of cadastral theory is already in place which needs to be recognised, interrogated, used, and further developed. It provides the general setting of the research, and the case study methodology would be a useful research method and tool for researchers to start doing

this. In this research, the theories and core concepts of land administration systems are reviewed and a theoretical framework is developed which provides the setting for the case studies. The practices of land administration in different parts of the world discussed in Chapter Two provide basis for the development of criteria to assess the effectiveness of land administration services. Similarly, the theoretical and empirical studies helped to develop the criteria to measure the variables.

The methodology applied in this research is presented in Figure 3-1. Theory development is the first step of the design phase. Yin (2003:28) emphasises the requirement of theory development as part of the design phase for case studies whether the ensuing case study's purpose is to develop or test theory. The theory is developed and a conceptual framework is prepared based on the body of literature in the first and second chapters. After that the cases are selected and data collection protocols are designed followed by conducting individual case studies and writing individual case reports. Then cross-case analysis is carried and conclusions are drawn. The theory developed originally is revisited and modified and some policy implications of the study are developed. The research process concluded after writing a cross-case report.

Figure 3-1: Case study method



Source: Adapted from Yin (2003:50)

3.3 Case Study Areas

As mentioned in Section 3.2 above, the land administration systems of Nepal, Bangladesh and Thailand are selected as the main case studies in this research. More specifically, the property formalisation programme of Chulachuli Village Development Committee (VDC)

in Nepal and the surveying settlement programme of Gharinda Union, Bangladesh provide the focus of the investigation. The research questions posed in this research seek to investigate the changes in land use, land value, investment and income promoted by land administration which may be analysed from the study of recently launched programme in those areas.

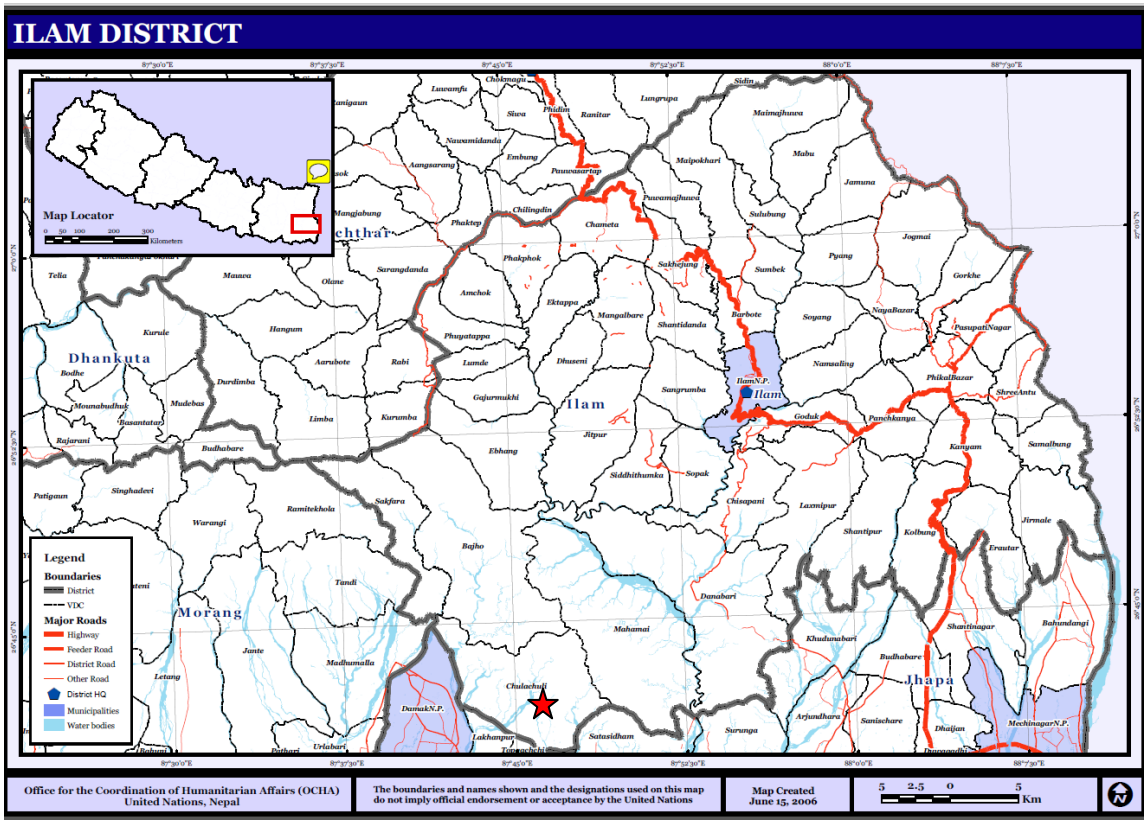
The land titling programme of Thailand is selected as it has been considered as one of the successful land titling projects contributing to agricultural production and the land market in Thailand. Information about the role of land titling in Thai economy collected from the secondary sources (for instance, studies by Feder et. al., 1988; AusAID, 2000) provides opportunity to compare these findings with the situation of Nepal and Bangladesh, specifically in case of third research question posed in this research. Since there is already some body of knowledge exist to address this research question in case of Thailand, household level data is not collected applying a slightly different approach for data collection. However, data required to answer other questions, especially to measure the effectiveness of land administration services are collected from Thailand too as there is a gap of research focusing this issue. Moreover, the selection of Thailand also makes possible to throw light on the lessons learnt from the land titling programme in the current scenario.

There are several reasons for selecting the case study areas. This research aims to assess the role of land administration in economic development so that a developing country where the role of land administration functions could be analysed would be an obvious candidate. Both Nepal and Bangladesh are developing countries in which there are some areas where land administration activities have been carried out recently. Most of the people in both countries still depend on agriculture for their livelihood. Also, the agriculture sector is one of the main contributors to their national economy. Nepal and Bangladesh are in the same geographic region and are in a similar position of economic development. Furthermore, the origin of the land administration systems in Nepal and Bangladesh is similar and both countries are adopting the deed registration system. Thus, the information collected from the study will provide the answer to the research questions posed in Chapter One.

Thailand is ahead of both Nepal and Bangladesh in terms of the level of economic development as well as the development of land administration. The contribution of agriculture sector is still significant to the Thai economy, which was promoted after the implementation of a twenty-year land titling programme between 1985 and 2004. It has adopted the title registration system which provides a guarantee of registered title, unlike in Nepal and Bangladesh. Whereas Thailand and Nepal are similarly ranked for property registration in the 'Doing Business Report' published by the World Bank (Nepal is 24th and Thailand is 29th), Bangladesh is in 177th position (World Bank, 2013). These differences between cases provide an opportunity to analyse the role of land administration in contrasting situations. Also, the study of multiple cases will provide more information and draw more robust conclusion.

Chulachuli VDC of Ilam district is selected as a study area in Nepal. Ilam district is situated on the eastern border of Nepal. Administratively, Ilam is divided into one municipality and 48 VDCs. The total area of Chulachuli VDC is 77.82 square kilometres. It lies in the south-western part of Ilam and is bordered by Mahamai VDC to the east, Mahamai and Bajho VDCs to the north and Jhapa district to the west and south (Map 3-1).

Map 3-1: Map of Chulachuli VDC, Ilam, Nepal



Source: UNNIP[2] (2014)

Land surveying in Nepal was initiated from the beginning of the 20th century. However, the systematic surveying and adjudication of land began only after the enactment of the Land (Survey and Measurement) Act, 1963 and was completed in 2000. However, there are still some informal settlement areas where land is yet to be formalised. The case of property formalisation in Chulachuli VDC is selected for study in this research as it was the only settlement recently formalised having a large population (around five thousand land owners). It is suitable for analysing the changes in land rights, land value, investment and income from land administration activities to answer the questions posed in this research.

Cadastral surveying and land adjudication work in Chulachuli began in the 1970s. In the meantime, the government declared the creation of a green-belt in the Chulachuli area and planned to evacuate the settlement from BS[3] 2035 [1978/79]. The government

[2]United Nations Nepal International Platform

[3] Bikram Sambat a calendar system practiced in Nepal; ahead of 56 year, 8 months 15 days than AD

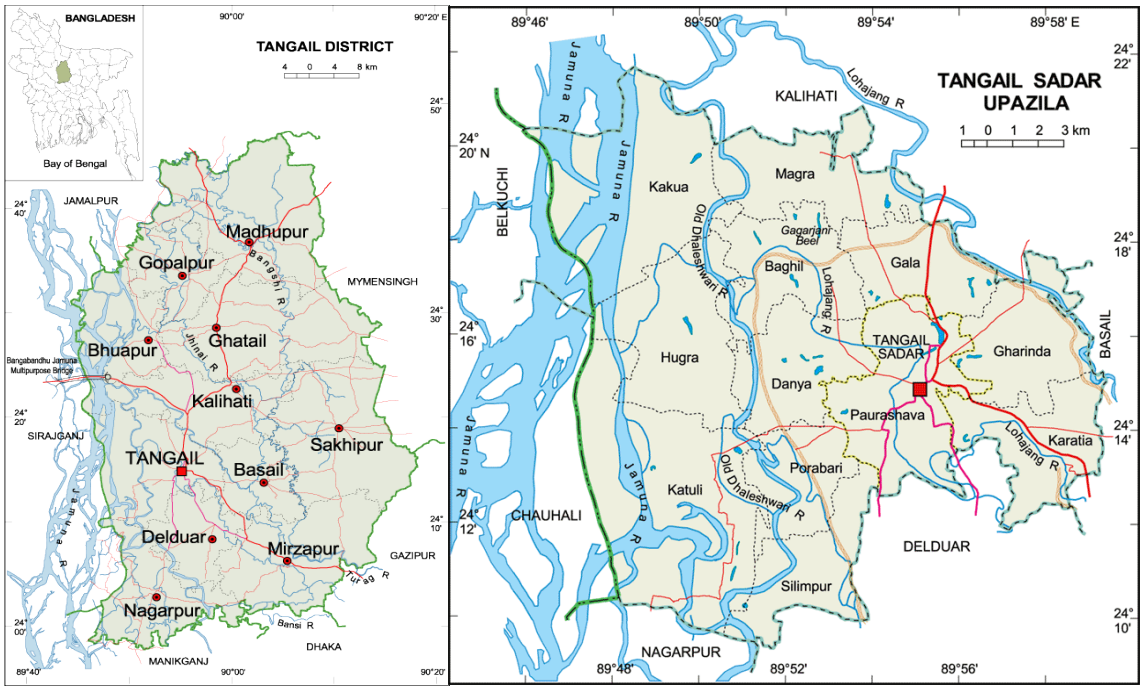
offered some areas of land in Prithvi Nagar, Kechana, Satasi and Jhiljhile of Jhapa and Pathari and in the Shanishchare area of Morang district. The tenants were offered up to one and a half *bigha*[4] and the landowners were offered up to four *bigha* of land as compensation, but landowners with more than four *bigha* of land were offered cash compensation for the additional land above four *bigha* (CAISPSC, 2010). Sixteen commissions were formed up until 1990 to carry out the resettlement work but all efforts were in vain. The task of resettlement remained incomplete for several reasons. The problems identified by the government included (a) some households and tenants could not get compensation; (b) some households did not leave their land and resettle in another area; (c) some households disagreed with the amount of land offered as compensation; (d) some households got the compensation but did not evacuate the original land; (e) some households left their original land but could not get land in the proposed area as it was already occupied by someone else; (f) in the meantime, people coming from other parts of the region occupied some land in the proposed resettlement area and because of this the households which had evacuated their land in Chulachuli could not settle there; and (g) more people migrating from hilly districts occupied the government land in Chulachuli area (ibid). In this way, the problem of evacuation and resettlement became complex and a source of conflict with the government.

The policy of the government changed after the restoration of democracy in 1990. The democratic government abandoned the idea of creating a green-belt and began to restore the rights of the people to their original land. Seven commissions were formed between 1990 and 2007 but the problem was solved only after the formation of the 23rd commission called the Chulachuli Area Informal Settlement Problem Solving Committee (CAISPSC) in 2007. According to the progress report published by the committee, 5,152 people from Ward Numbers 1 to 8 have applied to register land, 4,918 of them were successful, 3,943 title certificates were prepared and 3,815 landowners had collected their certificates by mid-July, 2010 (CAISPSC, 2010).

[4] A land measurement unit comprising 6,772.63 square meter in Nepal and 1,337.8 square meter in Bangladesh; 20 kattha

In Bangladesh, Gharinda Union of Tangail district is selected as a study area. Tangail is a district of the Dhaka Division and consists of 11 *upazilas*[5], eight municipalities, 72 wards, 211 *mahallas*[6], 103 *union parishads*[7]and 2,431 villages (Bangladesh Bureau of Statistics, 2011). Its area is 3,424 square kilometres. The selected study area is Suruj Village in Gharinda Union of Tangail Sadar Upazila (Map 3-2). The total number of household in the Gharinda Union was 5,867 and the total population was 28,315 according to the Population Census, 2001. The total number of households of Suruj village was 878 as per the information provided by the union office during the field study.

Map 3-2: Map of Bagladesh and Tangail sub-district showing the case study area



Source: Maps of Bangladesh (2014) (left); Islam (2014) (right)

The land tenure system of Bangladesh is mainly based on permanent settlement originated during the British period. Various Acts and Rules proclaimed during and after British rule shaped the rights to land of *zamindars*[8] and tenants. Surveying settlement and revisional settlement operations are the processes for creating cadastral maps. As

[5] A geopolitical subdivision of a district; a collection of *mouzas*
[6] An optional and non-elective unit of a city or municipal corporation, for ritual and representative purposes
[7] A geopolitical subdivision of a sub-district
[8] An individual responsible for land-tax collection at the village level; landlord

described by NORC (2009), these operations normally follow the process of systematic land titling or adjudication. It also states that surveying settlement (or land settlement) is the act of surveying and creating the initial cadastral map, and the revisional settlement is the activity of resurveying settled areas to reflect changes since settlement. The revisional settlement operations are done to update the existing cadastral records.

The process of land settlement or revisional settlement substantially follows typical practice for land settlement activities often known as systematic titling or systematic adjudication of titles in many countries. The surveying and settlement operations defined the rights and obligations of *zamindar*s and *raiyats*[9] according to the East Bengal Tenancy Act, 1885 (Hussain, 2012). This Act settled the general principles by which the relationship between landlord and tenant was regulated (Kabir, 1969:13).

Various settlement operations were carried in order to update the changes of land use and ownership. These operations were carried out sporadically at the beginning. The district-wide surveying and settlement operations were conducted in three different stages. As described by Hussain (2012), the first cycle began in 1888/89 and was completed with the settlement of Dinajpur district during 1934-40. The second cycle began with the settlement in Chittagong district in between 1923 and 1933. It was called a revisional settlement and was undertaken on the basis of cadastral maps and records. The state acquisition settlement operations were carried out after the proclamation of the East Bengal State Acquisition and Tenancy Act, 1950. Another settlement operation was launched between 1965 and 1978.

A new phase of settlement operation called zonal settlement was commenced in 1984. As described by Hussain (2012), the operation was planned to be carried out in the entire country simultaneously with 22 district headquarters working as operational centres. According to him, ten zones were initially selected for operations but it was found to be difficult to run the programme even in ten districts due to the constraints of budget and technical manpower. The full phase operation was carried out only in five districts, namely, Comilla, Mymensingh, Tangail, Rangpur and Bogra. Tangail was selected

[9] Cultivators; subject of the state

randomly out of the five districts. After selection of the district, the sub-district, union and village were selected randomly using the lottery method.

The land administration system of Thailand, specifically the land titling programme, is selected for background study as it is considered to be one of the successful land titling programme, having positive economic impact. A twenty-year project was implemented throughout the country between 1985 and 2004. The main objectives of the land titling project were to provide secure land tenure to eligible landowners, develop the long term sustainability of the Department of Lands institutional capacity, improve land administration service delivery, and to develop an effective national property valuation function (World Bank, 2003). The progress of the land titling project and its effect on revenue generation and agricultural production is discussed using data collected from secondary sources.

The process of land registration in Thailand is also studied in this research. A Provincial Land Office in Nonthaburi province, Pak Kret was selected for observation after consultation with the officials of the Department of Lands. The map of Thailand highlighting Nonthaburi province is presented in Map 3-3.

Map 3-3: Map of Thailand showing Nonthaburi Province, Thailand

Source: Wikipedia (2014)

The structure of the individual case study reports is the same and contains two basic themes: economic impact of tenure security and the effectiveness of land administration services. The case study reports of Nepal and Bangladesh are presented in the same chapter in order to avoid duplication and to provide an opportunity to discuss issues thematically rather than on a country-by-country basis.

3.4 Field Study Procedures

3.4.1 Logistical Arrangement, Initial Meetings and Preparation

Empirical field studies in Nepal and Bangladesh were carried out between December 2011 and April 2012. The case study area of Nepal was selected randomly based on the available information before going to the field and that of Bangladesh was selected after consultation with the land professionals in Dhaka. Ethical clearance was also obtained

from the University of Reading's Research Ethics Committee. The field-work in Bangkok was carried out in September 2012. The Department of Lands and the Provincial Land Office, Nonthaburi were visited during this field-work.

A letter requesting support for the field-work was handed over to all concerned organisations from all three countries visited during the field work. Government officers of the concerned ministries, departments and local land registration offices were informed about the research before starting the data collection process.

Logistical arrangements for the field work in Nepal became easier than in the other countries since it is the home country of the researcher, and many officers working under the Ministry of Land Reform and Management (MOLRM) were known to him. The officers of the ministry provided information about property formalisation in Nepal and helped to identify the probable case study areas. They also provided contact information for the officers involved in the property formalisation process in Chulachuli, Ilam. Member Secretary of the CAISPSC was contacted first who provided some contact information for the committee members. Local friends of the researcher assisted in every aspect of arrangements for the field-work including finding accommodation, hiring research assistants and surveyors, printing questionnaires and buying logistics. The research assistant and local surveyors also assisted in preparing and conducting the survey and travelling to the study area.

At the beginning of the field-work, information about the property formalisation programme was collected from the Land Administration Section of the MOLRM. Consultations with the officials of the MOLRM, Member Secretary of CAISPSC, local Land Revenue Officer, local land rights activists and social workers helped to know about the case and revise the survey questionnaire. Information about the distribution of land and the list of people acquiring land was obtained from the local land offices. A list of key respondents for semi-structured interviews was prepared and finalised after consultation with the supervisor.

In Bangladesh, Mr. Masud Ibn Rahman, Head of the Department of Real Estate, Daffodil International University, Dhaka, was contacted before going to the field. The Henley

Business School asked him for his support during the field-work. Mr. Rahman supported in each and every step of the field-work, including finding a translator and a field work assistant, providing information about the land administration system of Bangladesh, and providing contact information for the people working in the government as well as the non-governmental sector. The University also offered office space, access to their library, photocopying and internet facilities to the researcher. Research assistant, translator and few Nepali students living in Dhaka provided full support in travelling and finding accommodation.

The fieldwork in Bangladesh began with the discussion with Mr. Masud Ibn Rahaman and Mr. Shamshul Huda, Executive Director of Association of Land Reform and Development, soon after arriving in Dhaka. The meeting was scheduled via email before leaving for the field-work. They provided background information about the land administration system and contact information for some key people involved in the land rights movement and land administration profession in Bangladesh. Discussion with the District Registrar, Land Registry Office, Dhaka, Prof. Dr. Mizanur Rahaman, Acting Director General, Department of Land Records and Survey and some officers of the local land offices in Tangail helped in understanding land administration and identifying probable study areas. Gharinda union, Tangail was selected randomly as a study area. The samples were collected from the Suruz villages of this union. A list of landowners living in the study area was collected from the local land office.

The field visit in Thailand was shorter than in Nepal and Bangladesh since the main purpose of the visit was to collect secondary data about the land titling project. A friend of the researcher from Reading, UK helped to book accommodation and provided contact information of his colleagues in Bangkok. Likewise, one of the colleagues of the researcher from Bangkok helped in organising the field-work, contacting land officers, scheduling interviews and collecting secondary data. A meeting with her as well as the Director of the Land Titling Project Office, Department of Lands, helped in listing the names of possible interviewees and the titles of available documents. Similarly, locally hired research assistant and translator assisted to carry out interviews, collect data and travelling around.

The questionnaires (Appendix 1), information sheets (Appendix 2) and consent forms (Appendix 3) were prepared in English first then translated and printed in local languages Nepali and Bengali. Four surveyors in Nepal and three in Bangladesh were selected to administer the survey questionnaires. Orientation programmes were organised in both countries to train the surveyors in conducting surveys.

Pilot studies were carried out in both Nepal and Bangladesh in order to test the structure and content of the survey questions so that they represent the real situation and can be administered easily. They were tested with a few of the respondents selected randomly from the respective study areas of Nepal and Bangladesh. The contents of the survey questions in Bangladesh were modified slightly in order to incorporate the land tenure system and land value in Bangladesh. The questions were then revised and finalised; however, there was no significant change in the original questions posed by the researcher. The pilot study helped to identify whether the survey questions could be administered properly or not.

A checklist of key issues for interview as presented in Appendix 4 was also prepared for each category of respondents. A mock interview was carried out with one of the colleagues of the researcher in Kathmandu before starting the real interviews. Appointments were made in advance with all discussants and interviewees via telephone or email before visiting their offices.

3.4.2 Data Collection

There are many methods of data collection in social science research. Selection of data collection methods depends on several criteria. Observation, interview, questionnaire and documentation are the commonly used methods. Yin (2003) classifies sources of evidence most commonly used in doing case studies into six categories: documentation, archival records, interviews, direct observations, participant observation and physical artefacts.

Selection of a data collection method depends primarily on the type of research questions. The nature of required data, type of respondents and the circumstances of data collection can also affect the choice of methods. Robson (2002:223) states, “The

selection of method or methods is based on what kind of information is sought, from whom under what circumstances". He prescribes some simple rules of thumb for selecting methods as to (a) find out what people do in public, use direct observation, (b) find out what they do in private, use interviews or questionnaires, (c) find out what they think, feel and/or believe, use interviews, questionnaires or attitude scales, and (d) to determine their abilities, or measure their intelligence or personality, use standard tests.

Using different tools to collect data from a variety of informants creates multiple sources of evidence, forming a source of triangulation and the assessment of information from different perspectives (Arko-Adjei, 2011). Yin (2003:98) also argues, "[...] the most important advantage presented by using multiple sources of evidence is the development of converging lines of inquiry, a process of triangulation […]." He further states that triangulation increases the reliability of the data and the process of gathering it. Thus, collection of multiple sources of evidence using multiple techniques will increase the reliability of this research. Based on the nature of the study and the answers sought, the multiple techniques of data collection that are applied in this research are discussed below.

Documentation

Documents can provide large amounts of data in research. As argued by Stapsford and Jupp (1996:138), existing sources are also important sources for research that can work both as main and supplementary sources. Similarly, Robson (2002:349) states, "[Documents] can provide valuable cross-validation of other measures, either in support or disconfirmation of them". They can be important in triangulation, especially in case studies (Punch, 1998). Thus, various documentary data collected from various sources are analysed in this research.

In order to analyse the practices of land administration and land tenure of the selected countries, the respective land laws, government decisions, libraries and online sources, together with reports of the land administration organisations were reviewed. The minutes of the CAISPSC and records of the local government organisations were also consulted to identify the status of land ownership. Likewise, publications of finance

ministries, central banks and national statistical offices were reviewed which provided information on revenue and the gross domestic product.

Reviewing these documents helped the researcher to familiarise himself with existing practices and case studies. The data collected from these sources are used as both main and supplementary evidence.

Questionnaire

The questionnaire is a method of data collection used in survey research. Surveys include cross-sectional and longitudinal studies using questionnaires or structured interviews for data collection (Babbie, 1990). According to Robson (2002:236), most surveys involve the use of a questionnaire. He classifies the ways of administering questionnaires into three categories: self-completion questionnaires, face-to-face interviews and telephone interviews. The face-to-face interview technique was adopted to administer survey questionnaires. Application of the self-completion questionnaire technique was not possible to apply in this research because of the chances of having illiterate respondents, misunderstandings of questions and a low response rate. Likewise, the telephone inquiry was also not suitable for this study because many respondents did not have a telephone. Other techniques like internet and postal surveys were not possible as either there was no internet access or the respondents were not familiar with computers. Thus, the face-to-face interview was the only method suitable for this research in which the interviewer had the chance to describe the research, clarify questions and encourage the participants to respond'.

Structured questionnaires as shown in Appendix 1 were employed to acquire information from the landowners of the case study areas of Nepal and Bangladesh. In Nepal, Land Ownership Certificates were prepared in the names of 3,943 land owners from Ward Numbers 1 to 8 of Chulachuli VDC (CAISPSC, 2010). They are considered as the population of this study. The list of the landowners was prepared based on the decision made by the CAISPSC, and was further verified with the records of the Land Revenue Office, Ilam. Only 395 samples were selected using a systematic random sampling method. A list of all landowners was prepared and a number was assigned to each of them. Then a number was selected randomly from lottery method. Including that number, each of the tenth

number was selected for surveying. Out of these, 381 respondents took part in the survey but the remaining 14 of the chosen respondents could not be contacted even at the second attempt.

In Bangladesh, Suruj village of Gharinda Union, Tangail was selected for the case study. The surveying settlement operation in Tangail was completed in 2009. According to the record provided by the Union office, the total population of this village is 4,448 and the total number of households is 878. Out of them, 440 households were selected using a systematic random sampling method from the list provided by the Union office following the same procedure as in case of Nepal explained in above paragraph. The questionnaires were administered to 403 respondents but the remaining 37 respondents could not be contacted even at the second attempt. The questionnaire was revised after discussing with the experts and reviewing information collected from the land offices. Pilot studies were carried out in the case study areas of both countries. The questionnaire was finalised after incorporating the feedback.

The information sought from the respondents includes general information about their property, their feelings about the benefits of land registration, and the role of different agencies in providing land tenure security. The respondents were also asked to provide information about the realisation of land rights and associated risks on land they have before and after registration. Moreover, they were asked about the differences they observed before and after registration in terms of land use, investment, sources of investment, interest rates, annual income, and the land value. The information sought from them regarding land administration services included the purpose of their visit to local land offices and time taken to accomplish their tasks, evaluation of services, transaction costs and the role of land offices in providing land tenure security.

The field-work in Nepal was conducted between December 2011 and January 2012. Four surveyors were selected from four different areas of Chulachuli VDC in order to administer the survey questionnaires. One of them was a university student who had some theoretical knowledge of data collection. The rest had already been involved in administering survey questionnaires during the national population census. An orientation programme was organised by the researcher to train the surveyors about the

surveying procedure and the ethical issues they have to consider while conducting the survey. The ethical issues include taking consent, explaining the procedure and purpose of the survey, uses and storage of data and procedure of approaching and responding to the respondents, and getting their consent to fill up the questionnaire. The research assistant provided logistical support to the surveyors and supervised and monitored their work.

A timetable for administering the survey questionnaire was prepared based on the availability of the time of the surveyor and the possibilities of finding the respondents at home. At the start the researcher accompanied the surveyors. The information sheet was handed to all the respondents and was explained by the surveyor. The respondents were also informed that they could stop the survey at any time if they did not wish to continue. All the respondents were requested to sign the consent form (Appendix 3) to indicate their agreement. The survey was conducted only if they agreed to participate and signed the consent form. Altogether 381 questionnaires were completed but the other 14 respondents had left home for employment, internal migration or study purposes and could not be contacted. The houses of the absent respondents were visited at least one more time for follow up. Snapshots of the administration of survey questionnaires in Chulachuli are presented in Photo 3-1.

Photo 3-1: Administering survey questionnaires in Chulachuli, Nepal

In Bangladesh, three local surveyors were involved in the survey. They were recruited from the study area based on their education and previous experience in surveys. A field assistant and a research assistant were also involved in logistical arrangements, supervision and monitoring of the survey which was conducted in March 2012.

Semi-structured questionnaires were also used to collect data from the mortgage banks and financial institutions in Nepal. Nine out of 78 banks and finance companies based in Kathmandu and two from Ilam were selected from the list provided by the central bank randomly using a lottery method of random sampling as all of them provide mortgage against land as a collateral. The respondents were mainly the credit officers, managers or supervisors working in the credit section and involved in the process of mortgage registration. The semi-structured questionnaires were administered by the researcher following the same process as in the survey questionnaires. The information sheet was handed over and a written consent was obtained from the respondents.

Interview, Discussion and Seminar

The interview is the most widely employed technique for data collection in qualitative research. It can be used as a primary or only approach in a study, as in a survey or in

grounded theory studies, or in combination with other methods in a multi-method approach (Robson, 2002:270). Interviews are main sources of evidence in case study research since they study human actions and require personal views. Yin (2014:113) observes, “Interviews are essential sources of case study evidence because most case studies are about human affairs or actions.” He further states that interviews can also be employed if the researcher is interested in an interviewee’s personal view (for example, opinions, attitudes and meanings).

Interviews can be classified in many ways. A commonly used typology distinguishes between structured, semi-structured and unstructured interviews based on the degree of structure or standardisation of the interview (Robson, 2002:270-71). A semi-structured interview can be applied when the researcher wants rich and detailed information with a greater interest in the interviewee’s point of view (Bryman, 2004).

In this research, a semi-structured interview was employed to acquire in-depth information from key informants including senior members of the association of housing and real estate agencies, land rights activists, senior officials of the land ministries and academics (Appendix 5). A checklist of key issues and predetermined questions was prepared, as shown in Appendix 4, to make sure that all relevant issues were covered during interview. The order and wording of the questions were modified as required in order to maintain the sequence of the discussion and incorporate the likelihood of the interviewees omitting inappropriate questions and including additional ones.

The interviews were conducted according to the interview protocol presented in Appendix 6. At the beginning, the interviewees were informed about the purpose and procedure of the interview by handing over an information sheet and were asked to sign a consent form. The interviews were recorded only if a written consent for recording was obtained from the interviewee. The main points expressed by the interviewee were also noted down by the researcher during the interview.

Informal interview is also a type of data collection technique. Robson (2002:282) describes in this technique how the researcher takes an opportunity as it arises to have a chat with someone in the research setting about any relevant thing. He further observes

that this technique is not by itself appropriate as a data collection method but can be used in conjunction with other methods.

Informal interview and discussion helped to widen knowledge about the status of land administration services and their role in the economy. Discussions were held with the officers of the central banks and commercial banks, local land offices and higher-level government officials, service seekers of the land registries and land owners of the study areas. Discussants seemed more open to talk about the weaknesses of land administration organisations in an informal discussion.

Telephone enquiries and email correspondence were also conducted with some land professionals. Some discussants were also invited for tea, coffee or a meal while some others were visited in the meeting room of their own office.

The researcher was invited as a speaker in a seminar organised by the Real Estate Department, Daffodil International University in Dhaka. A paper entitled 'Land administration and economic development: perspectives of Bangladesh and Nepal' was presented by the researcher. A glimpse of the programme is shown in Photo 3-2.

Photo 3-2: Participating in a seminar organised by Daffodil University, Dhaka

Participants of the seminar were allowed to pose questions at the end of the presentation. Issues raised by them and their feedback were noted by the researcher.

Observation and Field Notes

Observation is a direct technique of data collection in which the researcher does not ask people about their views, feelings or attitudes but watches what they do and listens to what they say (Robson, 2002:310). Creswell (2003:186) classifies observation techniques

into four categories: complete participant, observer as participant, participant as observer and complete observer.

A complete observer type of observation technique was employed in this research to acquire first-hand knowledge about the land registration practices of the selected countries. Land Revenue Office, Ilam (Nepal) and Sub- Registry Office, Tangail (Bangladesh) were visited by the researcher to observe the process of land registration. In Thailand, the Pak Kret Provincial Land Office in Nunthaburi province was visited which is one of the land offices where the land records are digitised and the services are computerised. Observation was also carried out in the study are to get some idea about the land use and land related economic activities. An observation protocol as shown in Appendix 7 was prepared and used during observation.

Field notes are also a source of evidence which help in recording the feelings and initial reflections of the researcher from direct observation and experience. Bryman (2004) suggests researchers to take notes to record their observations, feelings and initial reflections on particular events. Field notes are also required if the interviewee or discussants decline to record the interview or informal discussions. As stated by Denscombe (2003), the researchers need to rely on field notes when the interviewees decline to record the interviewees or discussions.

Field notes may be classified as jottings, diary, log and field notes (Bernard, 2000:357). In this research, a log was used to record daily plans, schedules and the expenditure details. Likewise, notes were used to record the feelings and reflections of the researchers as well as the important information delivered by the interviewees or the discussants. The logs were maintained daily whereas the notes were written down during discussions, interviews and observation. These logs and notes were written down in notebooks and were transcribed later. Separate notebooks were used for each case study.

To sum up, multiple techniques of data collection including documentation, questionnaire, interview and informal discussion, observation and field notes are employed in this research. However, the whole process of empirical data generation is led by the survey questionnaire and semi-structured interviews.

3.4.3 Data Recording and Management

The data collected from different sources were recorded separately. A code list of questionnaires was prepared and the data collected from the survey were transcribed directly in a quantitative software SPSS after returning from the field-work. Interviews with all of the key respondents were audio recorded since they happily agreed to record it. Interview notes were also taken during interviews. The interviews went smoothly and none of the respondents asked the researcher to stop recording. Verbatim records of recorded interviews were prepared using a digital audio transcription foot pedal. Informal interviews and discussions conducted with the government and bank officials were not voice-recorded as they did not want to record their voices and felt more open to talk when it was unrecorded. The researcher took notes during all of those interviews and discussions, however. The notes taken during interviews, discussions and observation and all of the handwritten material were transcribed daily, edited and stored in a Case Study Database.

The data and information collected from secondary sources were also recorded in the database. Printed and handwritten documents were typed up or scanned and kept in separate folders. Electronic files of the secondary data were also kept separately. The files were named clearly so that the content of the file is known.

All of the information and data were kept in the database and multiple copies of the database were prepared and kept in separate computers at the office, at home and on an external hard-drive. The hardcopies of the documents were also stored securely. Data was saved in cloud sources including Drop-box and Google Drive as well.

3.4.4 Data Presentation, Analysis and Interpretation

This is an explanatory multiple case study research applying a mixed method approach. Both quantitative and qualitative data were collected in this research. The quantitative data were collected from survey and government documents. The data collected from the rest of the sources are qualitative.

Selection of data analysis technique is one of the most difficult parts in a case study. Robson (2002:473) states that a case study does not call for a particular approach to the

analysis of the qualitative data that it produces. Yin (2003) also argues that the analysis of case study evidence is one of the least developed and most difficult aspects of doing case studies. He proposes three general strategies for analysing case study evidence as relying on theoretical propositions, setting up a framework based on rival explanations, and developing case descriptions that can be used in practising five specific techniques: pattern matching, explanation building, time-series analysis, logic-models, and cross-case analysis. There are other techniques of analysing qualitative and quantitative data. Techniques used to analyse different forms of data are discussed below.

Quantitative data collected from survey are analysed using statistical techniques. The data were collected using structured questionnaires. A code list of the questionnaires was prepared and then the data were entered into SPSS manually. The variables were defined in the 'Variable View' window first and then the data were entered in the 'Data View' window. Each column in the 'Data View' window represents a variable and each row represents a record or case. The data were double checked with help from one of the friends of the researcher to avoid errors while inputting. Separate case study reports are prepared for each case study.

The questionnaire contains four types of variables: interval or ratio, ordinal, nominal and dichotomous. Frequency tables and bar charts are used to analyse the individual variable. Similarly, contingency tables are used to analyse bivariate analysis and correlation, regression and paired sample t-tests for multivariate analysis based on the nature of variables. The significance of the test was measured to a one per cent level of significance.

Content analysis is a method applied to analyse qualitative data. It is an approach to the analysis of documents and texts that seeks to quantify content in terms of predetermined categories and in a systematic and replicable manner (Bryman, 2008:275). It involves searching for underlying themes in the text material that contain information contributing to a particular theme of the research (Gibbs, 2002). Robson (2002:352-357) suggests six steps to carry out the content analysis: start with the research question, decide on a sampling strategy, define the recording unit, construct categories for analysis, test the coding on samples of text and assess reliability, and carry out the analysis.

Computer-assisted qualitative data analysis software called NVivo 9 produced by QSR (Software for Qualitative Research) International was used to analyse the qualitative data. A new project called 'Research Project' was created. Then the document containing data collected from interview, observation, discussion and field notes were transcribed into plain text format and imported to the project. The data collected from secondary sources were coded manually.

The content analysis was undertaken after coding the text. The coding was carried out by applying nodes to segments of text and the text units were selected as paragraph. The text was coded and text units were assigned names to reflect the content of the text. The codes applied were rights, risks, land use, land development, land value, credit, investment, production, income, revenue, registration procedure, time, costs, land record, land information, land valuation and employee efficiency, ethics and behaviour. These codes were structured under thirteen free nodes as rights, risks, land use and development, land value, credit, investment, production and income, revenue, registration, land record and information, land valuation, other services and employee efficiency and behaviour. These nodes were placed under nodes of specific categories namely, legal (or tenure security), economic and system which served as categories of analysis and also parent nodes. The nodes structured under legal or tenure security category were rights and risks. Similarly, land use and development, land value, credit, investment, production and income, and revenue nodes were structured under legal or tenure security category and registration, land record and information, land valuation, other services and employee efficiency and behaviour were organised under the system category. The nodes incorporated references to those portions of documents in which the code appears.

Data reduction and data display were considered as part of the analysis. Summarisation of field notes, coding and identification of themes and patterns, production of memos about codes and categories were the process involved. Then the coded materials and notes were used for thematic analysis and interpretation. The data saved under nodes were searched and compared using the NVivo search engine. The content analysis drew upon the research questions outlined in Chapter One. The analysis of data structured under the legal or tenure security category supported to answer the first research

question. Similarly, the analysis of data under the economic category supported to answer the second and third research question and that structured under the system category supported to answer fourth and fifth research question and also provided some answer to the second and third research questions.

The explanation building was done after content and statistical analysis as mentioned above in order to stipulate a presumed set of causal links about the studied phenomena. Thematic analysis was also carried out. Case study reports were developed from the thematic analysis and interpretation. The cross-case thematic analysis and interpretation was carried out by producing cross-case reports. The conclusions and recommendations were drawn based on the thematic interpretation.

3.4.5 Unit of Analysis and Measurement of Variables

A case is the unit of analysis (Lewis-Beck, 2007). The unit of analysis could be an individual, a group, an organisation or an event such as the implementation of an information system (Cagdas and Stubjkaer, 2009). The case study may contain more than one case and unit of analysis. The case study having more than one case is called a multiple-case design. If there are more than one units of analysis within a single case, it is called an embedded case study design (Yin, 2003).

The multiple case study approach is one of the most appropriate strategies for investigating systems containing more than one unit of analysis (Arko-Adjei, 2011:104). The evidence from multiple cases is often considered more compelling, and the overall study is therefore regarded as being more robust (Herriot and Firestone, 1983). The use of multiple sources of evidence provides a rich store of information that permits the analysis of a single issue from several perspectives, a process known as 'triangulating data' (Yin, 2003).

This study is also a multiple case study having embedded units of analysis. The land administration systems of Nepal, Bangladesh and Thailand are the individual cases and the property formalisation programme of Chulachuli, Nepal, the surveying settlement in Gharinda, Bangladesh and the Land Titling Programme of Thailand are the embedded cases. Similarly, households are the units of analysis since this study is concerned with the

investment and income made by a household and the activities they perform on their land. Land is another unit of analysis since the study is about the value of land. This study also explores the personal attitude of interviewees towards land administration, which makes an individual a unit of analysis.

This research has five research questions outlined in Section 1.3.2 and the criteria to measure the issues under investigation are developed in Section 2.5. The role of land administration in securing land tenure is measured from the rights and risks associated with land before and after registration based on the criteria developed in Section 2.5. The respondents were asked whether they have enjoyed rights of ownership, use of production, transfer, access to credit and lease their land and have experienced any risks of aggression and not getting adequate compensation in case of acquisition before and after registration or not. Similarly, the changes in land use and land related activities are measured based on the criteria developed in Section 2.5 and as shown in the survey questionnaire presented in Appendix 1. The list was finalised after consultation with the respondents who participated in the pilot survey and the local people met prior to finalising the survey questionnaire.

This study also seeks to determine whether there is any relationship between land tenure security and land value, access to credit, investment and income. Land value was measured based on information provided by the respondent land owners. It was cross-checked with the value determined by the government for taxation purposes and also from the key informants. Similarly, the annual investment and income were measured based on the information provided by the respondents. They were asked to state the amount of investment and production in terms of cash instead of goods because a variety of goods are produced on a small piece of land consequently the respondents may not provide the exact amount of input and output of each and every good. Rather, it would be easy to remember the average annual investment and income. The correlation method is applied to test whether there is any correlation of land value, investment and income with land tenure security using the tenure security as a dummy variable. Similarly, a paired sample t-test was employed to test the difference between means of land value, investment and income before and after registration of the land. The results are tested to

a one per cent level of significance. The status of land administration services and their effectiveness are also measured based on the criteria developed in Section 2.5.

3.5 Research Issues

3.5.1 Research Quality

Validity, reliability and generalisability are commonly used criteria for assessing the quality of research. Validity refers to the accuracy and trustworthiness of instruments, data, and findings in research; reliability refers to whether or not you get the same answer by using an instrument to measure something more than once (Bernard, 2000), and generalisability refers to the extent to which the findings of the enquiry are more generally applicable outside the specifics of the situation studied (Robson, 2002:93).

Yin (2003) mentions that four tests including construct validity, internal validity, external validity and reliability are commonly used to establish the quality of any empirical social research. Citing Kidder and Judd (1986), he states that the construct validity establishes correct operational measures for the concepts being studied; the internal validity which is applied only for descriptive or exploratory study, establishes a causal relationship, whereby certain conditions are shown to lead to other conditions, as distinguished from spurious relationships; the external validity establishes the domain to which a study's findings can be generalised; and the reliability demonstrates that the operations of a study like the data collection procedures can be repeated with the same results. These four techniques are considered to make the study more trustworthy.

The themes of this research were developed based on the theoretical foundation as discussed in the literature review. The research hypotheses were developed based on these themes. Similarly, the survey questionnaire and the checklists for interview and observation were also designed on the basis of the themes. The themes as well as the issues that emerged during the empirical studies were addressed while analysing and interpreting the data for each individual case study. Quantitative data were analysed using statistical tools and their significance was also tested. The cross-case analysis report was prepared which depicts whether the same logic is replicated or not.

Three principles of data collection proposed by Yin (2003), use of multiple sources of evidence, creating a case study database, and maintaining a chain of evidence, were followed in this study in order to establish the construct validity and reliability of the case study evidence. Multiple sources of evidence including documentation, questionnaire, interview, discussion, and field notes are the main sources of information employed in this research, which makes the triangulation of evidence possible.

Enough attention was given to make the research more reliable from the beginning of the case study. A case study protocol was designed which guided the entire data collection procedure. Similarly, a case study database was prepared for each case to organise data collected from all sources. A case plan was also prepared to organise the daily activities and a field diary was maintained to record the reflections of the researcher. The chain of evidence was established by linking the case study questions with the case study protocol, case study database and case study report. Specific sources of evidence were properly referred to while preparing the case study report. The case study reports were submitted to a few key informants and feedback was received from them. To ensure the reliability of the qualitative data collected from field work, complete records of all phases of research process including the problem formulation, selection of research participants, interview transcripts, field notes and data analysis decisions are cross-checked by the supervisors right from the beginning to the write up of every single piece of work. The processes and outcomes of every step of the study were shared with the supervisors and their feedback were duly acknowledged.

Thus, selection of more than one case, formulation and adoption of case study protocol, using multiple sources of evidence and establishing chains of evidence, thematic and cross-case analysis, hypothesis testing of quantitative data, obtaining feedback from a few key respondents about the case study report and sharing every details of the processes and outcomes of the study with the supervisors are the measures that maintain the quality of this research.

3.5.2 Ethical Issues

Ethical issues cannot be ignored as they relate directly to the integrity of a piece of research and to the disciplines that are involved (Bryman, 2008:113). Most of the data in

this research were collected from primary sources. Large numbers of people and stakeholders were consulted during the field study. A formal ethical clearance was obtained from the Research Ethics Committee of the University of Reading before starting the field-work.

Four types of ethical principles are proposed by Diener and Crandall (1978): whether there is harm to participants, whether there is lack of informed consent, whether there is invasion of privacy, and whether deception is involved; these were strictly followed in this study. An information sheet, describing the purpose of the research, the identity of the researcher, the process of the data collection, and the contact information of the researcher, was handed to each respondent before starting surveys and interviews. They were also informed about the process of their selection, likely benefits and losses and potential harms or risks due to their participation. Moreover, they were informed that they could stop discussion at any time in the survey or interview if they did not want to continue.

Consent forms were also prepared and printed in local languages Nepali and Bengali. After describing the research, the purpose and content of the consent form was explained to the respondents. They were requested to sign the form when they clearly understood the content and agreed to participate in the survey or interview. The consent was obtained in advance from all the respondents. In Thailand, the English version of the information sheet and consent form was used since only senior level government officers and academics were interviewed and they could understand the English.

Documents collected from the field-work were stored securely. The personal opinions of the respondents are not shared with anybody else and used only for the purpose of this research. The confidentiality and anonymity of the participants is maintained properly. Also, it was ensured that there would be no disadvantage to the participants because of their participation in the research process. The respondents selected for this study were all adult. No child or person above 80 years participated in the survey and interviews. No animals or any other living beings were part of this study.

Thus, enough attention was given in order to maintain the ethical standard of this research.

3.5.3 Reflection on the Field Study

The field studies were carried out in Nepal, the home country of the researcher, and two other Asian countries, Bangladesh and Thailand. The main components of the field work were to collect primary data from the landowners of the selected study areas, interview and discuss with the government officers working in and under the land ministries, senior executives of the real estate associations, bank officials, academics and land rights activists. Collection of secondary data from the government organisations, national statistical offices and central bank was also a part of the field-work.

A great difference was observed in undertaking research in home and in the other countries. A very warm welcome was offered to the researcher in his home country while visiting the government offices where the researcher had been employed for a long period of time. Most of the officers working in the land administration organisations were known to the researcher. The staffs were very excited to discuss the project and ready to provide the required information. Some respondents of the bank, financial companies and the real estate agencies were reluctant to discuss mortgage loans since this sector was suffering badly from credit problems at the time of the field-work. However, when they understood the purpose of the study and the content of the questions, they became supportive and more open. At the end, all the respondents were happy about the discussion.

The landowners of the study area were excited and happy that their cases had been chosen for study. When the purpose of the research was explained to them, they felt that their voices would now be heard in the academic sector as well. They were very eager to see their case written in the form of a thesis. They cooperated with the researcher and the surveyors by sharing their knowledge.

The researcher presented himself as a research student rather than an employee of the government among the respondents to avoid bias in their answers. His personal relationship was used to some extent to collect secondary data from the government and

banking sectors but not to influence the information from the respondents. Very good support was received from the academics, land rights activists and local people in the study area.

The situation in Bangladesh was quite different. Very warm support was received from the academic and non-government sectors. The support from the Daffodil International University was highly appreciated. The field-work could not have been completed without their support. Similarly, people working in the land rights sector were also excited about the study and eager to help the researcher. However, access for a foreigner to the government ministries and departments was found to be very difficult. The senior officers of the Department of Land Records and Survey were not interested in talking with the researcher as he was a foreigner. The researcher failed to book any appointments with the directors. Also, he did not get any access to the ministries. It was an unanticipated challenge faced by the researcher during his field-work in Bangladesh. No information could be collected from the central level land administration organisations consequently the researcher had to rely on the information collected from secondary sources, specifically in the case of the progress of the ministries. However, the officers working in the local land registries were very cooperative. They were even excited to know from the researcher about the land administration system and practices.

Difficulties in understanding the local language and culture, travel and transportation were the other challenges faced by the researcher during his field-work in Bangladesh and Thailand. Common people could not speak and understand English. The researcher could not go outside his room and buy necessary items from the shops without the help of a translator. Long traffic delays in Dhaka city were another problem that affected the daily schedule of the researcher. Travelling in rickshaws and CNG[10] in the afternoon was really horrible because of the traffic and high temperatures. It was even hard to attend two appointments in a whole day. Two and a half days holiday in a week also hampered his work. Moreover, protest rallies, demonstrations and public strikes and the use of force to suppress them also affected the daily schedule. The researcher had to stay inside for

[10]A caged, motorized tricycle run from compressed natural gas

four days because of the violent protests. Also, incidents of theft, robbery and kidnapping were quite common in the city. The researcher tried to avoid all unnecessary and unaccompanied travel for safety reasons. Despite these challenges, the field-work was completed on time because of the huge support from research assistants and translators. It is interesting to note that the differences in culture and religion did not have any serious impact on the fieldwork.

The researcher did not face much challenge during the field-work in Thailand as one of his classmates was employed in the survey department. She booked appointments with the directors of the Department of Lands, helped in collecting data from the department and National Statistics Office and arranged a field trip to Nonthaburi Land Office. Also, the field-work in Thailand was much shorter than in Nepal and Bangladesh as it was only focused on interviewing some respondents, collecting secondary data from the government departments and visiting a land office. Access to government departments and language remained problematic but were tackled with the help of assistants and colleagues.

There were no major changes in the case study plan. In Nepal, the data was collected from almost all of the expected respondents. There were minor changes in the questionnaire designed for the survey after doing a pilot study. However, there were no significant changes in the interview check-list. Some respondents, especially the local Land Revenue Officers were quite busy and opted to answer their questions in writing. Similarly, there were no major changes in the action plan prepared before going to the field although the interviews with some respondents had to be rescheduled because of their time constraints.

The study area in Bangladesh was selected only after discussion with local land professionals. The questionnaire had to be modified in order to integrate with the local system. The Ministry of Lands and Ministry of Law, Justice and Parliamentary Affairs (MOLJAPA) could not be visited since no access was granted to the ministry compound. However, the required information was collected from other sources. Personal relationships of the research assistant helped in collecting data from the central bank.

Instruction from the supervisor was obtained from time to time which helped in conducting the field study properly. Although there were some difficulties throughout the field-work, the overall work remained successful.

3.5.4 Limitations of the Case Studies

Despite some limitations, overall the field-work remained successful. High-level government officials working in the land administration organisations of Bangladesh could not be interviewed and hence their opinions could not be included in this research. This was because they were reluctant to provide any information to foreigners. Similarly, the researcher could not obtain official reports on the number of transactions, revenue collection and land valuation because these reports are not allowed to be shared with foreigners, although the purpose of the study was clearly explained. It has limited the analysis of these factors.

Language is one of the limitations faced by the researcher in this study. Most of the literature about land administration systems and reports of the government of Bangladesh and Thailand were written in Bengali and Thai respectively. It limited the understanding about the cases to some extent. However, books and documents written in English, online information provided in their websites and a discussion with the local land officers helped in understanding the system of land administration and gathering the required information.

3.6 Summary

This chapter explored the importance of the multiple case study approach for this study and explained the rationale behind the selection of specific research techniques, including the selection of study areas and methods of data collection and analysis. It also described the whole process of field study, measures taken to maintain the trustworthiness of the research, and reflections of the researcher about the field-work and its limitations.

The explanatory multiple case study method was selected for this study. Land administration systems in Nepal, Bangladesh and Thailand provide the focus for this study. In particular, the property formalisation programme in the informal settlement

area of Chulachuli VDC, Nepal, the surveying settlement in Gharinda, Bangladesh and the land titling program in Thailand form the case studies.

This study employed multiple methods to collect the data. Survey method was applied to collect data from the randomly selected respondents of the selected case study areas in Nepal and Bangladesh. Some key informants were interviewed in order to get in-depth knowledge about the land administration system of the three selected countries. Documentation, observation, informal discussion and field notes were also techniques employed to collect data. The data were transcribed and analysed using the quantitative and qualitative data analysing software called SPSS and NVivo respectively. Correlation analysis, paired sample t-test, content analysis and cross-case analysis were the techniques employed to analyse the data.

Efforts were made to maintain research quality at each stage of the research including the use of a mixed method approach, selection of multiple cases, use of multiple methods for data collection, adoption of case study protocol, thematic and cross-case analysis, hypothesis testing and obtaining feedback from respondents about the case study report. Ethical issues were properly considered while conducting field-work and managing and using data.

Chapter 4: Practices of Land Administration in Nepal, Bangladesh and Thailand

4.1 Introduction

This chapter discusses the systems of land tenure and land administration practiced in Nepal, Bangladesh and Thailand. It presents general background information, some macro indicators and the GDP from agriculture sector of the selected countries first. Then existing systems of land tenure and status of access to land in these countries are outlined. After that the system of land administration of these countries is discussed. It includes the legal framework, organisation structure, registration process, cadastral surveying and property valuation.

4.2 General Background

All three countries selected for study are from the Asian continent. Nepal and Bangladesh are situated in South Asia whereas Thailand is in South East Asia. Geographically, Nepal is divided into three regions; Mountain, Hill and *Terai*[11] representing 15, 68 and 17 per cent of total area respectively. Administratively, it is divided into development regions, zone and district. The districts are further divided into municipalities and VDCs. There are five Development Regions, 14 zones and 75 districts, 130 municipalities and 3,633 VDCs throughout the country (Central Bureau of Statistics, 2013).

The People's Republic of Bangladesh was formed in 1972. It was part of India until 1947 and then part of Pakistan until it gained its independence. Administratively, it comprises seven divisions, 64 districts, 483 sub-districts, and 4,500 *union parishads*, six city corporations and 309 municipalities as on 31st December, 2010 (Bangladesh Bureau of Statistics, 2011). Its smallest administrative unit is a village.

[11] Low-lying land at the foot of the Himalayas south to the border with India; covers 17 per cent of the total land area of Nepal

The Kingdom of Thailand is divided into provinces, districts, sub-districts, communes and villages. As of 2000, there were 76 provinces, 795 districts, 81 sub-districts, 7,255 communes, and 69,866 villages (National Statistics Office, 2004).

Selected macro indicators for Nepal, Bangladesh and Thailand are presented in Table 4-1. Bangladesh is highly populated, having a population of 160 million people. The populations of Nepal and Thailand in 2008 were 28 and 67 million respectively. The surface area of Nepal and Bangladesh is almost the same, but Thailand is nearly three times larger than both of these countries. Bangladesh has a higher proportion of arable and agricultural land than the other two countries. As shown in the table, 69 per cent of the land area in Bangladesh is agricultural land whereas only 30 per cent and 36 per cent of the land area in Nepal and Thailand respectively is agricultural land. The table also shows that Thai economy is the largest compared to the other two countries. The total GDP of Thailand in 2008 was more than 20 times higher than that of Nepal and more than three times higher than that of Bangladesh. Agriculture is the main source of income in Nepal where it constitutes one-third (34 per cent) of total GDP. It is the second largest contributor to GDP in Bangladesh (19 per cent). The contribution to this sector in the Thai economy is lower than in the other countries. In Thailand, the manufacturing and service sectors contribute 46 per cent and 36 per cent of total GDP respectively. These sectors share significant proportions of GDP in Bangladesh at 29 per cent and 18 per cent respectively. The share of the service sector in Nepal is only seven per cent.

Table 4-1: Selected macro indicators for Nepal, Bangladesh and Thailand

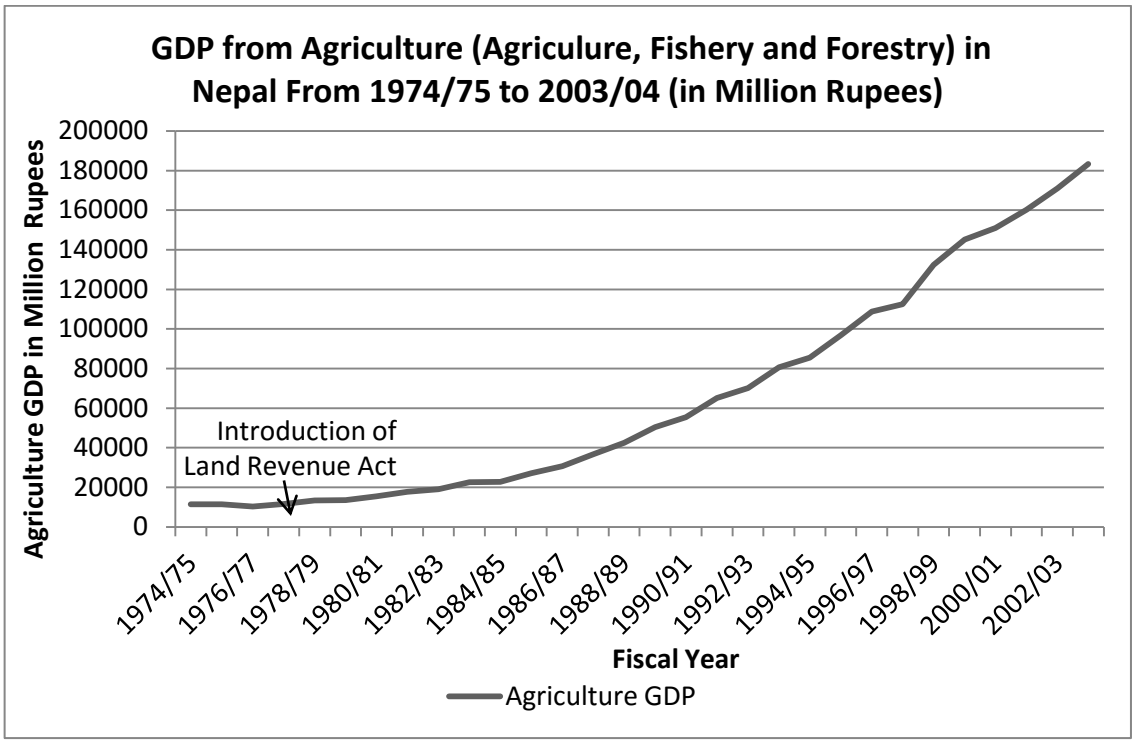
Indicators	Year	Nepal	Bangladesh	Thailand
Population	2008	28,581,687	160,000,128	67,386,383
Land area (square kilometres)	2008	143,000	130,170	510,890
Surface area (square kilometres)	2008	147,181	144,000	513,120
Arable land (percentage of land area)	2005	16.5	61.1	27.8
Agricultural land (percentage of land area)	2005	29.5	69.2	36.4
GDP (Current US$, in millions)	2008	12,615	78,992	260,693
GDP growth (annual percentage)	2008	5.3	6.2	2.6
Agriculture value added (percentage of GDP)	2008	33.7	19.1	11.8 (2007)
Manufacturing value added (percentage of GDP)	2008	16.7	28.6	45.5 (2007)
Services value added (percentage of GDP)	2008	7.4	18.0	36.1 (2007)

Source: USAID[12] (2011)

An overview of agricultural production in recent decades in Nepal, Bangladesh and Thailand is presented below. Figure 4-1 shows the GDP of the agriculture sector of Nepal between 1974/75 and 2003/04. As shown in the figure, the GDP of the agricultural sector in Nepal for the Fiscal Year 1974/75 was 11,435 million *rupees*[13]. It increased continuously throughout the period and reached 13,365 million *rupees* in 1978/79 and 183,357 million *rupees* in 2003/04, which is 1,503 per cent higher than that of 1974/75 and 1,272 per cent higher than that of 1978/79. It shows that the agricultural production increased when the land registration activities are carried out but it has followed a general upward path.

[12]United State Agency for International Development
[13] The currency of Nepal

Figure 4-1: GDP from agricultural sector in Nepal from 1974/75 to 2003/04

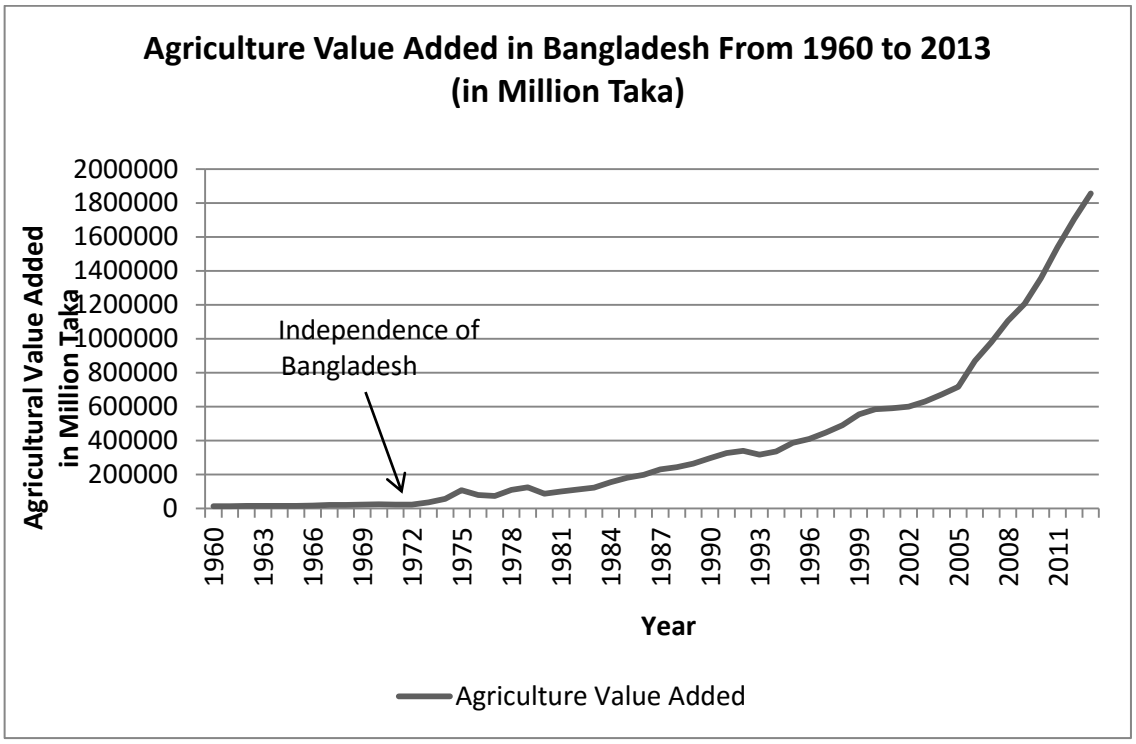


Source: Central Bureau of Statistics (2012)

The gross value added of the agricultural sector in Bangladesh between 1960 and 2013 is presented in Figure 4-2. As shown in the figure, the gross value added was 11,793 million *taka*[14] in 1960, which increased by around 90 percent in 1972 (22,490 million *taka*) when Bangladesh gained independence from Pakistan. It rose gradually with some fluctuations to reach 154,773 in 1984 and 1,857,525 million *taka* in 2013 increasing 15,650 per cent, 8,159 per cent and 1,100 per cent than that of 1960, 1972 and 1984 respectively. Thus, agricultural production has followed a general upward path during this period.

[14] The currency of Bangladesh

Figure 4-2: Agriculture value added in Bangladesh from 1960 to 2013

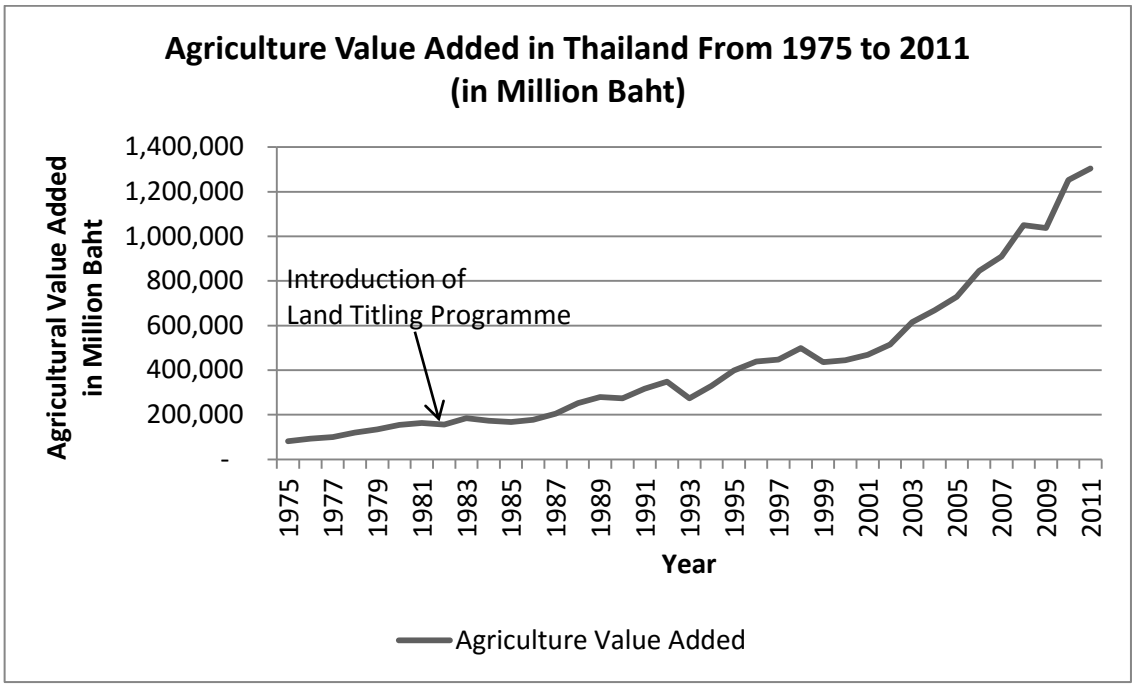


Source: World Bank (2014a)

Figure 4-3 presents GDP from the agricultural sector in Thailand between 1975 and 2011. The agriculture GDP increased considerably except in 1993, 1999 and 2009. In comparison to the GDP of 1985 (167,026 million *baht*[15]) it increased by 300 per cent in 2004 (668,808 million *baht*) and 680 per cent in 2011 (1,303,580 million *baht*).

[15] The currency of Thailand

Figure 4-3: Agricultural value added in Thailand from 1975 to 2011



Source: World Bank (2014b)

The data from Nepal and Thailand presented above cover the period in which land administration activities were mainly carried out. In Nepal, most of the land adjudication works were carried out and the Land Revenue Act, 1978 was implemented throughout the country. In Thailand, the 20-year land titling programme was implemented and more than 20 million parcels were titled. The data show that the agricultural production has followed an upward trend after the commencement of land registration activities despite some minor fluctuations. In case of Bangladesh, it does not cover the period in which land administration activities were carried out although, it provides a scenario of agricultural production in recent decades.

4.3 Land Tenure and Access to Land

This section discusses the system of land tenure practiced in Nepal, Bangladesh and Thailand and describes how the private ownership of land developed in these countries.

4.3.1 Nepal

Historically, all land in Nepal belonged to the state. Traditionally, people could enjoy rights to use and fruit but the state owned the land. Private property rights in land

emerged when the state began to delineate its ownership in many ways. The land tenure system of Nepal is known as *Raikar*[16] under which landowners can enjoy land rights provided that they keep paying land tax to the state.

A number of secondary forms of land tenure like *Birta*[17], *Guthi*[18] and *Jagir*[19] were created when private property rights emerged (Regmi, 1999:16). The system in which members of the royal family and soldiers were assigned income from land is known as *Birta*. The *Birta* land was provided to priests, religious teachers, members of the nobility and the royal family. Similarly, *Guthi* is used to denote an association of persons responsible for the management of religious and philanthropic land endowments (Bose, 1961). The land belonging to such association is known as *Guthi* land and the system that manages such land is also known as *Guthi* tenure system. A system of providing land to government employees and soldiers instead of cash salary known as *Jagir* emerged during the unification of Nepal[20]. The government used to prepare the record of lands on which the state retained its right to collect and appropriate revenue, which is known as *Jagera Lagat*[21].

There was another system called *Rakam*[22], which is not any particular category of land, but is a kind of system in which the cultivators of *Raikar*, *Guthi* or *Jagir* lands had to provide unpaid labour for the performance of a specific function. The tenants used to have a double obligation of paying in cash or in kind for cultivating land and providing compulsory and unpaid labour on special occasions in this system. Right of use in *Rakam* lands was held permanently and was inheritable provided the holder or his heirs continued to perform specific functions (Tuladhar, 2004).

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[16] Lands on which taxes are collected from individual landowners
[17] Land grants made by the state to individuals; abolished in 1960
[18] An endowment of land made for any religious or philanthropic purposes; trust land
[19] Raikar lands assigned to government employees and functionaries in lieu of their emoluments
[20] King Prithvi Narayan Shah (1723-1775) campaigned for unification of several kingdoms to build a strong nation and protect from the British Empire. The campaign continued until 1814 and the land between Tista and Satlaj came under the control of Nepal which squeezed into the present shape after the Sugauli Treaty of 1816 resulted from the 1814-1816 war.
[21] A record of Jagera land or land available for distribution
[22] Unpaid and compulsory labour services due to the government from peasants cultivating Raikar, Jagir, Kipat and Raj Guthi land; abolished in 1964

A communal type of land tenure system known as *Kipat*[23] was also in practice in the eastern hilly region of Nepal. Only members of a Limbu community living in a specific region could obtain ownership of *Kipat* land. Under this system, communal authority superseded any claim that the state might extend on the grounds of internal sovereignty or state landlordism (Regmi, 1999:19).

Other forms of land tenure also emerged under which land ownership was delivered to the people. *Ukhada*[24], *Jhora*[25] and *Kharka*[26] are types of land tenure that existed in different parts of the country. The land tenure system under which the tenant could pay the rent in terms of cash is known as *Ukhada*, which was in practice in Nawalparasi, Rupandehi and Kapilbastu districts. Similarly, land cultivated by cutting bushes or forest is known as *Jhora* land which was mainly practised in Jhapa, Morang and Sunsari districts. Also, land used for pasture known as *Kharka* land which was practised in Kabhrepalanchok, Sindhupalchok and Rasuwa districts.

The area of land held under different tenure systems as of 1952 is presented in Table 4-2. Accordingly, the largest form of tenure was *Raikar*, which constituted half of the total area of land. The second largest form of land tenure was *Birta*, which constituted 36 per cent of land area. *Guthi* and *Kipat* land constituted two and four per cent of land area respectively. Likewise, *Jagir*, *Rakam* and other categories of land tenure accounted for the remaining eight per cent of land area.

[23] A system of communal land ownership prevalent among the *Limbus* and other *Mongoloid* communities in the eastern hilly region

[24] A form of landownership under which lands of *zamindar* or intermediary landowners used to be let out to tenants on low cash rents; abolished in 1964

[25] A form of land tenure in which land was cultivated by cutting bushes or forest; forest land

[26] A form of land tenure where some area of land was allocated for pasture; pasture land

Table 4-2: Area under various forms of land tenure in Nepal in 1952

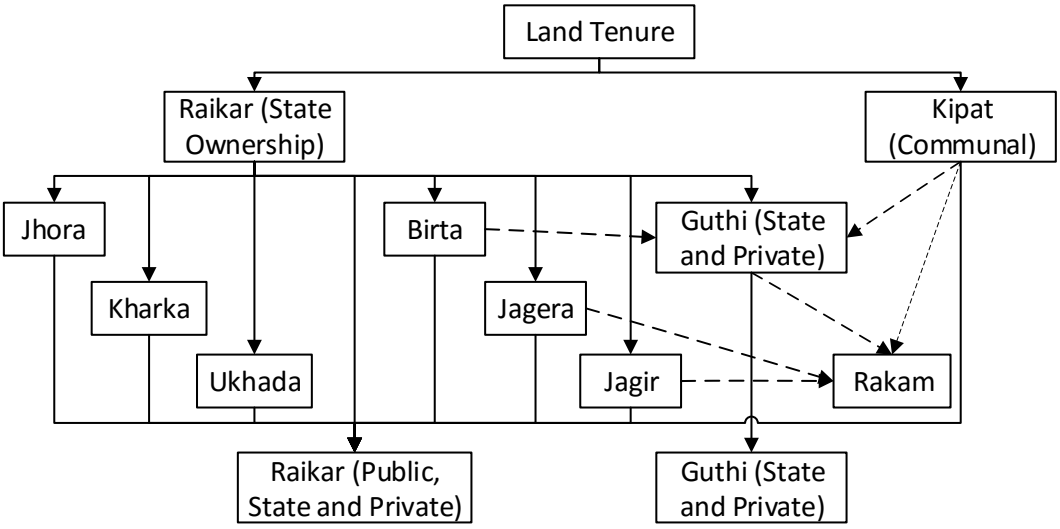
Tenure System	Land Area in Hectares	Percentage of Total Land Area
Raikar	963,500	50
Birta	700,000	36
Guthi	40,000	2
Kipat	77,000	4
Jagir, Rakam and Others	146,500	8
Total	**1,927,000**	**100**

Source: Zaman (1973:5)

The interrelationship between different forms of land tenure that emerged in Nepal in different time periods is shown in Figure 4-4. All other forms of land tenure except *Kipat* were derived from *Raikar*. However, *Guthi* was derived from *Kipat* land as well as other secondary forms (*Birta* and *Jagera*[27]). Similarly, the *Rakam* system existed in *Guthi*, *Jagera*, *Jagir* and *Kipat* land. After the political change of 1951, all forms of land tenure except *Guthi* converted into *Raikar*. Now there are only two types of land tenure, *Raikar* and *Guthi*. *Raikar* land is of three types, public, state and private land. Public land can be used only for public purposes, state land includes land owned by the government agencies and registered in the name of the government and can be used for any purpose which the government considers necessary, and private land is freehold in nature. The *Guthi* land is also of two types, *Raj Guthi*[28] (state) and *Niji Guthi*[29] (private).

[27] Raikar lands not assigned as Jagir
[28] Guthi endowments under the control or management of the Guthi Corporation
[29] Guthi endowments managed by individuals

Figure 4-4: Interrelationship among different forms of land tenure practiced in Nepal



Source: Adapted from Regmi (1999)

Land reform remains one of the means of providing land to the people after the political changes of 1951 in Nepal. It has been a highly contested, discussed and debated issue since then (Adhikari, 2009:100-101). The main initial efforts made by the government between 1951 and 1961 included the formation of the Land Assessment Commission and the Land Reform Commission, declaration of a Thirteen Point Plan and enactment of the Land and Cultivation Record Compilation Act, 1956 and Land Related Act, 1957 (HLCSLR, 2010:8). The post-1951 land reform policy aimed at ameliorating the condition of the peasantry and stemming the tide of social unrest (Regmi, 1999:197).

King Mahendra, who reigned from 1956 to 1972, initiated the land reform programme in Nepal. The *Bhumi Sambandhi Ain, 2021* (Land Act, 1964) was issued aiming to divert the inactive capital and human resources from the agricultural sector to other sectors of the economy in order to accelerate the pace of development, to uplift the living standard of peasants and maximize agricultural production. The main provisions of the Act were to abolish the z*amindari system*[30], establish a maximum size of land holding, acquire land in cases where landowners hold more than this maximum and distribute such land among local landless people, fix the amount of rent, and protect tenancy rights. Citing Bahadur (1972), Regmi (1999) observes that the government had identified approximately 50,000

[30] A system of land tenure assigning the task of collecting land tax to landlords

hectares of land above the maximum ceiling out of which 22,000 hectares was redistributed to about 10,000 peasant families by July 1972. This constituted approximately three per cent of the cultivated area. The current provision of the Land Act, 1964 is to allocate 50 per cent of the cultivated land to the tenants. Although the land reform programme has been criticised on various grounds, the concentration of landownership was broken after implementation of this programme, tenancy rights became secured and many tenants became landowners (Regmi, 1999). Thus, land reform has helped in establishing tenancy rights and increasing people's access to land.

State-owned land was transferred to the people in other ways too. These included resettlement plans, formalisation of informal settlements, redistribution of land to landless, deprived and indigenous people, and bonded labour called *Kamaiya*[31], *Haliya*[32], *Haruwa*[33] and *Charuwa*[34]. Government initiatives for solving the landless problem and settling people on forest land began after the political changes of 1951. Enactment of Regional Plan (Distribution of Land of Rapti Doon) Regulation, Plan to Assess the Agricultural Loan and Liberating Agricultural Bonded Labour, enactment of Act Related to Land of *Jhora* Area, formation of Regional Settlement Committee, Zonal Settlement Committee and High Level Commission on Improvement of Forest Area were some of these efforts (MOLRM, 2011). Large amounts of land were distributed to common people from different parts of the country, especially in the *Terai* region.

Most of the governments formed after the restoration of democracy in 1990 gave priority to solving the problems of landless people, informal settlers and other deprived people including freed-bonded labour. As mentioned by HLCSLR (2010), several commissions were formed to solve the landless problem and distributed around 46,694 *bighas* of land to landless people. Similarly, the government has distributed 4,607 *bighas* of land up to mid-July, 2011 to 22,918 *Kamaiya* households, who were freed in July 2000 (MORLM, 2011).

[31] A traditional system of bonded labour practiced in Western Terai of Nepal
[32] A person who ploughs the land of landlords to pay back his loan and interest
[33] A person who ploughs the land of landlords in an annual contract to pay back his loan and interest
[34] A herder who looks after landlords' cattle

The government has also formed various commissions and committees to solve the land problems of specific areas. For instance, the Chulachuli Area Informal Settlement Problem Solving Committee formed in 2064 (2007) to formalise property and solve land settlement problem in Chulachuli VDC of Ilam district provided land ownership certificates to nearly five thousand people.

Thus, the ownership of state-owned land was transferred to the general population in many ways. The total number of landowners (including non-agricultural holdings) reached 9,024,751 by mid-July, 2011 (MOLRM, 2011). Table 4-3 presents the number of agricultural land holdings between 1961/62 and 2001/02. The data shows that the number of land holdings increased by 118 per cent from 1,540 thousands of 1961/62 to 3,364 thousand of 2001/02. The highest increase in number and area of land holdings is observed between 1971/72 and 1981/82 in which period the number of land holdings increased by 28 per cent and the area of holdings by 49 per cent. This was the period when the activities of cadastral surveying, land adjudication and the establishment of Land Revenue Offices were at their greatest.

Table 4-3: Agricultural land holdings in Nepal from 1961/62 to 2001/02

Census Year	Number of Land Holdings		Area of Holdings	
	Number (in Thousands)	Percentage Change From Previous Census	Hectares (in Thousands)	Percentage Change From Previous Census
1961/62	1,540.0	-	1,685.40	-
1971/72	1,712.2	+11.2	1,654.00	-1.9
1981/82	2,194.0	+28.1	2,463.70	+48.9
1991/92	2,736.1	+24.7	2,597.40	+5.4
2001/02	3,364.1	+23.0	2,653.90	+2.2

Source: Central Bureau of Statistics (2003)

The task of determining land rights in Nepal was done by means of cadastral surveying. It was initiated in the first half of the 20th century; however, systematic cadastral surveying was carried out only after the enactment of the *Jagga (Nap Jach) Ain, 2019* (Land Survey and Measurement, Act, 1963). The main purpose of its enactment was to collect records

of landholdings for implementing the land reform programme. Initially, local landlords were nominated as non-official agents to collect land revenue, issue receipts and maintain ownership and transaction records on behalf of the government. The land records and tax receipts issued by them were considered as evidence of landholding during the adjudication of claims to land. The first stage of cadastral surveying throughout the country was completed in 2000.

The government promulgated the *Bhumi Prashsan Ain, 2024* (Land Administration Act, 1967) in order to maintain inventories of the lands, landowners and tenants in a modern fashion to make timely improvements in the provisions pertaining to current cultivation of the lands subject to land revenue. This Act was later repealed by the *Malpot Ain, 2034* (Land Revenue Act, 1978) which was mainly promulgated to revise and integrate the provision of collecting land tax with land cultivation. The Land Revenue Act provided for the establishment of Land Revenue Offices and assigned authority for preparing a land register, adjudication of land claims, registration of transactions, transfer of inherited property, updating of land records, collection of land revenue, and the preservation of government and public land, among others. The Land Revenue Offices also have authority to complete the task of land adjudication initiated by the Survey Parties during their cadastral survey in accordance with the Land (Survey and Measurement) Act, 1964. The Land Revenue Act has also provided for the formation of a committee or commission to solve the problems regarding the registration of land under the name of any specific individual, class or area. The informal system of land registration became a formalised system after the adjudication of land claims and the enactment of this Act throughout the country.

Thus, the state-owned land in Nepal transferred to the general population after the emergence of various tenure practices like *Birta*, *Jagir*, *Ukhada* and *Jhora* as well as after the enactment of various forms of land reform programme.

4.3.2 Bangladesh

Historically, the King owned all land in Bangladesh. Peasants cultivated land as tenants. The Mughal rulers changed the land tenure system substantially. At that time, most of the land belonged to the state, although it had recognised private ownership of land by

selling it to individuals to some extent. *Zamindars* and *talukdars*[35] were appointed to collect land revenue from peasants. A customary land tenure system, known as *raiyat*, was also practiced.

The current land tenure system of Bangladesh is mainly based on permanent settlement and was originated during the British period. The Titular Emperor Shah Alam of Delhi granted the *dewani*[36] of Bengal, Bihar and Orissa to the East India Company on 12th August 1765 (Khan, 2011). The Quinquennial Settlement[37], restoration of *zamindari* rights in 1778 and the Decennial Settlement of 1790-91 were the practices established by the Company. The Decennial Settlement was turned into the Permanent Settlement Regulation (Bengal Regulation 1 of 1793) on 22nd March 1793.

Permanent Settlement was a grand contract between the East India Company government and the Bengal landlords as a result of which the landlords became absolute proprietors of landed property. They had to pay a fixed amount of revenue to the government but were free to realise any amount of rent from their tenants. The short-term objectives of the permanent settlement regulations were to place revenue paying on a definite footing and make revenue collection sure and certain, ensuring a minimum revenue, relieving Company officials of revenue matters and engaging them in other spheres of administration, and forging an alliance between the *zamindar* class and the colonial rulers; the long term objective was to invest surplus capital in various sectors of agriculture for instance, land reclamation, irrigation, drainage, improved seeds so that increased agricultural production would yield more income to the government (Islam, 2012).

The East Bengal State Acquisition and Tenancy Act, 1950 abolished the *zamindari* system by acquiring all types of intermediary rent receiving interests that existed between the government at the top and the tenants cultivating the land at the bottom. The Act brought tenants directly under the government. Accordingly, the tenants had to pay rent

[35] Intermediary landholders responsible for collecting land tax
[36] Right to collect revenue
[37] The land settlement carried out between 1772 to 1777 to replace the traditional *zamindars* with the highest bidding revenue speculators

to the government directly and all lands available for settlement would be settled through a government agency, the District Collector. The rights and obligations of tenants would be regulated by the terms of each deed of settlement enforceable through courts of law. The Act also fixed the maximum amount of land to be held by a family or body as 100 *bighas* initially. The surplus land was used for settlement of landless or marginal farmers. In 1976, the Land Development Tax Ordinance was enacted to rationalise revenue structure and mobilise more domestic resources for development. Thus, the system of permanent settlement remained a form of land tenure for a long period of time, and its abolition in 1950 became a source of access to land for the tenants of what was then East Pakistan, which became independent Bangladesh in 1971.

The government land in Bangladesh is called *Khas* land[38]. This land is described in Register III which divides unoccupied land into three categories: those lands in which people have common rights and therefore cannot be leased out, for example, roads, tanks for drinking water, embankments; those plots which are available for settlements; and those which are purchased, resumed or abandoned (Barkat et al., 2001). The East Bengal Acquisition and Tenancy Act, 1950 and Land Reforms Action Programme, 1987 described the type of land to be included under *Khas* land. Accordingly, the *Khas* land includes, among others, diluviated land, newly accreted *Char*[39] land, land in excess of the maximum agricultural lot size, land received due to cancellation of ownership, land procured by the government, some categories of land in Register VIII (parts I, II, and V), unutilised land owned by government or semi-government bodies or acquired in excess of requirement, and land surrendered to the government under any law.

The Government of Bangladesh distributed *Khas* land to landless people as well as families of freedom fighters and those affected by river erosion. Barkat et al. (2001) observe that total *Khas* land and *Khas* water bodies constitute around nine per cent of the total area (Table 4-4). Out of a total 3.3 million acres of *Khas* land and *Khas* water bodies[40], 2.5 million acres (75 per cent) is *Khas* land of which around one-third, 0.8 million

[38] State land; distributable to the people
[39] The land left behind after a flood
[40] State-owned water bodies

acres, is agricultural *Khas* land. The government has distributed only 0.3 million acres of *Khas* land which is 43.5 per cent of total agricultural *Khas* land. Land for residential and commercial purposes is provided through agencies including the National Housing Authority under the Ministry of Housing and Public Works and large municipal development agencies like *Rajdhani Unnayan Kartipakhha* (RAJUK).

Table 4-4: Status of *Khas* land and its distribution in Bangladesh

Type of Land	Land Area (in Acres)	Percentage
Total area	36,961,837	
Total *Khas* land and *Khas* water bodies	3,320,018	8.9% of total area
Land area	2,489,663	75% of *Khas* land and water bodies
Water bodies	803,309	25% of *Khas* land and water bodies
Non-agricultural *Khas* land	1,686,354	67.7% of *Khas* land
Agricultural *Khas* land	803,308	32.3% of *Khas* land
Distributed agricultural *Khas* land	349,228	43.5% of agricultural *Khas* land

Source: Barkat et al. (2001:86-95)

There are three common types of land tenure in Bangladesh: common law freehold, use rights and leasehold. The freehold land offers exclusive ownership of land for an indefinite period of time and is estimated to apply to 69 per cent of agricultural farm landholdings in 2005 (USAID, 2011). The government land (*Khas* land) is distributed mainly to landless families who can use such land for 99 years. Leasehold can be either a cash lease or sharecropping. Cash leasing arrangements can range from one to 99 years but the sharecropping contracts must be for five years (ibid).

The land rights in Bangladesh are determined through surveying settlement operations, which is the initial act of surveying an area and creating the initial cadastral map. The revisional settlement is the activity of resurveying settled areas to reflect changes since settlement. The process of land settlement or revisional settlement follows practices for systematic adjudication of titles. The surveying and settlement operations defined the

rights and obligations of *zamindars* and *raiyats* according to the Bengal Tenancy Act, 1885.

The survey and settlement operations were undertaken in different parts of the country at different times. As described by the Asiatic Society of Bangladesh (2012), the district wide surveying and settlement operations were initiated in three stages. The first cycle began in 1888/89 and was completed with the settlement in Dinajpur district during 1934-40. The second cycle began in the Chittagong district (1923-33) and continued until 1950. It was called a revisional settlement and was undertaken using cadastral maps and records. The East Bengal State Acquisition Settlement Operations were carried out after the proclamation of the East Bengal State Acquisition and Tenancy Act, 1950 with the abolition of the z*amindari* system. Another settlement operation was carried out in between 1965 and 1978. A new scheme called zonal settlement was adopted in 1984, which was undertaken in five districts, namely, Comilla, Mymensingh, Tangail, Rangpur and Bogra. The surveying settlement operations recognised the ownership of land in Bangladesh.

The indigenous people living in the Chittagong Hill Tracts who represent more than 27 groups and make up 1.5 per cent of the population of Bangladesh, commonly hold land in indigenous areas under principles of customary law (USAID, 2011). There is also a religious land tenure system called *Waqt*[41] practiced in Bangladesh. However, the major portion of land is under the statutory or legal tenure system.

4.3.3 Thailand

Historically, all land in Thailand belonged to the King. Title documents for rice land were established in the main rice producing areas in the 1860s through to the 1880s (Chalamwong and Feder, 1988). In 1872, King Chulongkorn introduced procedures for the recognition of private rights to land. The land law of 1892 significantly improved security of title, but it did not establish a centralised land registration record or a system for clearly identifying land holdings (Feder et al., 1988:11). A titling system was introduced in 1901 based on the Torrens System of New South Wales.

[41] A religious forms of land tenure practiced in Bangladesh

In 1954, a comprehensive land code was passed which is the basis for the legal system of land rights in Thailand today. The Land Code, 1954 provided that a person may have title to land where title was acquired according to law prior to the effective date of this Code or by title deed under the provisions of this Code; and where title was acquired under any other laws. The Land Code provided for the formation of a committee called the National Land Allocation Committee under the Chairmanship of the Minister of Natural Resources and Environment. The committee shall have the power and duties to develop plans and policies regarding land allocation, approve projects relating to land allocation by public bodies, control the allocation of land and to lay down regulations or requirements, and to set rules or conditions in connection with land allocation.

The Land Code, 1954 also defines the power and duties of the Minister of the Interior and the Department of Lands and provided for the issuing of land documents. Different government agencies have authority to issue different types of land documents. As observed by Feder et al. (1988:11), the Department of Lands can issue documents for land that is not government property and adjudicate rights only for land that is not designated officially as forest reserves, national parks, and so on. The Forestry Department issues land documents for plots inside the forest reserves called *STK* (temporary cultivation rights). Likewise, the Public Welfare Department and the Land Reform Office issue land documents in specific areas.

Land documents issued from different departments are assigned with different tenure types and land rights. Ownership or freehold, leasehold, occupancy and user rights are the main tenure types recognised by the state. The most secure document is *Chanod* or NS-4 (title deed). *Nor-Sor-Sarm* or *NS-3* (certificate of use) and *Nor-Sor-Sarm Kor* or *NS-3K* (exploitation testimonial) are also secure and can be used as collateral.

Thailand has the largest area of arable land of all Southeast Asian countries and is the second biggest net food exporter after the United States. About 71 per cent of Thailand‘s agricultural land is held in private ownership (USAID, 2011). However, most of the land was untitled until the 1980s. A twenty-year land titling programme was implemented between 1985 and 2004. The main objectives of the project were to provide secure land tenure to eligible landowners, develop the long-term sustainability of the Department of

Lands institutional capacity, improve land administration service delivery, and to develop an effective national property valuation function (World Bank, 2003). Up until 1984, only 4.4 million titles were registered but the number of registered titles reached nearly 27 million in 2009.

Thus, the state-owned land in all of the three countries transferred to the general population after the emergence of various tenure practices and formalised after the enactment of land adjudication or land titling programme. Most of the land in all countries is now under legal tenure system although there are other tenure practices as well.

4.4 Land Administration System

This section discusses the existing system of land administration practiced in Nepal, Bangladesh and Thailand and provides some information to answer the fourth research question. The legal framework and organisational structure is presented first. Then the system of land registration, cadastral surveying and property valuation of these countries are discussed.

4.4.1 Legal Framework

The constitutions of Nepal, Bangladesh and Thailand have provided property rights as the fundamental rights of every citizen. Various laws and by-laws are promulgated in accordance with the authority provided by the constitution to govern land tenure and land administration in all of these countries. A list of the main land laws practiced in Nepal, Bangladesh and Thailand cited in this thesis is presented in Appendix 8.

In Nepal, establishment of land administration organisations, registration of land, collection of land, valuation of land and management of public land are provided for by the Land Revenue Act, 1978. The Land (Survey and Measurement) Act, 1963 provided for the survey and measurement of land and the preparation of cadastral documents. Likewise, the *Muluki Ain, 2020* (National Code, 1963) was enacted with the objective of maintaining peace and fostering good relations among people irrespective of class, caste or region, and incorporates procedural, criminal, civil, and penal provisions. The main provisions of the Code concerned with land include a system of land registration, transfer

of ancestral property, partition, cultivation of land, land evictions, encroachment of land, women's property and trust land. Similarly, the main provisions of the Land Act, 1964 are the fixing of a maximum allowable size of a land holding, registration of tenants and recognition of tenancy rights, fixing of rent, compulsory saving programme and establishment of a land use regulation commission. The *Guthi Samsthan Ain, 2033* (Guthi Corporation Act, 1976) has provisioned for the administration of trust land.

In Bangladesh, the Bengal Tenancy Act, 1985 made provision for the title, rights and liabilities of z*amindars*, *talukdars*, rent receivers and *raiyats*. The East Bengal State Acquisition and Tenancy Act, 1950 provisioned the acquisition of land by the state. The z*amindari* system was abolished and the tenants were brought directly under the state after enactment of this law. Similarly, the Survey Act, 1875 and the Registration Act, 1908 provisioned the survey and measurement and registration of land respectively. Likewise, the 1882 Transfer of Property Act provided for the process of transferring land rights. The Land Reform Ordinance, 1984 was promulgated to reform the law relating to land tenure, land holding and land transfer with a view to maximising production and ensuring a better relationship between land owners and *bargadars* (sharecroppers). The Land Reform Board Act, 1989 and the Land Appeal Board Act, 1989 provided for the establishment of the Land Reform Board and the Land Appeal Board and defined their functions. Other laws relating to land management and land tenure include Non-Agricultural *Khas* Land Management and Settlement Policy, 1995 and Agricultural *Khas* Land Management and Settlement Policy, 1997 which determine the procedure for the management and settlement of *Khas* land. Separate laws are issued to manage the customary rights and practices of the people living in the Chittagong Hill Tracts region, the main home of the indigenous people, including the Chittagong Hill Tracts Land Dispute Settlement Commission Act, 2001.

The Constitution of the Kingdom of Thailand, 2007, Land Code, 1954, The Agricultural Land Reform Act, 1975, Land Development Act, 1963 and Land Readjustment Act, 2004 are the main statutes that constitute the land regulation and governance framework in Thailand. The constitution has provided for the adoption of a land policy including land use, land distribution, planning and protection of land and natural resources. The Land Code, 1954 is the basis for the legal system of land rights in Thailand today. It provides for

various types of land tenure and associated rights, and for the establishment of a Land Allocation Committee. It also covers the protection of land, arrangements for the utilisation of State land, land allocation, issuance of documents evidencing rights to land, land surveys and land titling and registration. The Agricultural Land Reform Act of 1975 was enacted to address the issues of tenancy, landless households and allocation of state lands. The Act created the Agricultural Land Reform Office in the Ministry of Agriculture and Cooperatives to implement land reform programmes. The Land Development Act, 1983 provided for the establishment of a National Land Development Committee to help improve the utilisation and productivity of the agricultural land.

Thus, the land tenure and land administration systems of Nepal, Bangladesh and Thailand are determined by various laws and by-laws formulated in accordance with the local requirements.

4.4.2 Organisation Structure

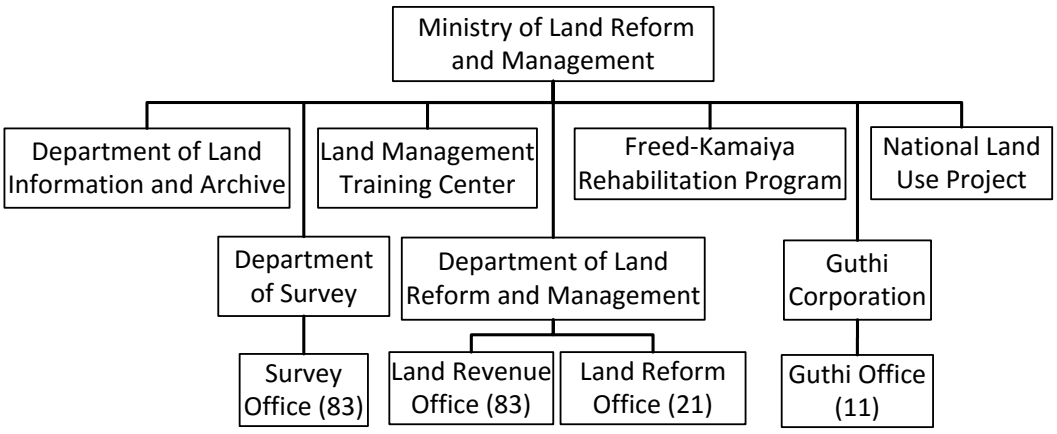
Various efforts were made to develop a land administration system in Nepal in the latter half of the 19th Century. Enactment of National Code, 1854, involved chain surveys of farm land of *Terai* and Hilly regions, cadastral surveying of Sindhuli district, establishment of land office, classification of land in *Abal*, *Doyem*, *Sim* and *Chahar*[42], preparation of land records in *Terai* and establishment of *Pota Registration Adda* (Land Registration Office) in Kathmandu, Lalitpur and Bhaktapur, which all developed a foundation for land administration (MOLRM, 2011). Beginning of registration of deeds in the land office, commencement of cadastral surveying in Bhaktapur district and establishment of the Survey Party Office were other early steps in the development of land administration in Nepal (ibid). The government tried to introduce new laws and establish new institutions after the political changes of 1951. The institutional framework established in the 1950s and 1960s has shaped the modern land administration system of Nepal.

Land administration functions in Nepal are structured under a single ministry called the Ministry of Land Reform and Management. As mentioned in MOLRM (2013), the main functions of this ministry are implementation, monitoring and evaluation of the policies,

[42] First, second, third and fourth category of land respectively in accordance with agricultural production

plans and programmes, land administration and revenue collection, and national and international issues related to land. The ministry also establishes and maintains geodetic control networks, produces topographic maps, aerial surveys and geo-information, manages *Guthi* Corporation and *Guthi* land, implements land reform programmes, and undertakes human resources development through professional training in land surveying, mapping and land management (ibid). These functions are carried out by its five central level offices, two national level projects, and 196 local offices (Figure 4-5). The Department of Land Reform and Management (DOLRM) is responsible for land reform and land management activities; the Survey Department prepares cadastral maps and land registers; and the Department of Land Information and Archive (DOLIA) is responsible for archiving land records, providing reliable land information and developing a national spatial data infrastructure (ibid). Similarly, the *Freed-Kamaiya* Rehabilitation Programme deals with rehabilitation issues of freed-bonded labour and coordinates the activities related to resolving the landless problem and the rehabilitation of freed *Haliya*, *Badi*[43] and informal (ibid). In addition, the National Land Use Project is involved in preparing land use maps, and zoning (ibid). The only corporation under this ministry is the Trust Corporation, which conducts the administration of trust land in the country. Around 5,400 people are employed under this ministry (MOLRM, 2011).

Figure 4-5: Structure of land administration organisations of Nepal



Source: MOLRM (2013)

[43] A tribal community living in Western Nepal

Similarly, Land Revenue Office, Survey Office, Land Reform Office and Trust Office are responsible for providing land administration services at the local level. The main functions of the Land Revenue Offices are the registration of deeds, issuing ownership certificates, adjudication of unregistered land and updating records whereas the Survey Office deals with parcel subdivision, prepares parcel plans and maintains cadastral maps (MOLRM, 2013). Similarly, the main functions of the Land Reform Offices are to maintain tenancy records, the adjudication of tenancy rights and fixing rents (ibid). The *Guthi* Offices maintain the records and collect land revenue from *Guthi* land (ibid).

Other organisations involved in land administration activities are municipalities and VDCs, which provide personal information regarding births, deaths, marriage, divorce, migration and relations, provide valuation reports on buildings, and collect land revenues and property taxes. They are under the Ministry of Local Development.

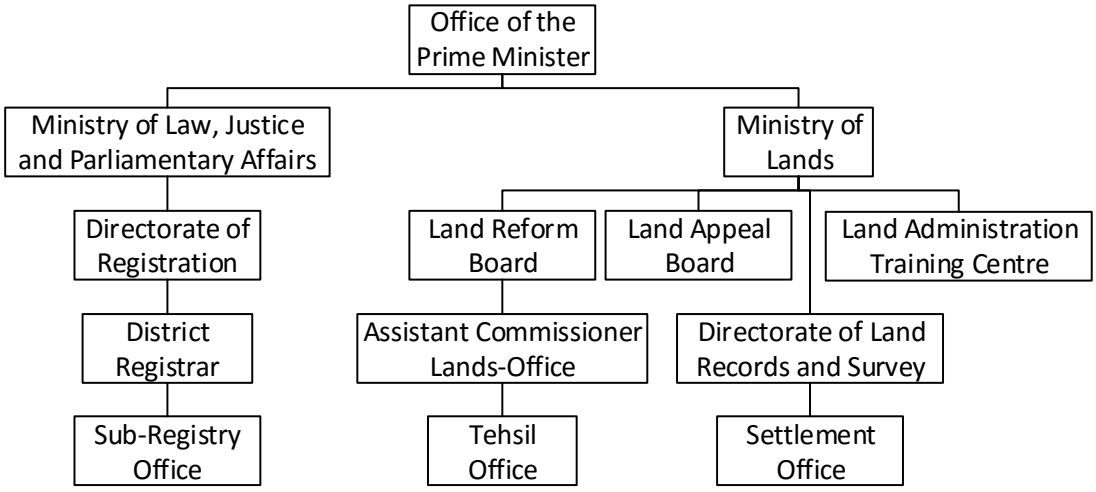
In Bangladesh, measurement of land was introduced for the purpose of collecting land revenue as in many other countries. Land administration in Bangladesh has a long history that dates back to systems developed by the Hindu rulers of ancient India, and still carries the heavy imprint of the elaborate system of land surveys and registration for revenue collection purposes introduced by the British (CARE, 2003). Sultan Sher Shah (1540-45) had introduced measurement of lands and a regular system of assessment and collection of revenue. But the first real step towards accurate assessment based on a comprehensive survey of land and the establishment of one uniform standard of measurement was achieved by the Revenue and Finance Minister of Emperor Akbar, Todar Mall (1571-82) and this was in practice until 1765 (Hussain, 2012). The Survey Act, 1875, Registration Act, 1908, Non-agricultural *Khas* Land Management and Settlement Policy, 1995, and Agricultural *Khas* Land Management and Settlement Policy, 1997 have provided for various issues of land management.

The Mughal rulers had appointed *zamindars* and *talukdars* to collect land revenue from the peasants. After taking the *dewani* of Bengal in 1765, the East India Company appointed some supervisors to look after the land revenue collection mechanism (Ahmed, 2012). A Board of Revenue was set up in 1772 to control and supervise the work of the collectors in matters relating to land administration and collection of land revenue.

The Board was reconstituted several times and in recent times was given the status of a fully-fledged ministry called the Ministry of Land Administration and Land Reforms in 1973, and renamed the Ministry of Lands in 1987 (ibid). Similarly, a Board of Land Administration was established according to the Board of Land Administration Act, 1980 which was replaced by the Land Appeal Board and Land Reform Board in 1989.

The structure of organisations directly involved in land administration activities in Bangladesh is depicted in Figure 4-6. The Directorate of Registration is under the Ministry of Law, Justice and Parliamentary Affairs and headed by the Inspector General-Registration. This department records land mutations[44] arising through sale, inheritance or other forms of transfer, reports changes to the Ministry of Land, and collects the Immovable Property Transfer Tax through Sub-Registration Offices (NORC, 2009). There are 61 District Registrar Offices, which provide guidance to the Sub-Registration Offices on policy and problems regarding registration, collaborate with the District Registrar Office and Sub-Registration Offices in the collection and management of information, and look after the complaints, operational irregularities and corruption cases involving Deeds and Marriage Registry Staffs and Deed Writers (ibid).

Figure 4-6: Structure of land administration organisations of Bangladesh



Source: NORC (2009)

[44]Actions of *tehsildars* and AC-Lands to update record of rights reflecting change in land rights and physical alterations

The tasks of land management including management of state land, waste land, vested and non-resident property, boundary demarcation, land revenue and settlement are the responsibility of the Ministry of Lands. The Land Appeal Board, Land Reform Board, Directorate of Land Records and Survey and Land Administration Training Centre are the four central level organisations under this Ministry. The Directorate of Land Records and Survey is the largest organisation among them and employs around 95 per cent of the 6,000 employees of the ministry. It is responsible for creating the base cadastral maps (*mouza*[45] or village maps) by systematic survey and titling of large areas on a continuous and rolling basis. Land settlement and revision settlement throughout the country is undertaken through its zonal and revisional settlement offices (NORC, 2009). Along with the cadastral maps, the settlement survey prepares the initial *khatiyan* (Records of Rights), a narrative title history of each legal property object recorded in the cadastral maps (ibid). Other responsibilities of the Directorate of Land Records and Survey include preparing maps of the international boundary between India and Bangladesh, preparing, printing and reprinting *mouza* maps, *upazila* maps, district maps, and country maps of Bangladesh, providing advice to the government on the above issues, and conducting training for civil service officials (ibid).

The sporadic modification to the cadastral maps and Records of Rights, however, is done by the AC-Lands Office[46] and their subordinate *tehsil*[47] level land offices, structured under the Land Reform Board. The main duties of the AC-Lands Office relating to land include mutation approval (sales and inheritance), administration of unoccupied state lands, administration of the land development tax, and administration of the *tehsil* level offices staffed by Assistant Land Officers (NORC, 2009). There are eight to 12 *tehsil* level offices under each AC-Lands Office. The main responsibilities of the *tehsil* level land office include collection of the land development tax, updating the Record of Rights subject to the approval of AC-Lands Office by recording mutations, land surveys, supervision of *Khas* land (lease terms), supervision of abandoned lands, and responding to inquiries about land ownership, mutation, litigation, and land surveys (ibid). Thus, the Land Reform Board

[45] A type of administrative district comprising one or more settlements
[46] Office of the Assistant Commissioner of Land
[47] Lowest or union-level revenue unit comprising several *mouza*

is most involved in the land record system. It administers *Khas* land, and manages abandoned and vested property, updates maps and land records between surveys, and sets and collects the Land Development Tax (ibid). It is also formally responsible for the implementation of land reform legislation and the implementation of tenant's rights (CARE, 2003). The Land Appeal Board is the highest revenue court in the land, serving as the final arbiter in matters of *Khas* land, changes in records, plot demarcation and taxation, which cannot be resolved at lower levels.

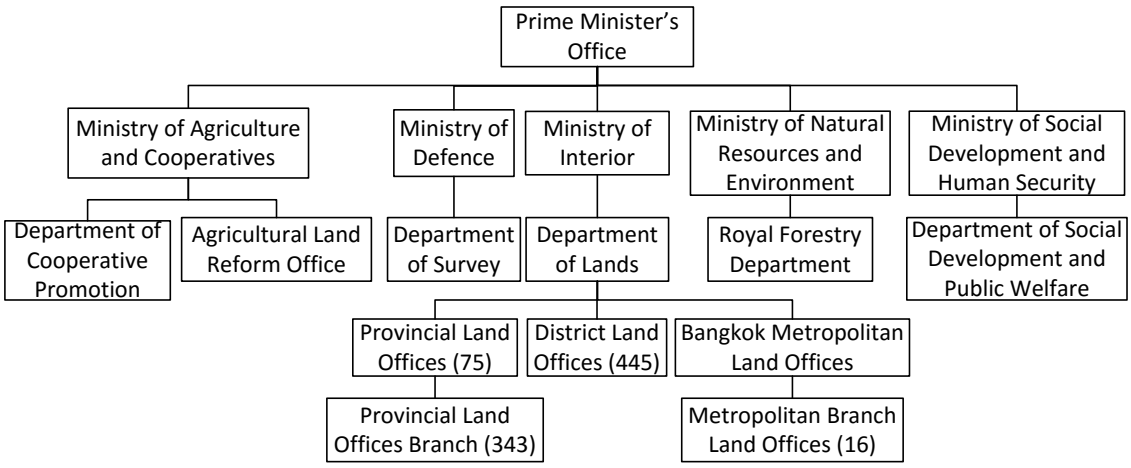
Three other ministries or cabinet level departments are involved indirectly in land administration activities, including the Ministry of Establishment, the Prime Minister's Cabinet Division and the Ministry of Finance; the responsibilities of these involve management of the structure of government and the civil service, local government administration, and taxation and revenues respectively (NORC, 2009). The Ministry of Establishment appoints and transfers the commissioner and other administrative staff of the AC-Lands Office. The Prime Minister's Cabinet Office also exercises supervisory authority over divisional and district officers.

In Thailand, the Land Code of 1954 and the Civil and Commercial Code published since 1923 provide the foundation for the development of the land administration system and property rights. The Civil and Commercial Code covers the basis of law, obligations and contracts, specific contracts, including transfer, sale and mortgage, property, including its acquisition, extent and exercise of ownership, family, and succession. Similarly, the Land Code covers the protection of land, the arrangements for the utilisation of state land, land allocation, rights in land, issuance of documents evidencing rights in land, land survey, registration of rights, limitations on rights for religious purposes, and limitations of alien's rights in land.

A number of government agencies are involved in land administration activities in Thailand; they are the Department of Lands, Royal Forestry Department, Agricultural Land Reform Office, Department of Cooperatives and the Department of Social Development and Public Welfare (Figure 4-7). The Department of Lands, one of the Departments of the Ministry of Interior, is the major provider of land administration services. It conducts its function through 75 Provincial Land Offices, 343 branches of Provincial Land Offices, 445

District Land Offices and the Bangkok Metropolitan Land Office and its 16 Branch Offices (Nanthamontry and Rakayo, 2007).

Figure 4-7: Structure of land administration organisations of Thailand



Source: USAID (2011); Ministry of Interior (2013)

The Department of Lands is responsible for implementing the Land Code and the registration of land rights throughout the country. It manages two categories of land; the titled public land called *Nor-Sor-Lor*[48] belonging to the government agencies and for communal purposes that guarantees public ownership over land. Another category of land is the private land for which it can issue four forms of documents in accordance with the Land Code, namely: the Title Deed (*Chanod* or *NS-4*), Certificate of Utilisation (*Nor-Sor-Sarm or NS-3* and *Nor-Sor-Sarm Kor or NS-3K*), Pre-emptive Certificate (*NS-2* or *Bai-Chong*), and the Claim Certificate (*Sor-Kor-Neung or SK-1*) (Nanthamontry and Rakayo, 2007). As observed by Feder et al. (1988), the NS-4 is the most secure, full and unrestricted ownership title, NS-3 and NS-3K are also secure which can be sold, transferred and mortgaged and can be converted to title deed (NS-4), and the NS-2 and SK-1 are less secured documents which can be converted into NS-3 or NS-3K. It is responsible for implementing the Land Code and the registration of land rights throughout the country.

[48] Titled public land

The Royal Thai Survey Department is under the Ministry of Defence. It is responsible for cadastral surveying. Similarly, the Royal Forestry Department of the Ministry of Natural Resources and Environment is responsible for undertaking surveys of national forest reserve areas declared by the cabinet. This department can issue land documents for plots inside the forest reserves. A programme to recognise the rights of agricultural land holders inside forests, with five year usufruct licences for the land suitable for agriculture was introduced by this department in 1981 (Nanthamontry and Rakayo, 2007).

There are two other agencies under the Ministry of Agriculture and Cooperatives concerned with agricultural land: the Agricultural Land Reform Office and the Department of Cooperative Promotion. The Agricultural Land Reform Office was created in 1975 with the aim of distributing forest reserves to the landless and households with small agricultural land holdings (ibid). It is mainly responsible for three activities: allocating land to the farmers, developing the land in land reform areas and improving agricultural production. It can issue the land use certificate called *SPK* (*Sor- Por- Kor*), which can be inherited but not sold. The Department of Cooperative Promotion also issues usufruct licences. The Department of Social Development and Public Welfare of the Ministry of Social Development and Human Security also issues usufruct licences in specific areas.

Thus, the land administration functions in Nepal, Bangladesh and Thailand are organised differently. Only one ministry is involved in land administration in Nepal whereas, at least two ministries in Bangladesh and five ministries in Thailand are responsible for these activities.

4.4.3 Land Registration

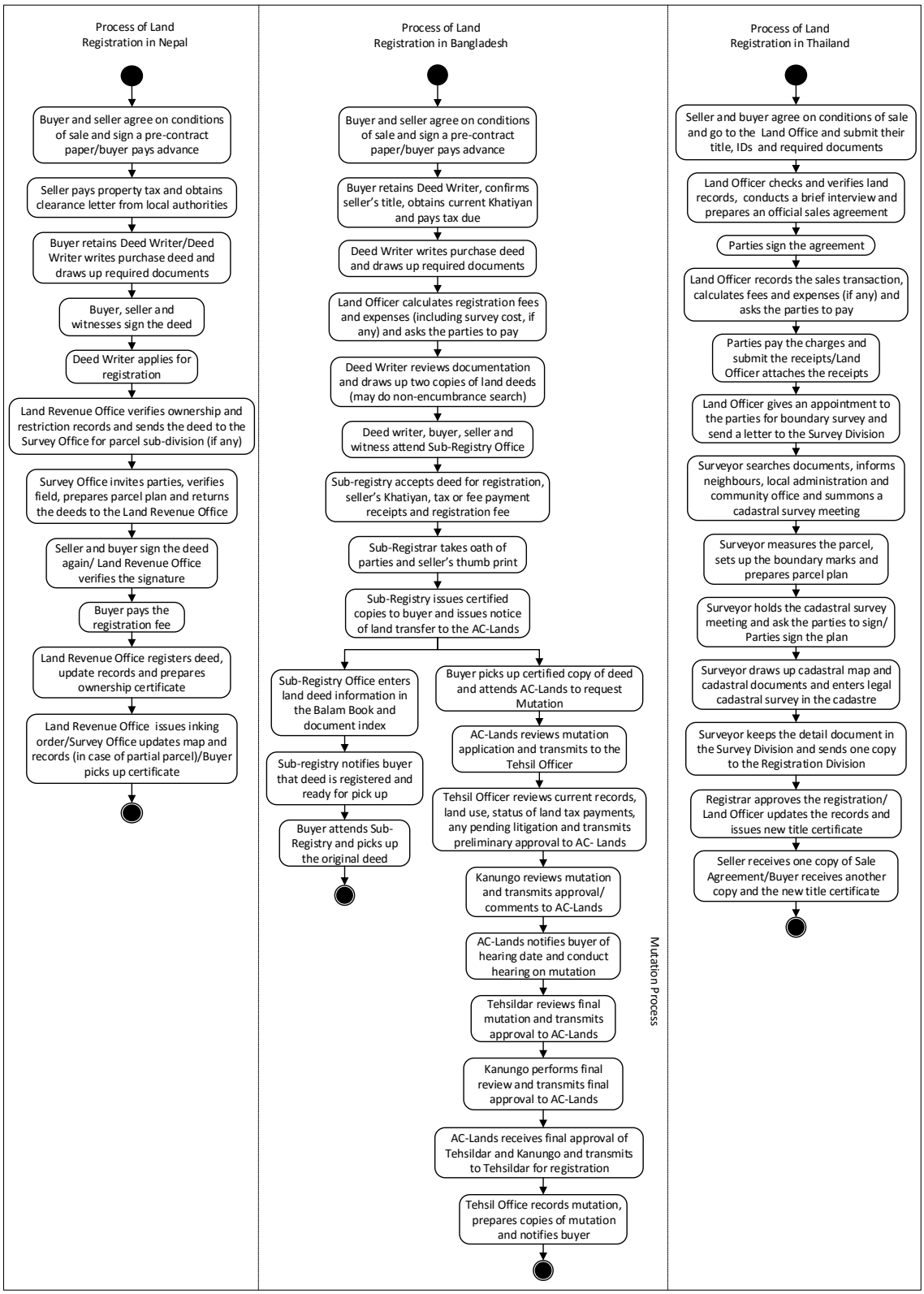
A typical process of land registration excluding the mortgaging process in Nepal, Bangladesh and Thailand is shown in Figure 4-8 which is prepared based on the information provided in respective land laws and the Doing Business Report, 2013 of the World Bank.

In Nepal, the task of registering property is assigned to the Land Revenue Offices according to the Article 8(1) of the Land Revenue Act, 1978. The Survey Offices provide technical support in land administration activities. The process of land registration is

mainly governed by the land laws, land administration and survey directives, and decrees issued by government departments from time to time. The *Jagga Prashasan Nirdeshika, 2001* (Land Administration Directives, 2001), describes the process of registration of deeds. The World Bank (2013) has classified the procedure for land (deed) registration in Nepal into three steps as obtaining clearance certificate from the municipalities or VDCs, hiring *lekhapadhi byabasayee* (deed writer or paralegals) and registration of deeds and issuance of a new title certificates. It states that the seller goes to the local government office to certify the type of road that adjoins the property and to get tax clearance certificate. Then the seller hires deed writer to prepare a deed although the seller can prepare the deed legally by himself.

The land administration organisations are directly involved only in the third procedure mentioned above (Figure 4-8). As described by DOLRM (2001:55-74), once the deed is received for registration, Land Revenue Office verifies the record and registers the application in a daily register. In the case of parcel sub-division, the deed is sent to the Survey Office which verifies parcel boundaries, prepares a parcel plan and submits it to the Land Revenue Office (ibid). Then the Land Revenue Office verifies the client's signature and the buyer pays a registration fee after which the staffs of the Registration Section of the Land Revenue Office sign the deed and submit it for final approval (ibid). The Land Revenue Officer conducts a brief interview with the seller and buyer and approves the deed (ibid). Then the Record Section updates the land records and prepares a certificate; once the officer verifies it, the buyer receives the certificate and a copy of the deed; another copy of will be sent to the Archive Section (ibid). In the case of a partial parcel, an order will also be issued to the Survey Office to update the cadastral maps and records (ibid).

Figure 4-8: Process of land registration in Nepal, Bangladesh and Thailand



Source: Adapted from World Bank (2013); DOLORM (2001:55-74); NORC (2009:35-40; 160)

In Bangladesh, the Registration Act, 1908 provides the legal foundation for land registration. World Bank (2013) and NORC (2009) describe the process of land registration in Bangladesh. The World Bank (2013) classified the process into eight steps as conducing mutation, obtaining inspection for mutation, verification of the records of rights, obtaining non-encumbrance certificate, preparing deed of transfer and paying stamp duty, paying capital gain tax, value added tax and other taxes, applying for registration and registering the change of ownership in case of Dhaka city. Similarly, NORC (2009) explains the registration process practiced in Bangladesh into eight steps which is shown in Figure 4-8 above and further explained below.

The process of land registration begins when the buyer and seller reach an agreement on conditions of sale and price. As shown in Figure 4-8 and described in NORC (2009:35-40), the buyer retains a deed writer, verifies the record of rights from the Land Office and obtains the current *khatiyan*. He also pays the taxes and fees, including capital gains tax, local government tax, value added tax and the registration fee. Then he supplies all receipts and the certified copy of the current *khatiyan* to the Deed Writer and pays stamp duty by purchasing stamped deed forms. The Deed Writer reviews the documentation and prepares two copies of the deeds; he may also undertake a non-encumbrance search. Once the deeds and documents are ready, the Deed Writer, seller and buyer, and the witnesses attend the Sub-Registry Office. The Sub-Registry accepts the deeds, *khatiyan* and other documents and prepares receipts showing a document registration number and registration fee and taxes paid on the deed. After that the Sub-Registrar takes oaths from the parties. Then the Sub-Registry Office takes the thumbprints of the seller and issues a certified copy of the deed to the buyer and also issues a notice of land transfer to the AC-Lands Office. The buyer then goes to the AC-Lands Office and requests a mutation. The Sub-Registry Office, meanwhile, enters the deed in the *balam book*[49] and notifies the buyer when the deed is registered and ready for collection.

The task of mutation is carried by AC-Lands Office and Tehsil Office. As described in NORC (2009:35-40; 160) and shown in Figure 4-8 above, the buyer applies in the AC-Lands

[49] Book recording deeds; Book No. 1 of the Sub-Registry Office in which deeds are registered

Office for mutation when he receives the certified copy of the deed from the Sub-Registry Office. He also attaches required documents including: the certified copy and a photocopy of the deed, certified copies of the *khatiyan* or photocopy along with the main copy and the approval of mutation (if applicable). The Sub-Registry Office registers the distribution among the inheritors of the property, the latest statement of tax revenue, a copy of the *parcha* (field note) of the City Survey (if applicable), a certified copy of the lease document, a copy of the letter of permission for the government plot (in case of land allotted by the Ministry of Housing and Public Works) and the attested copy of the power of attorney (if applicable).

The AC-Lands Office reviews the application and then transmits it to the *Tehsil* Office. After receiving an application, the *Tehsil* Office reviews current records, land use, status of land tax payments, and any pending litigation and then transmits preliminary approval to the AC-Lands Office. Then the *kanungo*[50] reviews the mutation and transmits approval or comments to AC-Lands Office. The AC-Lands Office notifies the buyer about the hearing date and conducts a hearing on the mutation application and approves the mutation; otherwise, it is transmitted to the *tehsildar*[51] for final review and approval. If received for final review: the *tehsildar* reviews the final mutation and transmits the approval to AC-Lands Office. Then the *kanungo* carries out a final review and transmits this to the AC-Lands Office. AC-Lands Office receives the final approval of mutation by the *tehisildar* and *kanungo* and transmits this to the *tehsildar* for registration. Finally, the *tehsildar* records the mutation in a register, prepares copies of the mutation and notifies the buyer. The whole process of registration and mutation is thus completed.

In Thailand, when the buyer and seller agree to transact a unit of land or a building, they go to the land office directly. As described by World Bank (2013) and as shown in Figure 4-8 above, when the buyer and seller go to the land office, the officer at the Information Desk requests supporting documents, including their identity cards and title certificates. Once received, he verifies the documents with the official records. If everything is consistent, he interviews the parties, prepares an official sales agreement and asks the

[50] Sub-assistant settlement officer; a position junior to assistant commissioner (land)
[51] Local revenue collector

parties to sign. After that the officer calculates the registration fee and other charges, including the cost of boundary survey in the case of parcel sub-division. The registration fee, withholding tax[52] and specific business taxes are payable to the Ministry of Finance but collected by the land office.

In the case of the transaction of a whole parcel, the Land Officer attaches the receipts and sends the application to the registration division. Then the application is submitted before the Land Registrar for approval. If the parcel needs to be sub-divided, the Land Officer arranges for a boundary survey to be undertaken and sends the document with a covering letter to the Survey Division. The Survey Officer then searches the documents, identifies the neighbours and summons them to attend the cadastral survey meeting and informs the local administration office as well. On the day of survey, the Surveyor measures the parcel, sets up the boundary marks and holds the cadastral meeting with the seller, the buyer and the owners of the neighbouring parcels where a new cadastral survey unit is formed. The Surveyor prepares a parcel plan and requests the parties to sign. If any of the neighbours do not attend the meeting, the Survey Officer corresponds with the local community office for further information. The Surveyor then draws up a cadastral map and cadastral documents and enters this in the cadastral records. One copy of the cadastral document is sent to the Registration Division and rest of them are kept in the Survey Division. Records are updated and a title certificate is issued when the Land Registrar approves the documents. The seller receives one copy of the sale agreement, and the buyer receives another copy and the title certificate.

Although the purpose of registration of land is same in all of the three countries, there are some differences in the procedures followed by their land registries. It seems the process of Bangladesh more complicated than Thailand and Nepal. The ease of doing business while registering property in these countries is presented in Table 4-5. In terms of the overall ranking of registering property, Nepal and Thailand are in better position (24 and 29 respectively) but the ranking of Bangladesh is very low (177) (World Bank, 2013). Similarly, there are eight procedures in Bangladesh whereas there are only three

[52] Deduction from payments made to suppliers who provide a service

and two procedures in Nepal and Thailand respectively. The process of Bangladesh is more time consuming and costly than the others; it takes up to 245 days to complete the registration process and 6.7 per cent of property value will be spent during registration. The process of Nepal and Thailand, on the other hand, can be completed in five and two days and it costs 4.8 and 6.2 per cent of property value respectively.

Table 4-5: Registering property in Nepal, Bangladesh and Thailand

Indicators	Nepal	Bangladesh	Thailand
Rank	24	177	29
Number of procedures	3	8	2
Time (days)	5	245	2
Costs (percentage of property value)	4.8	6.7	6.3

Source: World Bank (2013)

Thus, the process of land registration in Bangladesh is more complicated than in Nepal and Thailand. Involvement in only two procedures, preparation of contract papers by the land office, and completion of procedures within two days are the strengths of the land registration system in Thailand. The high number of procedures and lengthy time taken are the major weaknesses of land registration in Bangladesh.

4.4.4 Cadastral Surveying

The history of cadastral surveying in Nepal goes back to the early 17th Century; however, systematic cadastral survey commenced in 1965. Enactment of the Land (Survey and Measurement) Act, 1963 was the main step for starting systematic surveying which aimed to make arrangements for the survey and measurement of lands and determining their grade. The initial purpose of beginning systematic cadastral surveying was to support the collection of land revenues and to provide landholding records to implement the land reform programme introduced in 1964. The first phase of systematic surveying was completed in BS 2055 (1998 AD) (Survey Department, 2012).

The cadastral survey in Nepal was carried out using the plain table survey method. Out of 75 districts, a local coordinate system was used in 38 districts where the maps are in free

sheet and not connected in the national geodetic network; mapping of the remaining 37 districts was carried out using the national geodetic network. Modern technologies like Total Station and theodolites are being used in some places in recent surveys. As described in FIG (2003), the current cadastral maps are prepared graphically and are carried out at three different scales 1:500, 1:1250 and 1:2500 based on the nature of the terrain and the value of the land. These maps are being scanned and the process of digitisation is running in several districts. The survey also highlighted three major issues for the cadastral system in Nepal: the edges of the maps do not match with adjacent sheets; there is manipulation and misinterpretation of maps and existing documents, and involvement of more than one organisation in land administration activities.

In Bangladesh, the Survey Act, 1875 enabled the government to order the surveying of land situated in any district or its part or any track of the country, and that the boundaries of estates, tenures, *mouzas* or fields be demarcated on the lands to be surveyed whenever it should think fit. The appointment of Superintendents and Assistant Superintendents, Collectors and Deputy Collectors, their roles and responsibilities, and the process of surveying and boundary marking were also covered by this Act. Similarly, the Bengal Tenancy Act, 1885 and the East Bengal State Acquisition and Tenancy Act, 1950 gave the power to a Revenue Officer to order surveys and the preparation of Records of Rights for the provincial government in respect of all lands in any local area, estate or tenure or part thereof if he should think it fit.

Major survey operations conducted in the territory that is now Bangladesh were the *Thakbast Survey* (demarcation survey) (1845-1877), Revenue Survey (1846-1878), *Khasra Operation*[53] (1841-1854) and *Diara Surveys*[54] (1862-1883). As described by Hussain (2012), the *Thakbast Survey* aimed to demarcate boundaries of villages and estates. Likewise, in the Revenue Survey, accurate maps of villages were prepared, usually to the scale of four inches to one mile and one inch to one mile, showing topographical details and compiling certain statistical data for general administrative purposes. The *Khasra Operations* were carried out in the temporarily settled area, and also in some

[53] Survey of temporarily settled areas
[54] Settlement operations in alluvial area

permanently settled areas where it would be difficult or unduly expensive to show the details. Similarly, the *Diara Surveys* were carried out in the beds of the Ganges and other large rivers on the scale of four inches to one mile. The modern cadastral system is an improvement on the *Khasra operations* because it shows the real shapes of the field boundaries. Maps produced from the modern survey were on the scale of 16 inches to one mile.

The system of land recording in Bangladesh is provisioned by the East Bengal State Acquisition and Tenancy Act, 1950 and is presently administered by the Department of Land Records and Survey and the Assistant Commissioner-Lands structure. This Act describes the process of land settlement, which can be compared to the systematic titling provisions of other national laws, but which is primarily tied to the process of nationalisation of land through state acquisition (NORC, 2009). This Act also provided for the preparation, maintenance and revision of Records of Rights. The government may make an order to prepare a record of rights in respect of any district, part of a district or local area, or to revise the Records of Rights prepared under the Bengal Tenancy Act, 1885 by a Revenue Officer. The Revenue Officer records the rights, publishes a draft and considers any objections. Registrars are obliged to provide access to registered documents to citizens to assist in their transactions (ibid).

In Thailand, the Civil and Commercial Code (1932) assigns the responsibility for all cadastral surveys, including subdivision, for maintaining the land registers and for issuing land title documents to the Department of Lands. The Department of Lands has carried out cadastral surveying and mapping of land titles on the scale of 1:4000. The physical boundaries of parcels of land in Thailand are generally defined by legal boundaries, following the general boundary approach based on aerial photography. There are two categories of cadastral system for land title (NS4). The first class systematic surveys are done in urban areas where sufficient cadastral control can be provided. In this type of survey, adjudication documents have to be signed by all adjacent owners after completion of the adjudication process and numbered concrete blocks are placed at each corner. The boundaries are surveyed using theodolites and chain and the cadastral map is plotted in the computer. The second-class surveys are based on rectified photomaps at

1:4000 in rural areas, and on traverse and tape survey at 1:1000 in village and urban areas (Utsenan, 2010).

The cadastral maps are scanned and digitised in Thailand. All past survey data, field books and plans containing both dimensional information about parcel boundaries and field data about the value and methodology applied at the time of measurement need to be checked while resurveying which is normally done during parcel sub-division for transactions, the adjudication process in the court about boundary disputes, or at the request of the land owner (ibid).

To sum up, the cadastral surveying was done using traditional technology and the cadastral maps are recorded in an analogue form in both Nepal and Bangladesh but new technology was applied in Thailand. The process of digitization of cadastral records is started in all of these countries.

4.4.5 Property Valuation

The Government of Nepal started to determine the minimum valuation of land for taxation purposes since 1982. A Minimum Valuation Determining Committee would be formed in the area of each Land Revenue Office under the chairmanship of a Chief District Officer according to Article 8(2) of the Land Revenue Act, 1978. Other members of the committee are the Chairman of the District Development Committee or his representative, and Chiefs of the Survey Office, Tax Office (if any), and the Land Revenue Office. The committee determines the valuation of land for the upcoming fiscal year by mid-July. Factors such as financial activities, population density, topography of land, physical facilities, agricultural production, commercial and tourist centres, education, health, employment and security, development activities, size or shape of land, risk and migration should be considered while determining the minimum valuation of land as per the *Neunatam Mulya Nirdharan Nirdeshika, 2059* (Directives for Determining Minimum Valuation, 2003). The local government offices, however, prepare the valuations of buildings.

In Bangladesh, the value of property is determined in accordance with the policy framed by the Inspector-General of Registration as provided for in Section 69 of the Registration

Act, 1908. Land registration offices prepare minimum valuations of land for each *mouza*. Buyers and sellers determine the value of property but the value mentioned in the document should not be less than the market value as estimated by the land registry. According to Section 63A of the Registration Act, if the registering officer found the value mentioned in a deed is less than the minimum value prepared by the government, he would ask the parties to pay the remaining duties and fees.

In Thailand, the government determines the value of land. The land value is assessed by the Treasury Department of the Ministry of Finance every four years. This was previously done by the Department of Lands of the Ministry of the Interior.

Thus, there is a minimum valuation system in Nepal and Bangladesh, where the valuation determined by the government is normally less than is normally less than the market value, unlike in Thailand.

4.5 Summary

This chapter provides general background information about Nepal, Bangladesh and Thailand and discusses the system of land tenure and land administration of those countries. Agriculture is one of the main source of income in Nepal and Bangladesh. The GDP from the agricultural sector has been increased in all three countries recent decades.

In Nepal, all land traditionally belonged to the state. A communal type of system was also in existence among the Limbu community of the Eastern region. Private ownership of land emerged as the government granted land to the royal family and the cultivator under different systems of tenure, including *Birta*, *Jagir* and *Guthi*. All of these tenure forms were abolished and the land then either nationalised or converted into private ownership after the political change of 1951. The land came into the formal system as the cadastral surveying and land adjudication began in the 1960s. Private ownership of land was also established by means of land reform, formalisation of informal settlement, distribution of land to the landless and deprived people through land commissions, settlement committees and forest area improvement committees.

In Bangladesh, the ownership of land, which used to be cultivated by the peasants as tenants, was vested in the King. During the Mughal period, the ownership of land was

brought under the state, and *zamindars* and *talukdars* were appointed to collect land revenues from the peasants. The current land tenure system of Bangladesh is mainly based on permanent settlements originated during British rule under which the ownership of land was granted to the *zamindars* provided that they collected the rent from the tenants and paid it to the East India Company on a regular basis. The *zamindari system* was abolished after enactment of the East Bengal State Acquisition and Tenancy Act, 1950 after which the ultimate ownership came to the state and the tenants became the holders of land. The survey and settlement operations were undertaken in different stages in different parts of the country.

The functions of land administration in Nepal are organised in a single ministry whereas cadastre and land registry are under separate ministries in Bangladesh and Thailand. Three more ministries are authorised to provide some sorts of land certificates in Thailand.

Thailand is adopting a title registration system and Nepal and Bangladesh are adopting the deed registration system. In Thailand, the process of land registration is very simple and fast although the process of parcel sub-division takes a couple of weeks. The land registration process of Nepal can be completed within five days even in the case of partial parcels. The process of Bangladesh, however, is more complicated and time consuming. These processes will be further discussed in Chapter Six. The valuation of land determined by the government authorities in Thailand is close to market value, but there is a minimum valuation system in Nepal and Bangladesh.

Chapter 5: Tenure Security and Its Economic Outcomes

5.1 Introduction

The aim of this chapter is to discuss about land tenure security and its economic outcomes. It presents and analyses both qualitative and quantitative data collected from Nepal, Bangladesh and Thailand applying survey, interview, observation and documentation methods. It explores how land tenure becomes secure, how and to what extent the security of land tenure affects land related activities, creates a favourable environment for investment and increases production from land and provides answers to the first, second and third research questions posed in Chapter One.

As discussed in Chapter Two, registration of land is considered as the means of providing security of land tenure for the purpose of this research. In this chapter, the term 'land registration' is commonly used to denote the act of registering land rights by means of property formalisation in Chulachuli, Nepal and surveying settlement in Gharinda, Bangladesh as both of these programme aimed to register land. Thus, the role of land registration on tenure security is discussed first. After that the changes in land use and land related economic activities promoted by the registration are discussed. Then the changes in land value, access to credit, investment and income resulting from secured tenure are analysed. These changes are measured by comparing the situation before and after registration which represents the scenario of three years period. Before and after registration means the situation prior to and after getting the land tile respectively.

5.2 Land Registration and Tenure Security

Land registration is a process of registering rights to land. In order to identify the changes in the property rights situation, respondents were asked about the type of property rights available to them on their land before and after registration. The results are presented in Table 5-1. Almost all of the respondents from both countries said that they are enjoying the rights of ownership, sale and transfer, access to bank loans, and lease and use production after registration of land. The number of respondents who considered they

had these rights before registration is negligible, except in the case of using production from land. Around 71 per cent of respondents from Nepal and 98 per cent from Bangladesh said that they were using their production even if the land was not registered.

Table 5-1: Property rights before and after registration of land

Property Rights	Nepal		Bangladesh	
	Before Registration	After Registration	Before Registration	After Registration
Ownership	6 (1.6%)	380 (99.7%)	31 (7.7%)	401 (99.5%)
Sale and transfer	4 (1.0%)	381 (100%)	0 (0%)	390 (96.8%)
Access to bank loan	3 (0.8%)	380 (99.7%)	1 (0.2%)	391 (97%)
Lease	8 (2.1%)	381 (100%)	1 (0.2%)	392 (97.3%)
Use production	270 (70.9%)	380 (99.7%)	395 (98.0%)	401 (99.5%)

Unless land is registered, landowners may face certain risks on their land. As shown in Table 5-2, around 96 per cent of respondents from Nepal believed that, prior to registration, there were risks of aggression from other parties and 93 per cent were concerned about acquisition by government without fair compensation. Similarly, in Bangladesh, the percentages were 91 and 87 per cent respectively. Interestingly, only two and 16 percent of respondents from Nepal believed that there are fears of aggression and losing compensation after registration of land. The proportion of respondents from Bangladesh who believed that there are such risks after registration is negligible (around one per cent).

Table 5-2: Risks on properties before and after registration of land

Risks	Nepal		Bangladesh	
	Before Registration	After Registration	Before Registration	After Registration
Aggression from others	365 (95.8%)	7 (1.8%)	368 (91.3%)	5 (1.2%)
Acquisition without fair compensation	354 (92.9%)	60 (15.7%)	351 (87.1%)	2 (0.5%)

From the analysis of data presented in Table 5-1 and Table 5-2 above, it is clear that all forms of property rights are available and associated risks are lowered after registration of land in both countries. This observation is supported by statements of some interviewees as well. For instance, one of the local political leaders and ex-members of the CAISPSC said that full property rights are achieved after registration. In his own words:

> *"Ownership right, right to mortgage, right of transactions, including the access to government facilities are established after having Land Ownership Certificate. [...] We are enjoying the full property rights after registration."*

Similarly, one of the land rights activists from Nepal said that once land is registered, it is converted to freehold tenure in which a higher level of property rights can be enjoyed provided that the landowner pays land tax to the government. He said: "This type of land is *numbari* [freehold] which can be sold, transferred, used, mortgaged, and partitioned at any time." The Chief of the local Land Revenue Office in Nepal also stated that the land rights enjoyed by freeholders in other parts of the country are available to landowners in Chulachuli village as well. In his words:

> *"Whatever rights are enjoying by the landowners of other parts of the country in accordance with law, are available to the landowners of the Chulachuli area. Unless otherwise decided by the court, there is no restriction to anyone in using these rights. [...] The landowners of the Chulachuli area will have same rights and will be treated in the same manner."*

Landowners are also confident about their rights after registration of land and believe that there are no risks of losing their land now. One of the local land rights activists from

Nepal argued that they are confident that their land would not be grabbed by other people and that reasonable compensation would be given in case of acquisition. He said:

> *"Before having the certificate, we were always scared of encroachment of land from other people. Landless movement used to arise here frequently and some so-called landless people used to grab the land. However, we are now free from such problems. [...] We are now confident. In the past, we had to accept whatever the government provides; now we have evidences for claiming appropriate compensation."*

Moreover, almost all of the respondents (99 per cent from Nepal and 98 per cent from Bangladesh) opined that the property rights are secured after registration of land. The constitutions of both Nepal and Bangladesh consider property rights as fundamental rights and provide for fair compensation against land acquisition.

All forms of tenure security (perceived, *de jure* and *de* facto tenure security) are attained in the registered land as almost all of the respondents have perceived that their land rights are secured and protected by law, and they are physically controlling their land. Although most of the respondents from both countries have replied that they had used their produce even before registration, they did not have any legal documentation to evidence their use right. It indicates that the landowners had control over land before registration, that is, they did have de facto tenure security but not legal tenure security. These findings contradict the observation of Reerink (2011) that the contribution of land registration programme to legal tenure security is limited.

It would appear that the conditions for security of land tenure proposed by Place et al. (1994) and Brasselle et al. (2002) presented in Chapter Two are fulfilled: land tenure is secured after registration. Moreover, an overwhelming majority of respondents from the case study areas of Nepal and Bangladesh (90 and 99 per cent respectively) considered land registration as a means of providing land tenure security. It is one of the main task of land administration organisations. Thus, land administration ensured security of land tenure by offering rights of ownership, sale and transfer, access to bank loan, lease and use production and safeguarding against aggression and unfair compensation to the new land owners. It provides part of the answer to the first research question which will be further discussed in Chapter Six.

5.3 Economic Outcomes of Tenure Security

5.3.1 Land Use and Economic Activities

The second research question posed in this research asks whether the land administration promotes land use and land related economic activities. In order to identify the changes in land use and economic activities, respondents from the case study areas of Nepal and Bangladesh were asked how they have used their land and what type of economic activities were undertaken on their land before and after registration. The findings of the study are presented below.

The pattern of land use in the selected case study areas of Nepal and Bangladesh is shown in Table 5-3. The lands of those areas were mainly used for residential and agricultural purposes. Out of 381 respondents from Nepal and 403 from Bangladesh, the percentage of respondents using land for shelter before registration was 91 and 89 per cent and using for agricultural purpose was 98 and 100 per cent respectively. However, the percentage of respondents using land for commercial purposes was negligible (four and zero per cent respectively). A slight increase in the number of respondents using land for shelter and commercial purposes and a decrease in the number using land for agricultural purposes is observed after registration. Around 92 per cent and 100 per cent respondents used their land for shelter, 89 per cent and 97 per cent used for agriculture and nine per cent and three per cent used their land for commercial purposes from Nepal and Bangladesh respectively after registration.

Table 5-3: Land use before and after registration as a proportion of respondents

Land Use*	Nepal		Bangladesh	
	Before Registration	After Registration	Before Registration	After Registration
Shelter	348 (91.3%)	351 (92.1%)	360 (89.3%)	402 (99.8%)
Agriculture	375 (98.4%)	339 (89.0%)	402 (99.8%)	390 (96.8%)
Commercial (for example, renting, shops, cottage industry)	15 (3.9%)	35 (9.2%)	1 (0.2%)	13 (3.2%)

*Data are mutually inclusive.

Land related economic activities changed slightly after registration in both countries. Proportions of respondents conducting different activities on their land before and after registration are presented on Table 5-4. In this table, the value after registration represents the net change in the number (or percentage) of respondents conducting particular activities. In Nepal, the activities of constructing and renovating houses, levelling land, constructing irrigation canals, using new tools and techniques for farming, planting cash crops, trees and fruits and animal husbandry were conducted by most of the respondents even before registration. The number of respondents conducting some land-related activities after registration increased significantly. For instance, among those who had not done so before, the number of respondents constructing houses increased by eight per cent, renovating houses by 12 per cent, using new tools and techniques for farming by 29 per cent, planting cash crops by 20 per cent and planting trees by 14 per cent. The proportion of respondents starting other activities was also positive.

In Bangladesh, a significant proportion of the respondents among those who had not done so before, began constructing houses (six per cent), renovating houses (12 per cent), land levelling (24 per cent), using new tools and techniques of farming (18 per cent), cash cropping (30 per cent), planting trees (24 per cent) and animal husbandry (28 per cent) after registration (Table 5-4). The number of respondents using their land for commercial purposes also increased in both countries, albeit only marginally in Bangladesh.

Table 5-4: Land related activities as a proportion of respondents

Land Use	Nepal		Bangladesh	
	Before Registration	Changes After Registration*	Before Registration	Changes After Registration*
Constructing houses	325 (85.3%)	30 (7.9%)	335 (83.1%)	25 (6.2%)
Renovating houses	20 (5.2%)	47 (12.3)	25 (6.2)	50 (12.4%)
Land levelling	250 (65.6%)	31 (8.1%)	290 (72%)	95 (23.6%)
Constructing irrigation canals	278 (73.0%)	10 (2.6%)	277 (68.7%)	36 (8.9%)
Fencing	104 (27.3%)	30 (7.9%)	23 (5.7%)	54 (13.4%)
Using new tools and techniques of farming	207 (54.3%)	110 (28.9%)	75 (18.6%)	72 (17.9%)
Cash cropping	190 (49.9%)	77 (20.2%)	158 (39.2%)	121 (30.0%)
Planting trees	244 (64.0%)	54 (14.2%)	75 (18.6%)	96 (23.8%)
Planting fruits	321 (84.3%)	27 (7.1%)	25 (6.2%)	46 (11.4%)
Animal husbandry	343 (90.0%)	2 (0.5%)	239 (59.3%)	111 (27.5%)
Commercial purposes (for example, renting, shops, cottage industry)	15 (3.9%)	35 (9.2%)	1 (0.2%)	13 (3.2%)

*Denotes the number and percentage of respondents using their land for the given activities. The values after registration are mutually inclusive to the values before registration.

The data presented in Table 5-3 and Table 5-4 shows that land was mainly used for the residential and agricultural purposes even before registration and only little was used for commercial purposes. Increases in the proportion of respondents renovating houses, cash cropping, planting trees and animal husbandry (in Bangladesh) and using land for commercial activities like renting, shops and cottage industry might have been induced from the registration of land.

The activities presented in Table 5-4 above are related to the improvement of the quality of life, land development, cropping patterns and commercial use of land. These were subsistence activities and aimed to fulfil the short-term needs of the landowners. One of the respondents said: “Prior to registration, we managed to live in a small house but I

built a new big house just six months ago." Showing his newly built house, he said that he spent two million *rupees* to build his house, which he would not have invested if the land had not been registered. The increase in the number of respondents engaged in land development activities and changing agricultural patterns indicates that the landowners wanted to use their land in more efficient ways although they had to spend some money at the beginning. These activities will protect their crops and increase their production. Photo 5-1 presents images of a tailoring centre and mushroom cropping in Bangladesh, which shows a different pattern of using their property than traditional agriculture.

Photo 5-1: Tailoring training centre (left) and mushroom farming (right) in Bangladesh

The farming method is still traditional in many parts of Nepal. Photo 5-2 shows peasants harvesting rice (left) and a peasant levelling his land in a traditional way. While talking about the new techniques of farming, the peasants said that they are considering forming a cooperative to buy a thresher and a power tiller so that they can plant and harvest their crops more easily.

Photo 5-2: Peasants harvesting rice (left) and ploughing land (right) in Nepal

There appears to be a positive effect of land registration on improving the quality of living, developing land for better use, investing in long-term returning activities, land development and using land for commercial purposes. These findings support those from other studies. For instance, Reerink (2011:221) observes that landholders with formal tenure lived in somewhat more consolidated dwellings than those with informal tenure. Similarly, the AusAID (2000) identifies that titled land is more likely to be improved than untitled land in Thailand. These findings support the notion of Evolutionary Theory of Land Tenure that land registration (titling) enhances tenure security which promotes efficient use of resources (Platteaue, 1996) and the statement of Posner (1973) that function of property rights is to create incentives to use resources efficiently, as discussed in Section 2.4.3.

The evidences presented above shows a slight change in the land use pattern and in economic activities related to improving the quality of life, land development and more efficient cropping choices after registration of land. Thus, it can be concluded that the land administration promotes land related economic activities to some extent which answers the second research question.

5.3.2 Land Value

This research also seeks to identify whether there is any relationship between tenure security and land value. The value of land in Chulachuli VDC of Nepal is presented in Table 5-5. Out of 381 respondents, 89 per cent mentioned the average land value as up to NPR[55] 100,000 and 11 per cent mentioned the value as between NPR 100,001 and 200,000 per *kattha* before registration of land. None of them replied that their land value was above NPR 200,000 per *kattha*. Land value increased considerably after registration. As shown in the table, only three per cent of respondents considered the value of their land to be up to NPR 100,000 after registration, but 50 per cent and 44 per cent considered the value of their land to be between NPR 100,001 and 200,000 and between NPR 200,001 and 300,000 per *kattha* respectively. The average land value before

[55] Nepali Rupees

registration was NPR 60,700, which increased by 224 per cent to reach NPR 196,500 per *kattha* respectively after registration.

Table 5-5: Average land value in Nepal as a proportion of respondents

Average Land Value per Kattha (in *Rupees*)	Number and Percentage of Respondents	
	Before Registration	After Registration
1-100,000	340 (89.2%)	11 (2.9%)
100,001-200,000	41 (10.8%)	192 (50.4%)
200,001-300,000	0 (0%)	168 (44.1%)
300,001-400,000	0 (0%)	10 (2.6%)
Total	381 (100%)	381 (100%)

The average value of land in Gharinda, Bangladesh is presented in Table 5-6. As shown in the table, out of 403 respondents, 43 and 38 per cent of respondents indicated that the value of their land was between BDT[56] 50,001 and 100,000*,* and between BDT 100,001 and 150,000 per *kattha* respectively before registration of land. Only three per cent replied that the value of land was between BDT 150,001 and 200,000 per *kattha*. Likewise, 70 per cent of respondents replied that the average value of their land ranged between BDT 200,001 and 250,000 per *kattha* after registration. The average land value before registration was BDT 90,000 per *kattha*, which increased by 123 per cent and reached BDT 201,000 per *kattha* after registration.

[56] Bangladeshi Taka

Table 5-6: Average land value in Bangladesh as a proportion of respondents

Average Land Value per Kattha (in *Taka*)	Number and Percentage of Respondents	
	Before Registration	After Registration
1-50,000	63 (15.6%)	1 (0.2%)
50,001-100,000	175 (43.4%)	5 (1.2%)
100,001-150,000	151 (37.5%)	58 (14.4%)
150,001-200,000	12 (3.0%)	59 (14.6%)
200,001-250,000	2 (0.5%)	280 (69.5%)
Total	403 (100%)	403 (100%)

A Pearson correlation coefficient was computed to assess the relationship between tenure security and land value. There was a positive correlation between the variables, r=0.684, n=762, p=.000 in the case of Nepal and r=0.259, n=806, p=.000 in the case of Bangladesh (Table 5-7).

Table 5-7: Correlation between tenure security and land value

		Nepal	Bangladesh
Land Value	Pearson Correlation	0.684***	0.259***
	Significance (2-tailed)	.000	.000
	n	762	806

*** Correlation is significant at the 0.01 level (2-tailed)

A paired sample t-test was also conducted to compare the land value before and after registration. The paired sample statistics are presented in Table 5-8 and the results of the test are presented in Table 5-9. As shown in the tables, the mean land value in case of Nepal increased from 32,290 to 137,336 and that of Bangladesh increased from 40,349 to 69,365 after registration of land. Similarly, the t-values of land value before and after registration are -28.238 and -17.112 in the case of Nepal and Bangladesh respectively. The two-tailed probability (p-value) for both cases is .000 which indicates that the chance

that a value of t this big could occur by chance is very low. The statistics presented in Table 5-8 and test results in Table 5-9 suggest that the land value is increased after registration. However, the standard deviation of land value increased from 20,775 to 76,533 in Nepal and from 43,684 to 73,799 in Bangladesh after registration of land. The standard deviation of the differences of land values before and after registration is also very high in both countries (72,612.081 in Nepal and 34,039.399 in Bangladesh). These results indicate that the increase in land value may not have entirely caused from the registration of land.

Table 5-8: Paired sample statistics of land value before and after registration

Country	Pair	Mean	Number	Standard Deviation	Standard Error Mean
Nepal	Land value before registration	32290	381	20775	1064
	Land value after registration	137336	381	76533	3921
Bangladesh	Land value before registration	40349	403	43684	2176
	Land value after registration	69365	403	73799	3676

Table 5-9: Paired samples test of land value before and after registration

Pair	Paired Differences					t	Degree of Freedom	Significance (2-tailed)
	Mean	Standard Deviation	Standard Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Nepal								
Land value before registration-land value after registration	-105045.932	72612.081	3720.030	-112360.352	-97731.511	-28.238	380	.000
Bangladesh								
Land value before registration-land value after registration	-29016.129	34039.399	1695.623	-32349.525	-25682.733	-17.112	402	.000

The findings from the statistical analysis are supported from other evidence as well. Statements made by two respondents are presented in Box 5-1, which shows that the value of land is increased by 900 and 700 per cent in the first and second cases respectively.

Box 5-1: Statement on increase in land value after registration of land

> The land in this area used to be sold in around 40 thousand *rupees* per *kattha*. It is now being sold in four hundred thousand *rupees*.
>
> Local political leader, Chulachuli, Nepal
>
> It was really hard to sell a *kattha* of land in 50 thousand *rupees* in the past. I am really glad to say that one plot of land is just sold this morning in 400 thousand *rupees* per *kattha*.
>
> Landowner, Chulachuli, Nepal

The government has also increased the valuation of land used for taxation purposes after land registration in Chulachuli, Nepal. The minimum valuations determined by the Land Revenue Office, Ilam for the Fiscal Year 2007/08 and 2012/13 are presented in Table 5-10. According to the data provided by the office, the land was initially classified into irrigated and un-irrigated land, each having four categories; *abal*, *doyem*, *sim*, and *chahar*, but the classification of land has now been changed to residential and agricultural land. Also, there is a separate valuation for Ward Numbers 1 to 4 and 5 to 8. The valuation of irrigated land for the Fiscal Year 2007/08 ranges from NPR 2,325 to 4,651 whereas that of un-irrigated land ranges from NPR 1,528 to 3,853 per *kattha*. By 2012/13, the value of residential land seems to have increased dramatically and reached NPR 111,540 in Ward Numbers 1 to 4 and NPR 92,950 in Ward Numbers 5 to 8. It was increased by 2,298 and 1,898 per cent respectively than that of the highest value of land determined for 2007/08 (NPR 4,651). The value of agricultural land too increased substantially after registration. The valuation of first category land in Ward Numbers 1 to 4 and 5 to 8 was NPR 44,616 and 31,772 per *kattha*, representing increases of 859 and 583 per cent respectively from the highest category of land in the year 2007/08.

Table 5-10: Minimum valuation of land before and after registration (in *rupees* per *kattha*)

Grade of Land	Minimum Valuation per *Kattha* of Land (in *Rupees*)					
	Fiscal Year 2007/08		Fiscal Year 2012/13			
			Ward Numbers 1 to 4		Ward Numbers 5 to 8	
	Irrigated Land (*Khet*)	Un-irrigated Land (*Pakho*)	Residential Land	Agricultural Land	Residential Land	Agricultural Land
First	4,651	3,853	111,540	44,616	92,950	31,772
Second	3,853	3,056	92,950	31,772	65,234	20,618
Third	3,056	2,325	65,234	26,026	54,080	14,872
Fourth	2,325	1,528	54,080	20,618	44,616	9,464
Fifth	Not in Practice	Not in Practice	44,616	14,872	31,772	5,746

Source: Land Revenue Office, Ilam (2012; 2007)

The data presented above shows that the average value of land increased significantly after registration in both Nepal and Bangladesh (224 and 123 per cent respectively). The results of the correlation analysis show that there was a positive correlation between tenure security and land value. Similarly, the paired sample t-test shows that there was a significant difference in land value before and after registration. Evidences from other sources for instance, the statements of interviewees and the valuation of land determined by the land office also support the findings that land value is increased after registration. Similarly, a study by AusAID (2000) shows that, in Thailand, untitled land was 43 to 80 per cent less valuable than titled land. These findings are also in line with the findings of Feder et al. (1988) that there is a relationship between land titling and land value in case of Thailand and that of Markussen (2008) in case of Cambodia discussed in Section 2.4.3.

Thus, the above results established a positive correlation between land tenure security and evidenced a significant increase in land value after registration. However, the higher standard deviations of land value in Table 5-8 and Table 5-9 indicates more differentiated results and show that the increase in land value may not have been entirely caused by the registration of land.

5.3.3 Access to Credit and Investment

This research seeks to identify whether there is any relationship between tenure security and land related investment. One of the questions of this research asks whether registration of land enhances access to credit and increases land-related investment. As discussed in Section 5.3.1 above, the number of respondents constructing or renovating houses, improving land, changing cropping pattern and using land for commercial purposes increased after registration. Land value also increased after registration. Unless land is registered, landowners may not want to undertake long-term and large investment because of the risks of losing their property at any time. They may wish to spend to fulfil their short-term requirements but not a large amount, particularly on fixed assets.

Access to institutional credit at a lower interest rate is one of the major benefits of land registration as argued by the respondents. One of the respondents from Chulachuli, Nepal said that previously they had to rely on a private lender to borrow money since there was no chance of obtaining a loan from the banking sector, but that the situation has now changed. In his words:

> *"There was no chance of getting loan from any of the government institutions prior to land registration. [...] We had to borrow personally from the private lenders who used to charge intolerable rate [dhad sekne gari]. The people had paid from 30 to 60 per cent interest to them. The situation is very different now [Ahile ta aakash patal ko farak chha]. Some people have shown interest to take loan from bank as well."*

Thus, he pointed out access to bank loan in a cheaper interest rate as one of the main benefits of land registration. Land owners could get loan from the banking sector after registration of land. However, it is observed that none of the land owners of the study area of Nepal had taken any loan from the bank. When asked about the reason for this, one of the loan officers of the Agricultural Development Bank, Ilam replied that it was because of the confusion about their rights among the bank officials. He also informed that the government later made it clear that the new land owners of the Chulachuli also have equal rights to the land owners of the other freehold land and promised to start the lending procedure if any land owners applied for. The statement of the local Land Revenue Officer of Ilam presented in Section 5.2 above also makes it clear that the rights to mortgage land are established after registration. In Bangladesh, most of the

respondents (78 per cent) have borrowed from both private lenders and from banking sectors.

The interest charged by the bank may be lower than that of the rate to the private lenders by most of the respondents. The rates of interest charged by the private lenders in Nepal and Bangladesh are shown in Table 5-11. Only around one per cent of respondents from Nepal used to pay less than ten per cent interest and eight per cent used to pay between 11 to 20 per cent interest while borrowing from the private lenders, whereas 61 and 31 per cent of the respondents replied that they had to pay between 21 and 30 per cent and between 31 and 40 per cent respectively. The rates of interest in Bangladesh are lower than in Nepal. As shown in the table, ten per cent of respondents had to pay up to ten per cent interest, 41 per cent had to pay between 11 to 20 per cent interest and nearly half (48 per cent) had to pay between 21 to 30 per cent interest.

Table 5-11: Interest rate while borrowing from the private lenders

Interest Rate	Number and Percentage of Respondents	
	Nepal	Bangladesh
0- 10%	3 (0.8%)	39(9.7%)
11-20%	29(7.6%)	167(41.4%)
21-30%	232(60.9%)	195(48.4%)
31-40%	117(30.7%)	2(0.4%)
Total	381(100%)	403(100%)

The average bank interest rate in both countries is around 15 per cent, which is lower than the rate most of the respondents had paid while borrowing from the private lenders. However, Table 5-11 also shows that around eight per cent of respondents from Nepal and around half of the respondents from Bangladesh had paid up to 20 per cent interest which is close to the interest rate levied by the bank.

It is identified that most of the landowners from Bangladesh had taken loan from the banking sector, keeping their land as a collateral after registration of their land. In case of Nepal, although none of the landowners had taken any loan from the banking sector because of the confusion, bank officials promised to start the lending procedure as the government made it clear that loan could be granted to the new landowners from the case study areas. These findings support the statement made by Feder et al. (1988), Platteau (1996), de Soto (2000) and Deininger (2003) on access to credit resulted from land titling but contests the findings of Markussen (2008) that property rights have weak effect on access to credit. The interest rate paid by most of the respondents from Nepal and around half of the respondents from Bangladesh to the private lenders was higher than that of the bank rate.

The case study findings also support the contention that the amount of credit available increases when land value increases. As informed by the respondents from the banking sector from Nepal and Bangladesh, the valuation of land determined by the land offices and current market value are the main determinants of the amount of potential mortgage. The findings from Section 5.3.2 above show that both the valuation prepared by the land offices as well as the market value is increased after registration of land. It indicates that the amount of mortgage also increases as the land is registered. This accord with a study of the impact of the Thailand land titling programme by AusAID (2000), which concluded that farmers with a title deed who provided land as collateral were offered between 52 and 521 per cent more bank credit than farmers without title in Thailand. It shows that land can be used as collateral to borrow money from the banking sector. The interest charged by the bank is normally lower than that of charged by private lenders.

The respondents from both countries were also asked to indicate the amount of money they invested on their land. Table 5-12 shows the average investment before and after registration of land in Nepal. As shown in the table, around 95 and five per cent of respondents invested up to NPR 5,000 and from NPR 5,001 to 10,000 per *kattha* respectively before registration. The number of respondents investing up to NPR 5,000 decreased to 66 per cent and investing from NPR 5,001 to 10,000 increased to 32 per cent after registration. The average investment per *kattha* before registration was NPR 2,700,

which increased by 59 per cent to reach NPR 4,300 after registration. The discussion on the role of tenure security on investment will be followed.

Table 5-12: Average investment in Nepal as a proportion of respondents

Average Investment per *Kattha* (in *Rupees*)	Number and Percentage of Respondents	
	Before Registration	After Registration
1-5,000	363 (95.3%)	253 (66.4%)
5,001-10,000	17 (4.5%)	123 (32.3%)
10,001-15,000	1 (0.2%)	1 (0.2%)
15,001-20,000	0 (0%)	4 (1.0%)
Total	381 (100%)	381 (100%)

Respondents from Bangladesh were also asked about the amount of their investment. As shown in Table 5-13, the majority (82 per cent) of respondents had invested up to BDT 4,000 before registration, but only 28 per cent continued to invest that amount and most of them (62 per cent) had invested between BDT 4,001 and 8,000 after registration. The number of respondents investing between BDT 8,001 and 12,000 also increased from three to seven per cent. None of the respondents had invested more than BDT 12,000 *taka* before registration. Only three per cent of them had invested between BDT 12,001 and 16,000 and 0.5 per cent had invested BDT 16,001 to 20,000 after registration. The average annual investment per *kattha* of land before registration was BDT 2,800, which increased by 93 per cent to reach BDT 5,400 per *kattha* after registration.

Table 5-13: Average investment in Bangladesh as a proportion of respondents

Average Investment per *Kattha* (in *Taka*)	Number and Percentage of Respondents	
	Before Registration	After Registration
1 to 4,000	331 (82.1%)	114 (28.3%)
4,001 to 8,000	61 (15.1%)	250 (62.0%)
8,001 to 12,000	11 (2.8%)	26 (6.5%)
12,001 to 16,000	0 (0%)	11 (2.7%)
16,001 to 20,000	0 (0%)	2 (0.5%)
Total	403 (100%)	403 (100%)

Thus, investment was increased in both Nepal and Bangladesh after registration of land. One of the research question posed in this research asks whether there is a relationship between tenure security and land related investment. A Pearson correlation coefficient was computed to assess the relationship between them. There was a positive correlation between the variables, r=0.219, n=762, p=.000 in the case of Nepal and r=0.318, n=806, p=.000 in the case of Bangladesh (Table 5-14).

Table 5-14: Correlation between tenure security and investment

		Nepal	Bangladesh
Investment	Pearson Correlation	0.219***	0.318***
	Sig. (2-tailed)	.000	.000
	N	762	806

*** Correlation is significant at the 0.01 level (2-tailed).

Similarly, a paired sample t-test was conducted to compare the investment before and after registration of land. The paired sample statistics are presented in Table 5-15 and the test results are presented in Table 5-16. As shown in the tables, the mean investment in case of Nepal increased from 1129 to 2129 and that of Bangladesh increased from 989 to 2250 after registration of land. Also, the t-values of investment before and after

registration are -6.591 and -17.158 in the case of Nepal and Bangladesh respectively. The two-tailed probability (p-value) for both cases is .000 which indicates that the likelihood that a value of t this big could occur by chance is very low. Thus, there was a significant difference between investment before and after registration in both countries. However, the standard deviation of investment increased from 611.724 to 3,116.044 in Nepal and from 1304.987 to 2346.066 in Bangladesh after registration of land. The standard deviation of the differences of investment before and after registration is also very high in both countries (2,961.596 in Nepal and 1,475.546 in Bangladesh). These results indicate that the increase in investment may not have entirely caused from the registration of land.

Table 5-15: Paired sample statistics of investment before and after registration

Country	Pair	Mean	N	Standard Deviation	Standard Error Mean
Nepal	Investment before registration	1129	381	611.724	31.340
	Investment after registration	2129	381	3116.044	159.640
Bangladesh	Investment before registration	989	403	1304.987	65.006
	Investment after registration	2250	403	2346.066	116.866

Table 5-16: Paired sample test of investment before and after registration

Pair	Paired Differences					t	Degree of Freedom	Significance (2-tailed)
	Mean	Standard Deviation	Standard Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Nepal								
Investment before registration - Investment after registration	-1000.000	2961.596	151.727	-1298.330	-701.670	-6.591	380	.000
Bangladesh								
Investment before registration- Investment after registration	-1261.141	1475.546	73.502	-1405.638	-1116.645	-17.158	402	.000

The evidence presented above identified that the land related investment is increased significantly after registration of land in both Nepal and Bangladesh (by 59 and 93 per cent respectively). It supports the findings from Feder et al. (1988) that titled farmers in Thailand invested more than untitled farmers. It is in line with the findings from other studies discussed in Section 2.4.3, for instance, Salas et al. (1970) in Costa Rica, Villamizar (1984) in Brazil, Deininger and Jin (2006) in Ethiopia. The results from the correlation analysis identify a positive correlation between tenure security and investment. Similarly, the results of the paired sample t-tests show a significant difference in investment before and after registration of land. These findings indicate that land related investment is increased after registration. However, the higher standard deviations show that the increase in investment may not have been entirely caused by the registration of land.

It is also identified that land owners could obtain bank loans of a comparatively cheaper interest rate than that of private lenders after registration of land. In Bangladesh, around 78 per cent of the respondents had borrowed from bank. Findings from Nepal that none of the respondents had borrowed loan from any banks indicate that they could not exploit this opportunity to increase investment because of the lack of proper communication.

To sum up, this research identifies a positive correlation between tenure security and investment and an increase in the amount of investment after registration. However, it cannot explain whether the entire increase in investment is induced from the changes in land tenure status or is driven by any other factors as well. Access to bank finance is not enough to increase investment unless it is communicated properly.

5.3.4 Income

This study also analyses the affect of land tenure security on land-related income. Average income per *kattha* of land before and after registration in Nepal is presented in Table 5-17. As shown in the table, around two-thirds (66 per cent) of respondents earned up to NPR 5,000 per *kattha* and around one-third (33 per cent) of them earned NPR 5,001 to 10,000 per *kattha* on average before registration. The percentage of respondents earning more than NPR 10,000 was very low. However, the percentage of respondents earning up to NPR 5,000 decreased to 42 per cent and the percentage earning between

NPR 5,001 and 10,000 increased to 45 per cent after registration. The table also shows that the percentage of those earning between NPR 10,001 and 15,000 increased from one to eight per cent and those earning between NPR 15,001 to 20,000 increased from 0.3 per cent to 5.8 per cent after registration of land. The average income per *kattha* of land per annum before registration was NPR 4,300, which increased by 49 per cent to reach NPR 6,400 after registration.

Table 5-17: Average income in Nepal as a proportion of respondents

Average Income per *Kattha* (in *Rupees*)	Number and Percentage of Respondents	
	Before Registration	After Registration
1-5,000	252 (66.1%)	158 (41.5%)
5,001-10,000	124 (32.5%)	170 (44.6%)
10,001-15,000	4 (1.0%)	31 (8.1%)
15,001-20,000	1 (0.3%)	22 (5.8%)
Total	381 (100%)	381 (100%)

The statement of a farmer of Chulachuli village presented in Box 5-2 shows that investment and income increased after registration of land. The farmer had got two of his plots of land registered but another one was not registered yet as the land office was asking for more evidence. He said that he levelled his land and started to plant rice after buying a water pump shared with a group of farmers. He stated that the land can now yield three crops a year. He was confident that he could cover the expenses out of the increased income from that field. However, he was reluctant to invest in the unregistered plot because of the lack of confidence about its title. It indicates that security of tenure plays a crucial role in increasing investment and income.

Box 5-2: Statement of a farmer about changes on investment and income

> I got *dhani purja* [land ownership certificate] for two of these plots last year but that one [another plot] is not registered yet. I felt more secured about registered land. I am really excited ... I hired a tractor and levelled this land [registered one] last year. We [farmers] bought water pump for cultivation. The rice produced very well. I am planning to plant [rice] twice a year in this field. I can saw mustard in Mangsir (mid-November to mid-December). This land gives three crops a year [...]. I borrowed 30 thousand for land levelling and water pump which will be covered from the increased income in few years.
>
> I will improve another plot if it is registered. But until then, I am not that much excited. I am not sure whether it will be registered or not as they asked for more evidence that I do not have. I do not want waste money. What will happen if the land office gives it to another person?
>
> Farmer, Chulachuli village, Nepal

The amount of income earned by the respondents before and after registration of land in Bangladesh is presented in Table 5-18. The percentage of respondents earning up to BDT 4,000 and between BDT 4,001 and 8,000 per *kattha* decreased from 21 to two per cent and 67 to 16 per cent respectively, whereas that earning from BDT 8,001 to 12,000 and BDT 12,001 to 16,000 *taka* increased from 10 to 43 per cent and two to 34 per cent respectively after registration. Similarly, none of the respondents were earning more than BDT 16,000 before registration but six per cent of them earned that amount after registration. Average annual income per *kattha* of land before registration was BDT 5,700, which increased by 95 per cent to reach BDT 11,100 after registration.

Table 5-18: Average income per kattha in Bangladesh as a proportion of respondents

Amount (in *Taka*)	Income	
	Before Registration	After Registration
1 to 4,000	86 (21.3%)	8 (2.0%)
4,001 to 8,000	268 (66.5%)	65 (16.1%)
8,001 to 12,000	40 (9.9%)	172 (42.7%)
12,001 to 16,000	9 (2.2%)	135 (33.5%)
16,001 to 20,000	0 (0%)	23 (5.7%)
Total	403 (100%)	403 (100%)

A Pearson correlation coefficient was computed to assess the relationship between tenure security and income. There was a positive correlation between the variables, r=0.198, n=762, p=.000 in the case of Nepal and r=0.248, n=806, p=.000 in the case of Bangladesh (Table 5-19).

Table 5-19: Correlation between tenure security and income

		Nepal	Bangladesh
Income	Pearson Correlation	0.198***	0.248***
	Sig. (2-tailed)	.000	.000
	n	762	806

*** Correlation is significant at the 0.01 level (2-tailed).

A paired sample t-test was conducted to compare the income before and after registration of land. The paired sample statistics are presented in Table 5-20 and the test results are presented in Table 5-21. As shown in the tables, the mean income in case of Nepal increased from 1,965 to 2,917 and that of Bangladesh increased from 2,010 to 3,609 after registration of land. Also, the t-values of income before and after registration are -9.318 and -14.802 in the case of Nepal and Bangladesh respectively. The two-tailed probability (p-value) for both cases is .000 which indicates that the chance that a value of t this big could occur by chance is very low. Thus, there was a significant difference

between income before and after registration in both countries. However, the standard deviation of income increased from 1,944.474 to 2,686.538 in Nepal and from 2,306.339 to 3,914.949 in Bangladesh after registration of land. The standard deviation of the differences of income before and after registration is also very high in both countries (1,995.818 in Nepal and 2,168.340 in Bangladesh). These results indicate that the increase in income may not have entirely caused from the registration of land.

Table 5-20: Paired sample statistics of income before and after registration

	Pair	Mean	N	Standard Deviation	Standard Error Mean
Nepal	Income before registration	1965	381	1944.474	99.618
	Income after registration	2917	381	2686.538	137.636
Bangladesh	Income before registration	2010	403	2306.339	114.887
	Income after registration	3609	403	3914.949	195.017

Table 5-21: Paired sample tests of income before and after registration

Pair	Paired Differences					t	Degree of Freedom	Significance (2-tailed)
	Mean	Standard Deviation	Standard Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Nepal								
Income before registration - Income after registration	-952.756	1995.818	102.249	-1153.800	-751.712	-9.318	380	.000
Bangladesh								
Income before registration - Income after registration	-1598.809	2168.340	108.013	-1811.149	-1386.469	-14.802	402	.000

The evidence presented above identified that land related income is increased significantly after registration in both Nepal and Bangladesh (by 49 and 95 per cent respectively). It supports the statements of some land tenure theorists like Feder et al. (1988), Platteau (1996) and Deininger (2003) and findings of IDB (1986) and Chand and Yala (2009) discussed in Section 2.4.3. The results from the correlation analysis identifies a positive correlation between tenure security and income. Similarly, the results of the paired sample t-tests show a significant difference in income before and after registration of land. A study by AusAID (2000) also identifies that overall productivity was 12 to 27 per cent higher on titled land than on untitled land in Thailand.

Increase in land related economic activities and investment after registration support the statement that there may be a positive relationship between land tenure security and land related income. However, the higher standard deviations in Table 5-20 and 5-21 show that the increase in income may not have entirely caused from the registration of land. Other factors like inflation or increase in crop price may also be responsible for the increase in income as it was calculated from the price of the product. It provides part of the answer for the third research question posed in Chapter One.

5.4 Summary

This chapter has explored the role of land registration in securing land tenure and also discussed the impact of tenure security on land use, land value, access to credit, investment and income. The rights of ownership, use of production, sale and transfer of property, leasing and obtaining loans from the banking sector are all established after registration of land. Although most of the respondents from both countries have replied that they had used their produce even before registration of land, use right also became secured only after registration. Also, the risks of aggression from other parties and acquisition from government without fair compensation are lowered significantly. The level of confidence of the landowners about the security of their land rights is also increased after registration. It provides part of the answer to the first research question.

This study observed that the lands of the case study areas of Nepal and Bangladesh are mainly used for residential and agricultural purposes. The number of landowners using land for residential and commercial purposes is increased and the number using it for

agricultural purposes is decreased slightly after registration. Similarly, the number of households engaged in constructing and renovating houses, improving their land, changing agricultural patterns, planting long-term yielding plants and using their property for commercial purposes is increased to some extent after registration. It shows that there is a slight change in the land use pattern and increase in land related activities related to improving the quality of life, land development and more efficient cropping choices after registration of land. Thus, land administration promotes land related economic activities to some extent by means of registration of land. It provides answer to the second research question posed in Chapter One.

The exchange value of land is also increased by 224 and 123 per cent in Nepal and Bangladesh respectively. A positive correlation between tenure security and land value ($r=0.684$ in the case of Nepal and $r=0.259$ in the case of Bangladesh) is observed from the correlation analysis. The results of the paired sample t-test also concluded that there was a significant difference in the land value before and after registration in the case of both Nepal {$t(380)=-28.238$, $p=.000$} and Bangladesh {$t(402)=-17.112$, $p=.000$}. Evidences from other sources for instance, the statement of interviewees and the valuation of land determined by the land office also confirm the increase in land value after registration. The minimum valuation of land for the case study area of Nepal is also increased by the government by up to 2,298 per cent. Thus, land value is increased after registration and is positively correlated with the land tenure security, however, the higher standard deviations suggests that tenure security may not be entirely responsible for the increase.

The ability to invest is also increased after registration as it can be used for collateral. The interest rate in Nepal and Bangladesh was up to 40 and 30 per cent respectively when borrowing from the private lenders. But the landowners can get loans from the banking sector at an average interest rate of 15 per cent. Also, as discussed in the above paragraph, the exchange value of land is increased significantly. It increases the amount of credit available to the landowners which is mainly based on the value of land. It demonstrates that the collateral value of land is increased after registration.

An increase in investment is also observed after registration of land. The average investment increased by 59 and 93 per cent in Nepal and Bangladesh respectively. The

results of the correlation analysis show a positive correlation between tenure security and investment (r=0.219 in the case of Nepal and r=0.318 in the case of Bangladesh). Similarly, the results of the paired sample t-test also concluded that there was a significant difference in the investment before and after registration in both Nepal {t(380)=-6.591, p=.000} and Bangladesh {t(402)=-17.158, p=.000}. However, the higher standard deviations of investment show that the increase in investment may not have entirely caused from the registration of land. Also, findings from Nepal indicate that access to bank finance is not enough to increase investment unless it is communicated properly.

The land-related income is also increased after registration of land. The average income in Nepal was increased by 49 per cent and that in Bangladesh increased by 95 per cent. Likewise, a positive correlation between land tenure and income is also established. The correlations are significant at one per cent level of significance (r=0.198 Nepal and r=0.248 Bangladesh). Similarly, a significant difference in income before and after registration is observed from the results of the paired sample t-test {t(380)=-9.318, p=.000} for Nepal and t(402)=-14.802, p=.000 for Bangladesh). However, the higher standard deviations of income show that the increase in income may not have entirely caused from the registration of land.

Thus, this study identified that land value, investment and income are positively correlated with tenure security and a significant difference in these factors is observed after registration of land. However, the entire increase in these factors may not have caused from the registration of land alone. It provides answer to the third research question.

Chapter 6: Assessment of Land Administration Services and Their Role in Revenue Generation

6.1 Introduction

The main purposes for establishing land administration organisations are to prepare land records and collect revenue from land. The quality of services they offer may affect their performance. This chapter aims to assess the status of the land administration services and their role in revenue generation which answers the fourth and fifth research questions. Moreover, the role of these services in providing land tenure security is also discussed in this chapter which provide part of the answer to the first research question.

The status of land administration services is discussed first. It includes the process of land registration, management of land records and dissemination of land information, land valuation and collection of revenue from land. Then the justification to establish land administration organisations is discussed.

6.2 Effectiveness of Land Administration Services

The purpose of this section is to assess the services provided by the land administration organisations and discuss their effectiveness. The status of land registration, dissemination of land information, land valuation and collection of land tax in Nepal and Bangladesh is discussed. The land use and planning services are not studied here as the land use policy is not much properly implemented so far in Nepal (Acharya, 2011) and in Bangladesh (LANDac, 2012) and the land administration organisations are not much involved less in these activities in both Nepal and Bangladesh.

6.2.1 Land Registration

Registration of transactions by means of deed or title is one of the main functions of land administration organisations. It is one of the sources of revenue for the government. The systems of land registration in Nepal, Bangladesh and Thailand were discussed in detail in Chapter Four. This section discusses the procedure, time and costs of land registration in Nepal and Bangladesh. Moreover, the registration process of Thailand is also discussed.

Procedure

The process of land registration usually includes obtaining a clearance certificate, preparation of deeds and documents, verification of records, registration of deeds and payment of registration fee or stamp duty, updating records and issuance of title certificate. As discussed in Chapter Four, the registration processes in Nepal, Bangladesh and Thailand involves three, eight and two procedures respectively.

The process of land registration in Bangladesh is found more complicated than that of Nepal and Thailand, however, the process of Nepal is also not free from criticism. Around 90% of respondents from Nepal and Bangladesh considered the process to be very cumbersome. Some of the key informants from Bangladesh also presented similar opinions. For instance, a land rights campaigner from Bangladesh considered the process of land registration and mutation as 'ridiculous'. Likewise, participants of the seminar organised in Dhaka said that there are problems of manipulation and tempering of land records, and corruption and bribery in the land offices. Similarly, one of the senior officers of the Real Estate and Housing Association of Bangladesh (REHAB) regarded the process to be very cumbersome and argued that bribing the employees can speed up the process. He stated: “It is still pretty cumbersome although it has reduced a lot over period of time. [...] you can speed up, if you spend some money, even bribe [...]. It takes money." He further described how poor people suffer more than wealthier people. In his words:

> *“[...] Not all the parties have that money, commission [bribe]. If say, I am trying to buy land from a poor person, I can speed up the process. But one poor person selling land to another poor person, then they need a lot of money to speed up the process. They suffer actually.”*

It shows that money can work as a lubricant to speed up the process of registration and the poor are more victimised from these practices. These practices contradict the values of integrity and impartiality of land administration officials put forward by FAO (2007) and discussed in Chapter Two. Field observation also confirms that the process of land registration is better organised in Thailand than in Nepal and Bangladesh. The researcher visited the Land Revenue Office in Ilam (Nepal), the Sub-Registry Office in Tangail (Bangladesh) and the Provincial Land Office in Pak Kret (Thailand) to observe the process of land registration. The findings of the researcher are presented in Box 6-1. In the Pak Kret Land Office, Thailand, the clients were warmly welcomed in the help desk and asked

to state the purpose of their visit. They were clearly informed about the further procedures and referred to the proper booth. Help desks were established, citizen charters were wall-painted and complaint boxes were placed in the front of the offices in Nepal and Bangladesh as well. However, the office layout was not properly designed.

Box 6-1: Researcher's observation on registration process of Nepal, Bangladesh and Thailand

Land Revenue Office, Ilam, Nepal:

Help desks were established, citizen charters were wall-painted and complaint box were placed in the front of the offices. Around 100 clients in Land Revenue Office Ilam were present in the office compound at the time of observation. The queue system was followed but the office layout was not properly designed. There was enough space to stay outside the office but the rooms were narrow and congested. Some clients were moving from one room to another with some papers on their hand. Survey office was located close to the land registry building but not in the same building. Ownership records were stored in poor conditions. The clients who spoke to the researcher said that they want to get their things done in a shorter time and from a single stop.

Land Registration Office, Tangail, Bangladesh:

Help desks were established, citizen charters were wall-painted and complaint box were placed in the front of the offices. Around 50 clients in Sub-Registry Office Tangail were present in the office compound at the time of observation. The queue system was followed but the office layout was not properly designed. There was enough space to stay outside the office but the rooms were narrow and congested. Survey office was located not far from the land registry building. Ownership records were stored in poor conditions. Timely services from a single stop were the demands of the clients who spoke to the researcher during observation. One of the client said that even if the registration can be completed in a single day, it takes months to prepare documents prior to registration and also to complete the mutation process and get title certificate.

Provincial Land Office, Pak Kret, Thailand:

The clients were warmly welcomed in the help desk and asked to state the purpose of their visit. They were clearly informed about the further procedure and referred to the proper booth. The work was managed nicely although there were around 50 clients waiting for services at the time of observation. Enough seats were available in the waiting area. Token number were issued and displayed in the screen. Information about complaint process was also provided. One of the clients interviewed during observation said that the process of parcel sub-division is lengthy which takes around three weeks. Otherwise, the clients seemed happily waiting for their turn. While asking to what extent they are satisfied from the services, two of the clients replied that they were really happy from it. The office layout and record management system in Pak Kret Land Office seemed really nice. The desks were placed in such a style that clients could be served from the front desk. The front office and back office were properly located. The ownership records were digitised fully. The hard copy cadastral maps were stored in cases and their index numbers were printed outside of the cases. The Survey Section was located in the same building.

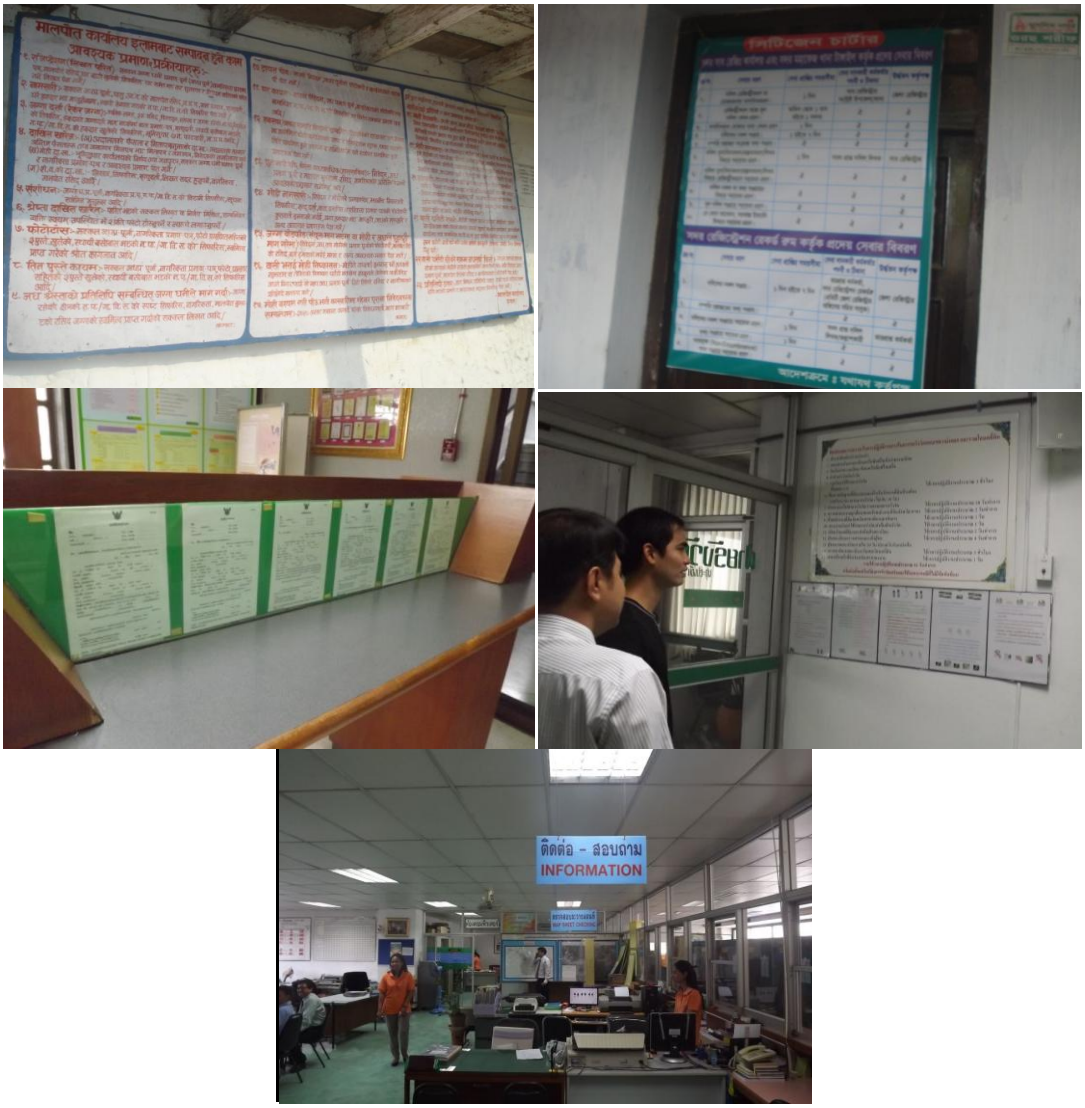
Photo 6-1 depicts clients waiting in front of the land registries in all three countries, which clearly shows how the waiting area and office layout are set up in land offices. As mentioned in Box 6-1, the office layout and record management system in Thailand seems better organised than that of both Nepal and Bangladesh. The clients are nicely greeted and asked to state the purpose of their visit. When they are directed to the designated booth, they can wait until their Token Number is displayed on a screen. There are also queuing systems in Nepal and Bangladesh but not as well-organised and properly implemented as in Thailand. The survey office is located in the same building in Thailand but not in Nepal and Bangladesh, although they were not that far away.

Photo 6-1: Clients waiting to register their land in Land Revenue Office, Ilam (lower left), Land Registry Office, Tangail (lower right) and Provincial Land Office, Pak Kret (upper both)

The way of sharing information is also better organised in Thailand than in Nepal and Bangladesh. As stated in Box 6-1 and shown in Photo 6-2, citizens' charters are published in all of the offices which are clearly visible. In Thailand all required information including the sample of the verities of documents and applications are also displayed clearly.

Moreover, the information desk can provide information checking services by computer which is easier and faster than that of the manual systems in Nepal and Bangladesh.

Photo 6-2: Citizens charters at the land registries in Ilam (upper left), Tangail (upper right) and Pak Kret (middle right), sample of application in Pak Kret (middle left) and information desk in Pak Kret (lower)



Publication of citizens' charters and provision of information desks help people acquire information more easily and make land administration officials accountable, which are values of good governance in land administration proposed by Zakout et al. (2006) and FAO (2007).

The process of land registration is completed in a single stop in Thailand. However, clients need to visit many places to get the services and transfer the documents in Nepal and

Bangladesh. The location of the survey section inside the land office in Thailand has reduced the time involved in moving documents and ensured their safety. However, in Nepal and Bangladesh, the clients or deed writers usually move the documents from one place to another and this increases the risks of loss or falsification of documents.

Time

The time taken to complete the process of land registration also affects on the quality of land administration services. Respondents in the case study areas in Nepal and Bangladesh were asked about the time they had to spend while collecting the required information, registering a deed and updating records in the land registry office. Only 79 (21 per cent) of respondents had visited the land office in Nepal while almost all of the respondents (395 or 98 per cent) from Bangladesh had visited those offices. The data about purpose of their visit and time taken to get the services are presented in Table 6-1. In Nepal, 78 respondents (21 per cent) had visited to update records while only 18 (five per cent) and 15 (four per cent) respondents respectively had visited to collect information or documents and register deeds.

In Bangladesh, most of the respondents had visited land offices to collect documents (395 or 98 per cent) and update records (366 or 91 per cent). Among the respondents who had visited land offices in Nepal, 78 per cent, 67 per cent and 85 per cent said that the task of collecting the required information and documents, registering deeds and updating records was completed within three days. The rest of the respondents replied that it takes four to six days to complete these processes. In Bangladesh, of those respondents who had visited land offices, 85 per cent, 72 per cent and 15 per cent respondents said that it took up to three months to collect information and documents, register deeds and update records respectively. Likewise, five (one per cent), zero (zero per cent) and 254 (69 per cent) of them replied the respective process can be completed within four to six months and 13 per cent, 28 per cent and 16 per cent said that they do not know the exact time. The data shows that getting information from land offices, registering transactions and updating records is more time consuming in Bangladesh than Nepal.

Table 6-1: Time taken to get land administration services in Nepal and Bangladesh

Purpose of Visiting Land Offices	Nepal			Bangladesh			
	Number and Percentage of Respondents Who Had Visited Land Office*	Time Taken to Get Services (in Days)**		Number and Percentage of Respondents Who Had Visited Land Office*	Time Taken to Get Services (in Months)**		
		Up to 3 days	4 to 6 days		Up to 3 months	4 to 6 months	Do not Know
To collect information and documents	18 (4.7%)	14 (77.8%)	4 (22.2%)	395 (98%)	337 (85.3%)	5 (1.3%)	53 (13.4%)
To register deeds	15 (3.9%)	10 (66.7%)	5 (33.3%)	176 (43.7%)	126 (71.6%)	0 (0%)	50 (28.4%)
To update records	78 (20.5%)	66 (84.6%)	11 (14.1%)	366 (90.8%)	54 (14.8%)	254 (69.4%)	59 (16.1%)

Note: *Percentage of total respondents (381 in Nepal and 403 in Bangladesh)
**Percentage of respondents who had visited land office (79 from Nepal and 397 from Bangladesh); mutually inclusive

Some of the interviewees from Nepal also said that the process of registering transactions could be completed within two or three days. One of the land rights activists, sharing his own experience, described how the process could be completed even in ten minutes if there is a personal relation with officials (Box 6-2).

Box 6-2: Experience of an interviewee about time taken to get services from Land Revenue Office in Nepal

> In some countries, it takes three months to get land certificate. But in our country it can be obtained within an hour. [...] In my own case, it took an hour. If we propose the land officer, it could be done even within ten minutes.
>
> I had gone to the land office to make a copy of land certificate of my friend. One of the staffs asked whether he has got recommendation from VDC and other documents. My friend presented those documents before him. Then he called a deed writer. The task completed in ten minutes. However, if it was in the case of poor tenant, it might take three days. I looked at other countries, they said it takes three months and they would be happy if they could get within three months; otherwise, it might take six months as well.
>
> Land Rights Activist, Nepal

He said that if all documents are ready and there is a good relationship with the officials, it can be completed even within hours. It may not be the case for ordinary citizens though. It indicates that the registration process in Nepal is very fast but there is lack of impartiality in the land administration officials in some cases, which contradicts the good governance values presented by Zakout et al. (2006) and FAO (2007).

In Bangladesh, it takes up to eight months to complete the whole process of land registration. A land officer working in the Sub-Registry Office in Bangladesh said that the process of merely registering deeds in the land registry can be completed in a single day; however, it takes more time to prepare documents and update records. One of the Managing Directors of a housing company in Bangladesh mentioned:

> *"It is possible for us to register a parcel of private, freehold land within one day. If the land is leasehold, we must take permission from RAJUK or ministry which takes too much time- two months or even three months. After getting their permission, we can take the registration within one or two days."*

The data presented above shows that it takes several months to complete the whole process and issue a title certificate in Bangladesh although the land registry does not take

much time. But the process can be completed within days in Nepal. These findings support those of the World Bank published in the Doing Business Report (World Bank, 2013). The report observes that it takes up to five days and 245 days to complete a registration process which involves three and eight procedures in Nepal and Bangladesh respectively. On the other hand, there is only one process in Thailand which could be completed within two days. The process that takes several months and involves more than five steps is considered as an indicator of problem by Zimmerman (2006). Thus, the land registration process of Bangladesh seems more problematic than that of Nepal and Thailand.

Costs

The cost of transactions may also affect on the effectiveness of services. Respondents from Nepal and Bangladesh were asked about the amount of money they had to spend in order to obtain services, apart from the legal fees or charges. The results of the survey in Nepal are presented in Table 6-2. It costs up to two thousand *rupees* to collect information or documents and register a deed as stated by 67 per cent and 73 per cent of the respondents respectively. Likewise, it costs from NPR 2,001 to 5,000 to update records and to pay for transportation and accommodation according to 69 per cent and 61 per cent of the respondents respectively. Similarly, more than half of the respondents (54 per cent) opined that it costs up to NPR 2,000 for other purposes, which include the cost of bribing employees with lunch [*khaja*].

Table 6-2: Transaction costs, Nepal

Services	Number and Percentage of Respondents Who Had Visited Land Office*	Transaction Costs (*Rupees*)**		
		No Cost	Up to 2,000	2,001 to 5,000
To collect information or documents	18 (4.7%)	6 (33.3%)	12 (66.7%)	0 (0%)
To register deeds	15 (3.9%)	0 (0%)	11 (73.3%)	4 (26.7%)
To update records	78 (20.5%)	0 (0%)	24 (30.8%)	54 (69.2%)
Transportation and accommodation	79 (20.7%)	0 (0%)	31 (39.2%)	48 (60.8%)
Other purposes (including bribes)	79 (20.7%)	31 (39.2%)	43 (54.4%)	5 (6.3%)

Note: *Percentage of total respondents (381)
** Percentage of respondents who had visited land office (79)

The cost of transportation and accommodation is also higher in Nepal for people living in rural areas. One of the interviewees from Nepal said that it costs around NPR 2,000 in transportation and accommodation to visit land offices, which is very high and difficult to afford. The situation in the capital city seems different according to representatives of the housing association of Nepal; up to five thousand *rupees* of extra money needs to be spent per transaction as bribes but travel time and costs of transportation are not as high as in rural areas.

The cost of transactions (excluding the official duty) in Bangladesh is shown in Table 6-3. Most respondents stated that it costs up to BDT 2,000 to collect information (85 per cent) and to register a deed (94 per cent). Around 81 per cent said that it costs up to BDT 5,001 to 10,000 to update records, which seemed a most costly process. The cost of transportation and accommodation in Bangladesh seems negligible according to 79 per cent of respondents. An overwhelming majority of respondents mentioned that they had to pay up to BDT 2,000 for other purposes including bribing employees. Only 14 per cent of the respondents said that they did not spend money for other purposes.

Table 6-3: Transaction costs, Bangladesh

Transaction Costs	Number and Percentage of Respondents Who Had Visited Land Office*	Costs (in *Taka*)**			
		No Cost	Up to 2,000	2,001 to 5,000	5,001 to10,000
To collect information and documents	337 (98.0%)	2(0.6%)	286 (84.9%)	29 (8.6%)	20 (5.9%)
To register deeds	176 (43.7%)	1 (0.6%)	165 (93.8%)	10 (5.7%)	0 (0%)
To update records	366 (90.8%)	2 (0.5%)	26 (7.7%)	41 (11.7%)	297 (81.1%)
Transportation and accommodation	397 (98.5%)	313 (78.8%)	84 (21.2%)	0 (0%)	0 (0%)
Other purposes (including bribes)	397 (98.5%)	57 (14.4%)	328 (82.6%)	6 (1.5%)	6 (1.5%)

Note: *Percentage of total respondents (403)
** Percentage of respondents who had visited land office (397)

Thus, transaction costs are high in both Nepal and Bangladesh. Just over half of respondents from Nepal (52 per cent) and almost all from Bangladesh (97 per cent) considered the cost of registering property as high. None considered the costs to be low. Most of the respondents are in favour of reducing transaction costs, and some suggested measures for it. In the case of Nepal, almost all (97 per cent) suggested improvements in the service employees' behaviour and around 95 per cent want to improve the law and procedures. Likewise, an overwhelming majority supported the measures for an online information system (87 per cent) and for the relocation of land offices (81 per cent). Around 80 per cent of respondents were of the opinion that improvements in land administration services would reduce transaction costs. In case of Bangladesh, revision of legal provision, improvements in employee's behaviour, restructuring of organization and reducing the rate of registration fee are the measures suggested to reduce the transaction costs. Most of the respondents are in favour of change in the existing legal provision regarding the process of land registration (97%), improving behaviour of employees (87%) and restructuring organizational framework (60%). Moreover, around 79% of the people believe that the improvements in land administration services would contribute significantly in reducing costs.

The problems of bribery and malpractices are also observed in land administration organisations which has increased the costs of transactions and threatened its security. The problem is more acute in Bangladesh than in Nepal. As shown in Table 6-2 and Table 6-3 above, respondents had to bribe officials to obtain services. A report published by Transparency International identified that 31 per cent and 48 per cent of respondents respectively from Nepal and Bangladesh had paid a bribe for land services (Hardoon and Heinrich, 2011). Similarly, bribes worth 83 billion *taka* were paid for land-related cases such as registration and altering of records in 2006 in Bangladesh (Ray, 2010). It indicates how big the problem of bribery in land offices is. One of the campaigners for the land rights movement in Bangladesh considered the land ministry as one of the corrupt ministries and stated that if you bribe the officials, they can even tamper with the land records. In her words, "It [Ministry of Lands] is one of the most corrupt organisations. You can bribe officials and tamper with the records and everything." Similarly, one of the university lecturers from Bangladesh said that there are no good governance values in any sector of government in Bangladesh. He argued that land administration is one of the most corrupt sectors in which all levels of employees are corrupt. He said:

> *"In the government of Bangladesh, good governance values are not at all, in all sectors. Land administration is perhaps one of the most corrupt sectors in Bangladesh. [...] Starting from the lower level up to the higher AC-Lands people are corrupt. Thus, if even the ministry is corrupt how much can we do to penetrate through the system and inject values?"*

He further stated that the work may go smoothly in some cases but it is necessary to bribe the employees in most of the cases. In his words:

> *"I am sorry to say we have many malpractices over there especially in the land settlement office and the government agencies. It is really hard to get proper legal support from the government until you do not have money underneath. In few cases, say, like 30 per cent cases, everything will go smoothly, if you go to the government [...]. But in most of the cases, you will have to deal with [...] some dirty deals to get proper judgement."*

These malpractices increase the costs of obtaining services from the land administration organisations as well as defending the property.

To summarise, it is clear that the processes of land registration in both Nepal and Bangladesh are not free from problems, more so in Bangladesh than in Nepal and Thailand. The process of land registration is well organised in Thailand but may be

completed faster in Nepal. Transaction costs are high in both Nepal and Bangladesh but the practices of bribery, forgery and corruption are found more common in Bangladesh. These practices may limit the rights of the land owners and threaten the security of tenure established from the registration of land as discussed in Section 5.2. Complicated processes and high transaction costs usually discourage the formal registration of transactions. Likewise, increased land litigation may also affect land related activities and investment as lenders might be reluctant to accept disputed land as collateral. These are symptoms of weak governance which may constrain economic development, reduce public revenue, increases tenure insecurity, increases land disputes, weaken land and credit markets and promote negative social behaviour, as observed by FAO (2007).

Service improvement is required to curb problems in land administration organisations. One of the campaigners for the land rights movement in Bangladesh suggested reviewing the registration process and making land information transparent and easily accessible. Similarly, one of the representatives of the Nepal Land and Housing Developers Association (NLHDA) suggested improving the information system, training employees and changing their behaviour in order to reduce transaction costs. In his words, “For improvement, all the documents need to be computerised, networking should be done and staffs need to be trained but should be penalised if they commit corruption.” Likewise, one of the land rights activists from Bangladesh described how administrative reform and service to citizens had to be the main agenda and that these are completely lacking in these organisations. In his words, “There is no agenda of reform and providing services to the people [...]. So service to citizens should be the main agenda of each and every organisation at every level.” Thus, reform in land administration is essential to reduce transaction costs and to control bribery and corruption, which ultimately enhances the security of tenure and increases its benefit.

6.2.2 Record Management and Information Dissemination

Easy access to reliable land information is the backbone of the land market. It is also a means of securing land rights and reducing land related disputes. This section discusses the status of management and dissemination of land information in Nepal and Bangladesh.

The system of recording land information in both Nepal and Bangladesh is mainly paper-based but the process of digitisation of land records has begun. In Nepal, most of the land records belonging to the Land Revenue Offices are digitised and the process of land registration is also computerised in some offices. Most of the cadastral maps and old land documents, however, are still in analogue form. The government is planning to complete this process throughout the country within a couple of years, as informed by the Director of DOLIA. He also said that once the process is completed, an integrated geo-database would be established.

The land recording system of Bangladesh is still traditional which has caused several problems. NORC (2009:85) observes that at present the information generated by land administration organisations is collected, stored and accessed using 19th Century technology. It further states that the information system is entirely paper-based, difficult to access, lacking backup in case of fire, theft or natural disasters, and prone to tampering. Recently, the Government of Bangladesh has taken a vision of Digital Bangladesh which aims to digitise all public records and adopt information and communication technology in all sectors by 2021 to ensure access to information (Planning Commission, 2012). The process of digitisation of land records has begun accordingly. A pilot project conducting revised settlement work using modern equipment including Global Positioning System, total station, data recorder and map processing software has recently been completed which is expected to reduce the time required for publication of records of rights and accurately measure the land plots. However, it may still take years to complete the process of digitisation and establish a land information network throughout the country.

The process of collecting land information is very complicated, especially in Bangladesh. Most respondents from Nepal and Bangladesh considered the land information systems to be problematic. Around 89 per cent of respondents from the case study area in Nepal and 91 per cent in Bangladesh opined that it is difficult to produce land records on time. Some interviewees, for instance, Managing Directors of one of the housing companies in Bangladesh, also said that it is necessary to visit more than one office and bribe the employees to collect land information. In his words, “It is very tough to get the

information [...]. We should go to different agencies and pay a lot of money. In most cases, it is very difficult for us to find complete information."

The current land recording and information system has caused several problems, including falsification of documents, increase in land disputes and incidence of violence. One of the university lecturers from Nepal mentioned that a lack of digital records causes duplication of ownership that increases conflict in the land market. In his words, "There are always conflicts in land market because of the duplication of ownership. This problem is occurred because we do not have electronic database." Similarly, one of the land rights campaigners from Bangladesh said that the land information system is not transparent and most of the court cases and incidents of violence are related to land. In her words:

> *"The land information system is not transparent and proper; this is going to lead to the worst situation possible. [...] We have enough records to show that almost 80 per cent of all the cases are somehow related to land. [...] But the large portions are false cases arising out of land- to get you off the land. They put you false cases then you spend your whole life trying to fight the cases or there may be violence, even murder because of the land."*

The land market may also suffer if the proper land information is not available. One of the representatives of the NLHDA argued that housing projects may suffer due to the lack of sufficient information. In his words, "[...] sometimes people may lie and we may not have sufficient information for cross-checking. Consequently, many problems may appear after launching a project."

Tampering and manipulation of records is another problem found in land administration organisations, especially in Bangladesh. One of the respondents from Bangladesh said that even government lands could be sold if staffs are bribed. In her words, "One researcher once tried to show that [...] he can even go and register the land of the Parliament Building." She also mentioned that if someone pays a bribe, he could tamper with the records, add his name in the land ownership records, or do whatever he wants. In her words, "[...] it is so corrupt, what they do is, they give money and they will have this portion; the *tehsildar* or whatever, just write it on your name. So you will find the same land." She further mentioned that she had hardly found any undisputed land. She said, "I have never found the land that is clean. Any land you touch, it will have four or five people also claiming the same land."

It shows that the problem of forging land records, adding someone else's name in the land records or multiple selling of the same piece of land in return for a bribe for example, is one of the main problems in the land administration organisations of Bangladesh. Moreover, poor land recording systems and a lack of transparency in land information has increased land-related conflicts which can be verified from the fact that up to 80 per cent of the court cases in the rural of Bangladesh areas are related to land (Hossain, 2015:26) These are the symptoms of weak governance which restrict development, limit revenue and increases tenure insecurity (FAO, 2007:16). Thus, both behaviour of employees and land recording and information systems may affect the security of tenure.

Digitisation of land records and adaptation of geo-information and communication technology has been considered as a means of protecting valuable documents, reducing land disputes, easing the process of disseminating land information and improving the efficiency of land offices. In the words of one of the university lecturers from Nepal, "If we could adopt geo-information and communication technology in the land administration services and provide services efficiently, [...] conflicts would be minimised." Similarly, one of the Managing Directors of a housing company in Bangladesh opined that real estate business would be highly professional and more developed if all the information is available from a single source. He also informed that the REHAB is taking some initiatives in order to improve the land recording and information systems and to provide services from all designated offices from a single window:

> *"From REHAB we have taken very much initiative. We have discussed with the authority of RAJUK. We have suggested that we want the one window solution; all the departments will be seated in the same place. It will go through one table to another table. All departments will see all the information, and then they will give the clear answer."*

It is a current need and means of reducing land litigations but it may not be sufficient to resolve all land related problems. In this regard, one of the environmental lawyers from Bangladesh said that the land recording system should be modernised and there should be a central database. She considered digitisation as not the only solution but a current need, which will reduce litigation and make the life of the people easier. In her words:

"I would not say that digitisation is only solution, because many of our people do not have access to computer and internet but digitisation is of course a good way; at the least, it should be available and authenticated. That is most important so that people can go and find out this land belongs to this gentleman. It should be easier. Digitisation is order of the day, so it [land records] should be digitised and should be accessible. This will, in fact, reduce the lot of litigations and make our life easier."

From the above discussion it is clear that existing system of land recording and information system have caused several problems, including falsification of documents and tampering and manipulation of land records, leading to an increase in land disputes and incidences of violence, especially in Bangladesh. Digitisation of land records and establishing integrated land information systems would protect valuable documents, reduces land disputes, ease the process of disseminating land information and improve the efficiency of land offices. However, it may not be enough to solve all of the problems in the land administration organisations as many people do not have access to or knowledge of computers. Also, the ethics, morale and efficiency of service employees may need to be changed. These findings are in line of the findings of Akingbade (2012:162) who reveals that corrupt practices such as forgery, multiple allocations, bribery, fraud and white collar malpractices were reduced after the application of ArcGIS in Nigeria, although he warns that high levels of computerisation or high-end electronic land administration solutions are not a panacea for corruption and do not automatically increase effectiveness in land-related public sector management.

6.2.3 Land Valuation

Valuation of land is also one of the main functions of land administration organisations. These organisations are either directly involved in the valuation of land or support the valuation agencies by sharing the required land information.

As discussed in Chapter Four, there is a minimum valuation system in Nepal and Bangladesh, which is prepared by the land offices. In Nepal, the Minimum Valuation Determining Committee formed according to the Land Revenue Act, 1978 prepares the minimum value of land for registration purposes. In Bangladesh, the land registration office prepares the valuation of land in accordance with the Registration Act, 1908. Buyers and sellers determine the value of property but the value declared in the deed should not be less than the minimum value thus determined.

The land value determined by the land offices does not reflect the current market price of the land. Cases presented in Box 6-3 show that valuations undertaken by the government are very much lower than the real price of land in both Nepal and Bangladesh. As shown in the box, the valuation of land is even one-tenth of the actual price of land in one case but one-third lower is common in both countries. For instance, the valuation of land in adjacent VDC of Bhimeshwor Municipality (Nepal) is nine hundred per cent lower and that of one plot sold in Chulachuli (Nepal) is 260 per cent lower than the market value. It is also understood that the valuation is usually prepared adding some percentage on the valuation of the previous year.

Box 6-3: Cases comparing land value determined by the government with the market value

Appropriate method is not applied in valuation. [...] during my research in Upper Tamakoshi Project, I found that the value of land in the adjacent VDC is quiet lower than Bhimeshwor Municipality. It created some doubt about valuation method adopted by the government. In case of Nepal, the value of government is in lump sum. [...] If the market price is ten *lakh* (one *lakh* equals to one hundred thousand) per *ana* [unit of land measurement equals to 31.8 square meters], the official value will be one *lakh* per *ana*. So it is clear that we are not being able to use appropriate method of land valuation.

University Lecturer, Nepal

The value of land determined by the government is around one-third of the market value. We had provided loan to one of our clients who bought a plot of land in Kathmandu and registered the deed yesterday in fifty *lakhs* [five million] *rupees* but its minimum valuation determined by the Land Revenue Office is only two million *rupees*.

Credit Officer, Commercial Bank, Nepal

I just sold two *kattha* of land at the rate of four *lakhs* (400 thousand) *rupees* per *kattha*. [The valuation of the land revenue office for this is 111 thousand *rupees* per *kattha*.]

Landowner, Chulachuli, Nepal

In the existing Minimum Valuation System, there is a provision of a committee under the chairmanship of CDO [Chief District Officer] which changes the valuation of the past year in the incremental basis and adds around five per cent or ten per cent considering that people may be unhappy if the minimum value is increased significantly. We cannot prepare current valuation based on this system.

Director General, Department of Land Reform and Management, Kathmandu, Nepal

The value determined by the land registry is lump-sum and is generally lower than that the market value. It is around one-third to half of the real price of land.

Land Registrar, Bangladesh

One of the university lecturers from Nepal describes the method of determining land value as inappropriate. The government considers factors like financial activities, population density, topography of the land, physical facilities, agricultural production, commercial and tourist activities, education, health, employment and security, development activities, size or shape of land, risk and migration while determining the minimum valuation of land (DOLRM, 2003). However, the data are not collected properly. As informed by one of the land revenue officers from Nepal, staff involved in land

valuation normally prepare reports based on their experience without visiting the field and collecting required information about the land. Similarly, one of the Land Registrars from Bangladesh described how they use the incremental method and add some percentage of the existing valuation to determine the value for the upcoming year. It is also identified that there is no separate valuation agency and the valuation is prepared by land registry staffs and no specialised property valuators are hired in the land administration organisations.

The valuations prepared by land offices are used as a reference for other purposes including land acquisition and mortgage calculation. Banks, finance companies, the courts and local government offices also use this valuation as a reference while determining the property value; however, they use their own system of valuation. As a result, the same property is given different valuations by different organisations. The Secretary of the MOLRM (Nepal) also described that there is no unique valuation of land and the valuation prepared by the government is minimum. In his words: "Since there are different valuations from the bank, insurance, municipalities and land offices, there is no actual valuation of land. Our valuation is only the minimum."

The existing valuation system has caused several problems. One of the Deputy Director Generals of the Survey Department in Nepal identifies two consequences of having multiple property valuation authorities as under-payment of tax and cases of fraud. He said:

> *"In one side, the buyers used to show the land price as minimum as mentioned in the valuation of land office so that he could pay lower tax. As a result, the government is losing substantial amount of revenue. In another side, the bank and financial institutions prepare their own valuation report due to which some clever people manage to determine very high value of their property [bribing valuators] and mortgage the land but do not pay back. Then bank also suffers. It indicates that there are some problems in our valuation system."*

Similarly, one of the environmental activists from Bangladesh said that the trend of under-valuation of property to evade tax and the rigid process of determining compensation resulted in inadequate compensation in the case of land acquisition. In her words:

> *"In the process of paying government tax, people show less value for their property. Therefore, their property is registered with the minimum value. If the government acquires*

the land, they will pay the value that is on the face of the paper. But the actual value will definitely be few time higher than that written in the paper. That is why the people in most cases are deprived of the actual price."

It indicates two consequences of existing valuation systems; reduction of potential revenue due to under-payment of tax, and risk of mortgage default due to a lack of appropriate valuation as well as unethical behaviour of staff. As the valuation prepared by the land office is around one-third of the real market value, the government lose two-thirds of the potential revenue which supports the observation made by FAO (2007:18) that forged sales values reduce taxes. Likewise, land owners may be under-compensated in the case of land acquisition and any default on land transaction. Thus, under-valuation of land is also a reason behind under-compensation in the case of land acquisition which contests with the findings from Chapter Five that land owners can get adequate compensation after registration of land.

The existing valuation system has caused problems in the credit market as well. Mortgage banks and finance companies have to work hard to calculate the value of property since there is no authentic value. Moreover, land owners are not able to obtain an adequate mortgage. The Chairman of NLHDA said:

"The bank considers the 30 per cent of government value and 70 per cent of market value as FMV [Fair Market Value] and invests up to 60 per cent of FMV [... which] is equal to 40 to 50 per cent of real market price."

It means that the Loan to Value Ratio is very low in Nepal and the land owners may not get adequate loan.

Land-related disputes have also increased due to the system of valuation. As argued by one of the interviewees from Nepal, the system of minimum valuation has encouraged some fraudulent people to file cases on land transactions. Many land buyers and real estate developers are suffering from this problem. He said that normally the deed is registered showing the minimum value but some fraudulent people used to file court cases against the transaction. In such a case, the court normally considers the value shown in the deed as a purchase value and the buyer might lose the remaining sum of money he paid for the property. He further mentioned that real estate development

projects may collapse at any time because of unscrupulous intentions on the part of the sellers. In his words:

> *"Some [landowners] used to sell land at first but file court cases and start bargaining when the developers start projects. Then the bank got confused and scares after filing a case and then asks to pay the loan immediately. Thus, due to the inappropriate valuation system, fraudulence nature of few people and the process of registration, any [development] project may be collapsed at any time. It is so vulnerable and risky."*

From the above discussion, it is clear that the existing valuation system has caused several problems including reducing public revenue, increasing the chance of being under-compensated in case of acquisition of land, reducing the amount of potential mortgage and increasing land conflicts which ultimately threatens tenure security. These findings contradict the findings from Chapter Five that land tenure would be secured after registration of land. It indicates that system and practices of land valuation also influence on tenure security. Improvement in the existing valuation system is one of the requirements for both countries. It would be beneficial for both landowners and government as it would provide more security to landowners, reduce duplications and disputes, increase government revenue and make the land acquisition process more transparent.

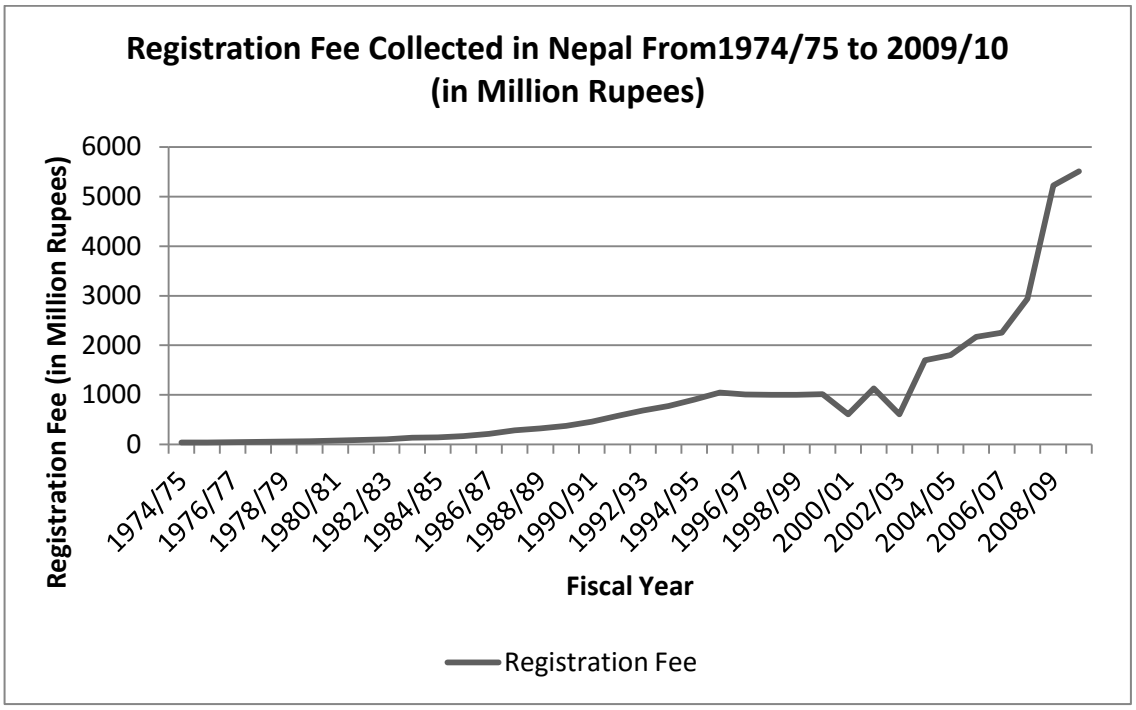
6.2.4 Revenue Collection

Land is one of the sources of revenue for most of the governments. Land tax, property tax, registration fees and stamp duty are the main types of revenue collected from land. The status of collection of revenue in Nepal, Bangladesh and Thailand is discussed below.

Registration Fee and Stamp Duty

In Nepal, a registration fee is collected while registering a transaction currently at the rate of four and two per cent of property value in urban and rural areas respectively. The amount of registration fee collected between 1974/75 and 2008/09 is presented in Figure 6-1. The amount has increased substantially during this period. Only 36 million *rupees* was collected in 1974/75 which increased to 1,048 million *rupees* in 1995/96. Then it follows a fluctuating path with a sharp decline in 2000/01 and 2002/03 and dropped to 608 million *rupees*. After 2002/03, it increased steadily and reached 5,511 million *rupees* in 2009/10.

Figure 6-1: Registration fee collected in Nepal from 1974/75 to 2009/2010

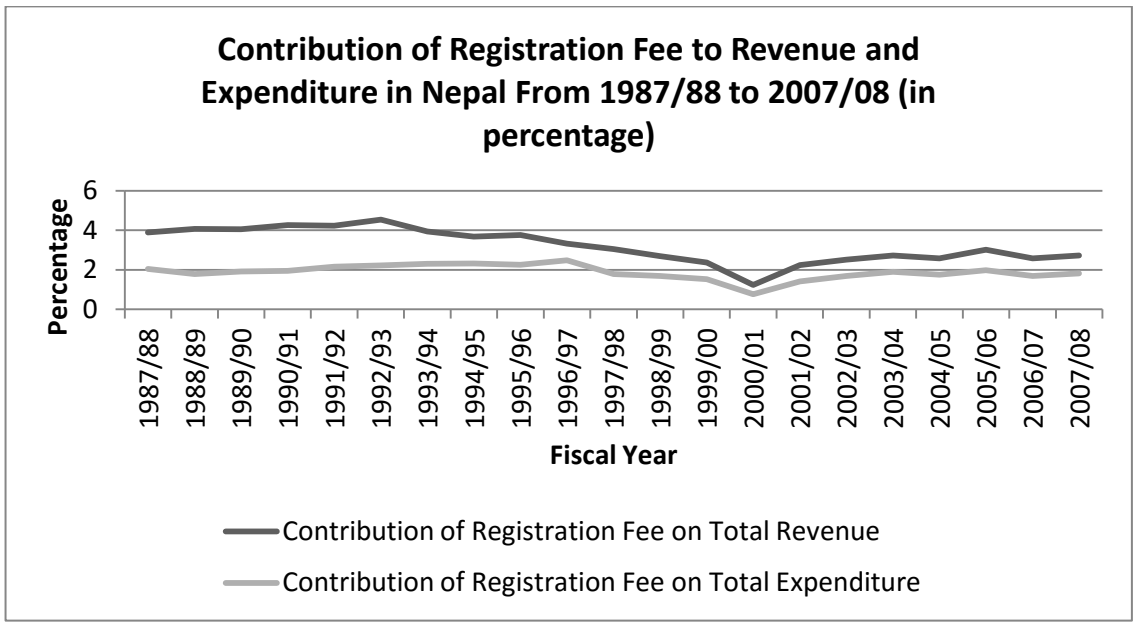


Source: Ministry of Finance (1990; 2002; 2009)

Significant changes occurred in the development of land administration in Nepal during this period. Although the formal registration of deeds began in 1923, land transactions used to be registered by local agents until the enactment of the Land Revenue Act, 1978. This Act was initially introduced in only 27 out of 75 districts. Only 54 million *rupees* in registration fee was collected in that year. Full implementation of this Act throughout the country was achieved in 1996. As shown in Figure 6-1, the amount of registration fees increased by 1,820 per cent between 1978/79 (5.46 million *rupees*) and 1995/96 (104.84 million *rupees*). Most of the informal systems of land registration came under the new formal system, which is the main reason behind this increase. According to the Director General of the DOLRM, fluctuation in the amount of registration fees from 1995/96 to 2002/03 mainly resulted from the ten-year long civil war that began in 1996. The insurgents had banned transactions of land, which affected most parts of the rural areas. The revolution ended with the Great People's Movement in 2005. The registration fees followed an increasing trend after 2002/03 and rose sharply after 2006/07 due to the increase in land market activities after settlement of the political crisis.

The contribution of registration fees to revenue and government expenditure between 1987/88 and 2009/10 is shown in Figure 6-2. The figure shows that registration fees provided a maximum of 4.53 per cent of total revenue in 1992/93 and a minimum 1.08 per cent in 2000/01. The highest contribution of registration fees to total expenditure was in 1996/97 when they contributed 2.48 per cent and the lowest contribution was in 2002/03 when they contributed 0.72 per cent of total expenditure. Moreover, 884,606 deeds were registered and 6,056.6 million *rupees* were collected in registration fees in 2009/10 (DOLRM, 2010) which is 4.22 per cent of total revenue. Thus, the contribution of registration fees to the economy is significant.

Figure 6-2: Contribution of registration fee to revenue and expenditure in Nepal



Source: Ministry of Finance (1990; 2002; 2009)

The amount of revenue collected from the registration of land would be increased if the valuation system and process were improved. As discussed in Section 6.2.3 above, the value of land determined by the land offices is much lower than the market value. The Secretary of the MOLRM, Nepal also supported these findings. According to him, the government is collecting around five to six billion *rupees* from registration and claimed that it could be doubled or even tripled if valuation is improved. In his words, "If we improve the valuation system and make the services more efficient and commercial, its contribution to revenue would be increased by two to three times." Thus, if land value

were determined properly, around 15 billion *rupees* would be collected from land registration in Nepal. Currently, the registration fee for the urban and rural sectors in Nepal is four and two per cent respectively. Even if the current rate is halved (that is, two per cent in the urban and one per cent in the rural areas), the government could collect seven and half billion *rupees*. It may increase the burden of the tax payer to some extent, however, it is still far below the average costs in South Asia (7.2 per cent of property value) (World Bank, 2013).

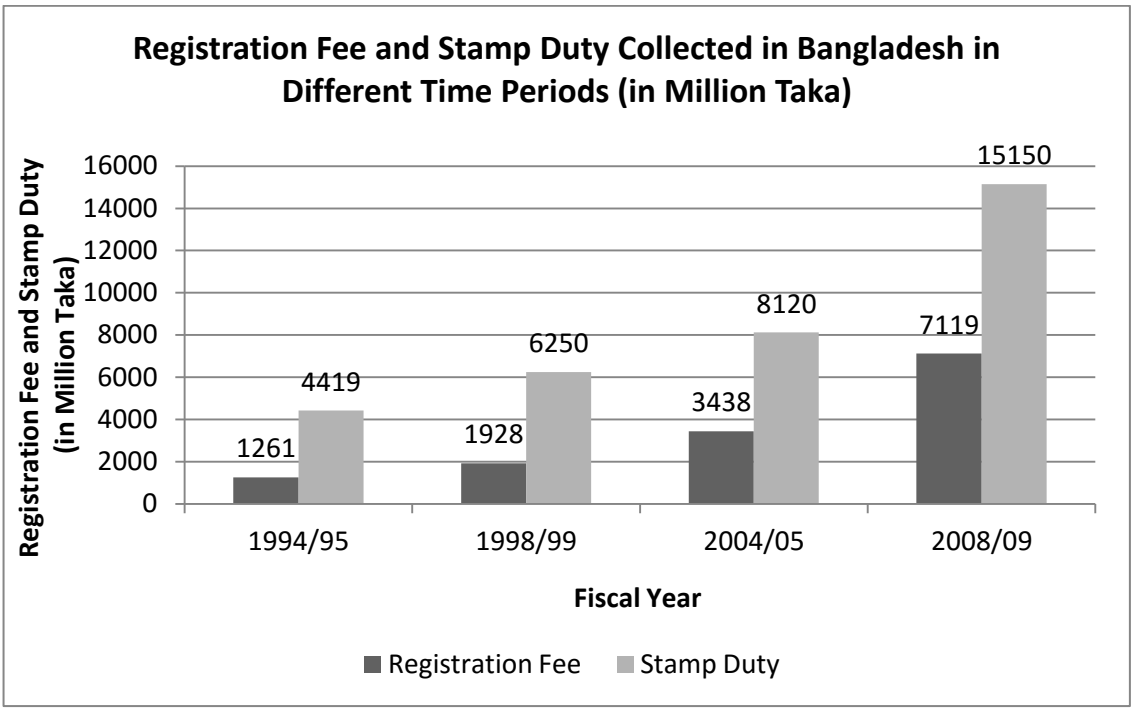
In Bangladesh, both registration fees and stamp duty are levied at the rate of two and three per cent of property value respectively. Also, one per cent local government tax, two per cent capital gains tax[57] and 1.5 per cent value added tax[58] is collected through transactions.

Revenue collected as registration fees and stamp duty in Bangladesh is shown in Figure 6-3. Although the amount includes revenue from other registrations and stamp duties, the overall trend can be discerned from this figure. The revenue from registration was 1,261 million *taka* in 1994/95, which increased by 464 per cent and reached 7,119 million *taka* in 2008/09. Similarly, the amount of stamp duty increased from 4,419 million *taka* in 1994/95 to 15,150 million *taka* in the 15-year period.

[57] In the case of land above BDT 100,000 but not applicable to rural agricultural land

[58] Applicable in municipal corporation areas and payable by private housing and flat developers and commercial businesses

Figure 6-3: Registration fee and stamp duty collected in Bangladesh in different time periods



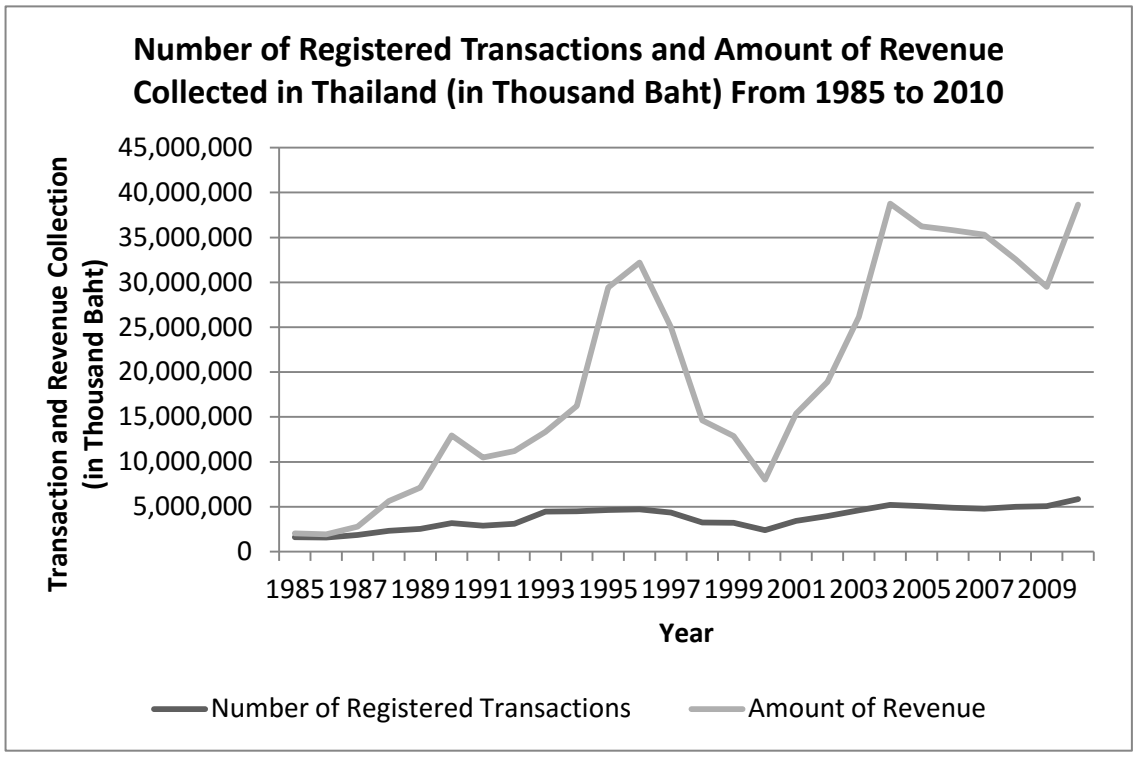
Source: Bangladesh Bureau of Statistics (2000; 2011)

In Bangladesh, around 2.7 million deeds were registered in the Fiscal Year 2008/09, and 26,254.9 million *taka* was collected by the Director of Registration in total (MOLJAPA, 2013) which is around four per cent of total revenue receipts of the government (691,800 million *taka*). As in Nepal, valuations prepared by the government in Bangladesh are approximately one-third of market value. Thus, revenue will be increased if the valuation is determined properly.

Figure 6-4 presents number of title registered in the land registry and revenue collected in Thailand in between 1985 and 2010. Registration of land transactions increased after land titling in Thailand. In 1985, only 1.6 million transactions were registered in the land offices. The total number of transactions reached a peak of 4.7 million in 1996, and then fell sharply to reach the lowest level of 2.4 million in 2000. As argued by the Inspector General of the Department of Lands of Thailand, the market volatility resulting from the economic depression of the South East Asian Nations has affected the Thai land market resulting in decline in the number of registered transactions. After 2000 the number increased sharply until 2004. It reached the highest level of 5.8 million in 2010 after a slight decline between 2005 and 2007. Similarly, revenue collected by the Land Offices

from the registration of transactions increased considerably after land titling, as shown in Figure 6-4. Around two thousand million *baht* was collected by land offices in 1985, which rose to a peak of 32,188 million *baht* in 1996 followed by a sharp decline during the economic crisis and reached 8,020 million *baht* in 2000. In 2001, around 15,375 million baht was collected which is more than 654 per cent higher than that of 1985. The amount of revenue then increased until 2004 followed by a continuous decline until 2009. In 2010, 38,657 million *baht* was collected which is 1,796 per cent higher than that of 1985. The sharp decline in revenue in 2000 and 2009 is because of the market volatility as described by the Inspector of the Department of Lands.

Figure 6-4: Registration of transactions and revenue collection in Thailand from 1985 to 2010



Source: Department of Lands (1985-2010)

The results from correlation analysis also show a high correlation between revenue and number of transaction where the coefficient of determination is equal to 0.939. It indicates that there is a positive correlation between the number of registrations and the amount of revenue collected by the government.

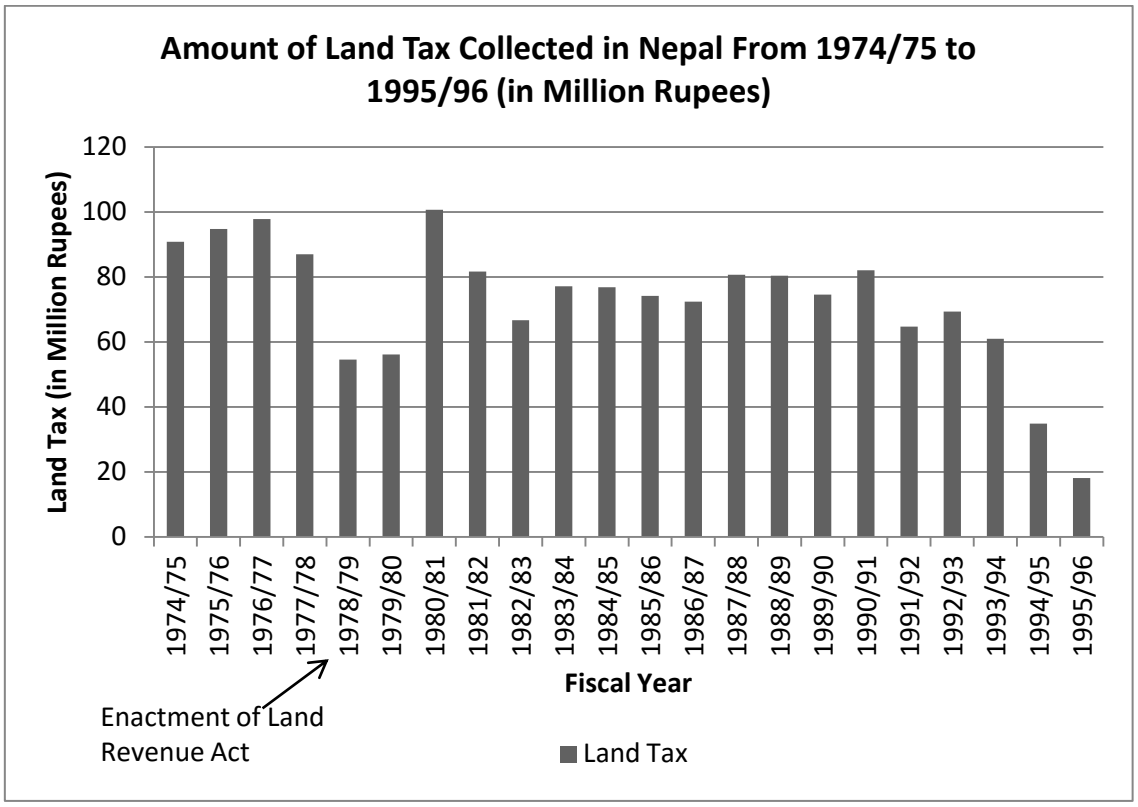
Unless the land is formalised, transactions cannot be registered in the land registry and hence there is no chance of collecting registration fees. The Land Revenue Office source of Ilam, Nepal informed that they had registered 80 transactions from the Chulachuli VDC after registration of land. Similarly, while registering land in Chulachuli VDC, NPR 1,431,774 registration fees, NPR 10,000 land tax and NPR 21,138,459 as price of land was collected from the landowners (CAISPSC, 2010). Data presented above, especially from Nepal and Thailand show that revenue collected from the registration of transactions increased as land administration activities began. It has shown that revenue is increased after registration of land.

The data presented above shows that revenue collected from registration of transactions is significant in all of the three countries. There is potential for increased revenue in Nepal and Bangladesh if the government valuations of land were determined properly. Revenue will also be increased if more transactions are registered.

Land Tax

Land tax was traditionally the main source of government income in Nepal and Bangladesh. In the first budget of Nepal presented in 1952, the estimate of land tax was 9.4 million *rupees*, which constitutes around one-third of the total revenue estimate (30.5 million *rupees*) (Pant, 1956). The amount of land tax collected in Nepal between 1974/75 and 1995/96 is presented in Figure 6-5. In 1974/75, 91 million *rupees* was collected as land tax, which dropped to 55 million *rupees* in 1978/79, and reached a peak of 101 million *rupees* in 1980/81. There are not many significant changes in the amount of land tax after enactment of the Land Revenue Act in 1978 except for a sharp increase in 1980/81 and a sharp decline after 1993/94. It may have been caused by sudden policy changes. As stated by the Director General of the DOLRM, the sharp increase in land tax in 1980/81 was caused by the enactment of the Land Revenue Act in 1978. The decrease in tax after 1992/93 was mainly caused by the political changes in 1990 and shifting of authority to collect this tax to the local government offices instead of Land Revenue Offices. Although the tax is being collected from the local offices, integrated information could not be obtained. Thus, only the data up to 1995/96 is presented in this research.

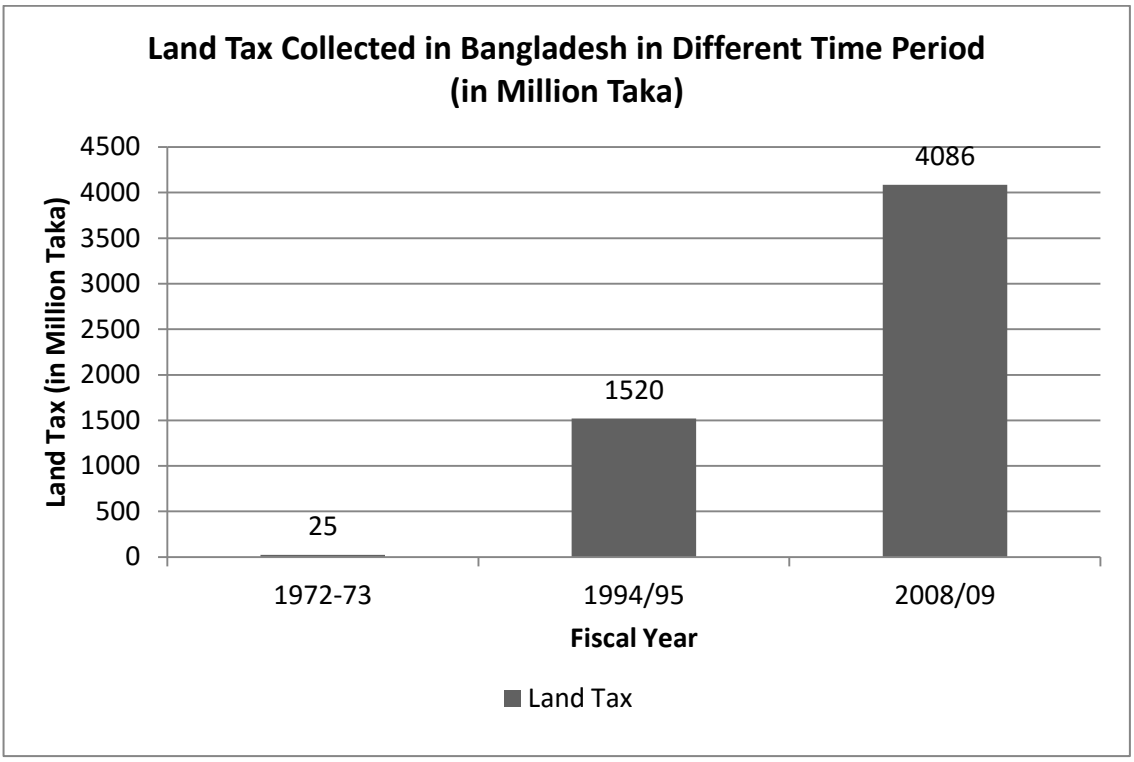
Figure 6-5: Land tax collected in Nepal from 1974/75 to 1995/96



Source: Ministry of Finance (2009; 2002; 1990)

In Bangladesh, land tax has been collected for many years. *Zamindar*s were nominated to collect land tax on behalf of the government during the British period (1757-1947). The government started to collect land tax directly from tenants after abolition of the *zamindar*y system in 1950. As mentioned by Khan (1964), 145.5 million *taka* was collected as land tax in Bangladesh (East Pakistan) in 1961/62 whereas the direct tax from the agriculture sector was 154.3 million *taka*. The land tax collected in three different time periods is shown in Figure 6-6. Only 25 million *taka* was collected in 1972/73. The figure also shows that 1,520 million *taka* was collected in 1994/95 which is 60 times higher than that of 1972/73. Likewise, in 2008/09, 4,086 million *taka* was collected. Maintenance of land records and allocation of land are the main reasons behind the increase in land tax during this period, as described by one of the land registrar.

Figure 6-6: Land tax collected in Bangladesh



Source: Bangladesh Bureau of Statistics (2000; 2011); Habibullah and Bala (2012).

Thus, the revenue collected from the land and property sector specifically in the form of registration fees, stamp duty or land tax can be regarded as one of the important contributors to the revenue of the central as well as local government. These revenues could be collected once the land is registered. From the above discussion, it is clear that the amount of revenue generated from land has been increased once the land registration activities began in Nepal and Thailand. Evidence from Thailand indicates that revenue will be increased if more transactions are registered. However, complicated processes of land registration and high transaction costs may discourage the registration of transactions and under valuation of land also reduces potential revenue. These findings provide answer to the fifth research question.

6.3 Justification for Establishing Land Administration Organisations

This section aims to discuss the justification for the establishment of land administration organisations based on the evidences discussed above. A government must contribute in

two ways while establishing land administration organisations. Firstly, it requires the investment of a substantial sum of money to establish these organisations and conduct land surveys and adjudication processes. Secondly, it needs to transfer the ownership of land in the name of the people. These contributions can be justified by the benefits of tenure security and the services they offer to the public, society as well as the government.

Government would benefit in many ways from the establishment of land administration organisations and from providing land ownership to the people. A direct benefit is an increase in revenue and GDP. As mentioned in Section 6.2, around four per cent of total revenue is generated by the registration fee and stamp duty in Nepal and Bangladesh. As discussed in Section 6.2 and Chapter Five above, production and income from the agricultural sector increased to some extent after registration of land. Increase in agricultural production and personal income at the household level may increase the GDP of this sector.

The real estate sector contributes around seven per cent of GDP in Nepal (Central Bureau of Statistics, 2012). Also, around 450 billion *rupees* is invested in this sector annually of which 150 billion *rupees* is provided from the banking sector, keeping land and houses as collateral. A senior officer of REHAB considered real estate as the heart of the economy of Bangladesh because of its volume and its support to the development of linkage industries. He stated that this sector contributes around 12 to 15 per cent of total GDP, employs almost three million people and supports the development of linkage industries including iron and steel, concrete, cement, furniture and the ceramics industries. Land administration organisations are the basic service providers of the real estate sector. Thus, these organisations may also support in generating income from this sector.

Efficient use of scarce resources is another benefit for the government from the registration of land. The state is the biggest landowner and owns most of the land of a country. However, the government itself may not be able to use all of its land in an efficient way. If the land is distributed to the people, it may be used more efficiently and the productivity of the land could be increased as was found in both cases of Nepal and Bangladesh. Access to land to the common people and the increased income in both

countries indicates that land registration may also contribute to achieve the goals of distributive justice and poverty alleviation to some extent. Thus, the government may be directly benefitted from the establishment of land administration organisations with increased revenue and GDP and also from its support in achieving the goals of efficient use of natural resources, sustainable development, distributive justice and poverty alleviation.

The landowner would benefit from registration in many ways. This research has identified that landowners have enjoyed rights to ownership, transfer, mortgage, lease and use of land. Also, the risks of aggression and expropriation without fair compensation are minimised. Registration of land has ensured security of land tenure and increased the confidence of the landowner. Owners now use land in their own way provided that they follow the responsibilities set by government.

It is also identified that tenure security has increased the incentives to invest in land improvement. Long-term investment such as constructing houses, planting crops, or building a factory. It increases the use value of land. Similarly, registered land possesses a collateral value that allows landowners to access institutional credit. The results of case studies have shown that the exchange value of land increased after registration. Thus, use value, collateral value and exchange value of land increase as land tenure became secure. The social value of land may also be increased since the social and power relationships of human beings are attached to land.

Higher willingness and ability to invest increases land-related investment and production, as discussed in Chapter Five. Increases in land value and income raise personal income, which can support poverty alleviation to some extent. The livelihoods of landowners can also be improved after registration of land. Thus, the landowners will benefit from many aspects once their land is registered.

Society will also benefit from the registration of land from different perspectives. As observed by the researcher during a field visit in Nepal, and described by the respondents; society could not benefit from various services until the land was registered as most of the services are attached with property. Another observation from the study is

that people did not have a link to the local land administration organisations prior to registration of land, which is shown by the fact that less than a quarter of respondents from Nepal had visited land offices. Thus, people of the informal settlement area felt isolated from mainstream of society.

Reductions in social conflict between neighbours are further benefits from land registration. As stated by local leaders in Nepal, the struggle for land rights lasted for decades and many people were wounded and arrested by the police during this movement but now, no more struggles are required and the people have now started to think about the development of their village.

Another benefit for society is the availability of funds to run social and local development activities. In Nepal, land revenue is collected by local VDC or Municipality offices and can be used locally as decided by the councils concerned. It is one of the main sources of income for them. In addition, a certain amount of revenue collected from land registration in Nepal is provided to the District Development Committees and this is also spent on local development activities.

Thus, the establishment of land administration organisations and the registration of land can be justified from its benefits to the state, landowners and society as a whole.

6.4 Summary

This chapter assessed the services provided by land administration organisations and discussed their effectiveness in revenue generation. It also discussed their role in tenure security. The process of land registration in Thailand is better than that of Nepal and Bangladesh. Responses to clients, information sharing mechanisms, workflow management and office layout are found to be highly satisfactory in Thailand, unlike in Nepal and Bangladesh. The process of land registration in Bangladesh is very complicated and lengthy compared with that of Nepal and Thailand. It takes five and two days to complete the process of land registration in Nepal and Thailand respectively whereas it takes 245 days in Bangladesh.

Land administration organisations in both Nepal and Bangladesh are suffering from many problems related to system and culture. The transaction cost is high in both countries. The existing system of land recording and information system has caused several problems, including falsification of documents and tampering and manipulation of land records, leading to increased land disputes and incidences of violence, especially in Bangladesh. Digitisation of land records and establishing integrated land information systems would protect valuable documents, reduce land disputes, ease the process of disseminating land information and improve the efficiency of land offices to some extent. It is essential to solve some of the problems however, it may not automatically control corruption and increase effectiveness in land administration services.

The quality of land administration services also affected the valuation of property. Because of the lack of reliable information and specialised property valuators, the value of land in Nepal and Bangladesh determined by the land registries is lower than the market value of land. It has reduced the potential revenue of the government and also increased the risk of not obtaining full compensation in case of default of transactions and land acquisition.

This chapter revealed the amount of revenue generated from land has been increased once the land registration activities began in Nepal and Thailand. Evidence from Thailand indicates that revenue will be increased if more transactions are registered. However, complicated processes of land registration and high transaction costs may discourage the registration of transactions and under valuation of land also reduces potential revenue.

This chapter also discussed the combined effect of land tenure security and land administration services based on the evidence analysed in Chapter Five and Section 6.2 above. From the discussion it is revealed that registration of land is essential to ensure security of tenure but the malpractices and inefficiency in land administration services has threatened the security even after registration of land. Thus, although land-related economic activities, land value, investment and income increased after registration of land, the practices of land administration may also affect on these factors indicating that the relationship between land registration and tenure security is not quiet straight forward. It provides answer to the first research question.

This chapter demonstrated that the establishment of land administration systems and the transfer of land ownership rights to the people will be beneficial for government, the public and for society. Increases in GDP and revenue, efficient use of scarce resources, distributive justice, poverty alleviation and sustainable development are the main areas in which government would benefit. It will contribute to economic development. Landowners would be benefit from increased value (use value, collateral value and exchange value) of land, increased production and income and improved social relations that emerge from secured tenure. Society will also benefit from increased access to government services, increased revenue of local government and reduced social conflicts.

Chapter 7: Conclusion

7.1 Introduction

This chapter summarises the major issues and findings of this research in light of the research questions outlined in Chapter One. It includes the role of land administration on securing land tenure, land use and economic activities promoted by land administration, role of tenure security on land value, access to credit, investment and income and assessment of land administration services and their effectiveness on revenue generation. Reflections on findings related to the conceptual framework are then examined. It also notes the contribution made by this research to the body of knowledge on land administration and economic development. After that, the implications of this research on policy and practice are outlined followed by a discussion on the limitations of this research. The chapter concludes with a brief note about possible areas for further research.

7.2 Summary of Findings

This section summarises the findings of this research in relation to the research questions outlined in Chapter One. It integrates the research questions with the findings and examines whether these questions are answered or not. It also analyses to what extent the overall aims of this research have been met.

7.2.1 Land Administration and Tenure Security

One of the research question posed in this research asks how does land administration ensure land tenure security. Chapter Two demonstrates that the relationship between humankind and land is established through land rights, the administration of which is undertaken by land administration organisations. The process of determining land rights begins from cadastral surveying and adjudication of land. The survey office and land registry carry out these tasks. They also maintain the cadastral and land ownership records. Land transfers are registered by the land registry with technical support from the survey office.

The findings of this research show that rights to ownership, sale and transfer, lease, mortgage and use of production were not available until land was registered. Although most of the respondents from both countries have replied that they could use whatever they had produced even before registration of land, they did not have any legal document to evidence their use right. There were risks of aggression from other parties concerning land and inadequate compensation in cases of compulsory land acquisition. However, after registration of land, landowners enjoyed a higher level of rights without any fear of aggression or losing compensation. This indicates that the basic requirements of land tenure security outlined in Chapter Two are met in registered land and that land tenure is secured after registration.

The findings from the data analysed in Chapter Six, however, show that malpractices in land administration organisations have threatened tenure security and increased the risks of land disputes. For instance, falsification, tampering and manipulation of land documents, bribery, corruption and favouritism are some of the problems that prevail in the land administration organisations, especially in Bangladesh. It has increased the land disputes, which can be verified from the fact that up to 80 per cent of the court cases in the rural areas of Bangladesh are related to land. Similarly, under-valuation of land in both Nepal and Bangladesh has increased the risks of not obtaining adequate compensation in cases of compulsory land acquisition or default on land transactions. However, these risks are minimal in Thailand where land records are secure, land information is easily accessible, valuation of land determined by the government is close to the market value and the title registration system provides a guarantee of registered title.

Thus, initial registration of land or land adjudication is essential to provide security of land tenure. However, the system of recording land information and property valuation as well as the behaviour and competencies of employees affect the rights of landowners even after registration. These findings reveals that land administration provides tenure security by ensuring property rights and reducing associated risks but it cannot be sustained if land administration practices are not good enough. Digitization of land records, establishment of integrated information systems, provision of morale education to employees, and monitoring and regulation of their behaviour may reduce malpractices.

Also, improvement in the valuation system, hiring trained property valuators or providing valuation training to existing employees and improvement in the information systems may help to determine the valuation properly. These efforts can help to reduce the level of malpractices and land disputes and protect rights of landowners. It provides answers to the first research question posed in Chapter One.

7.2.2 Land Use and Economic Activities Promoted by Land Administration

The second question posed in this research examines the extent to which the land administration promotes efficient land use and land-related economic activities. This study has provided evidence that the use of land for shelter and commercial purposes increased and that its use for agricultural purposes decreased after registration of land. As shown in Chapter Five, the number of respondents using their land for shelter and for commercial purposes increased after registration of land in both Nepal and Bangladesh. Although the number of respondents using land for agricultural purposes decreased, the cropping pattern changed slightly. The data shows that the number of respondents starting cash cropping, planting trees and fruits, and using new tools and farming techniques is increased in both countries. Likewise, more respondents have started fencing and land levelling to improve their land and renovating and building houses to improve their shelter.

Once land is registered, land administration may not directly influence land use and land related economic activities. However, as discussed in Chapter Six, if land administration practices are not good, landowners may not feel secure even after obtaining land title.

To conclude, as uncertainties about ownership and security of investment ended, landowners began to use their land in an efficient and productive way. Also, land-related economic activities increased to some extent. However, land administration practices may affect land use and economic activities indirectly even after obtaining land title. These findings answer the second research question and explain the extent to which land administration promotes efficient land use and land-related economic activities.

7.2.3 Role of Tenure Security on Land Value, Access to Credit, Investment and Income

This research has analysed the value of land, access to credit, investment and income before and after registration. As discussed in Chapter Five, the average value of land in Nepal was NPR 60,700 per *kattha* before registration, which increased by 224 per cent and reached NPR 196,500 after registration. Similarly, in the case of Bangladesh, the average land value before registration was BDT 90,000 per *kattha*, which increased by 123 per cent and reached BDT 201,000 after registration.

A correlation analysis shows a positive correlation between tenure security and land value in Nepal and Bangladesh. Similarly, results of the paired samples t-test shows that the mean value of land after registration is higher than that of before registration and there was a significant difference between these values in case of both countries.

The valuation of land determined by the land offices for taxation purposes is also increased after registration. The Land Revenue Office, Ilam (Nepal) has changed the classification of land and increased its valuation in Chulachuli VDC. As discussed in Chapter Five, the land was initially classified as irrigated or un-irrigated land, each having four categories. But the classification has now been changed to residential and agricultural land. This change in classification indicates the shift in land use pattern from agriculture to other sectors. The minimum valuation determined by the Land Revenue Office, Ilam for the Fiscal Years 2007/08 and 2012/13, which represent the situation before and after registration, also increased significantly. The minimum valuation for irrigated land for the Fiscal Year 2007/08 ranges from NPR 2,325 to 4,651 whereas that of un-irrigated land ranges from NPR 1,528 to 3,853 per *kattha*. The valuation of residential land increased to NPR 111,540 in Ward Numbers 1 to 4 and NPR 44,616 per *kattha* in Ward Numbers 5 to 8, which is 2,298 per cent and 1,898 per cent higher than that of 2007/08 respectively. Similarly, the valuation of the first category agricultural land in Ward Numbers 1 to 4 and 5 to 8 increased by 859 per cent and 583 per cent respectively from that of the highest category of land in the year 2007/08.

Although land value and the valuation made by the government increased after registration, the higher standard deviation of land value before and after registration provides more differentiated results which indicates that there may be other causes behind the increases in land value.

The status of access to credit, investment and income is also discussed in Chapter Five. Accordingly, unless land was registered, landowners had to rely on private lenders for the loans they require for investment, and they had to pay up to 40 per cent interest in Nepal and 30 per cent interest in Bangladesh. When land is registered, they can use it as collateral to obtain loans from the banking sector at an interest rate of around 15 per cent per annum. It has increased the ability to invest. In Bangladesh, most of the respondents (78 per cent) had borrowed from the banking sector. The land owners from the case study area of Nepal, however, could not utilise this opportunity because of the lack of proper communication. Thus, the access to bank credit is established after registration of land, however, landowners are not benefitting from it as much as they could be.

The findings from Chapter Five also show that a favourable environment for investment is created as land tenure became secured. The slight changes in land use and cropping patterns and land-related economic activities indicate that the willingness to invest increased after registration of land to some extent.

The data presented in Chapter Five show that average investment per *kattha* of land in Nepal before registration was NPR 2,700, which increased by 59 per cent and reached NPR 4,300 after registration. Similarly, average annual investment per *kattha* of land in Bangladesh was BDT 2,800 before registration, which increased by 93 per cent and reached BDT 5,400 after registration. The results from both countries show that the investment increased after registration of land. A correlation analysis shows a positive correlation between investment and tenure security in both countries. Similarly, results of the paired samples t-test of investment before and after registration shows a significant difference in investment. These results suggest that there is a positive correlation between land tenure security and investment. However, the higher standard deviations

of investment before and after registration show that the increase in investment may not have entirely caused from the registration and there may be other factors behind it.

The effect of tenure security on land-related income is also analysed in this study. As shown in Chapter Five, average annual income per *kattha* of land in Nepal before registration was NPR 4,300, which increased by 49 per cent and reached NPR 6,400 after registration. Likewise, in Bangladesh, average annual income per *kattha* of land before registration was BDT 5,700, which increased by 95 per cent and reached BDT 11,100 after registration. This indicates that income from land has been increased significantly in both countries after registration. A correlation analysis shows a positive correlation between income and tenure security in both countries. Similarly, results of the paired samples t-test of income before and after registration of land shows that there was a significant difference in income after registration compared with before registration in both countries. However, the higher standard deviations of income before and after registration indicate that the increase in income may not have entirely caused from the registration of land. These results suggest that there is a positive correlation between land tenure security and land related income although it does not prove the causal relationship between them.

To summarise, this research revealed that land value is increased, access to credit is promoted and investment and income are increased as the land tenure became secure; however, it does not indicate whether there is a causal relationship of tenure security with land value, investment and income or not. Also, access to institutional credit is not sufficient to increase investment unless it is communicated properly. It provides answer to the third research question.

7.2.4 Assessment of Land Administration Services and Their Effectiveness

This study has assessed the effectiveness of land administration services and their role in revenue generation. As discussed in Chapter Six, the process of land registration in Thailand involves only two procedures. Response to clients, information sharing mechanisms, workflow management and office layout are found to be highly satisfactory.

The clients are nicely greeted and asked to state the purpose of their visit. When they are sent to a designated booth, they can wait until their number is displayed on the screen. The task of registration of title is completed in one visit in Thailand.

The process of land registration in Nepal and Bangladesh is not as well organised as in Thailand. The process involves three and eight procedures in Nepal and Bangladesh respectively. There is a queuing system in these countries also but is not properly followed. Clients need to visit many places to access services from land offices. The process of land registration can be completed within a couple of days in Nepal and Thailand. However, it takes nearly eight months to complete the process and obtain a land certificate in Bangladesh.

This research also examined the amount of transaction costs landowners had incurred while obtaining land administration services. As discussed in Chapter Six, the transaction cost is high in both Nepal and Bangladesh.

Problems commonly found in the land administration organisations of Nepal and Bangladesh included paper-based land recording systems, a lack of an integrated land information systems, improper valuation of land and a lack of good governance values among employees. Problems of bribery, fraud and malpractice are found to be major problems in Bangladesh. This indicates that land administration organisations in both countries are not free from problems; however, more problems exist in Bangladesh than in Nepal. It answers the fourth research question of this research.

The land administration organisations generate revenue from land. The data presented in Chapter Six shows that land tax was traditionally the main source of income in Nepal. It had provided around one-third of the revenue of the first budget presented in 1952. The registration of transactions in the land registry in Nepal began in 1923; but it only came into full operation after enactment of the Land Revenue Act, 1978. In 1978/79, only 55 million *rupees* were collected in registration fees, but six billion *rupees* were collected in 2010/11. Similarly, while registering land in Chulachuli VDC, NPR 1,431,774 registration fees, NPR 10,000 land tax and NPR 21,138,459 as price of land was collected from the landowners. Local government organisations are now collecting the land tax.

In Bangladesh, the amount of land tax increased to 1,520 million *taka* in 1994/95 and 4,086 million *taka* in 2008/09. Maintenance of land records and the allocation of land are considered as the main reasons for this change. Similarly, in 2008/09, 2.7 million deeds were registered and 26,254.9 million *taka* in revenue was collected by the Director of Registration of Bangladesh, which constituted around 3.8 per cent of the total revenue of the government.

In Thailand, only 4.5 million plots of land were titled in 1985. The Department of Lands had registered 1.6 million transactions and collected two million *baht* in revenue in 1985. In 2010, 5.8 million transactions were registered and 38,657 million *baht* was collected through registrations. This clearly indicates that revenue from land registration has increased after land titling.

There is a minimum valuation system in both Nepal and Bangladesh. Valuations prepared by the government are approximately one-third of market value. Lack of reliable information about the land market and specialised manpower, as well as the use of inappropriate methods of valuation have resulted in the under-valuation of property. Consequently, revenue collected by the government is lower than the actual amount it could obtain. As described in Chapter Six, 150 per cent more revenue could be collected than it is collecting now if the valuations were undertaken properly. Even if the tax rate is halved, around 50 per cent more revenue could be collected. The case of Bangladesh is similar to that of Nepal. However, there is no problem of under-valuation of land in Thailand since the land values determined by the government are close to market values. This indicates that the practices and methods of valuation, access to information and efficiency of employees may affect the quality of valuations, which ultimately affects revenue.

The above discussion indicates that the amount of revenue will be increased after registration of land. However, complicated processes of land registration and high transaction costs may discourage the registration of transactions and under valuation of land also reduces potential revenue. It provides answer to the fifth research question.

To summarise, all of the research questions posed in Chapter One are addressed through the theoretical and empirical evidence presented above and we can conclude that an efficient land administration supports economic development to some extent by increasing land-related income as well as generating more revenue for the government. Thus, the overall aim of the research to investigate the relationship between land administration and economic development has been achieved.

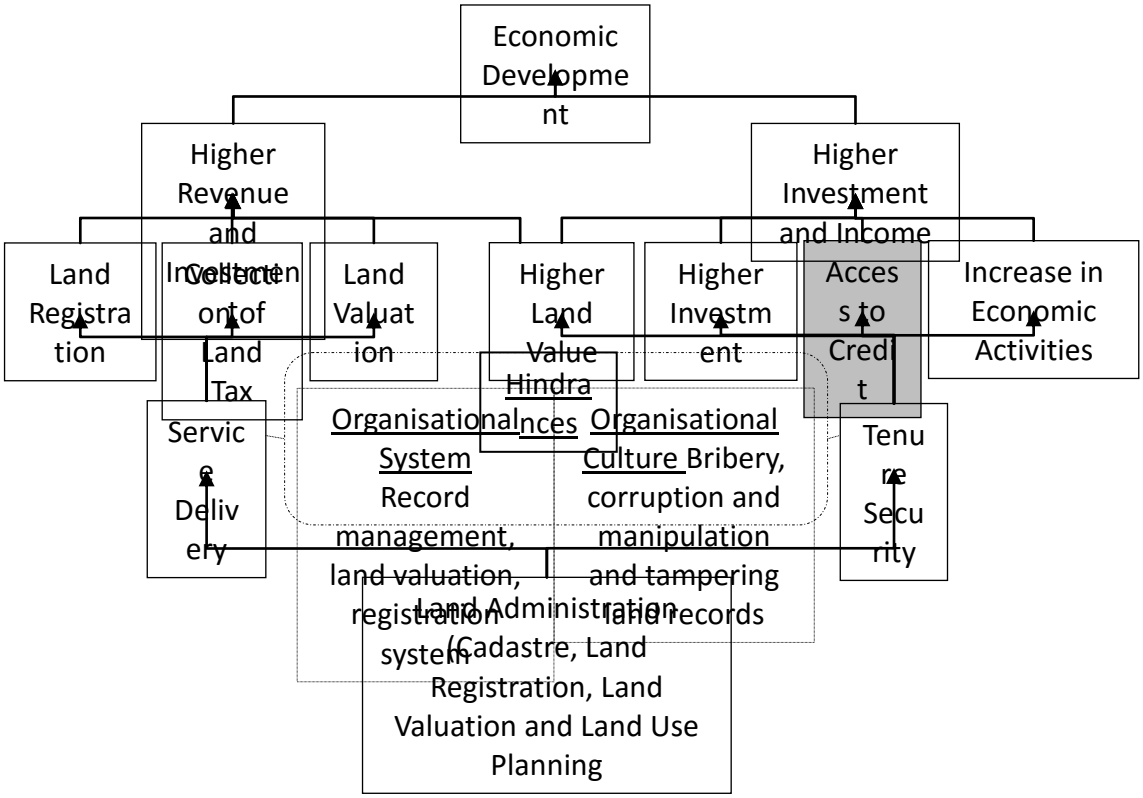
7.3 Reflections on the Theoretical Framework

The main theoretical foundation for this research is derived from land administration and land tenure theories. In addition to these theories, some concepts are also taken from the property rights theory, economic theory and development theory as discussed in the first and second chapters. A conceptual framework is developed in Chapter One (Figure 1-2) based on the analysis of those theories which visualises the relationship between land administration and economic development. Accordingly, land administration functions support economic development through two channels: first, it ensures security of land tenure, which promotes land value, credit opportunity, investment demand and productive land use resulting in a higher investment and income. Second, land administration services generate revenue for the government which may be used for development purposes. This section discusses the findings of this study in light of this concept.

The findings of this research have supported the conceptual framework developed in Chapter One with some modifications, as shown in Figure 7-1. The findings are presented in a similar diagram however, a box with a dotted line called 'Hindrances' has been added in the middle and the box named as 'Access to Credit' in the right hand side of the figure has been shaded. Two type of hindrances are found from this study that affect both service delivery and tenure security and ultimately reducing the contribution of land administration to economic development. They are: organisational culture and organisational system. Existing malpractices of bribery, corruption and manipulation and tampering of land records have threatened the security of tenure and increased the cost of transactions. Likewise, existing practices of record management, property valuation and registration have also threatened the security of tenure, reduced the amount of

revenue that could be generated by land administration organisations and made the registration process more complicated. The shaded box 'Access to Credit' indicates that access to credit is theoretically a means of increasing land-related investment, however, the land owners from case study areas of Nepal could not benefit from this opportunity because of the lack of proper communication which indicates that access to credit is not enough to increase investment unless it is communicated properly. Despite these contesting results, this research shows that land administration supports the economic development via the same two channels of service delivery and tenure security as explained in Section 1.4 and if the hindrances of organisational system and culture prevailed in land administration organisations are overcome, the revenue generated by land administration organisations would be increased, providing more funds to the government.

Figure 7-1: Land administration and economic development



7.4 Contribution to Knowledge

This study has presented an original contribution to knowledge in the field of land administration. It has opened up several new avenues to establish a relationship between

land administration and economic development. It has confirmed that there is a lack of research that links land administration activities with economic development. This study has filled a gap of knowledge in this sector to some extent. The findings of this research have enhanced the understanding of the significance of land administration institutions and tenure security for the individual, society and the state.

This research has integrated the theories of land administration and land tenure to observe their combined effect on economic development. It has also considered assertions made by property rights theories, economic theories and development theories. Moreover, it has explored the shift in national policies that focus merely on property formalisation as a means of increasing agricultural production, and addressed the role of governance and institutions in obtaining benefits from land.

The research confirms that land has been used more effectively as land tenure became secure. It has shown that the pattern of land use was changed, new tools and techniques of agriculture were applied, land was improved and land-related economic activities were increased to some extent after registration. The research also revealed that the use value of land increased as landowners were motivated to obtain maximum benefit from land resulting from secure tenure.

This study has shown that land value, investment and income increased after registration and they are positively correlated with land tenure security although it does not indicate whether there is any causal relationship between them or not. A slight change in land use pattern and land-related activities indicates that tenure security can create a favourable environment for investment and encourage the land owners to some extent. The possibility of using land as collateral has increased the ability for investment although it has not been established as a cause for increased investment at least in case of Nepal.

This research has assessed the land administration services of Nepal, Bangladesh and Thailand and identified that the lack of efficiency, malpractices and improper valuation methods have threatened tenure security and reduced potential revenue. If these problems were solved, land tenure would become more secure and the amount of revenue would also be increased. It would provide a new way of linking land

administration services to tenure security and revenue generation although the contribution has not been quantified because of the limitations of time and costs.

This study has documented the programme conducted for property formalisation in Chulachuli VDC, Nepal, surveying settlement in Gharinda, Bangladesh and the land titling program of Thailand and has offered readily available material for these cases. There are many countries in the world where the system of land administration has not been fully established. Also, there are many settlements where the properties are yet to be registered. The findings of this research could be useful for them when deciding on investment in a land administration system and formalisation of property rights.

Thus, this research has empirically tested the theories of land administration and land tenure and highlighted the significance of land administration functions and tenure security. It provides new insight into these theories from an integrated perspective of land administration and tenure security.

7.5 Implications for Policy and Practices

This study has implications for both policy-making and implementation. The issues of the establishment of land administration organisations and distribution and registration of land are highly political issues. This study has provided justification for them. It has evidenced that use value, collateral value and exchange value of land increased as the land was registered. Land registration may promote the efficient use of scarce resources because an individual landowner may use land more effectively than the government. These findings will be useful in the formulation of land use and land management policies.

The research has identified that income from land increased after registration. Increase in income at the household level will also increase GDP and help to achieve the goal of economic development. Formalisation of informal settlement may also help to maintain distributive justice, reduce poverty and improve the livelihoods of people. Moreover, this study has evidenced that revenue collected from land and the registration of transactions constitute around four per cent of total revenue in both Nepal and Bangladesh which is a significant income for the government. These findings will help a government while

deciding about the establishment of land administration systems and the formalisation of informal areas.

It was also noted that an overwhelming majority of the people from the case study area of Nepal had never been in the land office before registration of their land. It indicates that recognition of informal rights is essential to bring people into the mainstream of governance in the context of Nepal. These findings may be useful when formulating policies for people's participation.

This research has also shown that mal-practices in land administration organisations can increase the time and costs of obtaining those services, increase land litigation and threaten land tenure security and reduce potential revenue to some extent. It can be taken into consideration while formulating policy relating to land administration. These findings have implications at the implementation level as well. The land offices can learn from these findings and improve their service delivery mechanism. For instance, the good practices of land registration in the Pak Kret land office in Thailand would be useful for improving land administration systems in other land offices in Thailand as well as land offices in Nepal, Bangladesh and many other countries.

To sum up, the findings of this study will be useful while formulating or revising national policies relating to development, taxation, land use and management, distributive justice, poverty alleviation and improving the livelihood of the people. These findings can also be applicable to other parts of Nepal and Bangladesh. Nevertheless, countries like China, Vietnam and North Korea where the ownership of land is yet to be privatised and some countries especially in Africa, where the land tenure practices are still customary can also learn from these findings. Lessons can also be learned for the improvement of land administration system.

7.6 Limitations of Research

This research has explored the relationship between land administration and economic development based on case studies of the land administration systems of Nepal, Bangladesh and Thailand, more specifically the property formalisation programme of Chulachuli, Nepal and the surveying settlement programme of Gharinda, Bangladesh.

Findings of these studies may be generalised in theoretical term (analytical generalisation) as its results are compared with previously developed theories particularly, land administration theory and land tenure theories. However, it cannot be generalised to the population (statistical generalisation). Thus, these findings may not be equally applicable in other cases.

The researcher could not get access to the land related government ministries and departments in Bangladesh and interview the high level officers involved in land administration. Thus, their views could not be incorporated in this research. Specifically, the criticism made by respondents against the land administration organisations and its staffs could not be discussed with the government officials. Also, reports published by the ministries and departments could not be obtained and those published online were hardly in English. Thus, some data especially about the status of registration of deeds and collection of revenue in Bangladesh could not be included in this research. Likewise, the amount of land tax collected in Nepal after 1995/96 could not be obtained and thus not included in this research.

This research has investigated the relationship of land value, investment and income with land tenure security. It has established a positive correlation between them and observed that all land value, investment and income are increased after registration of land. However, because of the limitations of time and cost, it could not study the role of other factors on them, for instance, the role of inflation, demand of land and development activities in land value; role of changes in price of input like price of seeds, fertilizer and labor in investment; and the role of changes in crop price and production in income. Thus, this study could not establish a causal relationship between the studied variables.

This research has assessed the effectiveness of land administration services on revenue generation. However, the researcher identified problems in quantifying their effectiveness. This research could not measure the loss of revenue caused by inefficient services. Also, it was not possible to ascertain the actual number of transactions registered in the land offices or the actual amount of revenue increased due to the good land administration services. Likewise, the status and role of land use and planning

services is not studied as the land administration organisations of the selected countries are not much involved in these activities.

The area selected for case study are rural areas where the lands are mainly used for residential and agricultural purposes only. This research has not studied the changes caused by the land administration activities on the urban economy and other sectors such as the real estate and business sectors, construction or manufacturing sectors or the industrial sector.

7.7 Scope for Further Research

The findings of this study indicate a need for further research on the economic aspects of land administration. It would be worthwhile to investigate whether there are any other factors that are responsible to increase in land value, investment and income other than land tenure security so that the casual relationship between these variables could be identified. Also, the actual change caused by effectiveness of land administration services in revenue generation could also be an area of future research. Similarly, role of land use and planning services in securing land tenure and generating revenue would also be recommended for further investigation. It would also be worthwhile to look at the role of tenure security and land administration activities on other sectors, including the real estate and business sectors, the construction or manufacturing sectors and the industrial sector.

This research has observed changes in land use pattern and increase in land related economic activities, land value, investment and income after registration of land which may have changed the livelihood of the people and supported in combating poverty to some extent. The access to land may have played some role in providing distributive justice as well. It would be worthwhile to look at the changes caused by the registration of land in these sectors too. Moreover, social and environmental development are other sectors of sustainable development that could be contributed by the land administration functions as proposed by land administration theory and could be a subject of study. Similarly, the role of institutions and land tenure in customary and religious land would be another matter of investigation. Moreover, a study focusing on the significance of land

administration and property formalisation in countries like China and Vietnam is also recommended for further research.

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List of Appendices

Appendix 1: Survey Questionnaire

Name of the Respondents: …….. Gender: ☐ Male ☐ Female

Address: …….. Age: …… Year: ……..

Number of Parcels: …….. Area of Land: ……..

Number of Land Owners: …….. Share of the Respondents: ……%

Number of Family Members: …….. Education: ……..

1. What type of land/property do you have?
   - ☐ Land
   - ☐ House
   - ☐ Both
2. How have you acquired this property?
   - ☐ Purchase
   - ☐ Inheritance
   - ☐ Lease or Contract
   - ☐ Self-possession
   - ☐ Commission
   - ☐ Others:……
3. What type of evidence do you have for this property?
   - ☐ Title Certificate
   - ☐ Others: ……
   - ☐ Contact paper
   - ☐ None.
   - ☐ Deed
4. When was this land registered?
   - ☐ Within last 5 years
   - ☐ 5-10 years
   - ☐ 10-15 years
   - ☐ More than 15 years
5. In your opinion, what are the advantages of settlement or having a land certificate?
   - ☐ Legal evidence
   - ☐ Protection of property
   - ☐ Easiness in sale and transfer
   - ☐ Access to credit
   - ☐ Security of investment
   - ☐ Cheaper interest in loan
   - ☐ Possibility of long-term investment
   - ☐ Social security
   - ☐ Others: ……
6. Do you consider that your property is secured after registration?
   - ☐ Yes
   - ☐ No
   - ☐ Don't know
7. How much role do the following factors play in protecting the property rights?

Organisations	Role				
	Highest	High	Normal	Less	Negligible
Land Administration organisations	☐	☐	☐	☐	☐
Court	☐	☐	☐	☐	☐
Other government organisations	☐	☐	☐	☐	☐

8. How do the land offices help in protecting property rights? (Please teak as many as apply)
   - ☐ By surveying and mapping the land
   - ☐ Managing land records
   - ☐ Providing land information
   - ☐ Registering land
   - ☐ Providing documents and evidence
   - ☐ Others: .....

9. Could you please provide the following information before and after registering the land?

Description		Before Registration		After Registration	
		Yes	No	Yes	No
Property Rights	Sale and transfer	☐	☐	☐	☐
	Access to institutional loan	☐	☐	☐	☐
	Lease	☐	☐	☐	☐
	Use of production	☐	☐	☐	☐
	Right of ownership	☐	☐	☐	☐
Risks on Property	Risks of aggression from other people	☐	☐	☐	☐
	Risks of acquisition by the government without fair compensation	☐	☐	☐	☐

10. Could you please provide the following information before and after registration?

Description	Before Registration	After Registration
Land Use	☐ Shelter ☐ Agriculture ☐ Commercial use ☐ Others	☐ Shelter ☐ Agriculture ☐ Commercial use ☐ Others .....
Sources of investment (per cent) and rate of interest	☐ Personal Saving ..... ☐ Personal Borrowing ..... ☐ Bank loan..... ☐ Private lenders	☐ Personal Saving ..... ☐ Personal Borrowing ..... ☐ Bank loan..... ☐ Private lenders .....
Annual investment (per kattha)	.....	.....
Annual income (per kattha)	.....	.....
Land price per kattha)	.....	.....

11. Have you ever performed or willing to perform the following activities on your land after or before registration?

Activities	Before Registration	After Registration

	Yes	No	Yes	No
Constructing houses	☐	☐	☐	☐
Renovating houses	☐	☐	☐	☐
Land levelling	☐	☐	☐	☐
Constructing irrigation canals	☐	☐	☐	☐
Fencing	☐	☐	☐	☐
Using new tools and techniques of farming	☐	☐	☐	☐
Cash cropping	☐	☐	☐	☐
Planting trees	☐	☐	☐	☐
Planting fruits	☐	☐	☐	☐
Animal husbandry	☐	☐	☐	☐
Commercial purposes (for example, renting, shops, small industry)	☐	☐	☐	☐

12. Have you ever felt any obstruction in additional investment on your property due to the lack of registration?
    - ☐ Yes
    - ☐ No
13. Have you ever been in land offices?
    - ☐ Yes
    - ☐ No

    If yes, for which purpose? (Please teak on as many apply.) How much time did it take to complete the process? (If not, please go to question 18)

Purpose of Visit	Time Taken to Complete the Process (Days)
To collect information and documents	.....
To register deeds	.....
To update records	.....

14. How do you evaluate the services provided by the land offices?
    - ☐ Good
    - ☐ Neither good nor bad
    - ☐ Bad

    If it is bad, what types of problems have you found? (If not, please go to question 14)

    - ☐ Lengthy or cumbersome procedure
    - ☐ Time consuming
    - ☐ Costly
    - ☐ Difficulties in finding records
    - ☐ Inefficient staffs
    - ☐ Non-cooperative employees
    - ☐ Several stops
    - ☐ Red-tapism
    - ☐ Others: .....

15. Do you consider any improvement in the services provided by the land offices?

☐ Yes ☐ No

If yes, which of the following need to improve? (If not, please go to question 16)

- ☐ Improvement in law and procedures
- ☐ Digitisation of land records
- ☐ Simplification of registration process
- ☐ One stop shopping
- ☐ Online information system
- ☐ Making employees more efficient through training
- ☐ Improving employees behaviour
- ☐ Regular updating of information
- ☐ Others: ……..

16. How much money do you need to spend while getting the following services from land offices?

Job	Fee (*Rupees*/*Taka*)				
	Up to 1,000	1,001 to 2,000	2,001 to 5,000	5,001 to 10,000	Above 10,000
To collect information or documents	☐	☐	☐	☐	☐
To register deeds	☐	☐	☐	☐	☐
To update records	☐	☐	☐	☐	☐
Transportation and accommodation	☐	☐	☐	☐	☐
Other purposes including bribes	☐	☐	☐	☐	☐

The cost is,

☐ High ☐ Low ☐ Reasonable

If it is high, what should be done in order to reduce it? (Otherwise, please go to question 18.)

- ☐ Improvement on law and procedures
- ☐ Improvement on employee's behaviour
- ☐ Online information
- ☐ Providing registration form freely
- ☐ Relocating land offices
- ☐ Others: ……..

17. To what extent the improvement in land administration services would contribute to reduce the cost?

☐ A lot ☐ Normal ☐ Negligible

18. Would you like to add anything not covered above? ……
……

Thank you very much for your support in filling up this questionnaire.

The End

Appendix 2: Information Sheet

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Information Sheet

This interview/questionnaire is a part of my PhD study in the Henley Business School, University of Reading, UK. Topic of my research is *land administration and its impact on economic development* which aims to investigate the relationship between land administration and economic development.

The Land Administration System of Nepal/Bangladesh/Thailand is also a part of my study. The field work in ... includes observation of the process of land transaction in ... office, and discussion and interview with the officials of the land administration organisations, and researcher or academician working in this field. The researcher will make a note during the interview; however, the interview will be recorded if it is allowed by the respondents. Collection of secondary data and literature is also a part of the field work.

The data collected during this study will be used for the purpose of this study only and will be kept highly confidential. It will be kept in a safe place until the research project is completed and disposed properly after the completion of the project. The researcher is not offering any benefits to the respondents in return of their participation. Neither it is harmful or riskier to them.

The results of the study will contribute to my PhD study which will be published. One copy of the dissertation will be sent to the concerned department.

This project has been reviewed by the University of Reading, Research Ethics Committee and has been given a favourable opinion for conduct.

If you have any questions or complaint, please do not hesitate to contact the researcher directly in the email or mobile provided above or on the following address.

Thank you very much for your support.

Gandhi Prasad Subedi
UK Address: 108 Liverpool Road, Reading, RG1 3PQ, UK
Nepal Address: Bhachok-9, Kaski, Nepal
Email: g.p.subedi@pgr.reading.ac.uk

Appendix 3: Consent Form

Henley Business School
Whiteknights
Reading
RG6 6UD
UK

Consent Form

1. I have read and had explained to me by …….. the accompanying Information Sheet relating to the project on ……..
2. I have had explained to me the purposes of the project and what will be required of me, and any questions I have had been answered to my satisfaction. I agree to the arrangements described in the Information Sheet in so far as they relate to my participation.
3. I understand that participation is entirely voluntary and that I have the right to withdraw from the project any time, and that this will be without detriment.
4. I agree to the interview being audio taped.
5. This application has been reviewed by the University Research Ethics Committee and has been given a favourable ethical opinion for conduct.
6. I have received a copy of this Consent Form and of the accompanying Information Sheet.

Name: ……..

Signed: ……

Date: ……

Appendix 4: Key Issues and Checklist for Interview

S. N.	Key Issue	Checklist
1.	Land administration system	– Organisation structure – Functions and role of land administration organisations – Status of cadastral survey & land adjudication – System of land registration – Strengths and weaknesses – Role of land administration in economic development
2.	Status of governance	– Assessment of land administration services – Transparency and access to information – Problems and measures for improvement – Time, costs and procedures – Transaction costs
3.	Land policy	– Key issues of land policy – Land policy and political objectives
4.	Land tenure, property rights and access to land	– Tenure system and available property rights – Status of tenure security, – Risks or threats on tenure security – Landlessness and informal settlement – Role of land administration in securing land rights
5.	Land market and investment	– Status of land market – Pre-requisites of efficient land market – Factors determining land related investment – Role of land administration services
6.	Record management and information system	– Techniques and methods applied in data collection, recording and dissemination – Status of digitisation of land records and future plan – Updating records – Time and costs of collecting information – Problems and measures for improvement
7.	Property valuation	– System of valuation – Problems
8.	Human resource	– Employee efficiency – Employee behaviour and ethics – Universities and training centres offering land administration related courses – Type of training and academic courses available

Appendix 5: List of Interviewee and Discussants

A. List of Interviewees

S. N.	Name	Role and Affiliation	Interview Location	Interview Duration
Nepal				
1.	Mr. Bhesh Raj Lohani	General Secretary, Nepal Land and Housing Development Association	Respondent's Office, Kathmanu	Two Hours
2.	Mr. Drona Prasad Pokharel	Director, Department of Land Information and Archive	Respondent's Office, Babar Mahal	One and Half Hours
3.	Mr. Ganesh Phago	Land right activist, Chulachuli, Ilam	Respondent's Home, Chulachuli	One Hour
4.	Mr. Ichchha Bahadur Tamang	President, Nepal Land and Housing Development Association	Respondent's Office,, Kathmandu	One and Half Hours
5.	Mr. Jagat Basnet	Executive Director, Community Self-Reliance Centre	Respondent's Office, Kathmandu	One Hour
6.	Mr. Jeet Bahadur Thapa	Director General, Department of Land Reform and Management	Respondent's Office, Babar Mahal	One and Half Hours
7.	Mr. Lal Mani Joshi	Secretary, Ministry of Land Reform and Management	Respondent's Office, Singha Durbar	One Hour
8.	Mr. Kiran Bhattarai	Land Revenue Officer, Land Revenue Office, Ilam	LRO Office, Ilam	Written Interview
9.	Mr. Madhusudan Adhikari	Deputy Director General, Department of Survey	Respondent's Office, Min Bhawan	One and Half Hours
10.	Mr. Suvash Ghimire	Assistant Professor, Kathmandu University	Restaurant, Lalitpur	One and Half Hours
11.	Mr. Om Narayan Khanal	Local political leader; Member of Chulachuli Area Informal Settlement Problem Solving Committee	Respondent's Home, Chualachuli, Ilam	Two Hours
12.	Mr. Thakur Niraula	Member Secretary, Chulachuli Area Informal Settlement Problem Solving Committee	Respondent's Office, Damak	One Hour
Bangladesh				
13.	Ms. Khushi Kabir	Coordinator, Nijera Kori, Dhaka	Respondent's Office, Dhaka	One and Half Hours
14.	Asst. Prof. Masud	Head, Department of Real	Respondent's	Two Hours

	Ibn Rahaman	Estate, Daffodil International University, Dhaka	Office, Dhaka	
15.	Mr. M. A. Matin	Managing Director, DLM Properties Ltd. and Visiting Asst. Prof., Daffodil International University	Respondent's Office, Dhaka	One Hour
16.	Ms. Sayeda Rizawana Hasan	Director, Bangladesh Environment Lawyers' Association (BELA)	Respondent's Office, Dhaka	One Hour
17.	Mr. Shamsul Huda	Executive Director, of Land Reform & Development (ALRD), Dhaka	Respondent's Office, Dhaka	Two Hours
Thailand				
19.	Ms. Chinnapan Charoenkalunyuta	Department of Lands, Bangkok	Restaurant, Bangkok	One and Half Hours
	Dr. Perm Sark	Lecturer, Mahidol University, Bangkok	RECOFTC Office, Bangkok	One and Half Hours
20.	Mr. Rung-Arun Yodeam	Senior Surveyor, Survey Division, Pak Kret	Respondent's Office, Pak Kret	One Hour
21.	Ms. Somying Soontornwong	Thailand Country Programme Coordinator, The Centre for People and Forest (RECOFTC), Bangkok	Respondent's Office, Bangkok	One and Half Hours
22.	Prof. Sopin	Department of Agricultural Economics, Kasetsart University, Bangkok	Respondent's Office, Bangkok	One and Half Hours
23.	Mr. Teetat Charoenka Lunyota	Survey Engineer, Survey Office, Pak Kret	Respondent's Office, Pak Kret	One Hour
24.	Ms. Wanna Rakayo	Inspector, Department of Lands	Respondent's Office, Bangkok	One Hour

B. List of Structured Interviewee and Informal Discussants

S. N.	Name	Role and Affiliation	Interview Location
Nepal			
1.	Mr. Subash Shakya	Nepal Investment Bank Limited, Durbar Marg, Kathmandu	Respondent's Office, Durbar Marg
2.	Mr. Pravin Dhungel	Siddhartha Bank Limited, Hattisar, Kathmandu	Respondent's Office, Hattisar
3.	Mr. Rajesh Karki	Megha Bank Nepal Ltd., Kantipath, Kathmandu	Respondent's Office, Kantipath
4.	Mr. Sulabh Joshi	Nepal Development Bank Limited, Kamaladi, Kathmandu	Respondent's Office, Kamaladi
5.	Mr. Pramod Uptreti	Jyoti Bikas Bank Limited, Kamal Pokhari, Kathmandu	Respondent's Office, Kamal Pokhari
6.	Mr. Durga Prasad Bhattarai	Nepal Housing Development Finance Company Limited, Naya Baneshwor	Respondent's Office, Naya Baneshwor
7.	Mr. Praveen Upadhya	Nepal Housing and Merchant Finance Company Limited, Dillibazar	Respondent's Office, Dillibazar
8.	Mr. Deepesh Tamrakar	Patan Finance Limited, Man Bhawan, Lalitpur	Respondent's Office, Man Bhawan
9.	Mr. Deependra Shah	Agricultural Development Bank, Ilam	Respondent's Office, Ilam
10.	Mr. Tika Prasad Dahal	Excel Bank Limited, Ilam	Respondent's Office, Ilam
11.	Mr. Pradeep Paudel	Nepal Bangladesh Bank Limited, Kathmandu	Respondent's Office, Kathmanu
12.	Mr. Prarthana Baidhya	Brihat Investments Private Limited, Kathmandu	Respondent's Office, Sita Paila
13.	Mr. Kalindra Bahadur GC	Oriental Property Builders, Kathmandu	Respondent's Office, Kathmandu
14.	Mr. Revati Dhakal	Ex- Member Secretary, Chulachuli Area Informal Settlement Problem Solving Committee	Telephone
Bangladesh			
15.	Mr. Rose	Nijera Kori, Dhaka	Respondent's Office Dhaka
16.	Md. Abu Talib Khan	District Registrar, Land Registry Office, Dhaka	Respondent's Office, Dhaka
17.	Md. Jahanul Haque	President, Deed Writer's Development Committee, Tangail	Respondent's Office, Tangail
18.	Md. Majahidal Islam (Sumon)	BRAC Bank, Dhaka	Restaurant, Dhanmondi
Thailand			
19.	Ms. Phampen Phakaya	Administration Officer, Provincial Land Office, Pak Kret, Nonthaburi	Respondent's Office, Pak Kret

Appendix 6: Interview Protocol

Name of Interviewee:	.....	Date of Interview:	...../...../.....
Role and Affiliation:	.....	Time of Interview:	.....
Telephone:	.....	Place of Interview:	.....
E:mail:	.....	Interviewer:	.....

Thank you very much for agreeing to talk to me about the land administration system of Nepal/Bangladesh/Thailand. Please read the information sheet describing the purpose of my research, interview procedure and the use and management of information. [*Handover the Information Sheet*]

[*After reading the information sheet*] There are just ... questions and you may add anything at the end that is not covered during the interview.

I'll make some notes during interview; however, I wish to audio record the interview if you allow me.

(*If Yes*) Shall I request you to sign the Consent Form for audio recording?

(*After signing*) Shall I turn on the tape now? Let's begin.

Question 1: .....

Response: .....

Question 2: .....

Response: .....

Probe question: .....

.....

Thank you very much [...]. Would you like to add anything else not covered in the discussion?

.....

I really appreciate your help for this research will properly acknowledge on the final research document. I will send the transcript by e-mail. Thank you once again.

Appendix 7: Observation Protocol

A. Observation of Land Registries and Survey Office

Name of the Observer: ..... Date of Observation: ...../...../.....

Place or Organisation: ..... Time of Observation: .....

Checklist and Findings

Observation Check List	Findings
Office layout	.....
Provision of help desk	.....
Response to the clients	.....
Citizen charter and information sharing mechanism	.....
Record management	.....
Management of work flow	.....
Mechanism for complain and grievance handling	.....
Distance between cadastral and land registry offices	.....
Perception of service seekers	.....
Other.....	.....

Reflection

.....

.....

.....

B. Observation of the Research Site

Name of the Observer: ..... Date of Observation: ...../...../.....

Place Observed: ..... Time of Observation: .....

Checklist and Findings

Observation Check List	Findings
Land use pattern	.....
Activities	.....
Housing pattern	.....
Feelings of landowners	.....
.....	.....
.....	.....
.....	.....

Reflection

.....

.....

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Appendix 8: Land Related Laws Reviewed in the Thesis

Country	Laws
Nepal	– Interim Constitution of Nepal, 1954 – Land and Cultivation Record Compilation Act, 1956 – Land Related Act, 1957 – Birta Abolition Act, 1959 – Land (Survey and Measurement) Act, 1963 – National Code, 1963 – Land Act, 1964 – Ukhada Land Act, 1964 – Land Administration Act, 1967 – Act Related to *Jhora* (Forest) Land, 1971 – Kharka Land Nationalisation Act, 1974 – Guthi Corporation Act, 1976 – Land Revenue Act, 1978 – Land Administration Directives, 2001 – Minimum Valuation Determining Directives, 2003 – Interim Constitution of Nepal, 2007
Bangladesh	– The Survey Act, 1875 – Transfer of Property Act, 1882 – Bengal Tenancy Act, 1885 – Registration Act, 1908 – Non Agricultural Tenancy Act, 1947 – Acquisition of Waste Land Act, 1950 – East Bengal State Acquisition and Tenancy Act, 1950 – Constitution of the People's Republic of Bangladesh, 1972 – Land Development Tax Ordinance, 1976 – Board of Land Administration Act, 1980 – Land Reform Ordinance, 1984 – Land Appeal Board Act, 1989 – Land Reform Board Act, 1989 – Chittagong Hill Tract Regulation Act, 1990 – Non-agricultural Khas Land Management and Settlement Policy, 1995 – Agricultural Khas Land Management and Settlement Policy, 1997 – Chittagong Hill Tracts Land Dispute Settlement Commission Act, 2001
Thailand	– Civil and Commercial Code, 1932 – Land Code, 1954 – Land Development Act, 1963 – The Agricultural Land Reform Act, 1975 – Land Readjustment Act, 2004 – Constitution of the Kingdom of Thailand, 2007