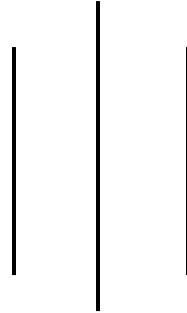
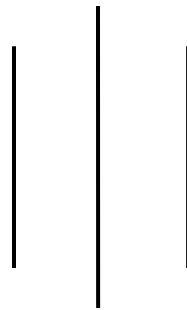


**RURAL TRANSPORT INFRASTRUCTURE, LIVELIHOOD
DIVERSIFICATION AND SOCIAL TRANSFORMATION IN
EASTERN NEPAL**



A Dissertation submitted to the Central Department of Sociology, Kirtipur.

**For the partial fulfillment of the requirements of
Degree of the Master of Arts (MA) in Sociology**



Submitted By:

PREM RAJ LIMBU

Central Department of Sociology

TU, Kirtipur, Kathmandu

Roll No. 372/068

TU Regd. No. 7-1-220-10-97

April, 2017

Letter of Recommendation

This is to certify that **Mr. Prem Raj Limbu** has completed this dissertation entitled **RURAL TRANSPORT INFRASTRUCTURE, LIVELIHOOD DIVERSIFICATION AND SOCIAL TRANSFORMATION IN EASTERN NEPAL** under my close supervision and guidance. This is an original research work and I recommend this dissertation for final approval and acceptance by dissertation committee.

Dissertation Supervisor

Tika Ram Gautam, Ph.D

Central Department of Sociology

Tribhuvan University

Kirtipur, Kathmandu

Date: 7th April, 2017 A. D.

25th Chaitra, 2073 B.S.

Approval Letter

This dissertation entitled **RURAL TRANSPORT INFRASTRUCTURE, LIVELIHOOD DIVERSIFICATION AND SOCIAL TRANSFORMATION IN EASTERN NEPAL** submitted to the Department of Sociology, Tribhuvan University, Kirtipur by **Mr. Prem Raj Limbu** has been accepted as the partial fulfillment of the requirements for the Degree of Master of Arts in Sociology by the undersigned members of the dissertation committee.

Evaluation Committee

Prof. Dr. Tulsi Ram Pandey
(Head of the Department)

Prof. Madhusudan Subedi
(External Examiner)

Dr. Tika Ram Gautam
(Dissertation Supervisor)

Date: 7th April, 2017 A. D.

25th Chaitra, 2073 B.S.

Declaration

I hereby declare that the dissertation entitled **RURAL TRANSPORT INFRASTRUCTURE, LIVELIHOOD DIVERSIFICATION AND SOCIAL TRANSFORMATION IN EASTERN NEPAL** submitted to the Central Department of Sociology, Tribhuvan University, is entirely my original work prepared under the guidance and supervision of my respected dissertation supervisor. I have made due acknowledgements to all ideas and information borrowed from the different formal and informal sources in the course of preparing this dissertation. The results of this dissertation have not been submitted or presented anywhere else for the award of any degree or for any other purposes. I assure that no part of the contents of this dissertation has been published in any form before.

Prem Raj Limbu

TU Regd. No. 7-1-220-10-97

Date: 7th April, 2017 A. D.

25th Chaitra, 2073 B.S.

Acknowledgement

I would like to express my sincere thanks to my dissertation supervisor Dr. Tika Ram Gautam owing to his excellent guidance and also because he helped me very seriously to bring this dissertation in this form.

I would like to thanks to Professor, Dr. Tulsi Ram Pandey Head of the Department of Sociology, Kirtipur as well as all of the faculty members for their help and kind regards. I also appreciate and thanks to my close friends, family members and as well as my dear wife Mrs. Mishra Limbu for their continuous benevolent helps and encouragements. I express my thanks to the staffs of Central Library of TU, Kirtipur for providing the reference materials.

At last, I feel pride to give thanks to all respondents who gave me valuable information which helped me to complete this research work in the due time.

Prem Raj Limbu

April, 2017

| Table of Contents | Page No. |
|--|-----------------|
| Declaration | ii |
| Letter of Recommendation | ii |
| Approval Letter | iv |
| Acknowledgement | v |
| Table of Contents | vi |
| List of Tables | viii |
| List of Figures | ix |
| Abbreviation | x |
| CHAPTER- ONE: INTRODUCTION | 1 |
| 1.1 Context | 1 |
| 1.2 Statement of the Problem | 6 |
| 1.3 Objectives of the Study | 8 |
| 1.4 Significance of the Study | 9 |
| 1.5 Organization of the Study | 10 |
| CHAPTER- TWO: LITERATURE REVIEW | 11 |
| 2.1 Theoretical Review | 11 |
| 2.2 Empirical Review | 14 |
| CHAPTER- THREE: RESEARCH METHODOLOGY | 18 |
| 3.1 Rationale of the Site Selection | 18 |
| 3.2 Research Design | 19 |
| 3.3 Units of Analysis | 19 |
| 3.4 Sample Design | 19 |
| 3.5 Nature and Sources of Data | 21 |
| 3.6 Data Collection Techniques (Tools/Methods) | 21 |
| 3.6.1. Interview Schedule (IS) | 21 |
| 3.6.2. Focus Group Discussion (FGD) | 22 |
| 3.7 Data Analysis, Interpretation and Presentation | 22 |
| 3.8 Limitations of the Study | 22 |

| | |
|--|----|
| CHAPTER FOUR : PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA | 23 |
| 4.1 Livelihood opportunities/Diversification in the Study Area | 23 |
| 4.1.1 Description of the interviewed households | 23 |
| 4.1.2 Distribution of HHs by current major sources of income | 24 |
| 4.1.3 Distribution of sample population by occupations | 25 |
| 4.1.4 Distribution of income sources of HHs before building of roads/bridge | 27 |
| 4.1.5 Distribution of HHs by changing occupations due to the building of roads/bridge | 28 |
| 4.1.6 Status of the foreign employment | 30 |
| 4.1.7 Discription of the family members by multiple economic activities after roads/bridge built | 31 |
| 4.1.8 Discription of life histories by the occupations | 31 |
| 4.2 Changing social relationships/Social transformation in the Study Area | 32 |
| 4.2.1 Mobility mapping of the study area | 32 |
| 4.2.2 Symbols of the social transformation process in the research area | 34 |
| CHAPTER FIVE: SUMMARY, MAJOR FINDINGS AND CONCLUSION | 37 |
| 5.1 Summary | 37 |
| 5.2 Major Findings | 38 |
| 5.3 Conclusion | 39 |
| REFERENCES | 41 |
| Annex 1: Photographs | 44 |
| Annex 2: Checklists for interview schedule (IS) | 46 |

| List of Tables | Page No. |
|--|-----------------|
| Table 1: Distribution of sample design by ward level of Municipality/VDC | 20 |
| Table 2: Distribution of interviewed households by age categories | 23 |
| Table 3: Distribution of HHs by current main sources of income | 25 |
| Table 4: Distribution of sample population by occupations | 26 |
| Table 5: Distribution of income sources of HHs before building of roads/bridge | 27 |
| Table 6: Distribution of HHs by changing occupations due to the building of roads/bridge | 29 |
| Table 7: Distribution of the foreign employment status | 30 |

List of Figure

Page No.

Figure 1: Distribution of community movement patterns by mobility mapping 33

Abbreviations

| | |
|---------|---|
| AD | : Anno Domini |
| BLS | : Baseline Survey |
| BS | : Before Christ |
| CBS | : Central Bureau of Statistics |
| DFID | : Development for International Department |
| DoLIDAR | : Department of Local Infrastructure Development and Agricultural Roads |
| DRSP | : District Roads Support Programme |
| FGD | : Focus Group Discussion |
| GoN | : Government of Nepal |
| HDI | : Human Development Index |
| HHs | : Households |
| HHH | : Household Head |
| IGAs | : Income Generating Activities |
| INGO | : International Non-Governmental Organization |
| JMBP | : Jamuna Multi Purpose Bridge Project |
| Km | : Kilometer |
| LBS | : Local Bridge Section |
| LRBP | : Local Roads Bridge Programme |
| MLRBP | : Motor able Local Roads Bridge Programme |
| MoFALD | : Ministry of Federal Affairs and Local Development |

NGO : Non Governmental Organization

NLSS : Nepal Living Standards Survey

NPC : National Planning Commission

PCI : Per Capita Income

QL : Qualitative

QT : Quantitative

UNDP : United Nations Development Programme

UNHCR : United Nations High Commissioner for Refugee

WB : World Bank

ZoI : Zone of Influence

CHAPTER – ONE

1. INTRODUCTION

1.1 Context

A development process is being prevailed as an indispensable component for the making a nation's more prosperity and progressiveness as well. Isolation and lack of access are one of the primary reasons for high incidence of rural poverty in Nepal. It is evident from the poverty disparity that there are strong connections between poverty and access to economic and social services. Nepal has different sorts of geographical structures. The almost places of Nepal has not been accessible in terms of rural transport infrastructure development.

According to our official data (CBS 2015), 77% of its lands cover of Hills and Mountains regions and rests are covered in Terai region. As per the National Population Census, 2011(CBS 2012), the annual growth rate of population is 1.35% and the total population has recorded about 26.5 million with sex ratio 94.2. Referencing to the (NLSS) Nepal Living Standards Survey (CBS 2010/11) report, about one fourth of the population (25.16%) lives below poverty lines and annual average per capita consumption to NRs. 34,829. Furthermore, an average per capita income (PCI) and household income recommends for NRs. 41,659 and NRs. 2,02,374 per annum respectively. The Gini-Coefficient, which indicates inequality in income distribution, is 0.328 as stated by the report of (CBS 2015). As per the latest data of (HDR 2015), Nepal has occupied in the rank of 145th and value of Human Development Index (HDI) has remained on 0.548. Similarly, life expectancy rate has been calculated 69.6 years consisting with 68.2 male and 71.1 female respectively.

The performance of the agricultural sector, which generates 40% of the national income, continues to be poor, with growth in agricultural output reduced from 4% to 2.5% per annum on average over the past decade as per the programme document of (MLRBP 2010:4). Most often, rural crops and products are not adequately sold in the market. Lack of access (without motor able bridges) is a serious constraint for economic and social development, incurring huge economic costs (cost of travel, health cost and inflated process of commodities) for the

people. Rural roads/bridges provide basic inputs for all round socio-economical development of the rural community.

This dissertation paper has some key words such as development, transport infrastructure, livelihoods, livelihoods diversification and social transformation which have been related to the research topic.

The most popular term of development is used by different sorts of government agencies, NGOs, INGOs and intellectual individuals during the public discourse or discussion. Normally, the development means a multidimensional process involving positive changes in structures, attitudes and institutions. An argument made by (Korten, D.C. 1990) that 'development is a process by which the members of a society increase their personal and institutional capabilities to mobilize and manage resources to produce sustainable and justly distributed improvements in their quality of life consistent with their own aspirations.' Development process has been activated through the mobilizing of resources and means for positive changes of society. Similarly, another scholars (Todaro and Smith, 2003:57) has mentioned in their book regarding the three objectives of development (i) to increase the availability and widen the distribution of basic life- sustaining goods such as food, shelter, health and protections (ii) to raise levels of living, including in additions to higher incomes the provision of more jobs, better education, and greater attention to cultural and human values, all of which will serve not only to enhance material well-being but also go generate treated individual and national self-esteem and (iii) to expand the range of economic and social choices available to individual and nations by freeing them from servitude and dependence not only in relation to other people but also to the forces of ignorance and human misery.' Thus, development is an aggregate form of positive changes in society and communities. It reflects good message to the every member of society further advanced stepping.

A development process triggers to the people for their livelihoods systems towards uplifting by creating the various new and innovative opportunities. Thus, development is most important process in to which multidimensional positive changes have been occurred in the communities. The transport infrastructure is one of the major indicators among the different indicators for measuring the level of developments. The developed transport infrastructure has contributed to the rural people by providing good connectivity, livelihoods

diversification, services and public utilities as well. Transport infrastructure comprises paths, roads, bridge, rope way, shipping port, dry port, airport, tram and train tracks with stations, air planes, waterways and so on which are directly related with the mode of transportation systems. These all modes of transportation are equally significant for the development field of transport infrastructure of the rural community. Basically, this research study has focused on the development sector of rural roads/ bridges and their consequences after building. Some facts relating to the updated status of rural roads and bridges in Nepal will be essential for the reviewing of the study.

A recent study carried out by (DoLIDAR/MoFALD 2006) that however, estimates an existence of over 22,000 kms roads of which only 9,300 kms are hardly said to be all-weather.' Most of these roads built so far are not pliable throughout the year partly due to lack of adequate maintenance and partly due to lack of reliable motor able river crossing. As stated by programme document of Motor able Local Roads Bridge Programme (MLRBP 2014:4) that 'Nepal has more than 6,000 rivers with an annual discharge of 200 billion cubic meters of water. Thus, if roads are to be made all-weather more than 3,000 bridges need to be built on the existing local roads.' It can be said that the huge numbers of local roads bridges have been required in order to overcome of the smooth rural connectivity and poverty. The building of rural roads bridges has stimulated for reducing rural poverty and strengthening of livelihoods opportunities in the communities.

According to Ellis (1998:4), 'a livelihood encompasses income, both cash and in kind, as well as the social institutions (kin, family, compound, village and so on).' The human beings are attached with their social institutions and social relation as resulted by the social structural process. In the social process, the measurement of livelihoods indicators are being more valued for all economic prosperities of rural people. Referencing with the discourse of livelihood, it has been described by (UNDP 2005:1) that livelihoods means 'a making a living and supporting a family or jobs.' Therefore, it is related that people have obliged to engage in different sorts of economic activities for sustaining their daily life. The people involving on daily work will be livelihood activities that make their living including family and dependent as well. For livelihood definition can be taken in the different angles and perspectives. Furthermore, according to (UNHCR, n.d.), 'livelihood may be defined as combination of the resources used and the activities undertaken in order to live.' Similarly, it is argued by

Chambers (1994:3) in same line, 'the means of gaining a living.' It can be said that the combination of social engagements and their transferring of living standards related values is always livelihood concerns of the people. A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living as per adapted by Scoones (1998), Carney *et al.* (1999) and others. The different sorts of activities for sustaining have been strongly incorporated in the livelihoods patterns. All livelihood activities are providing equal inputs on making enhancement for living standards as per their possibilities.

As per another stated by Scoones (2009:2), 'in the livelihood activities there are agriculture, wage employment, farm labor, and small-scale enterprises and so on.' In another argument regarding the livelihood, there has been mentioned as 'livelihood incorporates the diverse ways in which people make a living and build their worlds Whitehead (2002).' In the basis of aforesaid statements, livelihood means different kinds of daily activities that directly relates to living of human beings. The livelihoods diversification is a multiple economic opportunities whereas people have fully engaged in the occupations for their daily sustaining. As per the paper of Ellis (1998:5) defines livelihood diversification as 'the process by which rural families construct a diverse portfolio of activities and social support capabilities in their struggle for survival and in order to improve their standards of living.' The livelihood diversification is related to the constructing diverse type of economic activities and capabilities for their daily sustains. It can be said that it is social process of rural people in order to live.

A working paper of (Hussein and Nelson, n.d.), has argued that 'livelihood diversification is normal for most people in the majority of rural areas of developing countries in both Africa and Asia, and non-agricultural activities are critical components of the diversification process.' In the livelihood diversification, there is main comprising of the off-farm economic activities and agricultural base cash crops as well. The rural people have entertained in the diverse sorts of livelihoods activities for making uplifting of living standards. Because of the available potentiality of livelihood opportunities, people are optimum benefited from the diversely new economic opportunities. This logic is vary than the previous discussion because it is referred that for stabilizing of the livelihoods, one of the different sorts of interventions is 'infrastructure rehabilitation and it comprises building or rebuilding

infrastructure, especially community infrastructure such as roads, bridges, water and sanitation system, shelter, telecommunications, health facilities, schools, community centre, and irrigation and drainage systems UNDP (2016:63).' It is, thus that building of infrastructures will be most significantly helpful for creating new types of livelihood of rural communities. It is further noted by the scholar Ellis (1999:8), 'that livelihood diversification is an important feature of rural but often overlooked by the architects of policy.' More developing of fundamental infrastructures in any rural area is highly benefited towards livelihood diversification.

Furthermore, according to the Subedi (2014:89) 'livelihood diversification is a phenomenon that characterizes survival and income strategies in individuals and household.' It is, therefore revealed that income and survival strategies are being interrelated for livelihood diversification. In other ways Ellis (1998:4) further says that 'the term income diversity refers to the composition household incomes at a given instant in time, diversification, on the other hand interprets this an active social process whereby household are observed to engage in increasingly intricate portfolios of activities ever time.' Thus, livelihood diversification is a process by which rural urban families construct a diverse portfolio of activities and social supports capabilities in their struggle for survivals and in order to improve their standards of living. The rural livelihood opportunities will be emerged at high level after the building of transport infrastructure.

Another scholar like Adhikari (2008) has highlighted from the different angles on the Nepal's' integration with global system. He further has focused on the 'new remittance economy and livelihood change, the mobility of the people from rural to urban area, the flow of good and commodities, and flow of information and communication.' It is notify that huge numbers of livelihood opportunities have been derived from the development of transport infrastructure. Transport infrastructure can be taken likely as a main door for the further socio-economic development of rural areas. As a result, a society has shifted to another advanced society through the transport infrastructure development is called social transformation system.

Social transformation can be defined as 'a fundamental shift in the way society is organized that goes beyond the continual process of incremental social change that are always at work Castles (2010:1576).' It can be taken as some illustrations for the social transformation as;

using of e-mail instead of letter writing and using of tractor instead of traditional plough in the field. Thus, it is said that this kind of social changes are the symptoms of social transformation within the society. This is, therefore, infrastructure development has a positive reciprocal relationship with livelihoods because two things are equally important for the social transformation system. Rural people are suffering from the rural poverty due to the lack of enough livelihood opportunities in their surroundings. They have only limited options for their livelihood opportunities due to the lack of fundamental transport infrastructures in the community. Livelihood is strongly related to daily human survival component of the rural people. That is why, it is very important for liveliness of human beings. If rural area has good facilities of roads/bridges, the livelihoods diversification and social transformations of the communities have been occurred in their daily lifestyle of the rural people. After that, people have acquired more options of livelihood opportunities and engaged in such innovative type of livelihood orientated activities (IGAs-income generating activities) on the basis of their potentialities and capabilities.

This study has centered on the rural place of Ilam district whereas recently had constructed a new motor able bridge by the DoLIDAR/LBS over the Mai khola. Especially, this motor able bridge directly connects Ilam Municipality and Soyang VDC of Ilam district in along the Tilkeni-Mahavir-Archale-Naya Bazaar Soyang (23km). Before the construction of motor able bridge over the Mai khola, local people had been facing so many difficulties related of access and livelihood opportunities. Now, the people of nearby settlements of Mai khola bridge had been benefited from the building of motor able bridge. After the motor able bridge built, the access roads had been made smoothly all-weather even in rainy season. The local people within the zone of influence (ZoI) of bridge had been encouraged towards new income generation activities (IGAs) and livelihoods diversification. Thus, building motor able bridge has led to improve rural livelihoods of people. Because of the bridge building, social relationship among the rural people also had been changed on the basis of livelihoods activities.

1.2 Statement of the Problem

The infrastructure development is most essential component of the developing process. It affects directly to the whole system of multi-dynamic development activities. In general,

infrastructure plays pivotal roles in improvement of the rural livelihoods and poverty reduction. The livelihood component has been immensely involved in this development process of rural community. Motor able bridge is one of the most suitable forms of transport infrastructure and which helps for the better connectivity and improving livelihoods of the rural community. Therefore, it can be strongly said that motor able bridges play a vital role to make roads all-weather and livelihoods betterment as well. It is accepted that benefits derived from the roads/bridges are transmitted throughout the overall economy and its fruits are noticed in every sectors of development of nation. A motor able bridge building is a significant infrastructure for generating the other livelihood related development activities. It is interrelated with rural people's livelihood, prosperity and easiness of their daily lifestyle. Basically, it is trend that rural community adopts towards other creative sectors of livelihoods after motor able bridge built. As consequently, the traditional livelihood activities are absolutely transformed to the new one and modernly living opportunities. Thus, it is also a natural process and demands of fundamental economic activities of the rural community.

As common understanding of development process, multidimensional positive change is applied in the society/community. The livelihood refers that the diverse type of ways in which people makes a living and built their human prosperity. Every living thing is related to their indispensable relationships of livelihoods and aliveness. This study has incorporated basically on the patterns of rural transport infrastructure, livelihoods diversification and social transformation systems due to the motor able bridge construction in the rural areas of Ilam district. In general, different sorts of changes will be placed on influenced area of motor able bridge after completing its construction works. Amongst of these diverse type of changing, livelihood patterns have more concerned for triggering of social transformation on the rural community. People may get many potentialities of new livelihood oriented opportunities in their surroundings.

Many of the determinants have been responsible for the livelihoods diversification in the rural community and all are equally important. Similarly, a building motor able bridge in rural areas has been emerged new livelihoods diversification as much. Rural people want maximum benefits from the motor able bridge building and they engage in their own different occupations. Therefore, there is a causal relationship between motor able bridge building and new income generating activities of the rural households.

This study work encompasses basically rural transport infrastructure, diversified of livelihood patterns/opportunities and changing social relationships of the study areas. Because of motor able bridge built, there has been drastically changed on the daily activities for livingness on the rural communities. As result, the main characteristics of social transformation have been seen in the rural societies. After that, the rural community has transformed from one livelihoods option to another various better options of the livelihoods because of the bridge built/infrastructures. In the social transformation process, different sorts of social factors as like social value, norms, behaviors, custom, economics, family etc. are being actively responsible.

It is noteworthy that which social factors are being transformed in the rural community because of the bridge building and how? It is a major research area of this study. Therefore, these unknown social factors are main knowledge gap of the subject matter whichever created by livelihood opportunities after bridge building in the study area. It is most identical and analytical for further research work to meet findings of these research questions of the study. This research work is solely concentrated in order to find out the logical answers for the raising research problems. This research work will try to find out specific facts relating to the rural transport infrastructure, livelihoods diversification and social transformation in the level of rural household and community within the study areas as well. Therefore, it is necessary to study or research for findings out regarding the mentioned knowledge gaps on the livelihood diversification and social transformation sectors of the rural community after the motor able bridge/roads construction. The study has carried very important research responsibilities for findings out of the conclusions against the research problems. This study is highly expected to seek answers to the following major research questions:

- i. How does motor able bridge transform the livelihood opportunities in the rural community with in the ZoI of bridge?
- ii. How does motor able bridge bring changes in social relationships in the rural community due to the livelihood opportunities in the ZoI of bridge?

1.3 Objectives of the Study

The study has emphasized with hidden treasure of the rural transport infrastructure, livelihood diversification and social transformation on the rural community due to the motor

able bridge building. The general objectives of the study are to oversee closely regarding the livelihoods diversification and social transformation process in the rural community. This study work has incorporated all the aspects related to the research problems. The major findings have been obtained from the field level of the research work as well. The objectives of the study are very important and it is interrelated to the research conclusions. Therefore, whole research work has relied on their general and specific objectives for the study. Livelihood opportunities or diversification of rural people have triggered to the social transformation in the rural society. It is to be studied that in order to find out the facts of the knowledge gaps of the research work. The specific objectives of this research study are to:

- Describe on the livelihood patterns of the rural communities after the motor able bridge built,
- Analyze on the changing social relationships of the rural people through livelihood opportunities in the ZoI of motor able bridge and
- Explain on the livelihood diversification and social transformation of rural people through motor able bridge construction.

1.4 Significance of the Study

This study intends to explore and highlight the rural transport infrastructure, livelihoods diversification and social transformation after motor able bridge built in the rural community of eastern Nepal. Generally, it is trend that rural people have more benefited by the constructing of new motor able bridges but how and what social transformations will be appeared on the opportunity of livelihoods sectors to the rural people. Thus, this is core research matter and study has helped to meet the research findings. The diversified livelihoods activities always trigger towards the social transformation system of the rural community. The core facts of the bounding components of social transformation through livelihood opportunities are highly important for doing research work.

Livelihood opportunities have enhanced due to the roads all-weather after the motor able bridge built. Rural society has transformed in to advanced livelihood activities because of the good connectivity. At initially, local community engages in fundamental type of livelihoods activities level and then it transforms in to commercial level due to the making of good connectivity and marketing linkage as well. It is also a regular process which has helped to social transformation process on the rural community. Changing social relationships of the

local people has derived from the newly livelihood opportunities because of the bridge building. Thus, livelihood diversification and social transformation process of the rural community has pointed out from this study. The findings of this study can be generalized beyond the bonds of study. This dissertation will be helpful to the target groups, society and nation as a further reference and information. Furthermore, this dissertation will be also useful for the policy implications level of the rural infrastructure development sectors as well.

1.5 Organization of the Study

This dissertation has organized the essential chapters and sub-headings as per the standard paper writing of dissertation. In this dissertation paper has been structured with major five chapters including the sub-headings of the research study. In first chapter of introductory, there have been included the context, statements of the problem, objectives, significance and organization of the study respectively. Theoretical review and empirical review have included in the second chapter of the research study. Research methodology has addressed for all sub-headings such as rationale of site selection, research design, unit of analysis, sample design, natural and source of data, data collection techniques and data analysis/interpretation/presentation and limitations of the study in the third chapter. Similarly, four chapters have incorporated for sub-headings of presentation, analysis and interpretation of the data and at last, the chapters five has incorporated for sub-headings of summary, major findings and conclusion. The each sub-heading has concise descriptions on its respect.

CHAPTER – TWO

2. LITERATURE REVIEW

As stated by (LeCompte *et al.* 2003:124), the literature review is a 'legitimate and publishable scholarly document.' The literatures have reviewed under both theoretical and empirical reviews during the research study. Books, journals, previous research papers, reports, acts/regulations, articles, plans, policies, other published and unpublished documents related to the research study have been reviewed in the course of research work. The literature review works is most crucial for the research study. Literature reviews support to the strengthening of the dissertation. The research study has strongly guided by the relevant previous literature reviews. The applied literature reviews has played vital roles on the making of the research work for further concreteness and credibility. The theoretical reviews support to the research work through the point of view for social theories and perspectives. The empirical literature reviews depend on the same types of the previous research of any location/place specific works.

2.1 Theoretical Review

The theoretical review is essential part of the research study during the preparing work of dissertation. A research study always has been motivated by the relevant social theoretical lenses. The main research theme is that creating the social transformation process through the medium of livelihoods diversification by the developing of rural transport infrastructure on the rural areas. Thus, some relevant theories and perspectives have been tried to review in this chapter. The development of the infrastructure is most important for all developmental achievements. A policy framework shows that 'access to infrastructure enables people to take advantage of economic opportunities and access market, jobs, information and trainings DFID (2015:3).' These statements refer that people have benefited in the essential parts of livelihoods opportunities due to the accessible of infrastructure development. Therefore, it can be said that the development of rural transport infrastructure is caused for improving economic opportunities on the rural communities. The transport infrastructure plays vital role

of opening as main window for generating many livelihoods opportunities. As stated by (Booth, Hanmer, and Lovell 2000:9) 'particularly in rural area lack of transport infrastructure and services may constrain access to facilities and resources, such as schools, health centers and water, by the poor. Lack of transport services and infrastructure can thus contribute to inability to strengthen human capabilities.' The transport infrastructure is most essential component for developing of living standard of the rural people. It is also considered that the transport infrastructure is base foundation of emerging new livelihoods opportunities in the rural sectors.

The transport infrastructure has emerged various sorts of life sustaining options in the rural communities. 'As well as increasing access for facilities, transport access can improve livelihood prospects. Transport directly benefits may poor people through employment in the sector of connectivity also provides indirect benefits. It can improve agricultural profitability and facilitate income diversification Norman (2013:9).' Because of the improved transport infrastructure in rural areas, the agricultural products and non- farm economic activities may be uplifted than the prior conditions. According to (Glaister and Anderson 2005), 'to overcome the problem of social exclusion, governments should provide and maintain transportation infrastructure for the rural communities, and this should include roads and bridges, as they are of prime importance to rural people.' Thus, the roads and bridges are backbone for the developing of economical activities that stimulates in the upper level of people's livelihoods.

As per the conclusion of study by (Tanga *et al.* 2014:217), 'the availability of public transport improves people's livelihoods by improving the network with relatives and friends who live in other communities.' The developing practices will be more fruitful while developing a transport infrastructure in the back warded communities for the rural people. After that, rural people will be benefited from the improved livelihood conditions. A research by Bayes (2007:55) showed that 'infrastructure plays a pivotal role in uplifting rural livelihood and reducing poverty.' Especially, rural local roads bridge helps to improve good connectivity in the rural areas and it provides to rural local people by providing capabilities of livelihood activities. As stated by Norman (2013:5), 'poor connectivity is one of the factors that contribute to household poverty, restricting access to markets and basic services.' A building bridge has been played a major role for connecting one place to other places in safer way as

well. Therefore, it helps to improve on the rural access and people's livelihood opportunities with the zone of influence (ZoI) of the bridge.

A study says that 'the construction of the rural roads has led to livelihood diversification (Starkey, Tumbahangfe and Sharma 2013:21).' Roads are one of the most important components of transport infrastructure which has a bearing capacity of diverse types of human survival options remains in high level. The transport infrastructure can be triggered for making good livelihoods diversification in the back warded people of the rural communities. Another argument made by Tuladhar (2007:61) in the same line that 'building a bridge makes an enormous impact in the life and livelihood of the people within its area of the influence.' Building bridge is an example of the improved transport infrastructure which helps to increase different livelihood options for the rural people. The bridge has played significant role on the creating of new livelihood opportunities in the rural areas through the market linkage and good connectivity. It is concluded that the construction of the rural motor able bridges has led to the diversification of livelihood opportunities. Thus, rural transportation infrastructure plays a vital role in the overall developments and socio-economic transformation of the rural areas. After the review of above mentioned theories, it can be abstracted that the development has played vital role for the making of the changing society.

This study has highly collaborated with the social changes system of the society. The social change and social development systems have been attached with the social transformation process. Social change system is always occurred in interior parts/units of society and social transformation system prevails in the external phenomena of society. It can be understood from the other way that social change and social transformation have led in the micro and macro levels of social relationship process. The theoretical perspectives of this study have been employed as a functionalist for researching work of the social changes/developments. Therefore, this study has interpreted by the point of view functionalist perspectives of social change theory. It is fully depended on the basis of theoretical perspectives of functionalist. This perspective is believed that the society like human body is a balanced system of the social institutions and each of which is contributing on the function for the maintaining society. The different social units are mutual inter-related in the social system. All social units are actively functional for structuring of the social systems. Therefore, the whole social

structure comprises marriage, family, religion, politics, education, caste system, social value, norms, arts, behavior, law, tradition, customs, literatures, kinship, physical, biological, technical, cultural, economical, environment and so on as social units/factors. These social units have been equally contributed to build and change a whole system of the social structure.

2.2 Empirical Review

This research study is referred by the some of the empirical reviews work for the more credibility and logical. It is noted that the work of empirical literature review is more important to the research work. The review is extremely related to the subject matter of the research study. This research study has been adopted from the mentioned previous empirical literatures review which had been held on the same line of research problems. A final report of (Booth, D., Hanmer, L. and Lovell, E. 2000:18) had prepared on poverty and transport for the World Bank (WB) in collaboration with DFID. This study had conducted on the poverty focused transport projects of Bangladesh, Bolivia, Brazil, Colombia, Croatia, Malawi, Nepal, Panama, Russian Federation and Senegal. This report had shown the better interventions in the transport field might increase the probability that poor people's livelihood strategies result in positive livelihood outcomes. This report had referred to the way transport conditions affect some of the basic enabling conditions for pro-poor economic development. This report claims that the transport infrastructure is most prominent factor for the improving livelihoods of the developing countries.

A study had performed by (Starkey, Tumbahangfe and Sharma 2013:5), an assessment on the socio-economic impacts of the local roads on the six districts of Nepal. The surveyed local roads were constructed by the District Roads Support Programme (DRSP) of DoLIDAR/MoFALD in Nepal. This study was conducted by applying household's surveys and focus group discussion (FGD) methods on the influenced areas of the local roads. After the assessment, they had been concluded that the agriculture remains the main source of household income with the evidence of larger crops areas and higher yields, remittance income was low compared to national figures, and off-farm activities are emerging. Entrepreneurial enterprises had doubled in number. New enterprises including shops, tea rooms and workshops had been established. Some retails outlets have become whole sellers

and supplying goods to new shops along the roads. Traditional periodic markets are declining as people now have access to nearby shops. The above mentioned study shows that the economics status/opportunities of the local beneficiaries of the local roads have increased as compared to the prior condition.

It is pointed out by Bayes (2007:55) in his study on impact assessment of Jamuna Multipurpose Bridge Project (JMBP) on the poverty reduction. This study was performed on the Jamuna bridge construction over the famous river Jamuna of Bangladesh. The study had revealed as a conclusion that infrastructure plays a pivotal role in uplifting rural livelihood and reducing poverty. People's access to credit had been increased due to the bridge building and rural credit is an important plank for poverty reduction. The share of income from remittances for functionally landless households had been increasing. The poor households had gotten access to good education and health. The farmers in the project villages had increased putting in land under high value crops. Storage facilities had created in the vicinity of villages to help farmers earning as better return. This is an empirical finding of the above study in the sector of bridge building of the Bangladesh. Thus, this study indicates that the building bridge has stimulated for creating the different sorts of livelihoods related activities.

Furthermore, another study had made on the sector of the trail bridge by Tuladhar (2007:63), on the best practice publications of Helveltas has entitled on Trail Bridge building in the Himalayas. This publication is based on the experience and learning in international cooperation embracing Nepal and Bhutan. It is stated in this publication that the overall socio-economic impact is most marked at the locations that facilitate increased accessibility to the road heads, markets and district headquarters. Import of the agricultural inputs to remote villages and export of outputs to markets are greatly facilitated. Backward and forward linkages with markets are being developed. Villagers have introduced new products for the export. Increasing in the household's income is substantial because of increment in marketable surplus of cash crops. The bridge have strengthened women role at home as money makers and outside home as contributors to national development. People have become more health conscious in the project area. Enrolment of the student has increased and market centers to the remote villages have greatly improved. The turnover of retail outlets has increased by 15% within the couple of years. In the zone of influence (ZoI) increased

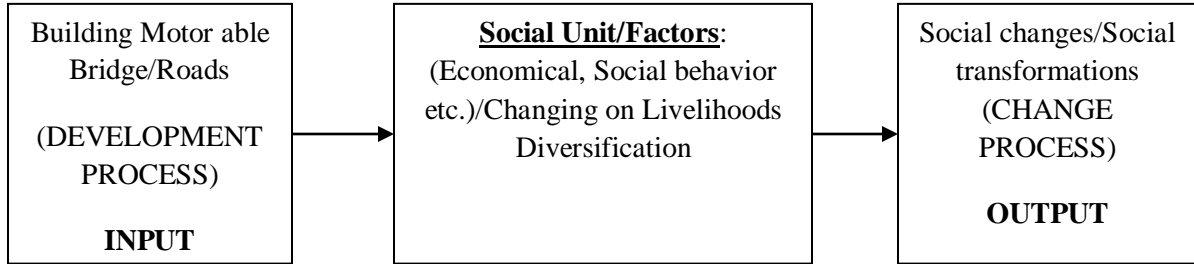
production of different agriculture crops and introduction of the new crops (vegetables, large cardamom, mushroom etc.) is observed. Cash crops such as oranges, apples and chilies are commercialized. Improvement in livestock population is facilitated due to the increased access to grazing land and forests. In this way, the overall development on the economic sectors has improved due to the building of Trail bridge as per the above study. This empirical review is slightly varied with the above mentioned reviews but it will be useful for the livelihoods diversification sector.

A study had made by (Khatun, D. and Roy, B.C. 2012:115) on the rural livelihood diversification in West Bengal in 2010 A.D. The study was conducted in the state of the West Bengal has identified the determinants and constraints to the livelihoods diversification among different livelihood groups. After the survey, research had shown that household-head experience (age), educational level, social status, training, asset position, access to credit, rural infrastructure, agro-climatic condition, and overall of economic development a region are the main driving force towards livelihood diversification in the state. Thus, it can be said that the different types of variables have been incorporated in the livelihoods diversification system according to the above mentioned reviews.

The aforementioned different types of research reviews have refereed that the rural people have enough new livelihood opportunities due to the construction of transport infrastructure. All of these research studies had used randomly selected households survey and focus group discussion (FGD) methods within the research areas. Especially, it is concluded after reviewing above mentioned studies that agricultural based cash crop, off-farm economic activities and on-farm based economic patterns had been increased in the zone of influence (ZoI) of the bridge after the bridge built in the rural communities.

Moreover, the living standard and household incomes of rural people had been increased by the adoption of livelihood diversification as per the above studies. This empirical literature reviews convey that changing livelihoods and diversification had triggered by bridge building on the rural communities. Similarly, the transport infrastructure had played vital role for the improving of rural people's overall aspects related to livelihood activities. Therefore, it can be expressed that bridge construction is a sign of development and it strongly stimulates to the uplifting of livelihoods of rural communities. On the basis of the discussion on the above mentioned empirical reviews, a conceptual framework has been developed for

the further research study. The conceptual framework of the research study is shown as below:



CHAPTER – THREE

3. RESEARCH METHODOLOGY

The research methodology has been adopted by the conducting an interview schedule (IS) and focus group discussion (FGD) within the study area. This research work has been done by the methods of participatory and probing orientated towards the research topic and research problems. In this dissertation, the primary and secondary data/information has been incorporated through the field survey works and different relevant authentic sources respectively.

3.1 Rationale of the Site Selection

A construction completed motor able bridge over the Mai khola of Ilam district had been selected for the conducting this research study. Ilam district is a hill district of Eastern Development Region of Nepal. This district covers 1,703 square km and the national census counted 2,90,254 populations (CBS 2012). Ilam bazaar is district headquarter of Ilam and about 676 km far from the Kathmandu. Ilam is today one of the most developing place with the destination of internal and external visitors. Its local Tea is very famous and exported to many parts of the Europeans counties as well. The basic locations for the research study had been selected within the zone of influence (ZoI) of Mai khola motor able bridge and its alignment of Telkeni-Mahavir-Archale-Naya Bazaar Soyang roads (23km) in Ilam district whereas a motor able bridge has been constructed recently.

This bridge and roads have been connected in-between Ilam Municipality and Soyang VDC of the Ilam district. It had decided to make a research study of the rural communities on the livelihoods diversification social transformation which fall under the ZoI of the motor able bridge/roads. The Local Roads Bridge Programme (LRBP/DoLIDAR) had constructed this motor able bridge over the Mai Khola of Ilam. This programme's main goal is to improve the livelihoods of the rural people fall under the ZoI of the motor able bridge and where assistance focuses on the reducing rural poverty. Its further aim is enabling communities with the better access and improved mobility to the services and opportunities. Therefore, these

motor able bridge/roads had supposed to be an appropriate for researching work on the livelihoods diversification and social transformation of the rural community in eastern Nepal.

3.2 Research Design

The purpose of the research study has been explained regarding the rural infrastructure, livelihood diversification and social transformation phenomena of the study areas. Furthermore, this research has been designed on the basis of specific research objectives. The livelihood patterns of the rural communities after the motor able bridge built have described through this research study. Similarly, changing social relationships of rural people through livelihood opportunities of the study areas have been analyzed within the research study. Interview schedule has been referred for the both quantitative and qualitative types of information collection for the study. Research questionnaires or checklists had mixed type for the conducting interview schedule (IS) on sampled household heads (HHHs) within the study areas. Beside this, focus group discussion (FGD) method had also applied for the collecting essential qualitative information related to dissertation paper as a supplementary tool. Both quantitative and qualitative (QT&QL) research information had been gathered during the research study.

3.3 Units of Analysis

The unit of the analysis for this research study has been adopted on the both individual and household's level of the study areas. The research variables of the study have been analyzed through the statistical tools.

3.4 Sample Design

In this dissertation, 40 household heads (N=40) had been taken for the conducting interview schedule (IS). These 40 households had been drawn from the list of sample households of the baseline survey (BLS) report which was conducted by the MLRBP/DoLIDAR within the two adjoining VDCs (Ilam Municipality and Soyang VDC) of Ilam district. This motor able bridge connects Ilam Municipality and Soyang VDC over the Mai khola of Ilam. For the conduction of interview schedule, the total 40 households had classified in to 3 categories of

less, semi and highly diversified households as per the livelihood diversifications. The definition of the less diversified households means that household has involved single or similar type of livelihoods activity by the family members of a household. Semi diversified means that household which have engaged in two types of different livelihoods activities by the family members of the same households and highly diversified means that household which have involved in more than three types of different livelihoods activities by the family members of the same households.

As a disaggregated form for this schedule, 2 households of the highly diversified livelihood, 1 household of the semi diversified livelihoods and 2 households of the less diversified livelihoods had been drawn from the each influenced 8 wards of the research areas. The sum of sampled households for the schedule were 40 HHs consisting with 16 households from highly diversified livelihood, 8 households from the semi diversified livelihoods and 16 households from the less diversified livelihoods patterns. The one event of focus group discussion (FGD) had employed for the collecting essential qualitative information related to research problems as of the supplementary tool. The proposed sample size has been supposed as statistical representatives for the universe of study areas. Altogether, 8 wards from nearby bridge area of two influenced Village Development Committees (VDCs) had been nominated for this research work. The sampling design for interview schedule is shown in details through the below **Table No. 1**

Table No. 1 Distribution of sample design by ward level of Municipality/VDC.

| S.N. | Categories of HHs | Ilam Municipality | | | Soyang VDC | | | | | Total HHs |
|------|--------------------------------|-------------------|------------|------------|------------|-----------|-----------|-----------|-----------|-----------|
| | | Ward No. 6 | Ward No. 7 | Ward No. 8 | Ward No.5 | Ward No.6 | Ward No.7 | Ward No.8 | Ward No.9 | |
| 1. | Highly diversified livelihoods | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 16 |
| 2. | Semi diversified livelihoods | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 8 |
| 3. | Less | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 16 |

| | | | | | | | | | | |
|--|----------------------------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| | diversified livelihoods | | | | | | | | | |
| | Total | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 40 |

3.5 Nature and Sources of Data

The research work has been fully centered on the rural transport infrastructure, livelihoods diversification and social transformation after the motor able bridge/roads building in rural community. Both qualitative and quantitative (QL&QT) data had been collected through the different survey instruments during the study. The essential filed surveys had been conducted for the collecting primary data and concerned agencies, books, journals, research material, document etc. had visited for the secondary data. Thus, the combined types of primary and secondary data had been incorporated in this research report.

3.6 Data Collection Techniques (Tools/Methods)

During the research study, the strong emphasis had been given to collect the accurate information/data and tried to get reality of the research problems as possible. This study has followed the following techniques and tools for the collecting work of primary level data/information on the study areas. Basically, two types of the research techniques/instruments had been employed during the study as below:

3.6.1. Interview Schedule (IS)

Both quantitative and qualitative data had been collected through the interview schedule (IS) method. The questionnaires/checklist of semi-structured interview had been used for the collecting information. As per the sampling design, this schedule had been collected of both individual and household's level information from the total sampled 40 households (N=40) within the ZoI of Mai khola bridge/roads, Ilam. Main respondents were household head of the research areas for the study of survey work.

3.6.2. Focus Group Discussion (FGD)

As a supplementary survey instrument, the focus group discussion (FGD) had conducted with different stakeholders such as representatives of political parties, teacher, local small traders/retailer, intellectual persons, women groups, civil society and social leader/activists. One event of focus group discussion (FGD) had been organized within the zone of influence (ZoI) of the study area. It had helped to capture further qualitative information regarding the research questions of the study.

3.7 Data Analysis, Interpretation and Presentation

The data has analyzed through using Microsoft Excel software because it is very useful and easiest way for data analyzing works. Both types of graphic and descriptive data presentation have been employed for the making final research report. Simple statistical tools like tables, figure have used for the data presentation of research study. The descriptive method has adopted for the especially on the presenting of qualitative data. All quantitative information has concise interpretation of the meaning for the further clarifying of the research conclusions.

3.8 Limitations of the Study

The limitations of this study have determined as per the research problems. This research study has solely focused on the livelihoods opportunities/diversification, economic activities/patterns and social transformations within in the study areas. Describing the livelihoods patterns, analyzing the changing social relationship and explaining regarding of the variables related to livelihood diversifications/social transformation have been as main subjects matter within the study framework. The overall research study has performed within the zone of influence (ZoI) of the Mai khola bridge and its roads (Tilkeni-Mahavir-Archale-Naya Bazaar Soyang) of the Ilam district. The only direct influenced settlements/communities of motor able bridge have been as study areas for the research work.

CHAPTER - FOUR

4. PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

The obtained survey data has been executed for the presenting and analyzing based upon the following research related subject matters. These are solely focused on the research problems of the study.

4.1 Livelihood opportunities/Diversification in the Study Area

4.1.1 Description of the interviewed households:

Altogether, 40 households had been nominated for the conducting interview schedule in the research work within the ZoI of motor able bridge/roads. Main respondents had been respective household heads (HHs) with in the study areas. The total population of the interviewed households had been remained 226 consisting with male 116 and female 110 respectively. Similarly, the percentage refers to male and female by 51.32%, 48.67% respectively. The economically inactive age means that falls under the bellowing of 18 years to 60 years above (<18 to >60 yrs.) was 86 persons. The population having economical active age (>18 to <60 yrs.) was 140 persons as per the given below table. The details figure is shown in the **Table 2** below:

Table 2: Distribution of interviewed households by age categories.

| Age categories | Male | Female | Total |
|----------------|-------|--------|-------|
| 0-5 years | 10.00 | 8.00 | 18.00 |
| 6-10 years | 11.00 | 11.00 | 22.00 |
| 11-15 years | 4.00 | 4.00 | 8.00 |
| 16-20 years | 12.00 | 12.00 | 24.00 |

| | | | |
|-------------------|---------------|---------------|---------------|
| 21-25 years | 14.00 | 14.00 | 28.00 |
| 26-30 years | 12.00 | 12.00 | 24.00 |
| 31-35 years | 10.00 | 10.00 | 20.00 |
| 36-40 years | 5.00 | 5.00 | 10.00 |
| 41-45 years | 10.00 | 9.00 | 19.00 |
| 46-50 years | 5.00 | 5.00 | 10.00 |
| 51-55 years | 6.00 | 6.00 | 12.00 |
| 56-60 years | 8.00 | 8.00 | 16.00 |
| Above 61 years | 9.00 | 6.00 | 15.00 |
| Total | 116.00 | 110.00 | 226.00 |
| Percentage | 51.32 | 48.67 | 100.00 |

Source: Field Survey, 2017

4.1.2 Distribution of HHs by current main sources of income:

The main current income sources which had reported by the respondents are presented in below **Table 3**. The acquired information reveals that the cash crops (Ginger, Broom-stick, Akabare Chilli etc.) was prevailed as a main income source after the building of transport infrastructure in their places. As per the presentation of below data, 32.5% was entitled by the respondent's cash cropping culture among the different sources. It means that the majority of the income sources on cash crops are being highly recommended for supporting in their daily sustain. Out of 40, 13 household heads had reported that the cash crops are extremely positioned on the first priority for their main income source. As per the majority of respondents during the interview schedule, the most top five income sources was found such as cash crops, cereal crops, livestock, remittances and wage labor by 32.5%, 22.5%, 10%, 7.5%, 7.5% respectively.

Table 3: Distribution of HHs by current main sources of income.

| S.N. | Income Sources | No. of Respondents | % |
|--------------|---|--------------------|---------------|
| 1 | Cereal Crops (Agriculture) | 9 | 22.5 |
| 2 | Cash Crops (Ginger, Broom-Stick, Akabare Chilli etc.) | 13 | 32.5 |
| 3 | Livestock | 4 | 10 |
| 4 | Milk Business | 1 | 2.5 |
| 5 | Fresh Vegetables | 2 | 5 |
| 6 | Agricultural labor | 1 | 2.5 |
| 7 | Services | 2 | 5 |
| 8 | Business | 2 | 5 |
| 9 | Remittances | 3 | 7.5 |
| 10 | Wage labor | 3 | 7.5 |
| Total | | 40 | 100.00 |

Source: Field Survey, 2017

The data shows that most of the rural people have been diverted to the cash crops due to the good connectivity with market through the building of road and bridge in the study area.

4.1.3 Distribution of sample population by occupations:

The different sorts of occupations had been affiliated by the people (family members of the interviewed HHs) as per the research study. Basically, the economically inactive age means that falls under the following 18 years to 60 years above (<18 to >60 yrs.) individuals. In accordance with the findings, out of the total sample population, 19.46% had reported to be engaged in cereal crops (Agriculture). Cash crops were revealed to be 11.06%. 7.07% of the total sample population was found to have been engaged in livestock followed by milk business 1.32%. 5.75% of sample population reported as fresh vegetables and another 0.44% as agriculture labor. Similarly, 2.21%, 2.65%, 4.42%, 0.88%, 5.75%, 0.88% of the total

sample populations were found to have adopted as services, business, remittances, seasonal business, wage labor, fruits farming respectively. The details of the occupations are shown in below **Table 4**.

Table 4: Distribution of sample population by occupations.

| S.N. | Occupation/Sectors | Population (Family members of HHs) | % |
|--------------|---|---|---------------|
| 1 | Cereal Crops (Agriculture) | 44 | 19.46 |
| 2 | Cash Crops (Ginger, Broom-Stick, Akabare Chilli etc.) | 25 | 11.06 |
| 3 | Livestock | 16 | 7.07 |
| 4 | Milk Business | 3 | 1.32 |
| 5 | Fresh Vegetables | 13 | 5.75 |
| 6 | Agricultural labor | 1 | 0.44 |
| 7 | Services | 5 | 2.21 |
| 8 | Business | 6 | 2.65 |
| 9 | Remittances | 10 | 4.42 |
| 10 | Seasonal Business | 2 | 0.88 |
| 11 | Wage labor | 13 | 5.75 |
| 12 | Fruits | 2 | 0.88 |
| 13 | Depended (<18 to >60 years) | 86 | 38.11 |
| Total | | 226 | 100.00 |

Source: Field Survey, 2017

Through the analysis of the data regarding the occupation of the sample population, they were found to have adopted diverse types of occupations for their livelihoods. Industrial type of occupation appears to be the least of all the occupations. The socio-economic condition of any groups and communities are determined by the occupations they hold. Hence,

distribution of sample population by the occupational status has been taken as one of the prominent variables of social transformation in this research study. As per the obtained information of research, out of total population, 140 persons were in the category of economical active and 86 persons were under the dependable (under aged and over aged). Similarly, the below chart shows that 61.89% of the total population were economical active and followed by economical dependable 38.11%.

4.1.4 Distribution of income sources of HHs before building of roads/bridge.

As per the revealed data of below **Table 5**, majority of respondents had reported that the cereal crops (47.50%) was in main income sources before the building of roads/bridge in their location. It is a real fact that matches with our national feature of agricultural country. 25% of the total interviewed HHs had reported for livestock which are extremely related to the agricultural system of Nepal. Furthermore, 5%, 5%, 5%, 2.5%, 5%, 2.5% and 2.5% of the total sample interviewed HHs had reported to be engaged in cash crops, fresh vegetables, services, business, remittances, seasonal business and wage labor respectively.

Table 5: Distribution of income sources of HHs before building of roads/bridge.

| S.N. | Income Sources | Interviewed HHs | % |
|-------------|---|------------------------|----------|
| 1 | Cereal Crops (Agriculture) | 19 | 47.50 |
| 2 | Cash Crops (Ginger, Broom-Stick, Akabare Chilli etc.) | 2 | 5 |
| 3 | Livestock | 10 | 25 |
| 4 | Fresh Vegetables | 2 | 5 |
| 5 | Services | 2 | 5 |

| | | | |
|--------------|-------------------|-----------|---------------|
| 6 | Business | 1 | 2.5 |
| 7 | Remittances | 2 | 5 |
| 8 | Seasonal Business | 1 | 2.5 |
| 9 | Wage labor | 1 | 2.5 |
| Total | | 40 | 100.00 |

Source: Field Survey, 2017

Above **Table 5** shows that the previous income sources status of the communities whereas no rural transport infrastructure had been at that time. As per the data of above presentation, 47.5% of the total HHs had engaged in cereal crops and followed by livestock (25%). Cash crops, fresh vegetables, services holders and remittances were revealed to be 5%. Thus, it can be said that the cereal crops had secured in as major income source before the time of construction of roads/bridge in the community. It was a first major livelihoods option of the study area in before time. Similarly, livestock and other economic activities had adopted as a supplementary level of livelihoods activities by the rural people of research area.

4.1.5 Distribution of HHs by changing occupations due to the building of roads/bridge.

The rural transport infrastructure has triggered rural occupations towards more effective ways in terms of prominently economical viable sectors than other economic activities they hold. The roads/bridge has improved good connectivity, enhance economic opportunities to the research area. As per the below **Table 6** presented that the distribution of HHs by changing occupations due to the building of roads/bridge. Now, the occupational trend of people in research areas had been changed in to the economically benefitted sectors due to the construction of rural transport infrastructure. Out of total interviewed HHs, 15 HHs had reported as to be changed in to cash cropping activities from their traditional agricultural occupation. Thus, it is a significant change for trending of occupational shifts rural people after the construction of roads/bridge. Fresh vegetables were revealed as to be reported by 8 households of study area. As 4 households had reported that they had changed their

occupations in to small business (tea shop, retail/grocery shops etc.) after the construction of roads/bridge in their locality. Similarly, 2HHs, 2HHs, 3HHs, 1HH, 1HH, 2HHs and 2HHs of the total interviewed households had reported for changing their occupations in to cereal crops, livestock, milk business (dairy business), services, foreign employment, wage labor and fruit farming respectively as per data presented in below **Table 6**.

Table 6: Distribution of HHs by changing occupations due to the building of roads/bridge.

| S.N. | Occupations/Sectors | Interviewed HHs | % |
|--------------|---|-----------------|---------------|
| 1 | Cereal Crops (Agriculture) | 2 | 5 |
| 2 | Cash Crops (Ginger, Broom-Stick, Akabare Chilli etc.) | 15 | 37.5 |
| 3 | Livestock | 2 | 5 |
| 4 | Milk Business | 3 | 7.5 |
| 5 | Fresh Vegetables | 8 | 20 |
| 6 | Services | 1 | 2.5 |
| 7 | Business | 4 | 10 |
| 8 | Remittances | 1 | 2.5 |
| 9 | Wage labor | 2 | 5 |
| 10 | Fruits farming | 2 | 5 |
| Total | | 40 | 100.00 |

Source: Field Survey, 2017

The data of above mentioned in **Table 6**, shows that the status of changing occupational trend of interviewed households. The data are revealed for the percentage of changing occupations holders. 37.5% of the total sample interviewed households had reported to be changed occupation in cash crops and followed by fresh vegetables farming (20%). Small business (tea shop, retail/grocery shops etc.) holders were changed to be as 10%.of the total respondents. 5%, 5%, 7.5%, 2.5%, 2.5%, 5% and 5% of the total interviewed households had reported that they had changed their occupations in cereal crops, livestock, milk business (dairy business), services, foreign employment, wage labor and fruit farming respectively.

4.1.6 Status of the foreign employment.

As reported by the respondents, out of total sample interviewed households (40), 9 households were found to have migrated for the foreign employment and remaining 31 households were found to have engaged with their occupations in village. Especially, most of the migrants had gone to the gulf countries for the working purpose. According to the below data, the migration trend for foreign employment has been gradually declined due to the presence of roads/bridge. Now, they have fully engaged themselves in the diverse types of livelihoods options in their own places. The detail information is presented in below **Table 7**.

Table 7: Distribution of the foreign employment status.

| Particulars | Migration for foreign employment | | Total |
|-------------------------------------|---|--------------------------|--------------|
| | Yes (Migrated) | No (Non-migrated) | |
| No. of Interviewed households (HHs) | 9 | 31 | 40 |
| Percentage (%) | 22.5 | 77.5 | 100.00 |

Source: Field Survey, 2017

The description the percentage of migrated and non-migrated households of the study area has been presented through above **Table 7**. As per the above table, 22.50% have been entitled on the migrated households and followed by 77.50% on non-migrated households.

4.1.7 Description of the family members by multiple economic activities after roads/bridge built.

For assessment of the family members of the interviewed households by the multiple economic/livelihoods activities were selected in the different sorts of activities they hold after the road/bridge built. In an average, 4 family members were found to have engaged especially in four different economic activities. The study generally reveals that one person was found to have engaged in different types of economical activities such as cereal crops, livestock, cash crops and fresh vegetables farming as top most multiple livelihoods options. Therefore, above mentioned information strongly refers that the holding of occupations/economic activities by the rural people has been diversified with the multiple economic activities for their daily livelihoods due to the building of roads/bridge in their locations.

4.1.8 Description of the life histories by the occupations.

During the course of interview schedule, some of people within the study area were found to have engaged in different occupations in their life. Amongst the respondents, one respondent was found having 60 years old who had previous occupational histories of the 15 years before intervals of the present age. As per statement of this respondent, the present occupation is adopted by him in the sector of small scale of business (retails shop) especially in grocery items in the village. When he was around 45 years old, the respondent had engaged in the cereal crops (agriculture based) as long time for the livelihoods. Similarly, when he was around 30 years, he had spent his time as a porter by carrying (Doko/Dhakar) of daily consumable goods (rice, sugar, beaten rice, salt etc.) from the district headquarter regular basis. Therefore, it shows that the occupational shifting trend of local people within the ZoI of roads/bridge has already occurred in their previous whole age due to the development of rural roads/ bridge in the rural community.

4.2 Changing social relationships/Social transformation in the Study Area.

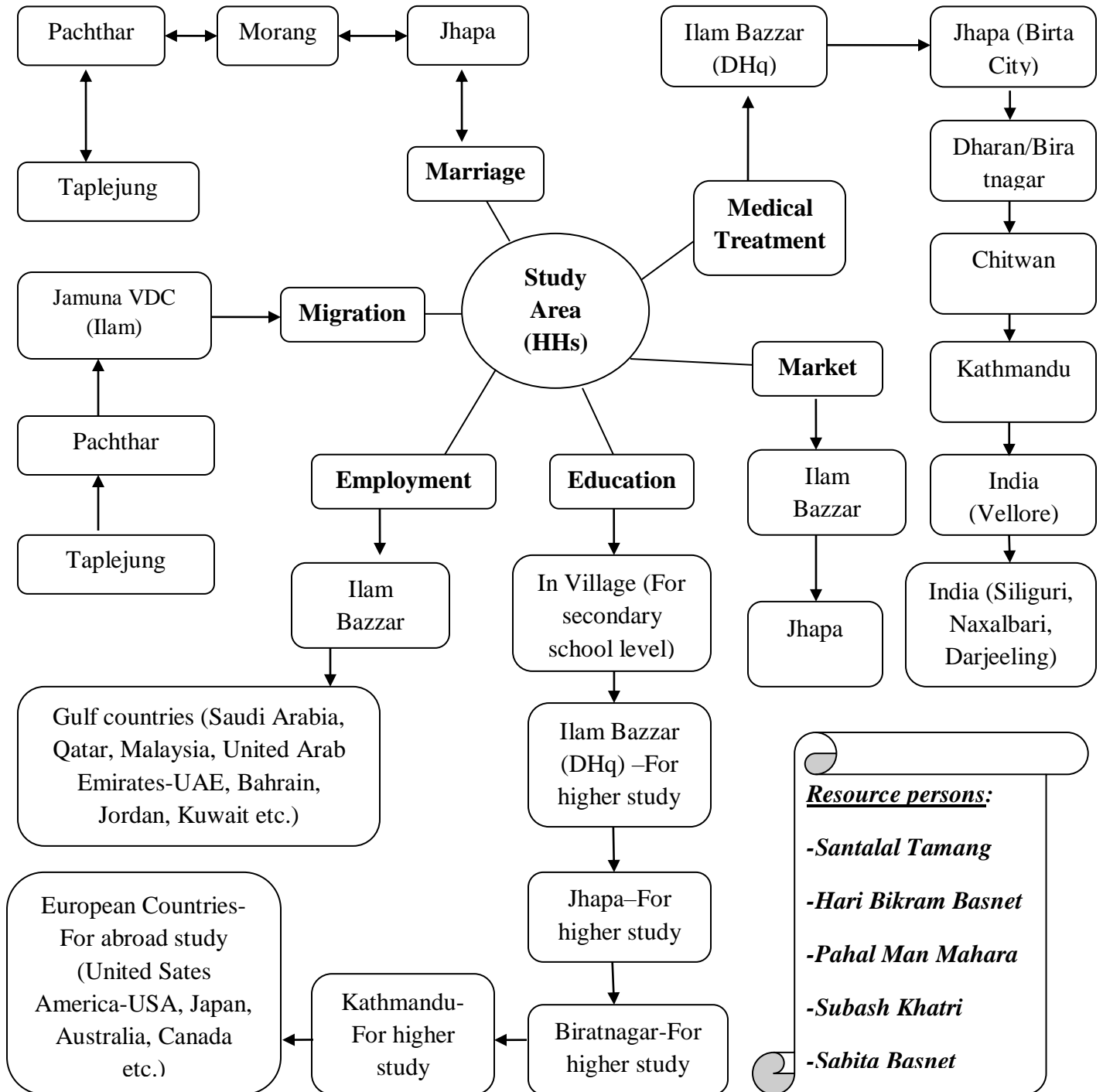
4.2.1 Mobility mapping of the study area.

As revealed by the below mentioned information of **Fig.1**, the exploration of movement patterns by the community of research area has been presented through the given flow chart. Generally, the mobility map is representation of community's movements in relation to the outside from their own place in search of medical treatment, education, market, marriage, employment or even migration that are fundamental things for a human being. This mobility map had administered through the participatory method of focus group discussion (FGD) with the people of study area.

As per the below conducted mobility mapping, the people of study area were found to have moved different places of country and out of country for purposing of their fulfillment of livelihoods related necessities. For the purpose of medical treatment, the people were found to have gone up to Indian cities as like Vellore, Siliguri, Naxalbari and Darjeeling for further better treatment. The people of study area were found to have moved up to European countries such as America, Japan, Australia and Canada for the purpose of further abroad study. For the purpose of employment, the people were found to have moved up to gulf countries for foreign employment. Up to Jhapa district, they have moved for further marketing of their buying and selling transactions of commodities. Especially, the migration status of people was found to have come from the neighboring districts Pachthar and Taplejung. Similarly, the people of study area were found to have moved for marriage purposes in double ways.

As resulted by the below mentioned mobility map these all elements have facilitated by the smooth transport connectivity due to the development in the rural transport infrastructure sector. Easy access to get services and opportunities has been created due to the construction of roads/bridge in their locality. In the same way, we can take an economical achievement of rural people have higher than their prior status because they have been paying much money for their further studying and even in medical treatment purposes. The details information related to mobility trend of rural people is presented in below **Fig. 1**.

Fig. 1: Distribution of community movement patterns by mobility mapping.



4.2.2 Symbols of the social transformation process in the research area.

This study has found some symbols of social transformations and changes in the community of study areas in the course of field work. The development of rural transport infrastructure has led for improving the overall development prospects and social changes in the communities of the rural areas. The roads/bridge is a part of rural transport infrastructure that have played vital role for changing and transforming in the systems of community.

As per the resulted of the field study, all of the members of communities were found to have affiliated in different sorts of social organization such as co-operatives, saving and credit groups, women groups, community forestry user groups (CFUGs), committee etc. All economic transactions of the rural people are to be found with only the financial institutions, groups, bank and cooperatives. It means the local people of study area have been gradually social and having common interest for unifying in order to overcome in to the social problems/evils. The women members of family were found to have involved especially in income generating activities (IGAs) such as retail/grocery shop, tea shop, livestock raising, fresh vegetable farming and so on. It indicates that the empowerment of women has seen in the economical and decision making process as well. Now, they have used tractor, pick up, jeep for the transporting their agricultural products to the markets easily. By the using of these kinds of transportation mode, it has totally replaced the usage of porter, mule and donkey for carrying goods nowadays.

The rural people of the study area have been benefitted by the roads/bridge during the emergency sickness. Now, they have good access for reaching hospital in order to medical treatment by the reserving of ambulance services from their home. For selling their agricultural cash products (ginger, broom-stick, akabare chilli, potato etc), they have good relationships with the dealer/whole seller. It codes that the boundary of social and economic relationships with merchants/business man is being highly broader day to day. The people who residing in the research area are being benefitted by the construction of roads/bridge because they go to their district headquarter (DHq) through the public vehicles for buying agricultural chemical fertilizers, seeds, pesticide and other daily necessary consumable

goods. The gender issues of the study area were found to have resolved gradually because women (daughter, daughter in law, etc.) have treated as an equal behavior of freedoms in the family. Some of the people of study area were found to have bought vehicles, tractors and motorcycles for their own use or giving rental services after the construction of roads/bridge. The skill training related to driving has taken by the some former porters and they have been engaging in their new occupations as a new driver (Guru Jee) now. This is a good sign for uplifting their social status in the community. The children of the local people has benefitted for going to their schools of district headquarter by the regular movement of vehicles. It helps for getting quality education to the children.

The involvement of people in income generating activities were found to have highly increased in different economic sectors such as cow rearing, buffalo rearing, fresh vegetable/off-seasonal vegetable farming, cardamom farming, poultry farming, establishment of dairy and so on in their locality. These all economic activities have been resolved by the development of transport infrastructure in rural area. The condition of market was found to have expanded up to different cities of Jhapa district as per study. Now, they have no problems of marketing for their selling of agriculture products. The kinships of the people within study area have increased the frequency of visiting purpose due to the easiness of transportation. The good relations between their kinships have shown than the before. The regular health check of elderly persons of this area were found to have done due to the good conduction of vehicles towards the district headquarter (Dhq).

As per the field study work, the valuations of the lands nearby roads/bridge side were found to have increased by up to 3 times than the previous land value. Presently, these lands are buying and selling as a vitta (residential lands). Therefore, the living standards of the local people were found to have increased due to the development of transport infrastructure. Cash cropping trend was found to have commercialized due to the good marketing conditions for selling purpose. So, local people are highly willing to grow the cash crops nowadays as compared to their previous livelihood activities. The building trend of new houses was found to have increased having pillars (rcc) with the combination of rebar, cement, brick, zinc roof (Jasta Pata) due to the good transportation of construction materials. Villagers usually have used tractor for carrying paddy, fodders/grass and firewood from their fields instead of the

traditional methods. It is thus that we can guess this society has shifted towards the advanced and developed society than the before. Similarly, due to the good facilities of transportation in the research area has been promoted as a new tourist area by the local government/agent. Local people were found to have good awareness regarding the importance of the transport infrastructure. The community of the research area was found to have become gradually developed and well facilitated as comparing rather than the previous days. As results of above mentioned research facts of the society of the rural communities was found to have shifted towards the latest modern advance societies. People's physically hardworking trend of the local of ZoI of roads/bridge is being gradually diminished due to the development of the good transportation system in the rural community of the study areas.

CHAPTER - FIVE

5. SUMMARY, MAJOR FINDINGS AND CONCLUSION

5.1 Summary

This study had conducted in the zone of influence of (ZoI) of Mai khola motor able bridge which is located along the Tilkeni-Mahavir-Archale-Naya Bazzar Soyang road (23km) in between Ilam Municipality and Soyang VDC of Ilam district. This motorable bridge had already constructed by the Department of Local Infrastructure Development and Agricultural Roads (DoLIDAR)/Ministry of Federal Affairs and Local Development (MoFALD) of government of Nepal (GoN). After the construction of bridge, local people of ZoI were found to have so much direct benefited by the bridge for getting smooth roads connectivity with their district headquarter even in rainy seasons. This study work had focused in 40 household heads (HHs) for the conducting interview schedule and focus group discussion (FGD) within the bridge's ZoI. For the work of interview schedule, the selected HHs was stratified in to 3 categories such as high, semi and less diversified of livelihoods options. Local people's livelihoods opportunities/activities were found to have increased with diversifiable type of occupations whichever they were holding for their livelihoods.

As per the study, the majority of the local people were found to have engaged in different types of multiple economic activities for their livelihoods due to the good transportation facilities in the village. A good majority of people within the study area were found to have adopted the cash crops due to the good income sources and marketing linkages. It means that the developmental efforts related to the roads/bridge were found to have played major role for transforming on their daily social and economic activities. Building of rural transport infrastructure has helped for facilitating to emerge the livelihoods diversification in the existing livelihoods patterns. Similarly, the enhancement of livelihoods diversification on the society was found to have transformed in existing social systems of the rural community.

5.2 Major Findings

The study has facilitated to identify the research findings in the respect of research problems. Research findings are based up on the field level study work whereas conducted interview schedule (IS) and focus group discussion (FGD) by the researcher. As revealed by the research work, the development of rural transportation infrastructure has led the vital role for changing on the living standards of the rural people. After the building of rural roads/bridge, people had adopted diverse type of livelihoods options based on their skill, capabilities and potentialities.

As per the results of field survey, 32.05%, 22.5%, 10%, 7.5% and 7.5% of the total sampled interviewed households (40) were found to have cash crops, cereal crops (agriculture), livestock raising, remittance and wage labor respectively as current main sources of income. Out of the total sampled population (226) of the interviewed households, 19.46%, 11.06%, 7.07%, 5.75% and 5.75% population were found to have engaged in the cereal crops (agriculture), cash crops, livestock raising, fresh vegetable and wage labor respectively. The percentage of economical active population (>18 to >60 years) was found to be as 61.89% and followed by dependable 38.11%. For the income sources of sampled households (40) before the construction of roads/bridge, 47.50% and 25% the HHHs had reported that they had adopted as cereal crops and livestock respectively. 37.5%, 20%, 10% and 7.5% of the total sampled interviewed households (40) were found to have changed their existing occupations/economic activities in the sectors of cash crops, fresh vegetables farming, business and milk business respectively due to the building of roads/bridge. Out of total sampled interviewed households (40), 77.50% and 22.50% households were found to have entitled in the non-migrated and migrated for the foreign employment purposes.

In an average, 4 members of a family were found to have engaged in multiple economic activities after the roads/bridge built. 46.01% of the total sampled populations (226) were found to have directly involved in multiple economical activities for their daily livelihoods. The study generally reveals that one person was found to have engaged in different types of economical activities such as cereal crops, livestock, cash crops and fresh vegetables farming as top most multiple livelihoods options. Therefore, above mentioned information strongly

refers that the holding of occupations/economic activities by the rural people has been diversified with the multiple economic activities for their daily livelihoods due to the building of roads/bridge in their locations. As revealed by the data analysis of the obtaining information related to the life history (before 15 years intervals) of the sampled interviewed family members within the study area. The occupational shifting trend of the local people within the ZoI of roads/bridge has already occurred in their previous whole age due to the development of rural roads/ bridge in the rural community.

As per the above mentioned facts findings of this study, it can be said that the people of study area were found to have adopted the livelihoods activities as extremely diversifications whichever they had holding for their daily livelihoods. Now, they had involved in diversified economical activities which have made their life easy with attractive household's income sources after the roads/bridge built. The people of study area had found to have good mobilized for utilizing resources and facilities for education, employment, migration, marriage, market, medical treatment as national and international level as per the mobility mapping. Therefore, the exploring of the social movement patterns by rural people is seen very high than the previous conditions. These all evidences have strongly triggered a society towards the social transformation process in terms of the social and economical aspects/benefits.

5.3 Conclusion

After the completion of study, it has been concluded that the basic fundamental pillars of the overall development is to build roads/bridge in the rural communities. It has been directly helped for connecting between rural and urban places through the good transportations. Because of the smooth development of transportation, there have been imported new and modern technologies, development instruments, people movements, business potentialities etc. to the rural community from urban developed cities. Similarly, local agricultural products and others have been exported to urban cities for selling in good prices. Rural people have benefitted by the livelihood diversification of the economic opportunities they hold. Therefore, it is good indicators of economic prosperities of the rural people due to the development of transport infrastructure. In this way, a transport infrastructure has led to the

enhancement of the economic prosperities of rural people and after then a society has already been going towards in the social transformation/change process gradually as per the theory of social change.

REFERENCES:

- Adhikari, J. 2008. *Changing Livelihoods: Essays on Nepal's development since 1990*. Kathmandu: Martin Chautari.
- Bayes, A., 2007. *Impact Assessment of Jamuna Multipurpose Bridge Project (JMBP) on Poverty reduction*, Japan Bank for International Cooperation (JBIC), Department of Economics, Jahangirnagar University, Savar, Dhaka.
- Booth, D., Hanmer, L., and Lovell, E. 2000. *Poverty and Transport: A final report prepared for the World Bank in collaboration with DFID, Overseas Development Institute*.
- Carney, D. et al. 1999. *Livelihood approaches compared: a brief comparison of the livelihoods approaches of the UK Department for International Development (DFID), CARE, Oxfam and the UNDP*. A brief review of the fundamental principles behind the sustainable livelihood approach of donor agencies. *Livelihoods connect*. London: DFID.
- Castles, S., 2010. *Understanding Global Migration: A Social Transformation Perspective*, *Journal of Ethic and Migration Studies*, Vol. 36 No.10, pp. 1565-1586.
- CBS, 2012. *National Population and Housing Census, 2011: National Report*, Kathmandu, Nepal: Central Bureau of Statistics.
- CBS, 2011. *Nepal Living Standard Survey, 2010/11: Statistical report*, Kathmandu, Nepal: Central Bureau of Statistics.
- Chambers, R. 1994. *Poverty and livelihoods: whose reality counts?* ID discussion paper, 347. Brighton: IDS.
- DFID, 2015. *Sustainable Infrastructure for Shared Prosperity and Poverty Reduction: A policy framework, summary*, www.dfid.gov.uk
- Ellis, F., 1998. 'Survey Article: Household Strategies and Rural Livelihood Diversification', *The Journal of Development Studies*, Vol.35, No.1, pp.1-38
- Ellis, F., 1999. *Rural Livelihood Diversity in Developing Countries: Evidence and Policy Implication*, DFID/ODI, UK.
- Glaister, S., Anderson, RJ 2005. *Transport Performance and the Data Clubs Approach*. ESRC International Public Service Rankings, December 2005. Oxford: Department of Politics and International Relations, University of Oxford, UK.
- HDR, 2014. *Summary Human Development Report*, Work for Human Development, UNDP.
- Hussein, K. and Nelson, J., (n.d.). *Sustainable Livelihoods and Livelihood Diversification: IDS working paper 69*.

Khatun, D. and Roy, B.C., 2012. *Rural Livelihood Diversification in West Bengal: Determinants and Constraints*. Agricultural Economics Research Review, Vol. 25(No.1) January-June 2012 pp 115-124.

Korten, David. C., 1990. *Getting to the 21st Century: Voluntary Action and the Global Agenda*, Vijay Primlani for Oxford & IBH Publishing Co. Pvt. Ltd.

LeCompte, M. D.,Klinger, J. K., Campbell S. A., and Menke, D.W., 2003. Editor's introduction, *Review of Education Research*, 73(2), 123-124.

MLRBP, SDC, 2010. *Motorable (Local Roads) Bridge Programme Document*, Kathmandu, Nepal, MLRBP: Government of Nepal (DoLIDAR) in collaboration with Swiss Agency for Development and Cooperation (SDC).

MLRBP, SDC, 2013. *Baseline Survey Report of Mai Khola Bridge, Ilam district, Nepal*, MLRBP: Government of Nepal (DoLIDAR) in collaboration with Swiss Agency for Development and Cooperation (SDC).

Norman, K., 2013. *Social Dimensions of Transport- a resource for Social Impact Appraisals*. A working document. DFID.

Scoones, I. 2009. *Livelihoods Perspectives and rural development*: Journal of Peasant Studies: Vol. 36 No. 1, January 2009.

Scoones, I. 1998. *Sustainable rural livelihoods: a framework for analysis*, IDS working paper, 72. Brighton: IDS.

Starkey, P., Tambahangfe, A., and Sharma, S., 2013. *Building roads and improving Livelihoods in Nepal*: External review of the District Roads Support Programme (DRSP) Final Report.

Subedi, M., 2014. *Changes in Livelihood and Caste Relations in Udipur*, Himalayan Journal of Sociology & Anthropology-Vol. VI (2014).

Tanga, Pius T.,Monaheng, L.R.C., Matobo, T., and Abie, S., 2014. *The Impact of Improved Road Infrastructure on the Livelihoods of Rural Residents in Lesotho*: The case of Phamong, Stud Tribes Tribals, 12(2): 209-218 (2014).

Todaro, M.P. and Smith S.C., 2003. *Economic Development*, Dorling Kindersley (India) Pvt. Ltd.

Tuladhar, A., 2007. *Trial Bridge Building in the Himalayas. Enhanced Access, Improved Livelihood*, Experience and Learning International Co-operation, (Helvetas Best Practice Publications).

UNDP, 2016. *UNDP Global Toolkit on the 3x6 approaches: Building resilience through jobs and livelihoods*, www.undp.org

UNDP, 2005. *Guidance Note on Recovery LIVELIHOOD*, International Recovery Platform Secretariat (IRPS), Japan, www.recoveryplatform.org

UNHCR, (n.d.). *'Developing a Livelihoods Assessment and Strategy: Case study from UNCHR Jordan.'* www.unhcr.org

Whitehead, Ann 2002. Tracking Livelihood Change: Theoretical, Methodological and Empirical Perspectives from North –East Ghana. *Journal of Southern African Studies*, 28 (3), pp.575-598.

Photographs:



Public vehicles are plying over the Mai Bridge and its roads alignments.



Gingers are ready for marketing after packaging.



Broom-sticks farming at the commercial scale in their lands.



Conducting a focus group discussion with the local people during the research study.

Checklist for interview schedule (IS):

Section- A (Livelihood Opportunities/Diversification)

Name of Interviewer: Date:

1. General Information

1.1 Name of Respondent:

.....

1.2 District: 1.3 VDC: 1.4 Municipality:

1.5 Ward No.: 1.6 Name of settlement (village):

1.7 Name of HH head

.....

1.8 Gender of the household head 1. Male 2. Female [age wise]

2. What are the main current incomes sources of yours family?

.....

3. What are the current occupations involving by your family members nowadays?

Member1

Member2

Member3

Member4

Member5

Member6

Member7

Member8

Member9

Member10

4. What were the income sources of your family before this bridge building?
.....
5. Which occupation has been changed due to the bridge building in your family? What are they?
.....
6. Has any family member migrated to do work/jobs? (Yes/No, If yes how many)
.....
7. How many family members are involving in multiple economic activities after the bridge built? What are they?
Member1
Member2
Member3
Member4
Member5
Member6
Member7
Member8
Member9
Member10
8. What were your family member's occupations patterns in the time frame of each 15 years before interval? (Make life history)
Member1 (Before each 15years of age)
.....
Member2
Member3
Member4.....
Member5.....
Member6.....
Member7.....
Member8.....

Member9.....
Member10.....

Section-B (Changing Social Relationship)

1. Are your family affiliated in any social organizations? (Group, union, committee, cooperative etc.)

.....

2. Have your women family member involved in IGA? If yes, mention.

.....

3. Do you save your money? If yes, where.

1. In Bank 2. In Cooperatives 3. In Groups 4. Others

4. Do you sell your agricultural products in the market? If yes,

1. Porter 2. Self 3. Mule /Horse/Cart/Donkey 4. Tractor/Bus/Jeep

5. How do you go to hospital for treatment in the case of emergency?

1. By using stretcher 2. By using ambulance 3. Others

6. What are the main transaction level for selling and buying agricultural products/other commodities?

1. Individual level 2. Dealer/whole seller level 3. Retailer level 4. Others

7. Where are you buying places for agricultural fertilizer, seeds and pesticide? How?

.....

8. Where is your market for selling your productions?

1. Local level (In village/tole) 2. Major market (In district headquarter)

9. Have you bought any vehicles (tractor, jeep, motorcycles etc.) in the family after the roads/ bridge construction?

.....

10. What is about your land value after the building roads/ bridge?

1. Increased value

2. Less than existing value

3. Moderate value