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Role of Small Towns for Integrated Development of Sub-Region:

A Case of Siraha District

by

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ABSTRACT

The uncontrolled urbanization and rural-to-urban migration have increased the possibility of expansion and provided much greater levels of social and economic benefits in large cities. It has increased the gap between small towns/market center and their hinterlands village. By supporting small towns and upgrading their amenities, these issues can be resolved. The current research examines the role of small towns for integrated growth of sub-region by studying the small towns within Siraha district. The Siraha district contains 17 small towns. Small towns are identified based on the population size and functional unit along with growth potential of the towns. Due to their backward and forward linkages, towns primarily function as market centers for the surrounding villages. In this article, questionnaire survey was conducted through random sampling method and altogether 233 people were interviewed with 119 from traders or shopkeepers and 114 from customers/farmers. The data was analyzed using MS Excel, SPSS, and QGIS software. If strengthening the small towns within the district then towns act as market center, service center and creating industrial and other off-farm employment for their surrounding areas.

17 small towns are divided into 4 groups. Out of these 4 groups, the 5 market towns such as Lahan, Mirchaiya Golbazaar, Dhangadhimai and Bandipur are located around the east-west highway can be considered the largest and most developed group in the district, while the group of Bhagwanpur, Bariyarpatti, Nawarajpur and Aurahi markets on the India border of the district can be considered the smallest. Kalyanpur, the only market towns in this district, exists as a separate town without falling within these four groups. Sukhipur Bazar is located in the central part of the district. The market towns are not found in north eastern part. Lahan is a market town with 1050 commercial units among them. Siraha, Mirchaiya, and Golbazar are market centers with 500 to 750 commercial functions, while Dhangadhimai, Sukhipur, Kalyanpur, Karjanha, Bishnupur, and Nahara are market centers with 100 to 300 commercial functions. Bhagwanpur, Aarnama, Nawarajpur, Aurahi, Bariyanpatti, and Laxmipur Patari are market centers with 50 to 100 commercial functions. The locational pattern of market centres in the district is conditioned by two factors, marketing and transportation. The influence of transportation principle is clearly seen in areas where market towns are located linearly along the major roads.

Market towns provide trading and other services to the surrounding areas. Some of these services are distributed from the market towns, while people from the surrounding areas commute to the market towns. Lahan, Mirchaiya, Golbazar and Siraha are the dominant trading centre, which supplies agricultural products and industrial products to different centres of the districts and outside the district. Trading of Sukhipur and local market centre are mostly confined to surrounding VDCs of Siraha district and local market centre acts as collecting and distributing point for local surrounding areas.

Road network is main factors for development of towns and village and also linkage between towns and hinterland village. Road network paly spatial integration of human activities and also indicates flow of goods in towns and surrounding areas. The towns south of the highway depends on Lahan, Siraha, Mirchaiya and Golbazaar for health and education services and also link to the Kathmandu, Biratnagar, Janakpur and Birgunj. About 35% people visit towns due to buying and selling of commodity. Flow of people are more in Lahan, Mirchaiya and Golbazaar in the district and about 55% people visit in Siraha for administrative purpose. Remittance has a good effect on both the development of towns and villages as well as the linkages between them. For all this reason, small towns play crucial role for integrated development of the district.

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LIST OF ACRONYMS AND ABBREVIATIONS

| | |
|--------|---|
| AID | Agency for International Development |
| BT | Black Topped Road |
| CBS | Central Bureau of Statistics |
| CDG | Central Department of Geography |
| CEDA | Centre for Economic Development and Administration |
| DADO | District Agriculture Development Office |
| DDC | District Development Committee |
| DHUD | Department of Housing and Urban Development |
| DOR | Department of Roads |
| DUDBC | Department of Urban Development and Building Construction |
| ER | Earthen Road |
| FGD | Focus Group Discussion |
| FRN | Feeder Road network |
| GR | Gravel Road |
| HMG | His Majesty's Government |
| ICIMOD | International Centre of Integrated Mountain Development |
| IPDD | Integrated Panchayat Development Design |
| IRDP | Integrated Rural Development Program |
| KII | Key Informant Interviews |
| LDC | Less Developed Countries |
| MLD | Ministry of Local Development |
| MRM | Mahendra Raj Marga |
| NH | National Highway |
| NPC | National Planning Commission |
| PR | Postal Road |

| | |
|-------|--|
| RUPP | Rural-Urban Partnership Program |
| SADP | Spatial Area Development Plan |
| TDC | Town Development Committees |
| UCLG | United Cities for Local Governments |
| UFRD | Urban Functions in Rural Development |
| UNCHS | United Nations Center for Human Settlement |
| VDC | Village Development Committee |

1 CHAPTER-I: INTRODUCTION

1.1 Background

In many countries around the world, the trend of continuing population concentration in metropolitan areas and larger cities is seen as a serious issue linked to continuing inter-regional developmental inequalities (Ganguly, 1997). The uncontrolled urbanization, which causes many problems in large cities such as the problems of housing, lack of resources, pollution, basic infrastructure facilities like roads, drainage, water supply, solid waste management and electricity. Small towns and market centers have poor communication with their hinterland villages, and as a result, rural residents migrate to large cities looking for better facilities. However, large cities have much higher levels of social and economic services and have a high potential for development. It has increased the gap between small towns/market center and their hinterlands village, leading to regional imbalances. Regional imbalances leading to the lack of access to market towns in rural regions not only limit the ability of farmers to sell their goods and increase their transport costs, but also limit their access to the social services and consumer goods that provide important incentives for increasing production and household income.

Planners have focused their efforts to strengthening and developing small towns as a result of problems raised on by the growth of large cities, population density, and rural migration to these metropolis (Arbabi & Mitri., 2016). Small towns and market Centre acts as bridging the gap between rural and urban development and these towns are promoting balanced economic growth between rural and urban areas. Small towns serve as the rural population's first point of interaction with urbanization; by improving linkages to rural areas, markets for agricultural products can be supported, and basic services can be provided there as well. Small towns can be enhancing economic growth and equity leading to integrated development of sub-region.

To support an integrated rural development strategy for Nepal's hills, the government also promotes small towns (Bajracharya, 2015). In Nepal, the 8th year plan promotes rural-urban connectivity through the growth of small towns and market centers. Small towns and market Centre in Siraha district act as a central place for their hinterland village. Small towns play an important role in the commercialization of the rural agricultural sector by acting as hubs for

the delivery of services and the selling of agricultural products, as well as by creating industrial and other off-farm employment.

The development of small towns and its hinterlands village can be seen due the linkage and functional integrity between small towns/market Centre and hinterlands village with the support of large cities such as Birgunj, Biratnagar and Kathmandu. Small towns and market Centre can be enhanced accessibility, social networks and increase economic opportunities within the sub-region and also support the integrated development of the study areas.

The main objective of these research is to examine the physical, social and economic infrastructural linkage between small towns and its hinterlands for integrated development of study area and to tackle related problems of the study area.

1.2 Need of the Research

Some countries have come to the conclusion that it is undesirable from both an economic and a social point of view for the population and economic activity to be overconcentrated in one or a few major urban regions. Inequality and the marginalization of certain human settlements are promoted by unbalanced development that is mostly driven by primary cities (Sietchiping et al., 2014). Policymakers have sought for various policies to level the development among regions, between large and small towns and between towns and rural areas. If governments want to achieve geographically widespread development, they must invest across regions. Concentration of development in one or a few large towns does not result automatically in the spread of development through “trickle-down” processes, and an articulated and integrated system of settlements should be proposed. Trickle-down effects have not been strong enough to stimulate regional development, and have led to more marginalization. Small towns help the spatial development system integrate urban and rural functions. Even though each of these towns may appear small on its own, taken as a whole, they can have a big impact on the growth and elimination of poverty in the country.

While in the long run market forces are influencing the growth of cities, with constraints of city regulations, taxation, and opportunities provided by new investments, planners can indirectly influence the spatial structure of cities. For instance, the choice of location of industries, infrastructure, and other economic activities across the region can determine the extent of the capability of small towns to attract populations. Compared to the creation of

new towns, small towns are more economically efficient in ensuring spatial decentralization of towns.

1.3 Importance of the Research

The potential benefits of small towns in promoting rural development and integrating urban and rural economies are highlighted by recent study and experience in developing countries (Rondinelli, 2011). Small towns have supported in reshaping the economies of rural areas in countries with a wide range of economic, social, and political characteristics by providing access to services, facilities, and non-agricultural employment opportunities as well as by offering incentives for the commercialization of agriculture. Small towns serve as centres for the expansion and consolidation of rural non-farm activities and employment, which is frequently related to the processing of agricultural products. They also serve as magnets for seasonal or permanent rural migrants from the surrounding area, reducing the pressure on larger cities.

Small towns serve as centers of demand and markets for agricultural products from the rural areas surrounding them, either for local consumers or as links to national and export markets. They also facilitate the production and distribution of goods and services to the rural areas, the growth and consolidation of non-farm activities and employment through the development of small and medium-sized enterprises or the relocation of branches of large private or nongovernment enterprises, and the attraction of rural residents (Satterthwaite & Tacoli, 2003). Small towns play an important role in the economic growth and the integration development of sub-region.

A viewpoint on rural-urban links is crucial when considering sustainable economic development (Mayer et al., 2016). There is substantial evidence that major urban agglomerations are disproportionately benefiting from recent economic trends, including trade liberalization, the importance of a knowledge-based economy, and the increasing integration of the global economy. Small towns that build rural-urban linkages may be able to reduce spatial disparities by creating economic opportunities in rural areas. Such rural-urban linkages may lead to more sustainable economic development at a macro level by allowing rural areas to develop in the face of significant concentration or depletion factors and creating a thriving rural economy, new and diverse employment opportunities, and transforming rural environments into locations that are suitable for modern socio-economic realities.

1.4 Problem Statement

The entire world is going through a major change (Sietchiping et al., 2014). It is rapidly transforming from an agricultural and rural way of life to one that is heavily urbanized, with industry serving as the primary source of income for growing numbers of people. Urbanization trends indicate that the populations of small towns will continue to grow. The growth of periphery settlements as a result of arriving migrants, as well as the suburbanization of people away from the city centre, are both contributing to this expansion. In this context, small towns are too weak to provide enough opportunities of employment to the rural unemployment people. They are no more pleasant place for living, working and trading. However, this pattern of urbanization is unsustainable, particularly in developing countries like Nepal, where it is plagued by intractable planning, organizational, and financial issues. Poor housing and insufficient urban basic services have also caused physical and social problems. The rise of these settlements is hampered by issues such as, garbage management, and increased crime. Small towns are the rural population's initial point of contact with urbanization; improving linkages to rural areas can help support agricultural markets and provide basic amenities.

The population of small towns will certainly continue to increase, according to trends in urbanization. (Sietchiping et al., 2014). Uncontrolled urbanization has increased the gap between rural and urban development, resulting in regional imbalances. In Nepal, the regional imbalance is a major concern. It has played a significant role in increasing the conflict between the human and spatial paradigms. Income variation, land price variation and rural-urban migration are common phenomena. Inadequate infrastructure and services, insufficient communication networks and connectivity, and ineffective implementation plans and policies all are contributing factors to regional imbalance.

Inequitable regional development is a result of regional imbalance (Nazem, 1994). Any potential investible surplus in the economy tends to concentrate even more into a small number of urban centers where infrastructure facilities and support services are concentrated. As a result, there is polarization in the process of urbanization and development, including the pattern of urban and rural areas as well as the growth of inter - urban areas. One of the reasons is an incomplete understanding of linkages between rural and urban areas. There have been challenges in maximizing the potential of local resources in rural areas, and the

economic situation in rural areas is not satisfactory. People are dissatisfied with the development results of rural areas as a result of this development cycle, leading them to explore social and economic development in urban areas for themselves and their children. Of course, the development of urban areas has been hampered by this process and also the stagnant agriculture economy, increasing rural unemployment, and insufficient job opportunities in surrounding small towns have forced rural dwellers to migrate to large urban centers in search of better jobs and a better way of life. They have increased the number of urban poor, slum inhabitants, and informal settlements in urban areas, harming city services and infrastructure.

In order to achieve integrated development, Nepal currently lacks an effective way to plan and revitalize the role of small towns in promoting rural development, retaining rural unemployment, and preventing overurbanization of larger urban centers. Small towns will play an important role in bridging the gap between rural and large urban areas, decreasing rural-to-urban migration and promoting integrated development thus increasing willingness of people to stay in rural areas.

1.5 Research Questions

The study was guided by the following key research questions.

1. What is the role of small towns for integrated development of sub-region: A Siraha District?
2. How can boost socio-economic aspects of small towns?

1.6 Research Objectives

The main objective of the study is to analyze the role of small towns for integrated development of sub-region: A Siraha District.

For that, the specific objectives of this study are:

- To explore the role of small towns for integrated development of sub-region.
- To develop and strengthen the socio-economic aspects of small towns in order to achieve a balanced sub-regional development.
- To examine the backward and forward linkage between small towns and its hinterlands for integrated development of sub-region.

1.7 Scope of the Research

The research is primarily focused on developing rural-urban linkages with small towns in order to improve sub-regional integration. The primary focus while studying the relationship between rural-urban areas and small towns is on physical, social and economic developments with its hinterlands. The research is based on rural-urban migration and development analysis. People's perceptions in rural hinterlands are used to study relationships between small towns. The study is limited to physical infrastructure such as accessibility, social infrastructure such as education and health as well as economic infrastructure such as inputs and outputs of agricultural products in market centre.

1.8 Limitations of the Research

Research is focused on the eastern terai context. The finding of the study may not be applicable in all other areas of Nepal. Research is mainly focused on the role of small towns to integrated development of sub-region in Siraha district, problems of urbanization, the small town as growth points for rural hinterlands and development factors for rural areas of the district. As a result, the research is limited to the district level.

1.9 Validity of Research

A rapid change from agricultural and rural lifestyles to a highly urbanized way of life due to urbanization and people migrated from rural areas to urban areas for a standard way of living. Uncontrolled urbanization has increased the gap between rural and urban and leading to the development of inter-regional disparities and inequities in development and also leading to the pressure on the large cities. They have created urban poor, slum dwellers and informal settlements in the city areas and also pressure on services and infrastructure system of the large cities. To overcome these issues, small towns should promote a more balanced urban hierarchy, and in turn, help reduce pressure on primate cities, moderate spatial inequities, and enhance rural-regional development. Hence, it is a valid topic of research.

1.10 Conceptual Framework of the Research and Methodology

Research paradigms are fundamental philosophical frameworks based on ontological, epistemological, and methodological assumptions. (Egon G & Yvonna S, 1994). Ontology deals with the philosophical assumptions about the nature of reality or existence. It examines underlying belief system of the researcher, about the nature of being and existence. It looks at

the researcher's underlying assumptions regarding the nature of being and existence. Understanding the shape, nature, and what you think can be discovered about reality is helpful. When conducting research, ontology requires the researcher to consider issues like: Is there a reality outside of one's own mind, or is the social world only a fabrication? What is the nature of reality? In other words, does reality have an objective nature or is it the product of human cognition? What kind of situation is being investigated? Ontology is crucial to a researcher's ability to understand the elements that make up the world as we know it. In order to contribute to the solution of the research problem, it also helps the researcher in focusing his or her thinking regarding epistemological and methodological beliefs in relation to the research topic (Khatri, 2020). This research topic is the role of small towns to integrated development of sub-region in Siraha district; it mainly focuses on the social reality. Understanding the meaning of this social reality is more important than knowing the truth. The study is based on people's perceptions of the challenges faces by small towns from rural to urban migration and how small towns are contributing for integrated development of study area. The Research is focused on the views and perspective of people towards the role of small towns for integrated development of sub-region. Epistemology is another component of research paradigm dealing with how knowledge is gained from different sources. It is simply known as theory and philosophy of knowledge. Epistemological position of the research is the small towns can play crucial role for integrated development of sub-region and past study of the integrated regional development of the region and also increasing willingness of people to stay in rural areas according to people perceptions.

The term 'paradigm' may be defined as "a loose collection of logically related assumptions, concepts, or propositions that orient thinking and research" or the philosophical intent or motivation for undertaking a study(Mackenzie et al., 2006). Alternatively, a paradigm, which includes three elements: a belief about the nature of knowledge, a methodology and criteria for validity. The paradigm gives the basis for the choice of methodology, methods and sources.

In this research, the objective has been set to explore the role of small towns for integrated development. This particular research can't be approached through the positivist paradigm as the phenomenon taken for the research; the role of small towns for integrated development is a phenomenon of the social world. In positivist paradigm, the scientific research is done in a controlled environment inside the lab and regardless of the personal value of the researcher

the universal results are obtained in researches conducted under positivist paradigm. So, this particular research objective can't be achieved through the positivist paradigm.

Post-positivists begin with the premise that every piece of research is impacted by a variety of established theories in addition to and separate from the one that is being investigated (Mackenzie et al., 2006). According to the post-positivist paradigm, social science cannot be viewed as a branch of natural science. The post positivist research is conducted using co-relational approach. Positivists and post positivist research is most commonly aligned with quantitative methods of data collection and analysis. In this research, there is no study to be conducted to find the relations between the variables.

Interpretivist/constructivist approaches to research have the intention of understanding “the world of human experience” suggesting that “reality is socially constructed”(Mackenzie et al., 2006). The interpretivist/constructivist researcher tends to rely upon the “participants’ views of the situation being studied” and recognizes the impact on the research of their own background and experiences. The research topic is based on the assumption that small towns will help to integrated development of sub-region and this leads to the decrease rural to urban migration thus increasing willingness of people to stay in rural areas. The truth is constructed and interpreted from the society. The data are interpreted in the interpretive paradigm but which is not possible due to the time constraints. Inductive approach will be used in the research. Inductive research involves the search for pattern from observation and the development of theories. In this research, linkage between rural and urban areas to be observed for integrated development before reaching to any theory.

Pragmatism is not committed to any one system of philosophy or reality. Pragmatic paradigm focusses on the ‘what’ and ‘how’ of the research problem. Early pragmatists “rejected the scientific notion that social inquiry was able to access the ‘truth’ about the real world solely by virtue of a single scientific method” (Mackenzie et al., 2006). While pragmatism is seen as the philosophical framework for mixed-methods research, it is also considered as the paradigm that offers the underlying philosophical framework for mixed-methods research. The pragmatic paradigm is a technique in which two different paradigms are required for two separate research purposes. This is not the same as intermixing paradigms; instead, two different paradigms will be used for two different goals. All of the issues or objectives stated in this study can't be answered with a single paradigm; instead, the many objectives must be

handled using a correlational technique inside the post positivist paradigm and inductive logic within the interpretivist paradigm, as previously noted. As a result, the pragmatic paradigm is applied to this study.

The wide term "methodology" is used to describe the study design, methodologies, approaches, and processes employed in a planned investigation (Khatri, 2020). This suggests that participants, data collection tools, and data analysis indicators are the only methodological aspects in a paradigm that contribute to understanding the study problem. In order to learn more about a research problem, the methodology describes the logic and flow of the systematic procedures used to carry out a research project.

In this research, qualitative and quantitative methods can be used. Qualitative research with human beings involves three kinds of data collection are in-depth, open-ended, interviews, direct observation and written documents(PATTON, 2005). Qualitative research can be done to learn about people's reasons, opinions, and motivations. Quantitative research is also utilized to quantify the issue. Quantitative data can include surveys and close ended questionnaires. This research will adopt the qualitative research methodologies which will emphasis on the natural settings. This will concentrate on the meaning and interpretation of the text, as well as how others view it. This will be accomplished by the use of a questionnaire survey to ascertain different people's perspectives. Correlational research will be carried out to understand the relation between small towns and rural-urban linkages in different locations within the district. In order to determine their relationship, statistical analysis would be used.

1.10.1 Literature Review

A comprehensive review of related literature was conducted. Various books, papers and journals, maps, and associated documents were examined to see how similar contexts were assessed and what answers were suggested. Desk research was conducted to assess the city's urbanization pattern and its implications for small towns.

1.10.2 Sources of data

Data was collected from both primary and secondary sources. The primary data was collected from interviews with key informants, who are specialists studying and working in connected subjects from both governmental and local perspectives. The close-ended and open-ended questionnaires focus group discussion observation guides/ checklist, photographs and maps

are the tools that were used to collect data. The questionnaires and interview schedules were made in proper sequence to ensure quality responses and to avoid the questions that could disrupt the interest for the effective response during questionnaire survey as well as key informant interview. Secondary data was collected through review of literature materials, maps, various plans, and policies documents.

1.10.3 Data Analysis and Results

Data was analyzed using IBM SPSS (International Business Machines, Statistical Package for the Social Sciences), a computer program. This technique is used to compare events and groups and to understand the relationship between dependent and interdependent variables represented in a data file. IBM SPSS was used to analyze survey data and provides a variety of fundamental statistical capabilities like as frequencies, cross tabulation, and bivariate statistics of the variables needed to respond to the research's main questions about how small towns to integrated rural-urban development.

The results of the key informant interview, focus group discussion, observation, and household questionnaire survey were triangulated and addressed in the research findings. To connect with the people, the findings were displayed in the form of charts, graphs, and bars, among other things, and certain inferences were reached based on those findings.

1.11 Expected outputs

This study will assess about the proper development of small towns that should be integrated development of sub-region in Siraha district. Small towns can play functional role central places, as service centres, as agro-processing centres, as administrative and political centres, as strengthening Food Security Systems as Social, Cultural, and Recreation Centres. Small towns are also focal points for socio-cultural interactions between rural and urban areas. This will help in formulation of plans and policies regarding the small towns for rural-urban development. Similarly, studies in different parts of Nepal are needed to evaluate the various roles of small towns in integrating development of sub-region.

1.12 Schedule

A time schedule for the project to complete a given activity within the time frame provided.

Time schedule for the thesis proposed by university is as below:

| S.N. | Proposed Activities | Months (2079) | | | | |
|------|--------------------------------------|---------------|-------|-----------|-----------|-------|
| | | Jestha | Ashar | Shrawan | Bhadra | Ashoj |
| 1 | Thesis Proposal Submission | 11th | | | | |
| 2 | Presentation of Thesis Proposal | 16th | | | | |
| 3 | Assigning Thesis Supervisor | 18th | | | | |
| 4 | Revised Thesis Proposal Submission | 22th | | | | |
| 5 | Preliminary Thesis Presentation | 29th/30th | | | | |
| 6 | Mid-term Thesis Report Submission | | | 8th/9th | | |
| 7 | Mid-term Thesis Presentation | | | 16th/17th | | |
| 8 | Draft Final Thesis Report Submission | | | | 19th | |
| 9 | Final Thesis Défense | | | | 26th/27th | |
| 10 | Final Thesis Report Submission | | | | | 7th |

2 CHAPTER -II: LITERATURE REVIEW

2.1 Concept of Small Towns

Small towns are referred to as centralized settlements with 5,000 to 20,000 people (Hardoy & Satterthwaite, 1988). Nevertheless, due to differences in population density and economic growth, no single definition is applicable to all countries. Small towns provide access to local and national transportation networks as well as goods and services to the people living in the surrounding areas. The small towns tend to have lower concentrations of public services like schools and health centers, as well as a significant proportion of the employees of a city working in non-agricultural occupations.

In Nepal's hills, where people are scattered, even a central area with less than 5,000 people can be considered as a small town (Bajracharya, 2015). Therefore, for the purposes of the research, it is believed that small towns in the hills are all central places that provide crucial urban functions to the rural hinterland population, such as retail market, administrative support, agricultural commodities facilities, and employment prospects. This would typically include Nepalese hill towns with a population of between 2,000 and 20,000.

The Ministry of Urban Development's 2015 approval of the revised 15-Year Development Plan for Small Towns Water Supply and Sanitation underlines the definition of small towns under Nepal's National Urban Policy, which was established in 2007 and defines small towns within its framework (Pokhrel & Adhikary, 2017). Towns satisfying these criteria include those with a population of 5,000–40,000, a minimum density of 10 people per hectare, continuous access to roads, grid power, and telecommunications, and the possibility for future growth. A total of 176 towns met the requirements for small towns in 2015.

In 2002, the Department of Urban Development and Building Construction had declared 132 small towns in Nepal. The basic requirements for the designation of small towns included the presence of municipal facilities (even though they might not have been designated as municipalities), district headquarters, health post facilities, electricity, telecommunications, higher secondary schools, Banijya banks, post offices, pharmacies, hotels, lodges, and retail stores, among other things and according to planning norms and standard (2013), small towns are those that have a population more than 10,000 and less than 40,000 along with functions

like marketing, retail shop etc. and market Center is defined as having at least 50 shops or outlets within 100 meters of the center(Urban Development, 2013).

2.2 Identification of Small Towns/Market Centre

As a part of an integrated rural development strategy for the hills of Nepal, the Nepalese government, in its successive development plans, has suggested the need to promote small towns in the hills. In its fifth five-year plan (1975-80), the government stressed on developing small towns in appropriate locations in hill and mountain regions "to act as intervening points for migration, development and diffusion of socio-economic activities in the lagging areas of the country". Similarly, the sixth plan (1980-85) reiterated the need to promote deliberate urbanization by promoting the growth of small urban centers and towns in the underdeveloped regions of the country. The eighth plan (1992-97) proposes that "rural-urban linkages will be promoted through the development of small town/market centers"(Bajracharya, 2015).

The Department of Housing and Urban Development (DHUD) is the important institution to study and rank small towns. Therefore, from the beginning of the Eighth Plan, the responsibility of identification was given to DHUD. In March 1994, ICIMOD had already identified the market centers for Kathmandu and the Lalitpur district. The settlement patterns, small towns, and market center in eight hill districts of the Bagmati zone have been researched by C.B. Shrestha and M.S. Manandhar. In June 1994, RHUDO/USAID, New Delhi conducted research and determined the small town/market center for the Dang district of the Mid-Western region.

Despite references to the importance of market centers and small towns in the Eighth Plan (1992-1997), no programs were created to strengthen their roles. Never before in the history of planned development has a deliberate urbanization approach been used to create a strongly interwoven hierarchy of central locations. Up to this point, only municipally-related programs have been involved

in urban development in Nepal. The government can only create Town Development Committees (TDCs) and have the Department of Housing and Urban Development, which is part of the Ministry of Physical Planning and Works, create physical plans for small towns and market centers. Without providing a compelling justification, the number of Town Development Committees had already reached 170 as of the end of Fiscal Year 056/57 B.S.

On the selection criterion of TDCs, there is no functional basis. The functional magnitude, functional array, and population size are all disregarded while selecting the TDCs. Without any other justification, it is being done exclusively for political reasons.

The "Rural Development through Small Town/Market Center Development" concept was initially introduced by HMG/Nepal in the budget speech of 1995. The following objectives were to be fulfilled by the planned physical development of the small towns and market centers that were identified.

- Establishment of socio-economic linkages between the big cities and rest of rural hinterlands,
- Expansion and extension of agricultural inputs such as seeds, fertilizers, insecticides, technology.
- Availability of marketing facilities, bulking and distribution of rural projects,
- Development of essential services in area of health, education, communication and other basic infrastructures.

HMG/Nepal initiated the program "Rural Development through Small Town/Market Centers Development" with the following specific objectives:

- To map and assess the distribution, structure and functional settlement (small town/market centers and bazzars) in terms of infrastructures and accessibility and distribution of population, resource endowment and provision of central service.
- To examine the present role of each existing small towns and market centers and to identify factors influencing/inhibiting their potential growth,
- To develop criteria and bases for identifying small towns and market centers location as priority areas for development,
- To identify and map spatial gaps in the provision of basic services and recommend guidelines at the policy level to address the problem and
- To look at institutional arrangement that could facilitate the growth of small town and market centers in the districts.

The sole authority for implementing out these government initiatives has been given to the Department of Housing and Urban Development. The study on market centers and small towns was carried out by the Central Department of Geography (CDG).

2.3 Three-tiered Governance Structure in Nepal

After the political revolution of 2006 was successful, discussions about federalism and state restructuring became more common, but this desire was not new. The Tarai Congress, a Madhesh-centric political party, had brought up the subject of federalism in 1951, soon following the collapse of Rana rule. The 2015 Constitution of Nepal, which replaced the Interim Constitution of 2007 and established three levels of government such as local, provincial, and federal and defines Nepal as a federal democratic republic. Since the country's most recent democratic election in November 2017, Nepal now has 753 local governments, 7 province governments, and one federal/central government. The 2017 local elections were held 6 metropolitan cities, 11 sub-metropolitan cities, 276 municipalities and 460 rural municipalities. Due to state restructuring, small towns are becoming cities, municipalities, and rural municipalities.

2.4 Hierarchy of Urban Areas in Nepal

The urban areas have been classified into 5 classes based on the population.

Table 1: Hierarchy of urban area in Nepal

| Urban Areas | Population Range | Other Considerations |
|------------------------|---|---|
| Market center | At least 50 shops or outlets within 100 m from the center | Collector street and Local Street, Primary level School, Sub Health Post, Police Post, Hat-bazaar twice a week (open area) Vegetable/ meat market with cold storage facility. |
| Sub-city (Small towns) | 10,000-40,000 | Density greater than 10 people per hectare; less than 50% of adult population involved in agriculture; connected to strategic road networks; basic infrastructure (i.e., grid electricity and IT services, secondary school education and health services). |
| City | 40,000-100,000 | Expressway, Arterial, Sub arterial roads, National grid supply line, Primary, Higher Secondary school, University, District Hospital, Police Post, Police Station, National Airport and market center |
| Sub- Metro City | 100,000 -300,000 | As above, regional level services and commercial offices |

| | | |
|------------|---------------|--|
| Metro City | Above 300,000 | As above, regional level services and commercial offices |
|------------|---------------|--|

Sources: Planning Norms and Standards, 2013

2.5 Small Towns and market center in Terai

On the basis of the district studies, some generalisations can be made regarding the origin and evolution of small towns/market centres and their spatial linkages. The emergence of the small towns and market centres in the Terai began with the extension of the Indian railway network to the Nepalese border in the early decades of the twentieth century. Small market centres were located in areas of population concentration with rich agricultural land in the southern part of the Terai near the Indian railheads well into the 1950s when most of the northern parts of the Terai were covered by forest and vulnerable to malarial infection. These centres acted as the link between the Indian market and the hills. All major urban centres characterise the break-of-bulk points and primary gateways to Nepal. Several small towns and market centre emerged, particularly along the border(Mangal S. Manandhar, Nanda G. Ranjitkar, Bhim P. Subedi, n.d.,1989).

The Terai's agricultural potential could be fully utilized after malaria was eradicated in the middle of the 1950s, which also encouraged migration from the hills. During this time, towns and agriculture spread into previously heavily forested areas. This approach resulted in the growth of a number of villages at key junctions of major trails, motorable roads that served a sizable population, and large agriculture hinterland. Regular "hats" helped these towns, especially those in the eastern and central Terai, gradually develop into small market centers (weekly markets). The presence of several governmental buildings and service organizations also strengthened these centers' ability to do trading and other activities. The extension of the 'hulaki' (postal) road joining the nodal settlements in the central part of the Terai also helped this process.

The Terai had a phenomenal migration from the highlands once malaria was eradicated. The break-of-bulk points moved north due to the subsequent growth of the road system. This was later hastened by the opening of the East-West highway and feeder roads to the hill districts. As a result, the trading prominence of the market centers in the southern Terai decreased, with the exception of large towns. Those who were in a good location continued to operate as small border markets, occasionally taking advantage of the local customers and markets.

Significant alterations to the overall spatial arrangement were brought about by the construction of the East-West highway and its feeder/branch roads. The roadway is connected to around 48% of the 122 small towns and market places that were found in the Terai's eight districts. About 39 market centers are located next to the highway directly, and another 27 are connected to it. Most of the former market towns that were connected to the roadway have grown to be sizable towns. The added benefit of a transportation mode has been realized by centers at the intersection of a feeder/district road and a highway as well as at the major road heads with a large hinterland. These centers still have a high chance of expanding since they provide a wider range of tasks and are made easier to expand due to the alignment of existing roadways and other institutional infrastructure.

2.6 Concepts in Market Centre and Hinterland Relation

2.6.1 Origin and Evolution Market Centre

Studies dealing with the origin of early market towns show environmental (fertile soils and water supply) and social organization to be fundamental factors of their growth. Political power and religion were also cited as the main reasons for the growth of early towns (Pradhan, 1992). Early cities served as centers of power. They arose in areas where the ruling elite controlled the surplus agricultural production sufficient to support the town people as ceremonial complexes made up of temples, shrines, and palaces. Religion served as a strong symbol of unity between urban society and its rural hinterland. The historical relationship between market towns and rural areas has been crucial to internal economic growth, and the emergence of market centers has increased the efficient production and exchange of products by providing access to urban areas to people living in rural areas. The fundamental explanation for the emergence of market centers appears to be economic, trade, which took place across both short and long distances, was the lifeblood of the early market centers. According to the study, the planned resettlement program is a key driver of the growth of market centres, particularly in the recently opened region with agricultural potential in emerging and developing countries.

2.6.2 Market Centre and Hinterland Linkages

The nature of market center and hinterland relation is reflected through the existing linkages and interaction between themselves. There exist various linkages between the market centre and hinterland, which cause interactions and flows between them. This process is the

precondition to establishing a relationship between the market centre and rural region(Pradhan, 1992).

RONDINELLI (1985) has identified seven possible linkages as physical (roads, water transport, railroads ecological interdependencies)); economic (market patterns. flows of raw materials and goods capital and income production linkages such as backward, forward and lateral, and cross-linkages, such as sectoral and interregional commodity flows); technological (irrigation telecommunication and another technological system), population movement (migration and journey to work), social (visiting and kinship patterns, rites, rituals and religious activities, and social group interaction); service delivery (networks of energy, and credit and finance, the delivery system of education, training and extension. and health, service patterns of professional, commercial and technical, and transport service system); and political (structural relationship. government budgetary flows, organization interdependencies, authority-approach supervision patterns inter-jurisdictional transaction patterns and informal political decision chains). This classification of linkages provides a broad framework for the consideration of rural-urban interaction. Various other studies (Preston. Funnel, etc.) have suggested that whatever the types of linkages or interactions, the concepts of linkages, flows and interactions should be considered in relation to the intensity of the problem and the condition of the area under study.

2.6.3 Market centre Approaches to Rural Development

In recent years, the role of small towns and market centres in rural regional development of developing countries has becomes a focal point for discussion .Some of more recent and specific issues on the market center development context have centered around four important interrelated aspects ; decentralized integrated areas development planning; location of rural development services, facilities and infrastructures; linkage between urban and rural areas; marketing of both urban and rural products(Pradhan, 1992). Importance of market centres for rural regional development can be shown by the following extraction from Taylor, (1968) -"the following which village are rapidly emerging as central places are those which have markets in or near them. There is no village, which is growing which does not have a market. There is no large market which does not have a village or very near to it.

There are three schools of thoughts for the logics they developed in a favour or against the role of market centers for the development of rural regions. These are: optimistic group,

pessimistic group and intermediate group. All have forwarded strong points to favour their logics. Optimistic group of scholars are strongly argued in favour of development of small towns and suggest that the idea of urban development in rural context is conceptually as well as empirically highly meaningful and attractive and therefore should be pursued as the large centre are facilitated to bring change drastically in the field of rural development. The most appropriate representative of optimistic view is the UFRD approach of Rondinelli and Ruddle and Urban Development in Rural Context (UDRC) of Baker.

The intermediate views of Hardoy and Satterthwaite, (1986) argue that universal generalization and policy prescriptions concerning small town development are simply not valid since each individual centre has unique characteristic of development.

2.7 Theoretical Concept of Small Towns

Regional development theories seek to explain the locational patterns and function of growth points such as small towns, market centres at the lowest level of urban hierarchy in the rural region.

2.7.1 Central Place Theory

In 1933, Walter Christaller proposed the Central Place Theory, one of the most well-liked ideas that tries to explain the spatial arrangements and distribution of human settlements and their number based on population and distance from another human settlement(Vi et al., 2019).

Christaller submitted in his dissertation, which was titled "The Structure of Settlements in 1933." In spite of the settlements' even distribution, he discovered that they follow a regular pattern. Based on this relationship, he entitled these principles "spatial economic geographical laws" or "the laws of geography of settlements." His theory was based on the study of settlement patterns in southern Germany made by Christaller. In this study, the links between communities of various sizes and the population were analysed in respect to their economic activity.

From a theoretical viewpoint, the Central Place Theory of CHRISTALLER and LOSCH represents the most fundamental concept in understanding the interdependency between urban centers and its surrounding rural hinterland and indicates the spatial considerations of the urban center. The center place studies specify the optimum settlement spacing, estimate

the size of the peri - urban area needed to maintain a town, and attempt to arrange the environment to support human activity. The theory is helpful in determining the relative importance of settlements in relation to all the central functions properly considered, that will help identify the hierarchy of settlements.

Christaller has some assumptions. They are as follows.

- i. A homogeneous plain with an even distribution of natural resources, population, consumer preferences and production techniques for each and every product.
- ii. Human Activities are essentially space utilizing, transport cost, demand functions, and economies of scale will vary from product to product. The spatial range of goods and services produced will also vary.
- iii. Simple basic services (eg. grocery stores) are said to be of low order while specialized services (e.g., universities) are said to be of high order.
- iv. The sphere of influence is the area under influence of the Central Place.

The theory consists of two basic concepts

- i. Threshold population: The minimum population, that is required to bring about the provision of certain good or services,
- ii. Range of goods or services: The average maximum distance people will travel to purchase goods and services

Sizes of Settlements, Communities as per Central Place Theory

Walter Christaller gave a system with five sizes of settlements based on the population. The smallest unit is Ham et which is considered a rural community and the largest unit is Regional Capital.

The rank order of central places in ascending order include:

- i. Hamlet
- ii. Village
- iii. Town
- iv. City
- v. Metropolis

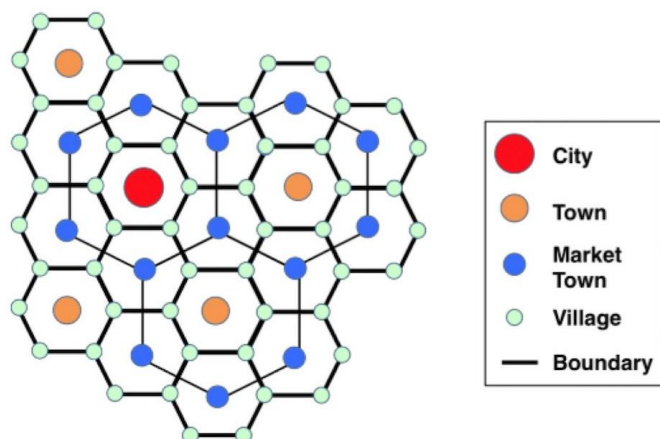


Figure 1:Christaller's Hexagonal Arrangements

The hierarchy of markets and services is typically interconnected, with smaller towns providing services to smaller markets. The distribution of towns can, however, vary from the homogeneity predicted by theory due to border and transport effects.

The three principles in the arrangement of the central places

According to the following principles, which jointly govern how the center place is organized, Christaller observed three alternative configurations for central places.

- i. The marketing principle: $K=3$
- ii. The transportation principle: $K=4$
- iii. The administrative principle: $K=7$

According to the marketing principle: $K = 3$, the market area of a higher-order place(node) occupies 1/3rd of the market area of each of the consecutive lower size place(node) which lies on its neighbour. The corner of the largest hexagon surrounding the high-order settlement is where the lower size nodes (6 in number and second larger circles) are located. In this system, market areas at a certain level of the central place hierarchy are three times bigger than the next lowest one.

According to the transportation principle, central locations are distributed along the major transportation routes. When Central Places are arranged in accordance with the traffic concept, the lower order centers are located at the midway of each side of the hexagon rather than the corner. As a result, the transportation principle results in a hierarchy with a $k=4$ structure and core locations that are nested in fours. Each lower order center is situated halfway along the transport path that links two higher centers. As a result, a network with $k=4$ market areas forms where each order center is shared by three higher orders.

According to the administrative principle, distinct complementary regions would develop as a result of settlement management that was effective. When the value is $k=7$, the lower service centers increase by a factor of seven.

As key drivers of the system of central places in Nepal, JOSHI (1985) outlined a number of factors, including national policy, the location, hierarchy, and accessibility of existing central places, linkages and impulses, and the articulation of the system, as well as the functional dimension of the center and the center's role in national and regional development. Biratnagar

has been recommended as both the growth and planning center for the Eastern Terai Region. It is anticipated that it will strategically connect to other growing sites and centers. In their separate spheres of influence. Lahan has been seen as the connecting points to numerous smaller service hubs. Agriculture and agro-processing businesses, together with other economic infrastructure like power, irrigation, and transportation, have been given primary importance while developing a development strategy for the Terai planning region. It has been suggested that, for a self-sustaining spatial order, the planning regions, sub-regional units, and central places should come first in the resource allocation and investment criterion.

2.7.2 The Core-Periphery Model

John Friedmann developed his core and peripheral model of a region's relationship to its rural and urban areas in 1966. Although urban regions generally have certain advantages over peripheral rural areas, the core-periphery model offers an explanation for why some inner-city neighborhoods experience significant affluence while others exhibit indicators of urban deprivation and poverty. Economic "cores" dominate over periphery not just in the economic sector but also in the political and cultural sectors. The peripheral develops in part due to the core, which is often a metropolitan region, even though it is subordinate to it in terms of social and economic aspects (Klimczuk & Core-, 2019). The relationships between the core and the periphery can be divided into three primary categories. Relationships between the town's core and its surroundings are highly interdependent.

In a primarily agrarian economy of remote rural areas, market towns develop as a hub of exchange for the surplus agricultural products, provide basic necessities and services to its hinterland, and maintain close relationships with its service area and its inhabitants. The hierarchy of centers is entirely disregarded, and this center has parallel or no relationships with other market centers. The high dependent relationship is one-way exploitation of the periphery by the core. The economy became more concentrated at a few areas during the industrial and colonial periods, leading to the development of primates' cities. These centres were highly dependent on their hinterland for their prosperity with little or no contribution to its hinterland. This is characterized by rapid exploitation, one-way flow and no reciprocating and widening disparity between the centre and its periphery. A symbiotic or interdependent relationship is based on interactions that benefit both parties. The functionally interdependent structure of cities, where the center and periphery have complementary reciprocal relationships, is the basis for the assumption of the generative relationship. A network or

mixture of centers and sub-centres must operate together such that the interaction between the core and the peripheral is mutually beneficial. This is not just the responsibility of one core and one periphery.

Friedmann's version is called a "core-periphery four-stage model of regional development" that covers the following stages: pre-industrial, transitional, industrial, and post-industrial. (Klimczuk & Core-, 2019)

Stage 1 (Pre-industrial): The pre-industrial (agricultural) society, which had small-scale settlement patterns and localized economies. Each community is spread out, with activities scattered throughout and limited mobility. The degree of economic growth varies only slightly between spatial entities.

Stage 2 (Transitional): As a result of innovation, capital accumulation, and industrial growth, the economy starts to concentrate in the central city. Location is a major element, but the reality remains that a dominant center forms within an urban system to serve as its development pole. The precise causes of this concentration are frequently not quite evident. Despite the fact that total mobility remained low, trade and mobility grow but within a pattern dominated by the core.

Stage 3 (Industrial): Other growth centers arise as a result of economic expansion and dissemination. The main causes of decentralization are rising input costs in the core area (mostly labor and land). The development of transportation infrastructures and greater linkages between urban system components are related to this dispersion.

Stage 4 (Post-industrial): Spatial disparities are greatly diminished and the urban system is fully integrated. The division of labor and specialization brought about by the distribution of economic activities are linked to congested traffic along high-capacity transportation corridors.

2.7.3 Concept of Agropolitan Model

Another perspective on the spatial development plan of the 1970s is provided by the Agropolitan model created by FRIEDMANN and DOUGLAS in 1978. The significant characteristics of an agropolitan approach include integrated development involving a complete physical and institutional support system and optimal use of local resources; integration of agricultural and non-agricultural activities especially resource-based activities;

and, development of local service centres as an interface with the whole urban, regional and eventually the metropolitan centres(Jusoh, 2011).

In an agropolitan, in addition to local market, economic activity within the agropolis must take into account regional, national, or even global value chains. Here, access to off-farm and non-farm employment and business opportunities are accessible in the agropolis, growth centers, and in certain cases, metropolitan centers where they are within commuting distance. This model rejects the idea of the region as an open system since its main characteristic is the regional growth from an enclosed territorial unit or agropolitan district. In areas where agriculture is the primary source of income, this is essentially a fundamental need strategy for territorial development through a bottom-up planning process. Its key argument is that an agropolitan approach for regional growth can satisfy the needs of nearly autonomous, self-sufficient rural development. The two basic features of this strategy are to minimize rural-urban distortions by establishing rural-urban linkages on an equal, symbiotic basis at smaller territorial scales of interaction, and to prevent the leakage of created wealth by closing off certain territorial areas. The planning process is emphasized in the model as having a high degree of self-sufficiency in decision-making, as well as massive public participation and cooperative action at local levels. It is anticipated that this will encourage both agricultural and non-agricultural activities, with a focus on the development of small-scale rural industrialization and the use and assessment of regional resources and technologies. The model seems to fit well in explaining the existing situation of the hinterland of the Siraha district despite its idealistic assumption of a closed region, and as a result, its recommendations are highly relevant for the purpose of this research.

2.7.4 Urban Functions in Rural Development (UFRD) Model

The Urban Function in Rural Development Strategy is also known as the "Transformational Development Strategy" This approach believes that the failure of highly polarized settlement systems is partly attributed to the lack of an adequately integrated system of settlements through which innovation and economic growth could be diffused(D. Rondinelli & Ruddle, 1979). As a result, this theory suggests that small towns should be included in a hierarchy of urban centers, intermediate cities, small towns, and villages that is spatially and functionally interlinked.

UFRD methodology for analyzing market towns was developed for USAID during 1970s and modified in the 1980s. It has been tested in pilot projects in the Philippines and Bolivia. The UFRD methodology was also tried in Africa and Latin America. Applied methods of regional analysis, such as the Research Triangle Institute's "Urban Functions in Rural Development" (UFRD) approach, can identify the market towns that perform important production and support functions and indicate their investment needs(D. A. Rondinelli, 1990).

This approach is supported by research that indicates urban centers, such as market towns, rural service centers, and intermediate cities, as well as the services, facilities, infrastructure, and productive activities located there, can play significant roles in supporting rural development. The physical framework for rural and regional economic growth can be provided by towns and cities that serve as agricultural markets, offer basic social services and public amenities to rural residents, and are connected to other towns and cities as well as to the rural areas surrounding them.

Urban Functions in Rural Development (UFRD) strategies must be implemented in response to major objectives.

- In order to reduce time, effort, and cost for effective facility utilization, it is important to ensure that central facilities are distributed optimally throughout the regional central place system,
- To establish a symbiotic relationship between the center and its surroundings.

2.7.5 Integrated Rural Development Program

During the 1980s, several developing countries adopted the 'Integrated Rural Development Program' (IRDP) as the strategy for the rural regional development model. The integrated rural development plan integrates sectoral plans with general settlement plans through adequate: infrastructural linkages. The development process, which is selective, tends to propagate outside the growth centres with varying intensities depending upon the circumstances. These circumstances are called 'infrastructure'(Pradhan, 1992). The radiation of development impulses from growth centres to other settlements takes far too long a time in the absence of a good transportation network and communication channels. In the absence of such spatial-organisational flows, the development process is not able to gain full cycle and becomes obstructed at various points. The removal of the choking points is of great

importance in planning so that the successive waves of innovation may travel fast enough to modernize the rural areas.

The integrated rural growth requires services such as health, education, marketing, transportation and communication and other institutions in the area. This necessitates organizational and socialization of the process of production. It forms only a link in the chain of the functional hierarchy of areas, where the urban centres perform a wide range of services and functions (economic, social, administrative, cultural and recreational) and have mutually dependent relationships. In rural planning, where the problem is one of providing an efficient organization of economic and service functions for the community, these concepts are of great value. The identification and deliberate promotion of these rural communities not only fits in well with the concept of integrated area planning but also provides a strategy for the distribution of services and amenities in a situation of scarce resources.

This is the most common approach currently practiced in most developing countries. Though the content and focus of IRDP vary from country to country, the basic objective of this approach is to alleviate rural poverty by strengthening the rural economy both in agriculture and non-agriculture sectors through a number of spatial and sectoral development programs. However, evaluation studies carried out in those countries indicate that this approach also has appeared likewise to have little impact on the improvement of the living conditions of mass rural people who have limited benefits. It thus becomes difficult to think to reduce the gap between urban and rural areas in a short span of time. As the phenomenon of bringing balanced urban-rural development is a complex one, the concepts and strategies evolved and practiced so far in different countries are neither adequate nor appropriate to some extent and therefore it is strongly desired further to carry out intensive research on various issues of urban-rural relations and the desired results might lead to offer some important solutions.

2.8 Role and Function of Small Towns

The role of small towns in rural regional development in developing countries has become a focal point of discussion. Some of the more recent and specific issues in small market town development in rural contexts have focused on four important and interrelated aspects. They are:

- i. Decentralized integrated area development planning
- ii. Location of development facilities and infrastructure.
- iii. Urban and rural areas linkages and
- iv. Marketing of urban and rural products

The research literature on small towns, however, reveals that there is disagreement on the findings of the studies. Some believe that the development of market towns is vital for the development of the rural hinterland and that the idea of urban development in rural environments is very relevant and appealing from both a philosophical and empirical standpoint. These academics can be categorized as an optimistic group. Others dispute it and claim that small towns can't support rural development. They grow at the expense of taking advantage of the hinterland's resources. These academics belong to the pessimists' group. Some academics argue that small market towns have diverse potentialities and that their roles and functions vary from region to region, falling somewhere between these two extremes. Some of them will help in rural development if their potential is carefully evaluated. The intermediate category includes these authors. According to scholars who hold an optimistic perspective, small market towns have the following effects on rural development,

- a. Symbiotic relationships
- b. Increased productivity in agriculture
- c. Strategies for marketing rural productivity
- d. Functioning as a barrier to the by-pass and dominant impacts of large centers
- e. Functioning as centers for rural production and transformation process

The role of small towns in rural development within the context of an area with hilly terrain, serve resource constraints and ethnic diversity. He focused on three primary functions of such a town: (a) as market centers, (b) as employment centers and (c) as service centers(Bajracharya, 2015).

2.8.1 The Small Town as Marketing Center for Goods and Services in Rural Areas

Small towns are typically explained as centers for providing goods and services from larger metropolitan centers and as local markets or gathering locations for the agricultural produce of nearby farmers. Studies done in the Serayu Valley Region in Indonesia show that the rural small town has become primarily a market for the purchase of urban consumer goods rather

than for the selling of rural produce(Bajracharya, 2015). Small towns used to provide an essential collecting function, but that role is gradually disappearing.

Studies conducted in Malaysia (1979), Thailand (1979), and Tanzania (in Funnell, 1976) all reach similar conclusions about the significance of small towns as centers for the distribution of metropolitan consumer products. On the other side, rural product totally bypasses small towns and is sold directly to larger cities from the rural areas (Bajracharya, 2015). Although the majority of these studies suggest that small towns serve primarily as markets for urban consumer goods, there are a few examples of small and intermediate urban centers that prospered as a result of becoming the sites of producer and consumer services as well as processing industries linked to higher income from agricultural produce.

Market towns are the main locations where rural residents may sell their produce and make a living. It serves as their initial point of contact with the world market. From these regional market centers to global marketplaces, there may be a network of hierarchical market linkages. They act as the links between the rural traders and the middlemen or urban traders(Sietchiping et al., 2014). Rural farmers can sell their goods, acquire services and new technologies, and get inputs through a system of integrated market centers, all while learning about shifting consumer wants. Farmers can access a variety of processed commodities and services at market centers, while customers can access a wide range of items. These small and middle-sized towns provide rural residents a chance to grow from the bottom up. The growth of local small and medium-sized businesses or the establishment of branches of major private companies can both improve their involvement in the economic development of rural areas.

2.8.2 The Role of Small Towns in Rural Areas as a Source of Industrial and Other Non-Farm Employment

Small towns are seen as possible areas for industrial and other non-farm investments to minimize congestion and diseconomies in the large cities(Bajracharya, 2015). Small cities have the ability to serve as areas where migration flows can be redirected away from large cities if they generate enough employment. Small town development can accommodate a segment of the growing labor force that is unable to work in agriculture and can thus play an important role in a labor employment plan in developing countries. Small towns provide

feasible locations for future human resource expansion without having a materially negative impact on society or the national economy.

Studies of small towns in Pakistan, Tanzania, Kenya, Sudan, Malaysia, Thailand, Bolivia, and Peru revealed that there are few job possibilities outside of small manufacturing enterprises in these places. They cannot, therefore, divert migration to other, larger centers. In India's small towns, where there are only a few retail and service businesses that provide a limited number of jobs, a similar situation might be seen. Small towns play a more significant role as commercial service centers than as industrial Centers.

2.8.3 The Small Town as a Center for Provision of Urban Services to Rural Areas

Small towns are considered appropriate locations for concentrating various public services (such as health, education and agricultural development facilities) for the surrounding rural population (Bajracharya, 2015). These urban centers have a population density that is at least sufficient to increase the effectiveness of such services. Small towns are justified by the fact that they give access to the agricultural inputs and other services that are required for the expansion of the agricultural industry in many developing countries.

However, various empirical studies disprove these assumptions. In terms of social services, research by Utis Kaothien (1979) on small towns in Thailand and by Preston (1978) in highland Bolivia shows that urban residents of the towns themselves use the educational, health, and agricultural credit facilities provided in the towns more frequently than farmers in the rural hinterland. Similar to this, King and Portais talk about how using hospital and educational institutions in Uganda's small towns has significant distance-decay consequences.

Provision of services to rural communities becomes more cost effective if located in a concentrated central location (Sietchiping et al., 2014). Small and medium-sized towns play a crucial role as hubs for the distribution of products and services to rural communities. In settlements that are dispersed widely, it minimizes the amount of money invested in infrastructure projects like building roads and markets. The provision of these services can be done more affordably and effectively in dense, compact populations. Water, sanitation, health, and education fall under this category of services.

2.9 Concept of Integrated Development Planning

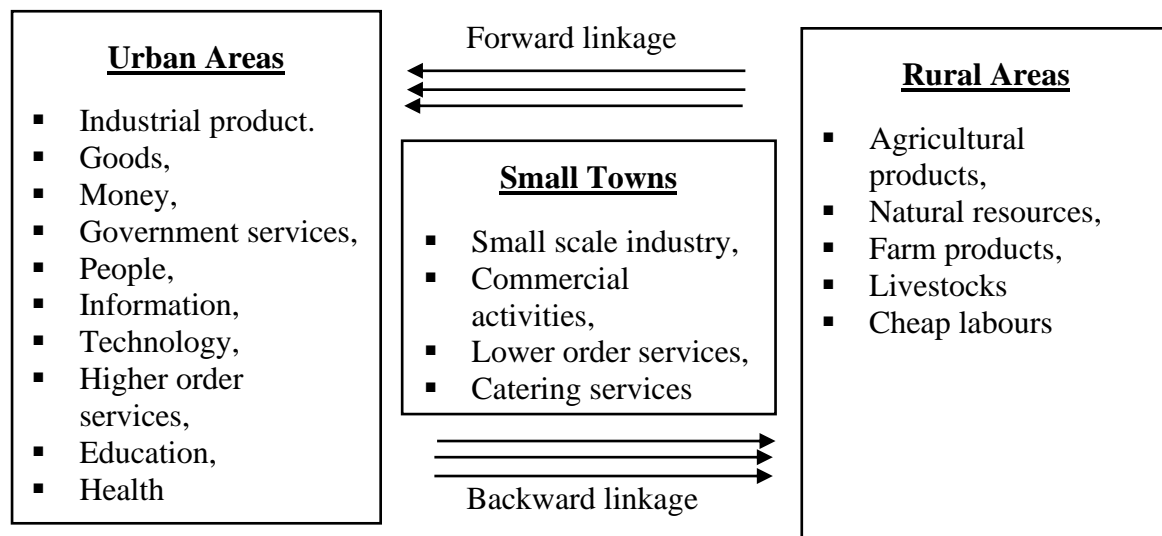
Integrated development planning is a method of planning that incorporates the entire municipality and its residents in identifying the best options for achieving sustainable development (Etu.org.za, 2015). A super plan for a region that provides a broad framework for development is called an integrated development plan. It tries to coordinate the efforts of local and other sectors of government into a comprehensive strategy to enhance the standard of living for everyone residing in a region. It should consider the circumstances, issues, and resources accessible for development. The whole economic and social growth of the region should be considered in the strategy. It must establish guidelines for how land should be utilized, what facilities and services are required, and how the environment need to be safeguarded.

Using the intersectoral or interdisciplinary planning mechanism, more commonly referred to as integrated development planning, is one method that the new approach to development planning might be addressed. IDP generally has two common approaches: top-down and bottom-up. It makes sense that bottom-up planning has become more popular in response to top-down approach. While the realities have repeatedly and forcefully shown that top-down designs created in far-off national capitals are unable to understand the breadth and depth of local-level conditions, bottom-up planners maintain that the local level is the only one that can determine what development priorities should be prioritized, and that local level activities should be provided to grass-roots leadership. However, because the bottom-up strategy might not consider national realities, a comprehensive set of coherent development planning system is required to produce the new integrated concept of development, where development strategies are "hybrid" rather than "top-down" or "bottom-up." The hybrid approach seems to be extremely suitable in the context of Siraha for Integrated Development.

2.10 Backward and Forward Linkage

Through socially, economically, and through various functional activities, the road networks link the town center and the hinterlands' important growth centers. By fostering flows and interdependencies, it shapes the urban to rural continuum. There is the sectoral flow, which includes the movement of agricultural products from rural to urban and peri-urban areas as well as the movement of goods from urban manufacturing areas to more rural areas, and there

is the spatial flow, which includes the movement of people, goods, money (in the form of remittances), technology, knowledge, information, and waste.



2.11 Nepalese Research Experience on Small Towns

The new era conducted a study of the three hill towns and a Terai town in the western region of Nepal (New Era, 1989). The study pointed out the general characteristics of the hill towns that they acted merely as distribution points for agricultural and industrial products from Terai towns and India. The study found out that the hill towns have a weak industrial base and generally few employment opportunities. The Terai town (Butwal) is comparatively in a better position than the hill towns because of well transportation linkage to other cities, higher agricultural productivity and a larger potential for supporting agro-processing industries.

CEDA'S report on " Inter and Intra Regional Flows in Nepal - 1989 " is the first comprehensive study on the status of all major towns (the then 33 municipalities and 18 market towns of non-municipal status). The study covers the towns of different ecological zones. The towns have been classified in five hierarchical orders based on the number, type and range of functional units (business, industry, institutions). The Terai towns are in the upper tier while the hill towns fall in the lower hierarchical level.

The workshop on " Market Towns and Rural Development Assessment organized by MPPW in association with Abt Associates Inc. Cambridge Mass, USA basically focused on providing analytical methods that feature economic criteria for developing market town and

their hinterlands and rationalizing service center locations and priorities. The 1990 workshop identified the following reasons needed to focus on market towns in rural development programs:

- Market towns are an important link in the food system,
- Market towns are centres of off-farm employment,
- Market towns are neglected in public sector investment programs,
- Market towns are poorly administered,
- Poor administrative performance is often accompanied by wasted resources,
- Market towns are not mobilizing resources as they might, and
- Businesses in market towns are not as productive.

The workshop provided guidelines for market town assessment. It suggests the following three main steps in the identification of the market town program.

- Finalization of the objectives of the program,
- Selection of towns and regions (key areas of investigation).
- Identification of development activities.

B.N. Bajracharya's doctoral dissertation on Small Town and Rural Development: a study of urban-rural relation in the hill region of Nepal, 1994 " has made a case study of Banepa considering the relation with its hinterland villages. The study focused on the importance of small towns for rural development. It has attempted to investigate the nature of the urban-rural linkage between a small town and its hinterland villages. It has addressed the three major rural development functions:

- Acting as market center,
- Creating industrial and other off-farm employment, and
- Providing urban services

Shrestha C.B. and Manandhar M.S. have made a study on " The Settlement System, Small Towns and Market Centers in the Bagmati Zone Sub-Region 1994" covering eight hill districts of the Bagmati zone. The study focused basically on the assessment of the structure, function and role of market towns. It pointed out that though these small towns and market centers have been playing a significant role in the growth of local, regional and national

output by providing technical know-how, distributing inputs, imparting training and facilitating the market activities, there are still gaps in terms of the development of off-farm employment and the provision of social services.

A paper titled "Market and Small Towns in the Hindu Kush Himalayas Perspectives and issues" by Sharma Pitamber in 1998 presented at the Regional Consultation Meeting in the Hindu Kush Himalayas reveals that in regions with predominantly subsistent economics (for example in much of Bhutan, Nepal and remote parts of Utter Pradesh hills and Himachal Pradesh, much of the northern part of Pakistan), the state of market centres and small towns are characterized by inaccessibility, low level of marketing interaction and weak trade linkages between rural areas and towns.

Pradhan P. on his study titled "Market Centers and Rural Development in Chitwan district-1992" focuses mainly on the growth of market centres in the context of agricultural development and their economic and functional base, the sphere of influence, spatial linkages, socioeconomic dimensions, and extent of their social changes. Identification of potential market centers as rural service centers, interaction and flow of both farm and household's commodities, the hinterland's resources, the customer's behavior and linkage pattern between rural and urban centers in order to provide suggestions for effective policy-making in rural regional development are of direct relevance to this case study.

The doctoral dissertation on "Market Center and Hinterland Relation in Lalitpur district Nepal-1998" of Puskar Pradhan addresses the linkages between the market centers and the hinterland rural settlements. The historical process, environmental base, hinterland activities and functional base are the main potentials for Market Center Development. The study also highlighted the theoretical concepts of central place system, gateway model, land use model, and spatial development model with growth pole theory, agropolitan model and integrated rural development program in the market center and hinterland relation.

Central Department of Geography T.U. made a study on the identification of district-level potential Town / Market centers and their development in Chitwan district for the Department of Housing and Urban Development, Ministry of Physical Planning and Works in 1997. The study mainly focused on identifying the 21 districts level market centers and categorizing

them in the hierarchical order on the functional magnitude, functional array and population size.

"Regional Market Linkage Study for Bharatpur Market Region " prepared by DEPROSC-Nepal for RUPP / UNDP in January 1998 identifies the market centers within the Bharatpur region. The study identified 12 market centers within this region out of which four are of non-municipal status. For the identification of market centers the following basic considerations are dealt in detail:

- Existence of direct and indirect flow of man, money and material,
- Marketing functions provided/undertaken,
- Existence of trade linkages (direct/indirect),
- Linked with road network and transportation facilities, and
- Provision of direct input and output marketing functions.

The main issues identified by the study on Rural-Urban Linkages were:

- Existing socio-economic linkage,
- Role of development initiatives,
- Distributional equity and
- Backward and forward linkages on growth and development.

2.12 Small Town Planning Policies and Programs in Nepal

2.12.1 Policies

The development planning practices have been initiated in Nepal just from 1955 A.D. The first three development plans basically did not address all the regional town planning approaches. After one and half decades of planned development, for the first time, the fourth five-year plan (1970-1975) introduced the regional planning approach of the country. Growth corridors were identified following the previous trade routes. Growth centers were recognized along the axes running in north-south directions. The whole country was divided into five development regions with a regional center functioning as an administrative and commercial center of that in that region. Thus, Dhankuta, Kathmandu, Pokhara, Surkhet and Dipayal were recognized as the regional centers of eastern, central, western, mid-western and far-western development regions respectively. The approach was based on the concept of growth axis,

which was a series of north-south development corridors linking diverse ecological zones (Mountains, Hill and Terai). The objective was to permit economic viability and generate an interregional exchange of goods and services through the development corridors.

The fifth five-year plan (1975-1980) emphasized more on Small Area Development Program (SADP) which completely replaced the growth axis strategy of development. Identification of the small town/market center along the growth axis to create a hierarchy of large and small growth centers was also mentioned. The introduction of nine "Service Centers" in each district was another interesting program envisaged in the fifth plan period under the Integrated Panchayat Development Design (IPDD) in 1978. The nine service centers in each district were supposed to provide administrative services, provision of technical inputs and other essential services to the people of the Ilakas (Hinterland of the service area).

The Sixth Development Plan (1980-1985) commenced after the end of the fifth plan and it emphasized the Integrated Rural Development Program (IRDP) through the people's participation in rural development. Several IRD programs were introduced throughout the country during this plan period. However, many IRDP projects lacked an urban component for the villagers to market agricultural products and provide off-farm employment.

The Seventh five-year plan (1985-1990) came out with a policy of urban development as complementary to rural development. It was envisaged to develop three tiers of urban hierarchy: regional level; sub-regional level (Terai, Hill and Mountain areas of each development region) and service center level (district level). The Decentralization ACT 1982/83 was promulgated. The focus was given to establishing nine service centers in each district. The objectives of the Decentralization ACT 1982/83 were as:

- Strengthening local development efforts,
- Mobilizing people's participation,
- Mobilizing local resources,
- Identifying local bodies for the above objectives with clearly specified their rights and duties.
- To encourage small-scale industries and tourism in rural areas,

- To generate employment opportunities through the increased investment in the development and construction activities.

Regional Balance and Spatial Area Development Plan (SADP) were the main components of the development thrust for the regional development and investment with people's participation in the backward areas. Formulation and implementation of regional development plans will be carried out for balancing the utilization of different resources and for the implementation of development programs according to the geographical endowment of the regions.

Compact Settlement development for the remote hill areas has been emphasized under the Human Settlement and Urban Development Section. The use of local construction materials, female participation and the results of building research have to be brought into practice for publicity. Very little budget has been allocated to identify the small towns and to study the rural-urban linkages.

2.12.2 Programs

His Majesty's Government of Nepal for the first time put together the program "Development of Nepal through Small Town Development" in 1995. The development programs related to small town planning practices in Nepal are enlisted below:

2.12.2.1 Rural Development Through Small Town Development

The program called "Rural Development through Small Town/Market Center Development" was launched under the active initiation of NPC. This is only a technical study and it is not implementation-oriented. The Department of Housing and Urban Development has the sole authority for this program. However, this study is not comprehensive in terms of understanding the nature of the relationship between the small towns and rural hinterlands and one of the main reasons is the limitation of financial resources.

2.12.2.2 Rural-Urban Partnership Programs (RUPP)

The Rural-Urban Partnership Program (RUPP) came into operation on 7, September 1997 as a joint effort of the HMG/Nepal-National Planning Commission (NPC), Ministry of Local Development (MLD), and the United Nations Center for Human Settlement (UNCHS). It is an urban-based Local Development Program, which intends to focus its activities on enhancing management capabilities at the municipality, VDC and community level, currently

in 12 municipalities and 28 rural market centers for institutionalizing strong socio-economic linkages amongst the urban centers, rural market centers and villages. The program is intended to work in the market region of three development regions: eastern, central and mid-western. At present, outside Kathmandu, the project offices are stationed at Biratnagar, Bharatpur, Pokhara and Nepalgunj. It is still in the learning process. The goal of the program is to improve the livelihoods of poor and disadvantaged people by creating enabling environment for them to take advantage of the social and economic development opportunities that can be obtained through strengthened rural-urban linkages. However, this program's conceptualization is an absent elaboration on how rural-urban partnership would exit. It is providing small credits for rural and urban communities to develop entrepreneurship.

According to the agreement, the program ends in December 2001. It may face difficulties in realizing the government ownership after the termination of the program since it is a directly executed program by UNDP without the involvement of the HMG/N counterpart at the implementation level.

2.13 Case study on the role of small and intermediate towns in regional development: A case of India

2.13.1 Introduction

This research study was conducted in the region of India and focused on the function of small and intermediate towns. Raebareli, Sultanpur, and Pratapgarh are the three administrative districts in Uttar Pradesh. In 2017, Harikesh N. Misra and Ashutosh Mishra from the Geography Department at the University of Allahabad in India conducted the study. The case area is comparable to the example of Siraha district, where political influence is concentrated and a number of development techniques have been applied in the past. Another similarity is that agriculture and animal husbandry are the main sources of income for most people in the case area as well (Misra & Mishra, 2017). The study comes to the conclusion that by promoting the infrastructure facilities in potential villages, the pace of development can be accelerated. It has been hypothesized that small and medium-sized towns contribute significantly to the socioeconomic change of regional regions through the dissemination of innovations, but that villages, with their superior infrastructure and services, play a vital role in this diffusion process.

2.13.2 Means and Methods

The study's primary focus was on how development was organized around towns in India at the level of subdistrict planning units to support rural development. The information was gathered from secondary sources for 62 blocks across three districts, and development scores were produced using the Z score method. The following variables were used to measure development in the study area:

- a. Percent main workers
- b. Percent female literacy
- c. Metalled road per thousand sq. km. area
- d. Primary health centre on per lakh (hundred thousand) population
- e. Intermediate college per lakh population
- f. Commercial bank per lakh population
- g. Cropping intensity and fertilizer consumption per hectare of gross sown area

2.13.3 Findings and Discussions

According to the correlation matrix between the development scores and the variables shown in the table below, the development score is significantly correlated with metaled roads ($r=0.55$), female literacy ($r=0.54$), fertilizer consumption ($r=0.45$), main workers (-0.35), primary health centers ($r=0.34$), and schools ($r=0.30$). Blacktopped roads, female literacy, fertilizer use in agricultural production, the availability of labor, primary healthcare facilities, and educational facilities (secondary schools) were the main factors in this scenario that significantly influenced development.

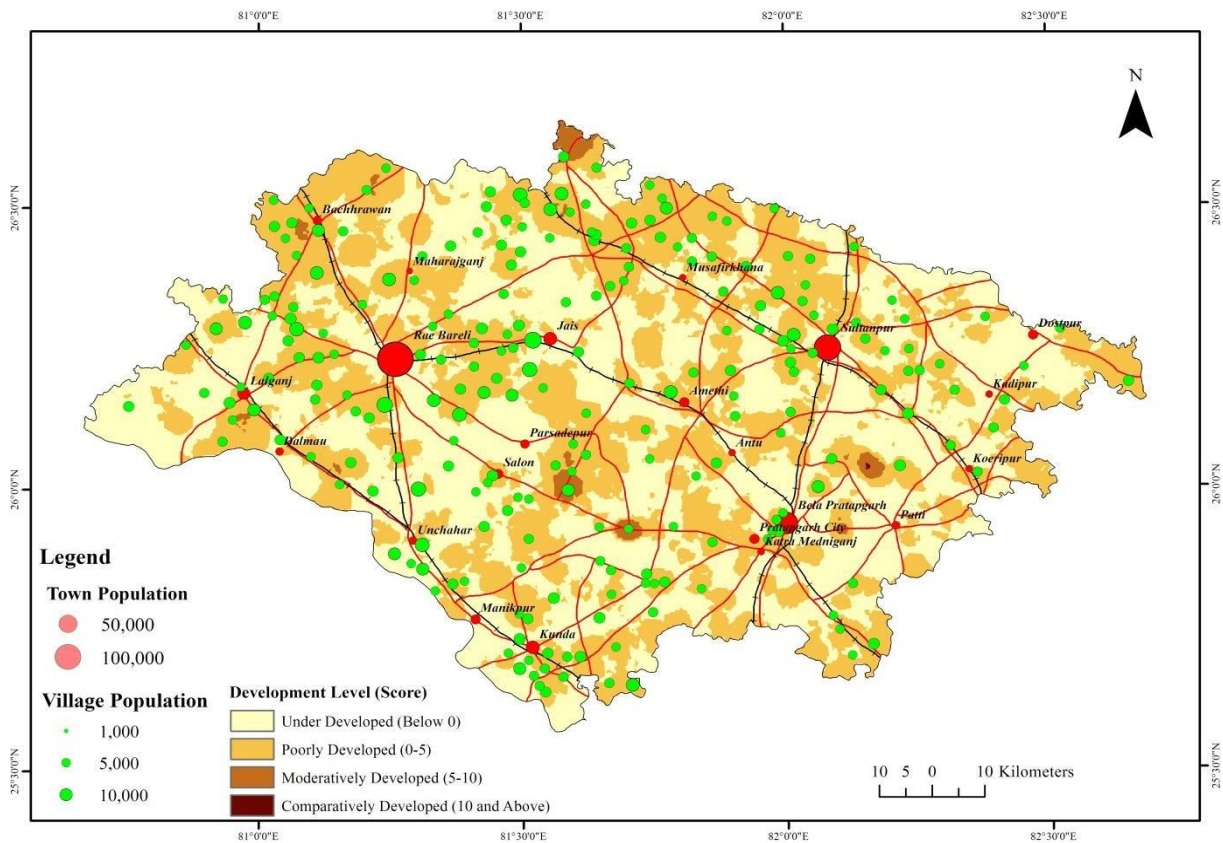
Table 2: Correlation matrix between variables and the development score (Source: Mishra & Mishra, 2017)

| Correlation | Percent main workers | Percent female literacy | Metaled road per thousand sq. Kk. area | PHC on per lakh population | Inter college per lakh population | Commercial bank per lakh population | Cropping Intensity | Fertilizer consumption in kg. Per hectare grass sown area | Development score |
|--|-----------------------------|--------------------------------|---|-----------------------------------|--|--|---------------------------|--|--------------------------|
| Percent main workers | 1 | | | | | | | | |
| Percent female literacy | .45** | 1 | | | | | | | |
| Metaled road per thousand sq. km. area | -0.05 | 0.13 | 1 | | | | | | |
| PHC on per lakh population | 0.22 | 0.21 | 0.11 | 1 | | | | | |
| Inter college per lakh population | -.31* | 0.13 | 0.15 | -.25* | 1 | | | | |
| Commercial bank per lakh population | -0.12 | -0.12 | -0.03 | -0.10 | 0.07 | 1 | | | |
| Cropping intensity | 0.05 | -0.15 | -0.16 | -0.18 | -0.24 | -0.07 | 1 | | |
| Fertilizer consumption in kg. per hectare grass sown area | -.25* | -0.13 | .42** | -0.05 | .29* | 0.06 | -0.07 | 1 | |
| Development score | .35** | .54** | .55** | .34** | .30* | 0.24 | 0.06 | .45** | 1 |

** Significant at 99% confidence

* Significant at 95% confidence

Figure 2: Rural urban linkages between towns and villages and regional development



Source: Mishra and Misha, 2017

2.13.4 Conclusions

Connectivity, or better road infrastructure to rural areas and linkages to small and intermediate towns, has a substantial impact on the development of towns and villages. Development is greatly facilitated by women's literacy rates and information exchange. Another important component in the development of numerous people is agricultural productivity. Although not as significant as road connectivity, literacy, and agricultural productivity, the availability of a work force, educational opportunities, and health care services in intermediate towns plays a role in growth. Because of a better flow of infrastructure, districts with larger towns are more developed than those with small towns. In comparison to villages that are far from major towns, those that are closer to them have more development.

3 CHAPTER-III: RESEARCH METHODOLOGY

Both primary and secondary data have been gathered in order to conduct the research according to the objectives and research topic. For the integrated development of the sub-region in Siraha district, there is a lack of knowledge and literature regarding small towns. The following technique has been used to carry out the research since qualitative information needs to be obtained.

3.1 Literature Review

Here, relevant literature on small towns and rural-urban relations is examined from the university library, the internet, books, journals, and other libraries. Study is done on various base maps and land use maps. The literature review provides the fundamental concept required to conduct the research study. Numerous national and international studies are currently being conducted on the topic of small towns development. It developed the theory that applied to the research study.

3.2 Methods of Data Collection

The study is based on both primary and secondary sources of information. However, the study heavily depends on primary data, which served as a guide for the research that led to the findings and conclusions.

3.2.1 Small Towns/Market Centres Identification

According to Planning Norms and Standards, 2013, an inventory of small towns/market centers in the Siraha district has been identified. To collect information about small towns/markets centers, key informants including consumers and shop keepers were interviewed.

3.2.2 Primary Data Collection

To collect the primary data different methodologies have been used and they are as follows:

3.2.2.1 Observations

An observation study was carried out to find out the backward and forward linkage of market centres and their hinterlands. During the survey, photographs were taken for the study of the real situation of the town. The weekly haat of main market center in Siraha was observed to monitor the sales of goods, mainly merchandise from the villages.

3.2.2.2 Questionnaire Survey and Interviews

To find out the forward and backward linkages of small towns/market centers and their hinterlands in the Siraha district, a sample survey method has been adopted. The customer and trader/shopkeepers in 8 municipality and 9 rural-municipality in siraha district are separately questioned to find the forward and backward linkage between the market centres and their surroundings village. The questionnaire



form was compiled and analyzed from MS excel and SPSS software programs, Interview method has been adopted to find out the backward and forward linkage of the market center and their hinterlands and also the respondent opinion about the problems they encounter along with their future prospect of the town. In order to meet the set objective of the study, the interview questionnaire was prepared accordingly. The sample size for the research area is estimated to be around 384 based on a 95 percent confidence level and a 5-point confidence interval with a population of 637,328. But with the time limitation, altogether 233 people were interviewed with 119 from traders or shopkeepers and 114 from customers/farmers from different parts of the main market centre and their hinterlands area of the district. The range of interviewers varies from farmers, businessmen, teachers, servicemen and professionals whose responses are tabulated and used to meet the present prospect of the study.

Table 3: Sample size of customers and traders/shopkeepers

| S.N. | Respondents | Numbers |
|------|---------------------|---------|
| 1 | Customers | 114 |
| 2 | Traders/shopkeepers | 119 |
| | Total | 233 |

3.2.2.3 Discussions

The discussion was carried out with older men, technical experts, businessmen, customers, visitors, teachers, locals and migrants in individual and groups. Their suggestions were also incorporated even though some comments made were beyond the scope of this study.

3.2.3 Secondary Data Collection

Secondary data have been collected from different sources from the published books on official records, libraries, CBS, line agencies, government policies, journals, maps, related reports and newspapers. The sources of the data were duplicated and the sources were quoted and accredited. Former related reports from DDC, DUDBC, ICIMOD, line agencies, libraries were collected.

3.3 Research Strategy

Table 4: Research Strategy for the analysis of small towns: A Siraha district

| Area of Interest | Information Elements | Data Collection Technique | Source of Data | Purpose of Study |
|--|--|---|---|--|
| Identification of Small towns/Market center | Population of Small towns /Market center | | CBS, DUDBC reports | To identify small towns |
| People's Linkages analysis | Flows of people | Checklists, Interview | CBS, Population monographs, PCO office of district, | |
| | | | | To identify which small towns, have more flow of people |
| Physical linkages Analysis (Accessibility) | Modes of transport, routes of transport | Field visit, observation, Interview | Maps, DDC reports, | To identify the modes of transport use for small towns |
| | | | | To identify the routes of transport use for small towns |
| Social linkages (Health and Education) | Number of school and hospital | Field visit, observation, Interview | CBS, DDC reports | To identify which small towns, have more flow of people for education and health purpose |
| Economic linkages | Imports and exports of goods, | Field visit, observation, Interview, Checklist, | CBS, DDC reports, Questionnaire surveys, Field | To identify the imports of goods from other places to the district (clothes, |
| | Types of goods | | | |

| | | | | |
|--|--|-----------------------|---------|--|
| | Resource potential of the district | Questionnaire surveys | surveys | groceries, construction materials, petroleum products |
| | Commercial activities (Whole seller, Retailing, Catering) | | | To identify the exports of goods from towns of the district to various places (Food grains, fisheries, horticulture, dairy products) |
| | Industrial Activities (Small industry/Mills, Bakery factory, Poultry farm) | | | |
| | Institutional Activities (bank, schools, hospitals, communication, police station) | | | |

3.4 Data Compilation and Presentation

The collected data is compiled using different data compiling and analyzing tools like MS excel and SPSS. The outputs are presented in the form of graphs, charts, tables and figures etc as required.

3.5 Data Interpretation and Analysis

The collected data is analyzed as qualitative and quantitative. Quantitative analysis was done as a statistical analysis of various variables and their interrelation using statistical MS excel and software SPSS. The theoretical aspect that the data gathered in the process of transformation revealed is included in the qualitative analysis.

3.6 Conclusion and Recommendation

After quantitative and qualitative analysis and synthesized conclusions are drawn out possible ways to incorporate development along with the conservation of traditional activities will be raised in the analysis part will be studied in detail. The final outcome of the research will be presented in form of guidelines and suggestions incorporating the planning and developmental aspects of the area.

4 CHAPTER-IV: PROFILE OF STUDY AREA

The development and spatial distribution of small towns/market center can be described with respect to physical, social, economic and ethnic features of the sub-region. So, the following general description of the district provides framework for explanation of small towns/market center.

4.1 General Information

Sihara is located in Nepal's terai region. The district, which has Siraha as its administrative center, has a total area of 1,188 km². A 2011 census found that there are 637,328 people living there. The districts of Saptari on the East, Dhanusha on the West, Udhayapur on the North, and Madhubani in India on the South border the district. The average length and breadth of the district is 29.9km (East-West) and 42.4km (North-South) respectively. In this district, the main highway runs about 43 km. from the Balan river in the east and the Kamala River in the west. Siraha is highly populated with the people belonging to the Madhesi, Tharu and Muslims communities.

There are 17 main market towns in the district such as Siraha, Mader, Bariyarpatti, Bagwanpur, Bishnupur, Kalyanpur, Mirchaiya, Golbazaar, Choharba, Dhangadhimai, Sukhipur, Thadi, Lahan and Bandipur and acts as marketing and collecting point for local produce, education, business and administration works and also provide agricultural inputs. The main trade items were cloth and agricultural products. Lahan, Dhangadhimai, Golbazar, Mirchaiya and Siraha are the main market towns in Siraha district and these market towns helps to integrated development of district.

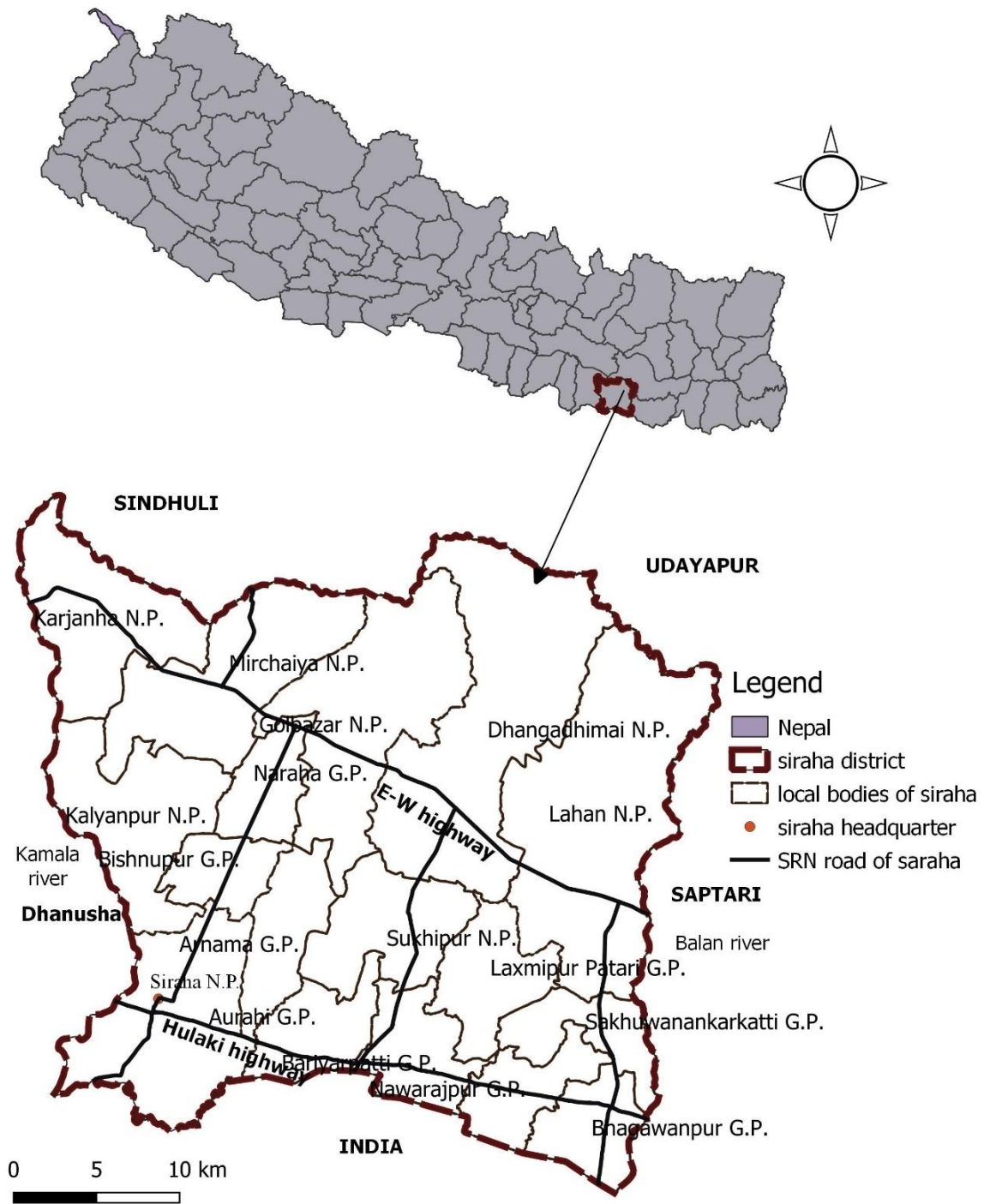


Figure 3: Locational map of Siraha district

4.2 Topography

The elevation in the district ranges from 76km to 887km from mean sea level. Siraha district can be divided into two kinds of topography.

Table 5:Topographical Distribution and Land Use (Area in ha.)

| Physical Condition | Agriculture land | | Pasture and forest land | | | |
|--------------------|------------------|----------------|-------------------------|--------|--------|---------|
| | Cultivated | Non-cultivated | Pasture | Forest | Others | Total |
| Siwalik | 1,477 | 151 | 35 | 25,763 | 358 | 27,784 |
| Terai | 79,289 | 7,438 | 1,279 | 2,392 | 4,615 | 95,013 |
| Total | 80,766 | 7,589 | 1,314 | 28,155 | 4,973 | 122,797 |

Source: DADO, 2009

4.3 Demography

In Siraha District, there were 637,328 people living there as of the 2011 Census, with 310,101 men and 327,227 women. In comparison to men, who make up 48.66% of the population, women make up 51.34 percent of the population. Of these, 85.8% spoke Maithili, 4.3% Nepali, 3.6% Urdu, 2.7% Tharu, 1.0% Tamang and 0.8% Magar as their first language. English and Nepali are two major mediums of written and spoken languages used in schools and public and government offices.

Table 6:Population in Siraha district in different census

| Census year | Population | % p.a. |
|-------------|------------|--------|
| 1981 | 375,358 | |
| 1991 | 460,746 | 2.07% |
| 2001 | 572,399 | 2.19% |
| 2011 | 637,328 | 1.08% |
| 2021 | 748,416 | 1.62% |

Source: CBS 1981, 1991, 2001, 2011, 2021

Table 7:Rural municipality and municipality population in Siraha district

| S.N. | Ga.Pa./Na.Pa. | Population | Households |
|------|------------------------|------------|------------|
| 1 | Lahan Municipality | 1,02,955 | 17,832 |
| 2 | Siraha Municipality | 96,543 | 15,310 |
| 3 | Golbazaar Municipality | 65,263 | 10,853 |
| 4 | Mirchaiya Municipality | 60,086 | 10,496 |

| | | | |
|----|---------------------------------------|-----------------|-----------------|
| 5 | Kalyanpur Municipality | 59,986 | 9,869 |
| 6 | Dhangadhimai Municipality | 54,244 | 9,657 |
| 7 | Sukhipur Municipality | 42,547 | 7,192 |
| 8 | Karjanha Municipality | 38,940 | 6,696 |
| 9 | Laxmipur Patari Rural Municipality | 31,103 | 5,235 |
| 10 | Bariyanpatti Rural Municipality | 29,859 | 4,475 |
| 11 | Aarnama Rural Municipality | 28,137 | 4,231 |
| 12 | Aurahi Rural Municipality | 27,194 | 4,092 |
| 13 | Nahara Rural Municipality | 23,656 | 3,786 |
| 14 | Bhagwanpur Rural Municipality | 23,324 | 3,553 |
| 15 | Bishnupur Rural Municipality | 22,796 | 3,821 |
| 16 | Sakhuwanankarkatti Rural Municipality | 20,951 | 32,23 |
| 17 | Nawarajpur Rural Municipality | 20,832 | 3,214 |
| 18 | Total | 7,48,416 | 1,11,745 |

Source: CBS, 2021

4.4 Education Facilities in Siraha District

Table 8: Educational Facilities in Siraha district

| S.N. | School | Community | Private | Total |
|--------------|------------------|------------|-----------|------------|
| 1 | Primary | 282 | 41 | 323 |
| 2 | Lower Secondary | 37 | 6 | 43 |
| 3 | Secondary | 47 | 15 | 62 |
| 4 | Higher Secondary | 4 | 3 | 7 |
| Total | | 370 | 65 | 435 |

Source: Disaster Risk Management Plan report: Siraha District, 2011

4.5 Natural Resource Endowment

The agricultural area, forest and water resources are the main natural resources of the district. The land covered by agriculture in the district is very big (74 %). Similarly, about 21 percent of the total land area of the district is covered by forest. The district is drained by many streams and rivers. Kamala, Ghurmi, Balan, Mainabatti, Khutti, Gagan, Sarre, Sahaja, Bataha, Jiba and Bhedawa are the major rivers and streams of the district.

4.5.1 Land use

DDC (2007) reveals that 80.52% of the population is still dependent on agriculture. The total area of the district is 122,796.9 ha. Of this, agriculture covers 71,011 ha, and irrigated land

covers 21,003 ha. The area covered by paddy, wheat, maize and millet is 72,300 ha, 14,390 ha, 300 ha and 1,200 ha respectively. In terms of geographical areas, 94,900 ha are covered by Terai and Bhabar whereas 27,900 ha are covered by Churia and Dun. The distribution of land is not equal. The data from DDC (2007) reveals that only 9.52% people have more than 5 ha of land and 26.93% people have 1 to 5 ha of land. Similarly, 31.73% people have 0.5 to 1 ha and 31.82% have 0.25 to 0.50 ha of land. It clearly shows that about one-third of the population has less than 0.5 ha of land.

4.5.2 Forest

Siraha is rich in forest resources. However, the rate of forest depletion is an increasing trend. The area covered by forest was 27,707.9 ha but now it is only 14,000 ha owing to a high level of deforestation (DoF, 2004). The community forest area covers 5,068.74 ha. This indicates that about 50% of the forest resources have been depleted within the last 27 years. This is one of the reasons why the downstream population is threatened by floods every year. People mostly depend on the forest of Churia. The forest-based small-scale industries within the district are being negatively impacted by the depletion of the forest. There are two plywood factories, 50 saw mills, eight bidi (cigarette) manufacturers and 36 brick factories (DDC, 2004), which are entirely dependent on forest resources in one way or another.

4.5.3 Major rivers

The major rivers and rivulets of the district are Kamala, Balan, Khutti, Ghurmi, Mainawati, Gagan, Sahaja, Bataha, Jiwa and Bhedawa. There are 975 ponds located in the district. Among them, 280 are public and 148 ponds are private (Siraha District Profile, 2001). There are 15 different irrigation projects implemented within the district (DDC, 2004). Despite the abundance of water resources in these rivers and the different irrigation projects working to improve overall irrigation facilities, the majority of the land is still rain fed.

4.6 Natural and Historical Landmarks

Some important natural, historical landmarks and religious sites in Siraha district with potential for tourism are listed in Table.

Table 9: Important Historical Landmarks in Siraha

| S.N. | Important Sites | Importance | Location |
|-------------|------------------------|------------------------------|----------------------|
| 1 | Sahles Phoolbari | Historical, natural resource | Siswani, Padriya |
| 2 | Manikdaha | Natural resource, religious | Malhaniya, Govindpur |
| 3 | Salhes Gahwar | Historical, religious | Siraha Municipality |

| | | | |
|----|--------------------------|---|-------------------|
| 4 | Saraswor Mahadev | Historical, religious | Saraswor |
| 5 | Hariharnagar Pataal Pond | Historical, natural resource, religious | Luxmipur, Pattari |
| 6 | Parasnath Mahadev | Historical, religious | Itari Prasai |
| 7 | Balasundari Bhagwati | Historical, religious | Bhagwanpur |
| 8 | Hanumandhoka daha | Natural resource, religious | Maheshpur Pattari |
| 9 | Kamaldaha | Natural resource, religious | Phulbariya |
| 10 | Nandababa temple | Historical, religious | Badharamaal |
| 11 | Budhangarha | Historical | Brahman Gorchhari |
| 12 | Akashganga | Natural resource, religious, Social | Muksar |
| 13 | Dhamiyain Maain | Religious | Asanpur |
| 14 | Dinabhadri | Religious, Social | Pipra Pradha |
| 15 | Kabhre Mahadev Temple | Religious, Social | Taregana |
| 16 | Pakdiyagarha | Historical | Bhadaiyya |

Source: Disaster Risk Management Plan report: Siraha District, 2011

4.7 Livelihood Assets

The people of the district are involved in different occupations. The major occupations are agriculture, business and government services. The majority of the people, about 81 % of the total population, are involved in agriculture. The average household farm size in the district is 1.09 hectares (CBS, 2001). Most of the VDCs' household farm size is small (less than 2 ha). Bishnupurkatti VDC has a majority household farm size of more than 3 hectares. The density of the population relying upon agriculture is higher in the VDCs which have smaller farm sizes. This means that the larger population depends on the smallest division of agricultural land in the district. The irrigation facilities in the district are good compared to the other districts. The irrigated land in the district is 38.13 % of the total agricultural land (CBS, 2001).

In the past two decades, the percentage of people going to Arab and other Asian countries for employment has been increasing. With regard to the foreign employment statistics, the trend has been more prominent in Siraha with approximately 18% of young people migrating for foreign employment since 1996.

4.8 Economic Resources

4.8.1 Agriculture

46.2 percent of households had less than 1 hectare of land, while 1.64 percent were landless. The district's main crops include paddy, wheat, legumes, mustard, and maize. Potatoes, fruits, vegetables, and spices are examples of horticultural crops that are considered minor crops. In the districts, the main livestock species include buffalo, goat, sheep, pig, chicken, and duck.

4.8.2 Industry

In the Eastern Development Region, Siraha is one of the major industrial areas. In the District Cottage and Small Industry Office as of the 2010 fiscal year, there were 1,923 registered enterprises. They were 65% focused on production, 31.6 % on services, 1.8 % on tourism, 1.4 % on agriculture and forestry, and 0.2 % on construction (UNDP, 2013).

4.8.3 Small business

Small businesses like retail stores, tea stalls, candy stores, petty trading (grains, vegetables, milk, and live animals), agro-vets, fertilizer dealers, and similar enterprises were discovered to be a substantial source of income for a significant number of rural communities. In the district, there were 20 butchers, 5 milk chilling facilities, 10 dairies, 64 agro-vets, 67 employees in animal health, 63 dealers in fertilizer, and 11 fruit nurseries (UNDP, 2013).

4.8.4 Traditional skill-based occupations

In the rural areas, there are traditional occupational groups including blacksmiths (iron workers), tailors, carpenters, clay potters, laha bangle (for women)-makers, vegetable farmers, and weavers who use their native skills and customs to make their occupation their source of survival. Even today, Dalits from castes like the Damai (tailors), Kami (blacksmiths), Mochi (shoemakers), Musahar, Harijan, and Khatwe continue to work in jobs depending on their caste. Indigenous Tharu women in the countryside produce handicrafts based on their skills, such as the weaving of dhakki and daliya utilizing particular grasses that are readily available. But traditional handicrafts are slowly dying out as a result of the widespread usage of modern artifacts.

4.8.5 Markets

The district has 17 major market areas, including those at Siraha, Kalyanpur, Mirchaiya, Golbazaar, Choharba, Dhangadhi, Sukhipur, Lahan, Bandipur, Bishnupur, Bariyarpatti, Nawarajpur, Aurahi, Sakhuwanankarkatti, Laxmipur patari, Bhagwanpur, and Arnama. As hubs for market and economic activity in rural areas, these market centers have stronger infrastructure, including better road connections to external markets, electricity, communication services, and others. There are various rural markets in the district that offer wholesale services to retail stores, agro-vet enterprises, small- to large-scale industries, lodges, tea shops, medical stores, telephone services, and educational institutions that serve other VDCs surrounding.

4.9 Potential Micro-enterprises by small towns

4.9.1 Lahan

Vegetable farming, goat raising, poultry, fruit tree nurseries, tailoring, muda, beaten rice production, potato chip production, papad production, trading (retail shop, ghumti, vegetable collection and sale), house wiring, electric shop, salon, bicycle and motorcycle repair, bamboo/cane product production, handicrafts and watch repair, babiyo rope production, milk and dairy products, dalmoth, and TV/radio repair.

4.9.2 Siraha

Vegetable farming, broiler chicken farming, goat farming, retail trading (ghumti, vegetable collection and sale), house wiring and electric shop, cycle and motor cycle repair, tailoring, rope (babiyo)-making, dairy, bamboo/cane products, handicrafts, laha bangle-making, TV/radio repair, salon, papad, dalmoth, pickle, potato chips-making, etc.

4.9.3 Mirchaiya

Farming of vegetables, broiler chickens, pigeons, goats, home wiring and electric work, tailoring, rope, trading (retail store, ghumti, vegetable collection and sale), beaten rice mill, bamboo/cane goods, handicraft, mushroom farming, beekeeping, fire wood collection and sale, etc.

4.9.4 Golbazaar

Babiyo rope, pop rice (beaten rice), bamboo products, cement tiles, potato chips, papad, dalmoth, retail stores, agro companies, electric shops, trading in vegetables, house wiring,

tailoring, cycle repair, hair cutting, vegetable cultivation, vegetable nurseries, poultry, and goat raising, among other things.

4.9.5 Dhangadhimai

Dairy, sweets, potato chips, papad, dalmoth, muda, ice-cream (baraf) udyog, retail shop, agro firms, trading in vegetables, milk, beaten rice, bicycle and motorcycle repair, TV and radio repair, hair cutting, tailoring, poultry, duck and goat raising, dairy, animal health volunteers' development, (agro-vet), bamboo products, shoe-making, driving, paan shop, house wiring etc.

5 CHAPTER-V: DATA ANALYSIS AND FINDINGS

5.1 Functional Characteristics of Small Towns in the District

Market centers are supposed to provide three functions simultaneously: local exchange, internal trade, and central place function, despite the common assumption that they are the location where products and services are exchanged. According to PRADHAN (1998), the market centre or bazaar is used differently from the term sahar by the Nepalese people. Generally, they think of a bazaar as a place where they can buy and sell goods. But indeed, the market centre is not merely a place for the exchange of goods. It is also a place for the exchange of services and ideas a place for agro-processing mills of small-scale industries, a place for community and production services, and a place for fair or hat (periodic market) or social gatherings and a place of transport service or break of-bulk service Thus, besides the primary function of marketing, the market centre possesses various activities and therefore is likely to contain various rural development activities As the such market centre is the foci of development activities in the rural region. The area over which the market centres provide a certain level of functions and services to the people in its surrounding area and hence exert its influence is termed as "hinterland".

The way these market centers operate in terms of the hinterland's population density, accessibility (through regular roadheads), and accessibility to institutional services The level of trade and commerce as well as the presence of industrial establishments or significant religious or touristic locations have been measured by allocating average marks. During the field survey, data on these components were collected. The scores that were obtained have been utilized to rank those market towns, and they are shown in Table 10. In the Siraha district, there are 17 small towns. Small towns are identified based on the population size and functional unit along with growth potential of the towns.

According to the ancient theoretical concept that is generally accepted until now, all urban markets are spread in a triangular lattice at a distance of 100 meters from the nearest market centre to the settlements. But the distance from this Siraha district to the neighbouring market is not uniformly distributed. The distribution system of most of the bazaars in the district seems to be distributed in four groups. These four groups are found to be closely related to the nature of unpaved and paved road transport in the district. Out of these 4 groups, the 6 market towns located around the east-west highway can be considered the largest and most developed group in the district, while the group of Bhagwanpur, Bariyarpatti, Nawarajpur

and Aurahi markets on the India border of the district can be considered the smallest. Kalyanpur, the only market towns in this district, exists as a separate town without falling within these four groups. Sukhipur Bazar is located in the central part of the district.

The table clearly shows that Lahan is the top market towns. then Siraha, Mirchaiya Golbazaar, Dhangadhimai, Sukhipur, Karjanha and Kalyanpur (amongst the top eight). They are all situated along the MRM, with the exception of Siraha, Kalyanpur and Sukhipur. Dirt roads link the remaining 9 market towns. The settlements of the Indian border markets include Bariyarpatti, Nawarajpur, Aurahi, and Bhgwanpur. Vegetable collection villages are located near market towns that are connected by roadways. The market towns are not found in north eastern part. As there are many rivers throughout the district, the rainfall affects most of the market settlements. Lack of planned development, lack of bus stops in markets with bus services and other problems hinder the development of market towns. Since there are open haats in most of the markets, there is a problem of heat and water in summer/rain. Despite having a high population density in the hinterland, inner market towns are typically ranked lower.

Lahan is a market town with 1050 commercial units among them. Siraha, Mirchaiya, and Golbazar are market centers with 500 to 750 commercial functions, while Dhangadhimai, Sukhipur, Kalyanpur, Karjanha, Bishnupur, and Nahara are market centers with 100 to 300 commercial functions. Bhagwanpur, Aarnama, Nawarajpur, Aurahi, Bariyanpatti, and Laxmipur Patari are market centers with 50 to 100 commercial functions. The locational pattern of market centres in the district is conditioned by two factors, marketing and transportation. The locational pattern of market centres is areal in character. The influence of transportation principle is clearly seen in areas where market towns are located linearly along the major roads.

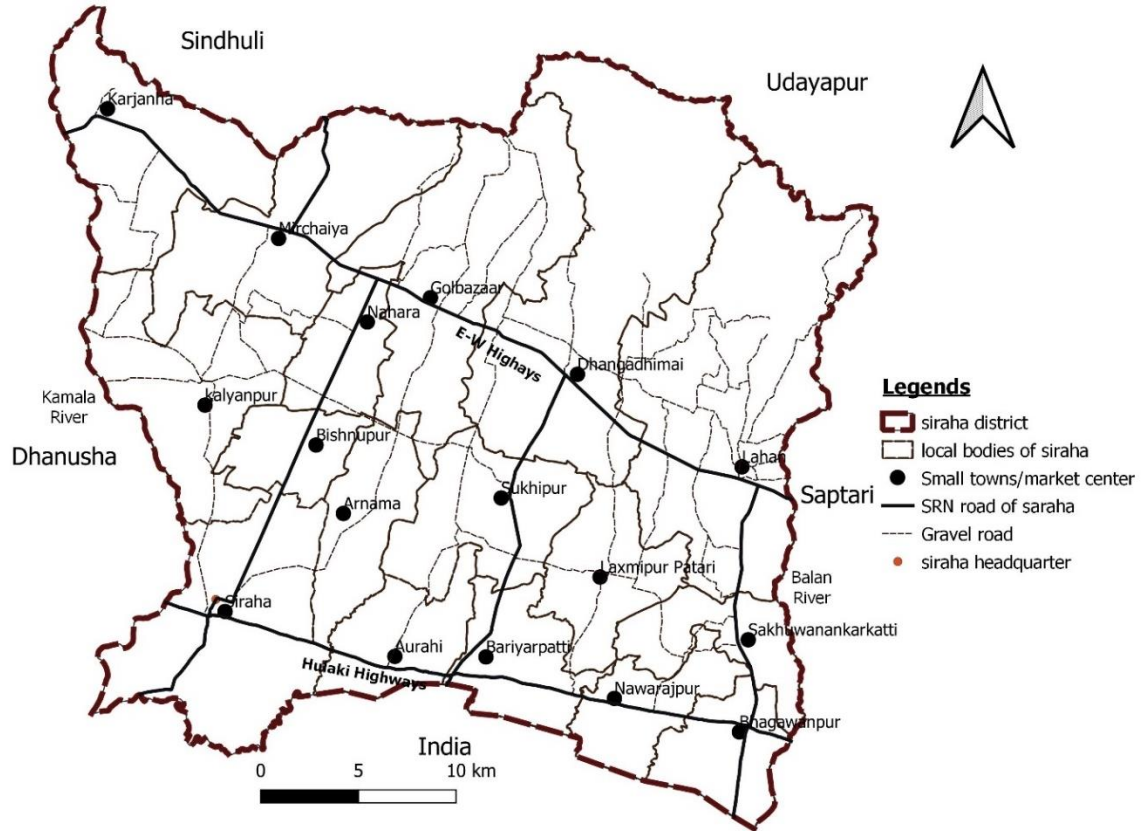


Figure 4: Influence area of small towns

Table 10: Functioning type and number of small towns in Siraha district

| S.N. | Small towns | Population | Number of shops |
|------|-----------------|------------|-----------------|
| 1 | Lahan bazaar | 33653 | 1050 |
| 2 | Siraha bazaar | 28442 | 750 |
| 3 | Mirchaiya | 13477 | 714 |
| 4 | Golbazaar | 12926 | 603 |
| 5 | Dhangadhimai | 11262 | 255 |
| 6 | Sukhipur | 10040 | 298 |
| 7 | Kalyanpur | 9584 | 104 |
| 8 | Aarnama | 9241 | 80 |
| 10 | Nawarajpur | 8730 | 60 |
| 11 | Karjanha | 7467 | 139 |
| 12 | Aurahi | 5685 | 45 |
| 13 | Bishnupur | 5208 | 105 |
| 14 | Bariyanpatti | 5129 | 97 |
| 15 | Laxmipur Patari | 4658 | 40 |
| 16 | Nahara Balkawa | 4476 | 117 |
| 17 | Bhagwanpur | 4157 | 45 |

Source: Field survey-2021 & CBS,2011

5.1.1 Classification of Towns on the Basis of Population

The population serves as the fundamental cooling mechanism that satisfies the base conditions for constructing and maintaining development infrastructure. Another crucial factor for sustainable growth is population size. 17 market centers in the Siraha district are divided into 4 classes based on population. Table 11 illustrates their distribution. Of the total markets, Lahan has the largest market town with a population of 33653. The smallest market town, Bhagwanpur, with 4157 population.

Table 11: Classification of towns on the basis of population

| S.N. | Group | Number of Towns | Towns |
|------|-------------|-----------------|--|
| 1 | >5000 | 3 | Laxmipur Patari, Nahara and Bhagwanpur |
| 2 | 5000-10000 | 7 | Kalyanpur, Aarnama, Nawarajpur, Karjanha, Aurahi, Bishnupur and Bariyanpatti |
| 3 | 10000-20000 | 4 | Mirchaiya, Golbazaar, Dhangadhimai and Sukhipur |
| 4 | 20000-40000 | 2 | Lahan and Siraha |

Source: CBS,2011

5.1.2 The Hierarchical Structure of Small Towns

The concept of stratification is very important in the study of market towns. This concept is related to Central Place Theory. Market towns are usually central settlements. Therefore, this concept is also applicable in relation to market settlements. Thus, according to the concept, in the layered structure of the market settlements located in a certain area or place, there are very few settlements at the upper level and many settlements at the lower levels. As the relative importance of the level increases, the number of settlements decreases. In this study, without the use of special techniques, the size of the population and business units has been determined in a certain group, and the stratified structure has been determined.

Table 12: The Hierarchical Structure of Towns

| S.N. | Group | Population and Commercial units | Number of Towns | Towns |
|------|-------|--|-----------------|--|
| 1 | I | 20000-40000 Population and 750-1100 commercial units | 2 | Lahan and Siraha |
| 2 | II | 10000-20000 Population and 200-750 commercial units | 4 | Mirchaiya, Golbazaar, Dhangadhimai and Sukhipur |
| 3 | III | 5000-10000 population and 50-200 commercial units | 7 | Kalyanpur, Aarnama, Nawarajpur, Karjanha, Aurahi, Bishnupur and Bariyanpatti |
| 4 | IV | >5000 population and less than 50 commercial units | 3 | Laxmipur Patari, Nahara and Bhagwanpur |

In this way, the market centre in the Siraha district has appeared in four groups. There are 2 market settlements at the highest level. Lahan and Siraha are market centres belonging to this group and situated along E-W highways. Lahan has a population of 33653 while Siraha has a population of 28442. The number of business units is 1050 in Lahan and 750 in Siraha. Based on both aspects, the relative importance of Lahan is more than Siraha. Even though the relative importance of Lahan is more based on the number of speciality shops and wholesale trade units, both market centres are important for commercial settlements. As there are three financial service units in both markets, their commercial importance becomes clear. All other scheduled business types and infrastructure facilities are available in both these market settlements except the tap water facility. As various services including education and health services are available, these two market Centre are also important as service Centre.

There are 4 market settlements at the second level. The market settlements in this group are Mirchaiya, Golbazaar, Dhangadhimai and Sukhipur and situated along E-W highways except Sukhipur.

There are 7 market settlements at the third level. The market settlements in this group are Kalyanpur, Aarnama, Nawarajpur, Karjanha, Aurahi, Bishnupur and Bariyanpatti and these are located along fair-weather roads, except Karjanha.

There are 3 market settlements in the lowest level group. The market settlements in this group are Laxmipur Patari, Nahara and Bhagwanpur.

5.1.3 Small Towns with Village Settlements

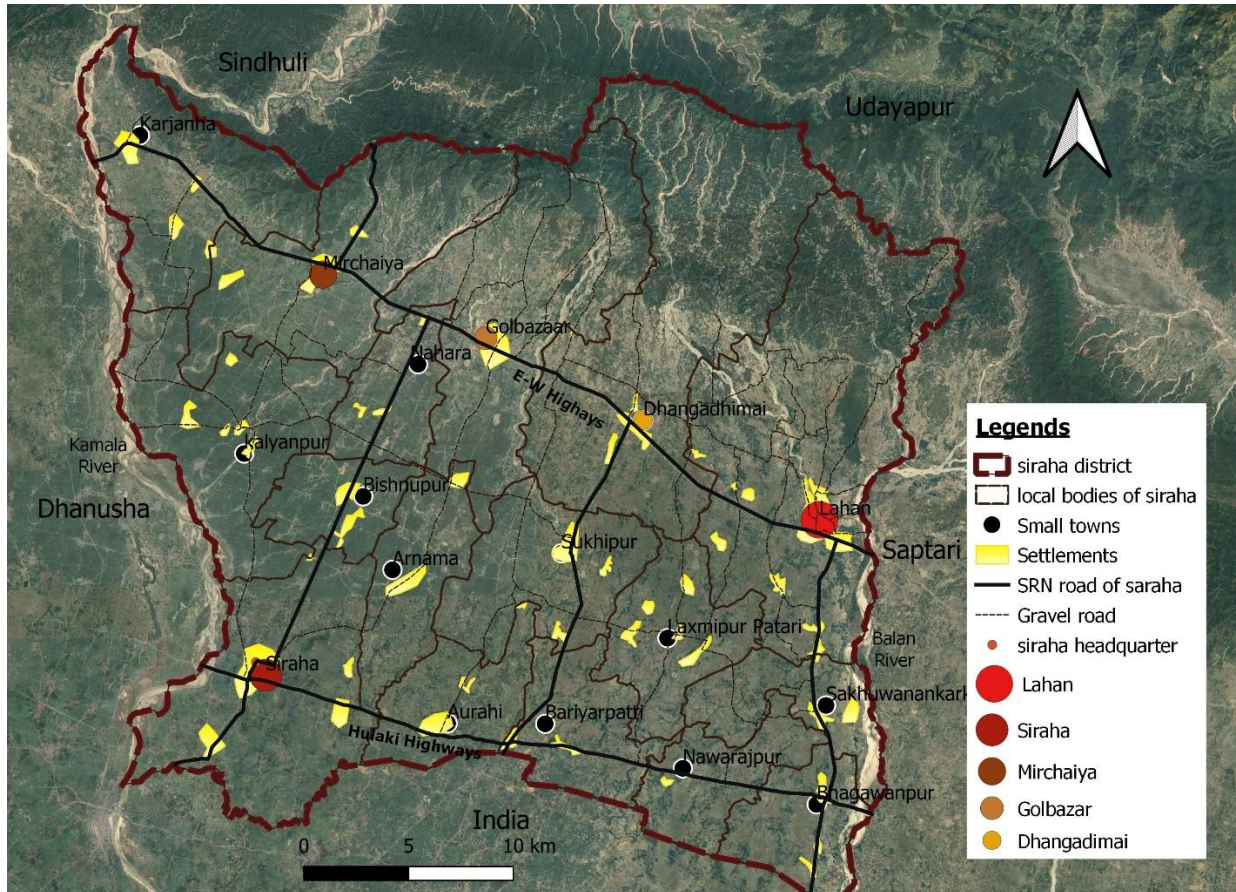


Figure 5: Towns with village settlements

Lahan, Mirchaiya, Golbazar and Siraha are surrounded by few village settlements but to support larger area of village settlements. Towns of south highways are surrounded by large village settlements

5.1.4 Potential Development Activities of Small Towns in Siraha District

A number of development activities could be taken up in the market towns on the basis of potential and local needs. The proposed development activities have been identified mainly with a view to ensuring their linkages with their hinterland areas. The proposed development activities in the market towns are of two different categories. One category includes those activities which tend to enhance rural-urban linkages and the other is concerned with the development of infrastructure and service provision in the market towns.

Table 13: Potential development of towns

| S.N. | Small towns | Potentials of Towns |
|------|-----------------|--|
| 1 | Lahan bazaar | Administrative purpose, education, health, commercial market centre, center for collecting and distributing of goods |
| 2 | Siraha bazaar | Administrative purpose, health and market centre, |
| 3 | Mirchaiya | Education, commercial market centre and hub for mango goods |
| 4 | Golbazaar | Commercial market centre (Mainly for clothes) |
| 5 | Dhangadhimai | Main center for collecting and distributing of goods |
| 6 | Sukhipur | Education, health and center for collecting and distributing of goods |
| 7 | Kalyanpur | Center for collecting and distributing of goods (Period market) |
| 8 | Aarnama | Center for collecting and distributing of goods (Period market) |
| 10 | Nawarajpur | Center for collecting and distributing of goods (Period market) |
| 11 | Karjanha | Center for collecting and distributing of goods (Period market) |
| 12 | Aurahi | Center for collecting and distributing of goods (Period market) |
| 13 | Bishnupur | Center for collecting and distributing of goods (Period market) |
| 14 | Bariyanpatti | Center for collecting and distributing of goods (Period market) |
| 15 | Laxmipur Patari | Center for collecting and distributing of goods (Period market) |
| 16 | Nahara Balkawa | Center for collecting and distributing of goods (Period market) |
| 17 | Bhagwanpur | Center for collecting and distributing of goods (Period market) |

Source: Field survey-2021

5.2 Hinterland Area of Small Towns in Siraha District

Market towns provide trading and other services to the surrounding areas. Some of these services are distributed from the market towns, while people from the surrounding areas commute to the market towns. The extent and shape of trade areas of individual towns can be defined by applying appropriate indices, like accessibility, range and magnitude of function. It is found that people make visits to local market centres usually for purposes of buying convenience and non-convenience goods, selling their products, buying and selling and other purposes. Because so many people are active in business, major towns like Lahan, Siraha, Mirchaiya, Golbazaar, and Dhangadhi have more urban residents than hinterland residents. Local market towns such as Sukhipur, Bariyarpatti, Bhagwanpur, Kalyanpur, Aurahi etc. have more rural population and urban population because of many people have active in agriculture.

Figure 6: Small towns with hinterlands

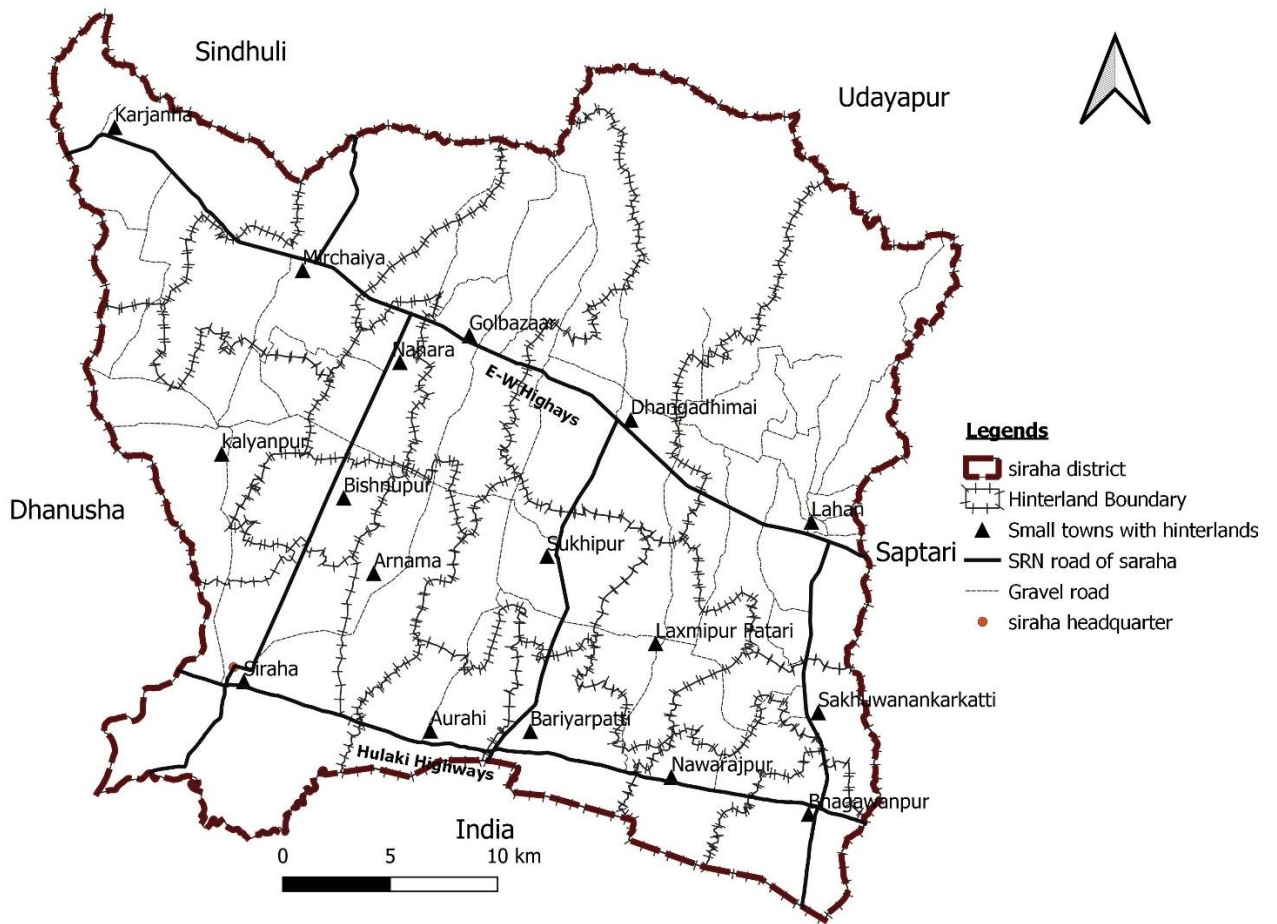
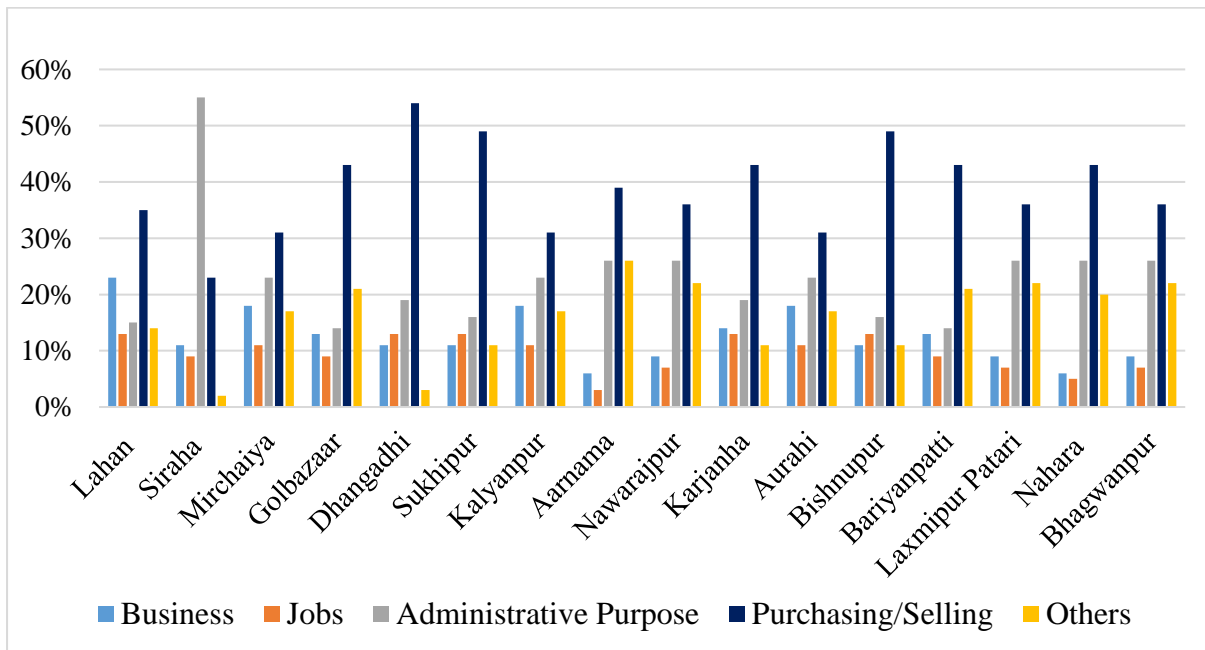


Figure 7: Flow of people to market towns



Source: Field Survey, 2021

The survey shows that, about 35% people visit towns due to buying and selling of commodity. Selling stems included green seasonal vegetables, food grain, bamboo products, clay products, and festivals. whereas the goods that are commonly bought are comprised of goods for daily necessities like salt. kerosene, oil, shop, surf, cloth, utensils, agro medicine, improved seeds, agricultural equipment etc. Flow of people are more in Lahan, Mirchaiya and Golbazaar in the district and about 55% people visit in Siraha for administrative purpose.

5.2.1 Potential Development Activities in the Hinterlands of Small towns

The major development potential in the hinterlands area of each town is agriculture, vegetable farming cottage industry, livestock, horticulture and milk and dairy products.

Table 14: Potential development activities in the hinterlands

| S.N. | Small towns | Potential in the Hinterlands of Small Towns |
|------|-----------------|--|
| 1 | Lahan bazaar | Agriculture, Cottage industry, livestock and milk and dairy products |
| 2 | Siraha bazaar | Agriculture, and livestock |
| 3 | Mirchaiya | Agriculture, Industry and horticulture(mango) |
| 4 | Golbazaar | Agriculture, Industry and livestock |
| 5 | Dhangadhimai | Vegetable farming and livestock |
| 6 | Sukhipur | Vegetable farming, livestock and milk and dairy products |
| 7 | Kalyanpur | Intensive agriculture and horticulture |
| 8 | Aarnama | Intensive agriculture |
| 10 | Nawarajpur | Intensive agriculture |
| 11 | Karjanha | Intensive agriculture, industry and livestock |
| 12 | Aurahi | Intensive agriculture and vegetable farming |
| 13 | Bishnupur | Agriculture, and livestock |
| 14 | Bariyanpatti | Agriculture, livestock and milk and dairy products |
| 15 | Laxmipur Patari | Intensive agriculture and vegetable farming |
| 16 | Nahara Balkawa | Agriculture, Cottage industry, livestock |
| 17 | Bhagwanpur | Center for collecting and distributing of goods (Period market) |

Source: Field survey-2021

5.3 Small Towns and their Inter-linkages

There is an interaction between market settlements in any district or region. Interaction depends on demand and supply of goods, exchange of different types of services, movement of people and exchange of information can be done. Interaction is of two types. One is the interaction of the small towns with other small towns and the second is the interaction between the small towns and their surrounding areas. It depends on the level of interaction

between the market settlements, the size of the market settlements, the distance between the market settlements, the complementarity of demand and supply between the market settlements and the intervening opportunity between the market settlements and the transferability. Every market town is a service centre where services are available. It also depends on the number and type of businesses, the resources and products available on the surface, and the income level and living standard of people.

Lahan, Golbazaar and Mirchaiya are major towns in Siraha district, followed by Dhangadhimai, Sukhipur Bariyanpatti. Siraha is administrative centre in Siraha district. Many people are dependent on this market for buying and selling of daily consumables. Almost all peoples depend on main market centre. People of surrounding areas depends on this market for banking and other services. Lahan has developed as market center and health center not only for Siraha but for other districts like Udayapur. The range of the market and population of municipality itself has become the major pull factor for the people of other districts. Due to number of private and governmental schools, people from different districts come here for quality education. And people of Lahan go to Kathmandu, Biratnagar and Janakpur for higher and quality education. For buying products, education, business and administration works, Lahan is the main centre.

Lahan, Mirchaiya, Golbazar and Siraha are the prominent potential market centre of the district. Trade interaction among the local market centres is an important phenomenon. Lahan, Mirchaiya, Golbazar and Siraha are the dominant trading centre, which supplies agricultural products and industrial products to different centres of the districts and outside the district. Another important trading centre is Madar and it transacts goods with Janakpur and border area of India. Trading of Golbazar and Sukhipur are mostly confined to surrounding VDCs of Siraha district. There is trade interaction among the local market centres within the district as well as with the other municipalities and market centre outside the district.

Looking at the sources of commercial goods between the market centres, it is found that there is an important interaction between the market centre and its hinterlands within the district. Michaiya has found that 10% (Buddhanagar) to 70% (Bandipur) of cloth supply in the 9 bazaar settlements under study. Goalbazar is found in the 12 bazar settlements under study from 5% (Kalyanpur) to 60% Dhangadhi). Cloth supply is found in 3 bazaars of Sukhipur. Lahan found 10% (Dhangadhi) to 40% (Golbazar and Buddhanagar) in 6 market settlements.

Birgunj, Biratnagar and Kathmandu are prominent cities outside the district. India is also an important supplier.

The locals as well as people from close by rural municipality travel to Lahan, Golbazaar area as there is various educational institution such as J.S. Morarka, Multiple Campus, Ramprasad Ram Pratap Campus, Janta H.S.S and Sagarmatha Choudhary Eye Hospital, health post. Vegetable Market is also available on daily basis; so many people visit this place for buying and selling vegetable. Lahan and Golbazaar and Siraha has to and fro linkage. So, this is the main centre for business, educational and administration works of this district.

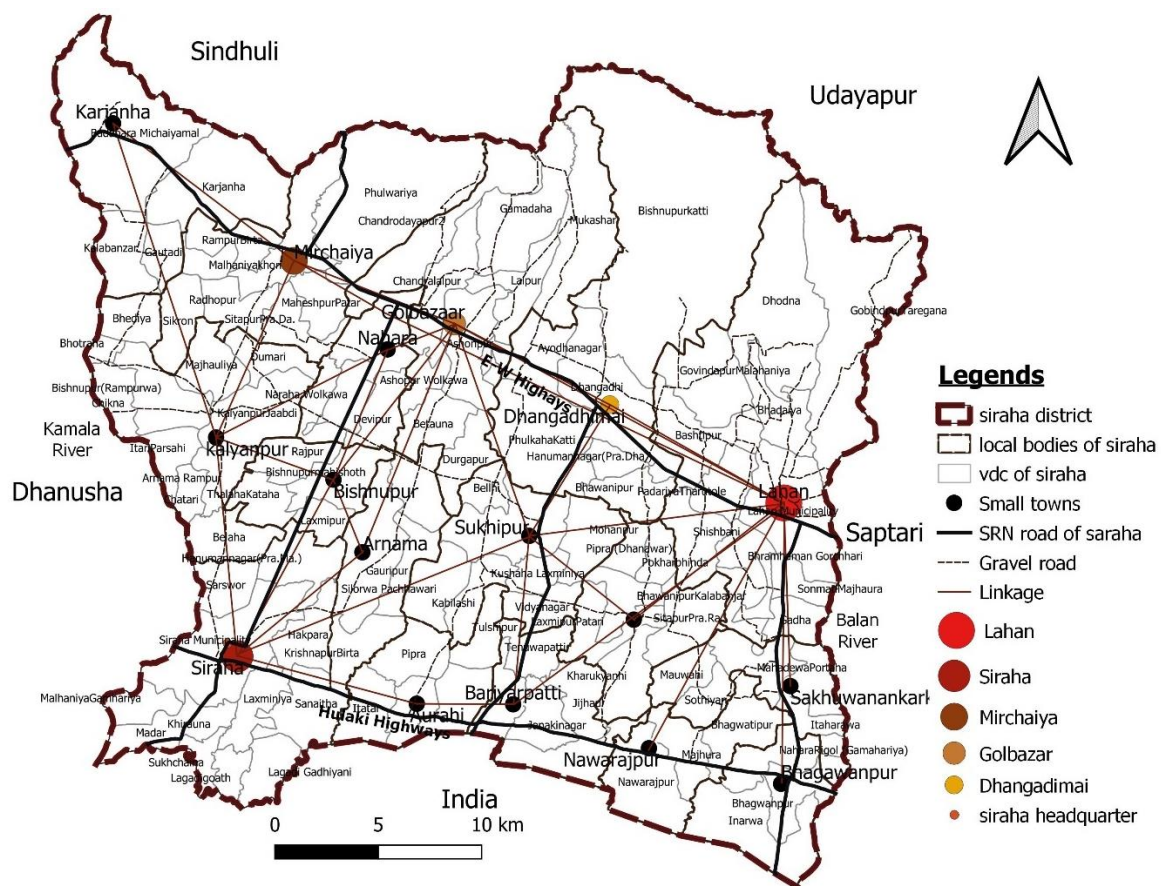


Figure 8: Inter-linkage of small towns in district

5.4 Transportation Linkage Analysis

There are many road networks connecting the main market center in Siraha district to hinterlands village by national highways, district roads, gravel road and earthen roads, which develop the growth of the towns. There are 6 main market towns along the national highways such as Lahan, Dhangadhimai, Golbazaar, Choharba, Mirchaiya, and Bandipur. These roads are modes of backward and forward linkage of the small towns/market center in Siraha

district. The roads mentioned below are the studied road networks which plays the significant backward and forward linkage between small towns/market center and their hinterlands village.

The main highway in the district runs for about 43 km between the Balan River in the east and the Kamala River in the west. E-W highways, Postal highways (Hulaki road), Chauharwa-Siraha, Lahan (MRM)-Bhagwanpur-Thadi, and zeromile (MRM)-Sukhipur - Bariyarpatti are major roads of the study area.

It deals with the road connectivity between main market towns in Siraha district and their hinterland villages. The types and condition of road pavement affect the activities and linkage between market centre and their hinterland village. National highway function as inter-linkage and intra-linkage to the main market towns in district and also their surrounding areas. This linkage is important because they are the main vehicles for spatial integration of human activities and also indicates flow of goods in market towns and surrounding areas.

Figure 9: Road networks in Siraha district

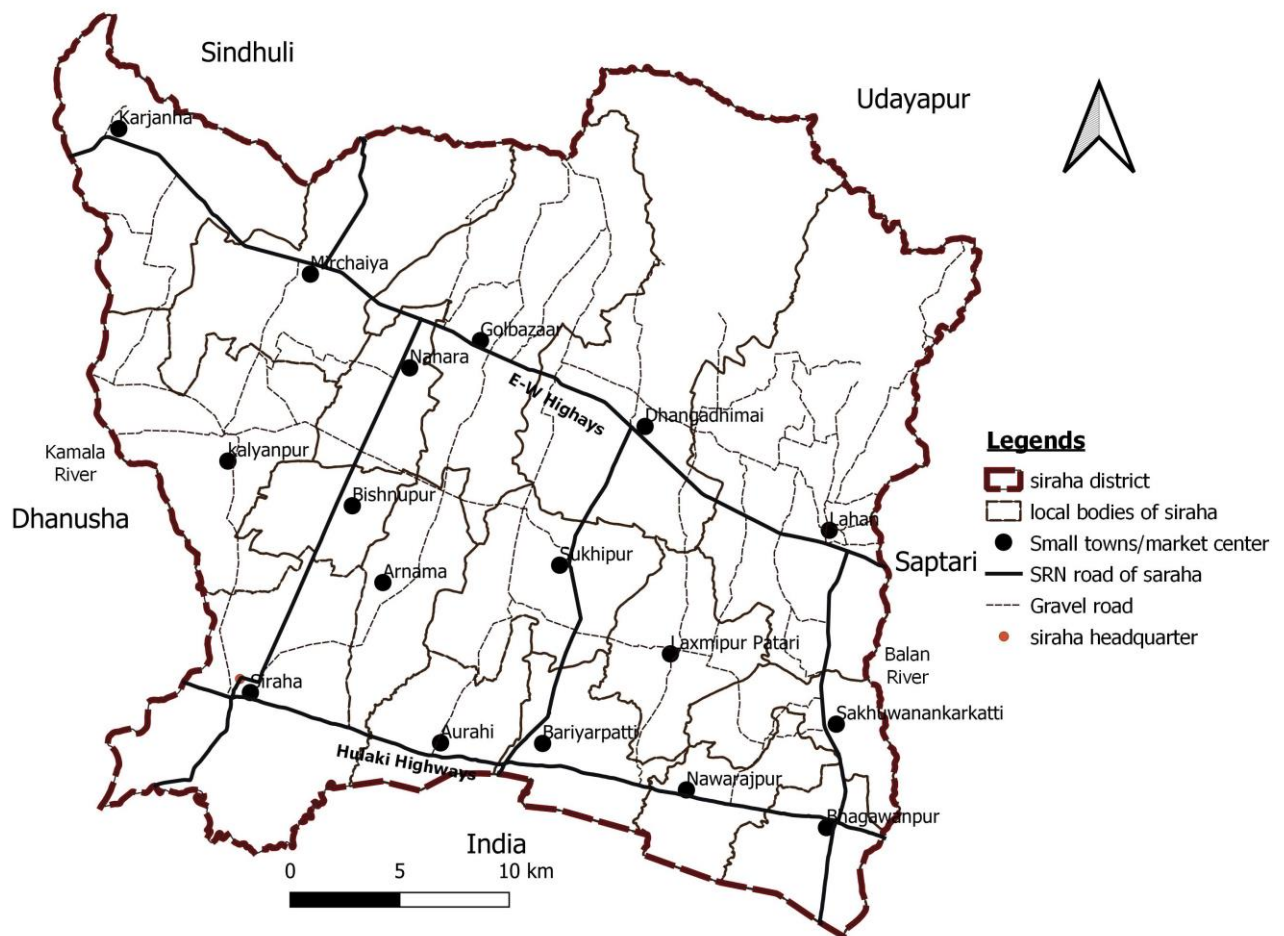


Table 15: Roads under DOR in Siraha district (Kilometer)

| S.N. | Name Of Road | Class | BT | GR | ER | Total |
|------|--|--------------|---------------|-----------|-----------|---------------|
| 1 | Balan-Padariyachok | NH | 5.14 | 0 | 0 | 5.14 |
| 2 | Padariyachok-Chauharwa | NH | 19.66 | 0 | 0 | 19.66 |
| 3 | Chauharwa-Mirchaiya | NH | 5.15 | 0 | 0 | 5.15 |
| 4 | Mirchaiya-Kamala | NH | 13.32 | 0 | 0 | 13.32 |
| 5 | Chauharwa-Siraha | FRN | 18.21 | 0 | 0 | 18.21 |
| 6 | Siraha-Madar | FRN | 8.45 | 0 | 0 | 8.45 |
| 7 | Mirchiya (MRM)-Jyamire (District Border) | FRN | 7 | 0 | 0 | 7 |
| 8 | Lahan (MRM)-Bhagwanpur-Thadi | FRN | 13 | 0 | 0 | 13 |
| 9 | Dhangadhimai (MRM)-Vidyanagar-Bariyarpatti | FRN | 17 | 0 | 0 | 17 |
| 10 | Balan River-Kamala River (Postal) | PR | 0 | 19 | 14 | 33 |
| | | Total | 106.93 | 19 | 14 | 139.93 |

Source: Department of roads (DOR), 2020

NH-National Highway, FRN-Feeder Road network, PR-Postal Road BT-Black Topped Road, GR- Gravel Road, ER-Earthen Road

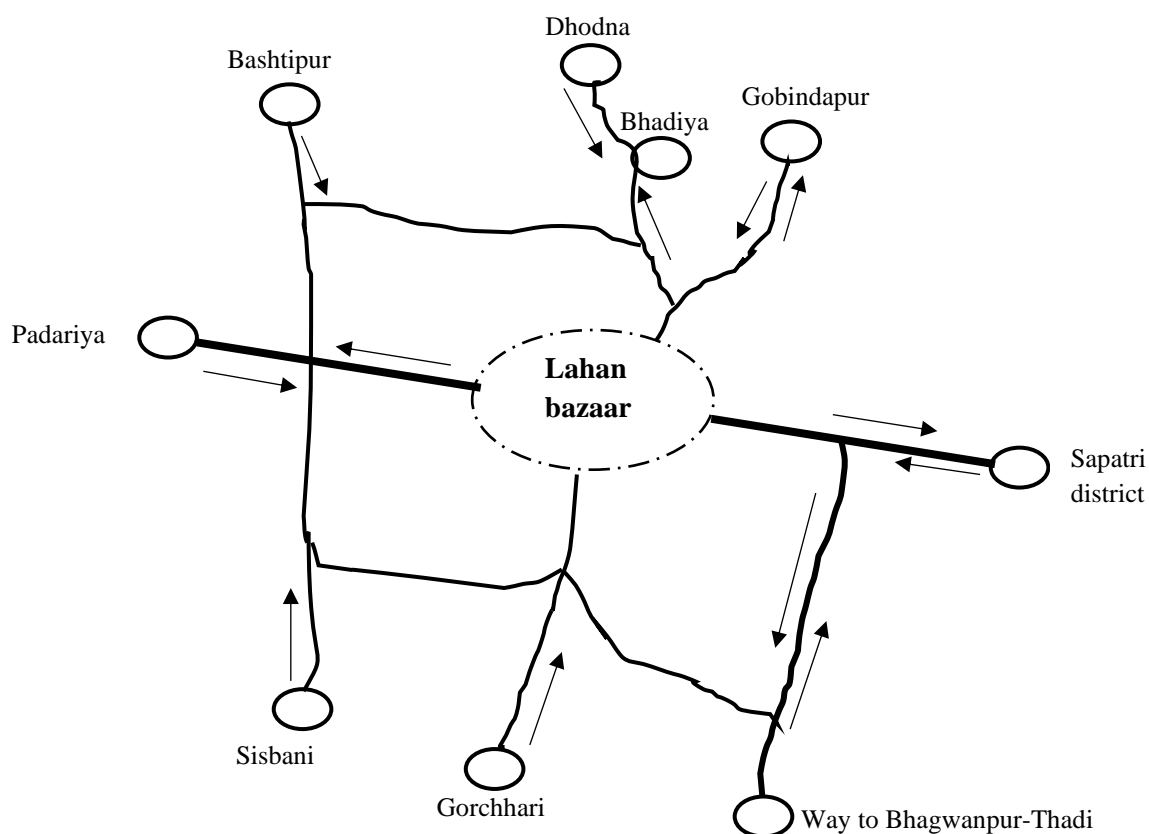
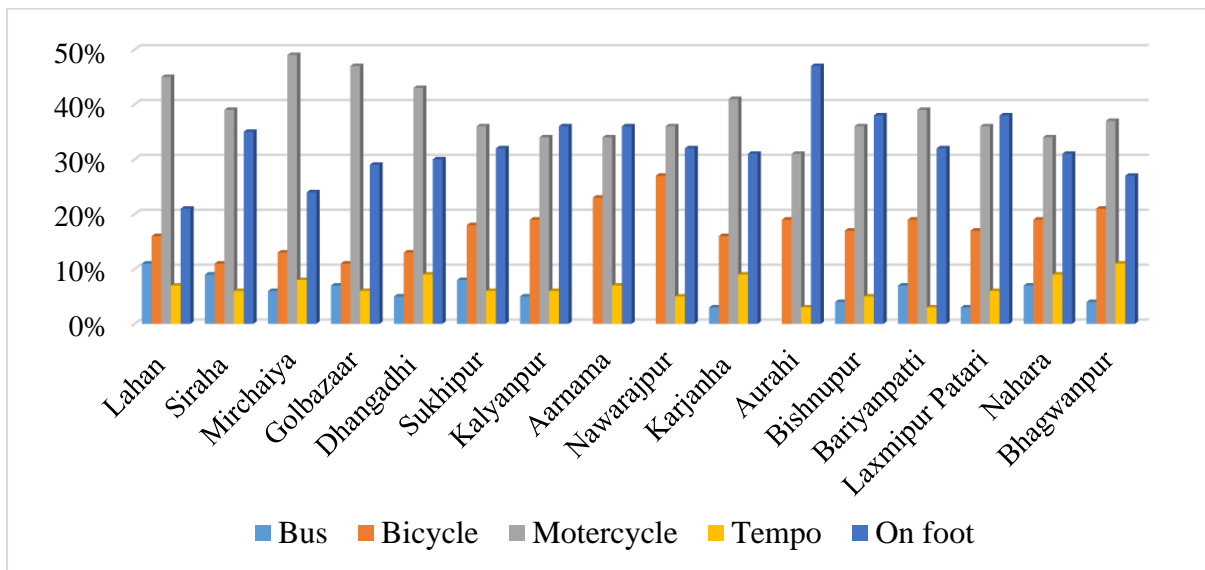


Figure 10: Road linkage of Lahan bazaar with its hinterlands

For human activities like the purchasing and selling of goods in market towns as well as for the period market of the hinterland people, Lahan bazaar and its surrounding villages are connected by gravel and earthen roads. Each town in the district has a similar road network connection to its surrounding village.

5.4.1 Mode of Transportations

Figure 11: Mode of Transportations



Source: Field Survey, 2021

The graph shows that, about 36% people traveled by motorcycle and 30% people traveled by foot. Maximum people use bus, tempo and motorcycle traveled to highway towns due to better facility of road network. People traveled by foot far from highway towns due to lack of proper provision of bus and fair-weather road condition. Road network is the one factor that support the development of towns and their hinterland village and also helps the backward and forward linkage of the small towns/market center and hinterland village within the district.

5.5 Telecommunication Linkage Analysis

The telecommunication facilities increased the linkage between two main market Centre and also their hinterland villages. The telecommunication linkage from Siraha district to Kathmandu, Biratnagar and other places are taken from interviews methods on the field survey and also from Nepal telecommunication authority.

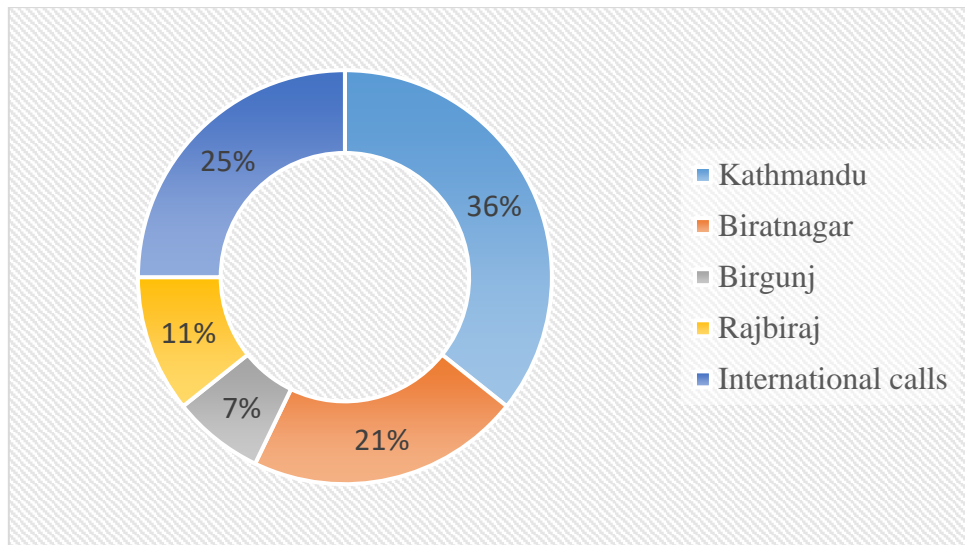


Figure 12: Telecommunication Linkage from Siraha district

The telecommunication pattern shows that outgoing calls from Siraha district has maximum linkage with capital city of Kathmandu, while about 25% calls are from international calls may be due to the people in gulf country such as Malesia, Dubai, Qatar and 21% calls from Biratnagar. This data shows that town has strongest linkage with Kathmandu due to temporary migration, professional and for higher and quality education.

5.6 Economic Linkage Analysis

The main source of the economy of Siraha district is agriculture. The large portions of the economically active population are engaged in farming and fishing. The secondary occupation of this district is sales services, production labour which is followed by technical workers, and administrative and electrical workers. To go to gulf countries and all over the world for service is a new trend for youth in Siraha district. Remittance is the newly introduced source of the economy. There are a few small-scale industries in Siraha district, so economic activities are focused on commercial activities, trading, transport sectors and services.

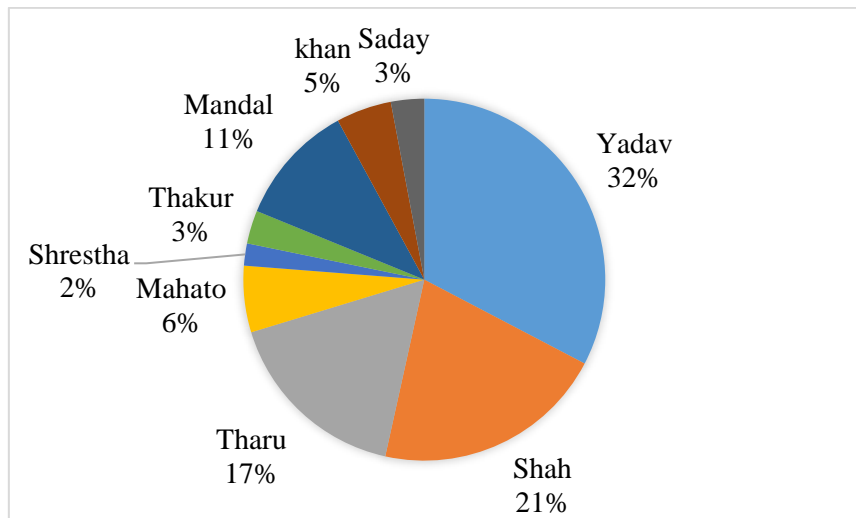
Economical linkage deals with the economic activities, demand and supply of agriculture products, industrial products and herbals etc. This research study concentrates on the observation of the transportation of different types of goods, agricultural products, herbals, livestock products etc. from the market towns in the district to its hinterlands and from central towns like Kathmandu, Rajbiraj, Birgunj, Biratnagar and India to Siraha district.

5.6.1 Sample Customers Survey

In 17 market centers and surrounding hinterland villages, a customer questionnaire study is conducted. In the district, 114 people have been interviewed overall. Out of 114 respondents, 91 male and 23 female have been interviewed. 40-60 years respondents are more active than 20-40 and above 60 years old respondents. Most of customers have formal education of +2 or diploma level about 35% and followed by SLC about 31%.

5.6.1.1 Caste and Ethnic Group of Sample Customer

Figure 13: Caste and Ethnic group

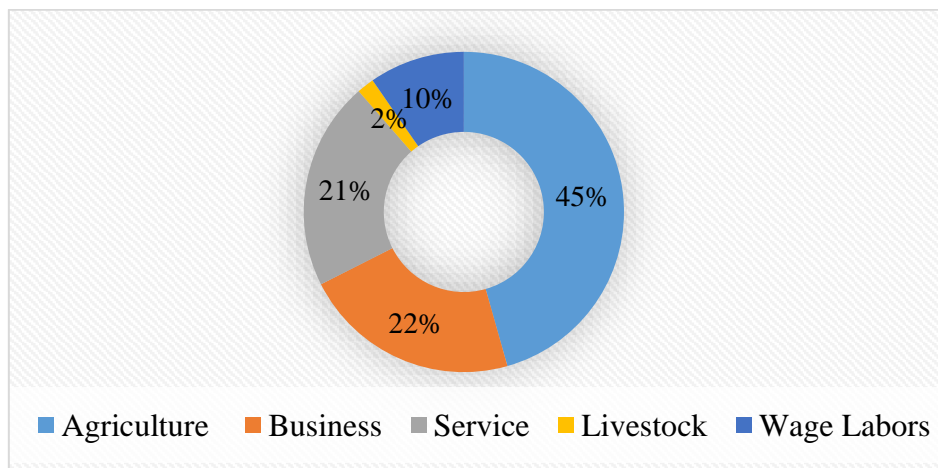


Source: Field Survey, 2021

The above graphs show different castes and ethnic groups. Yadav and Shah have highest in district according to field survey followed by Tharu, Mandal.

5.6.1.2 Main Occupation of Customers

Figure 14: Main Occupation of Customers

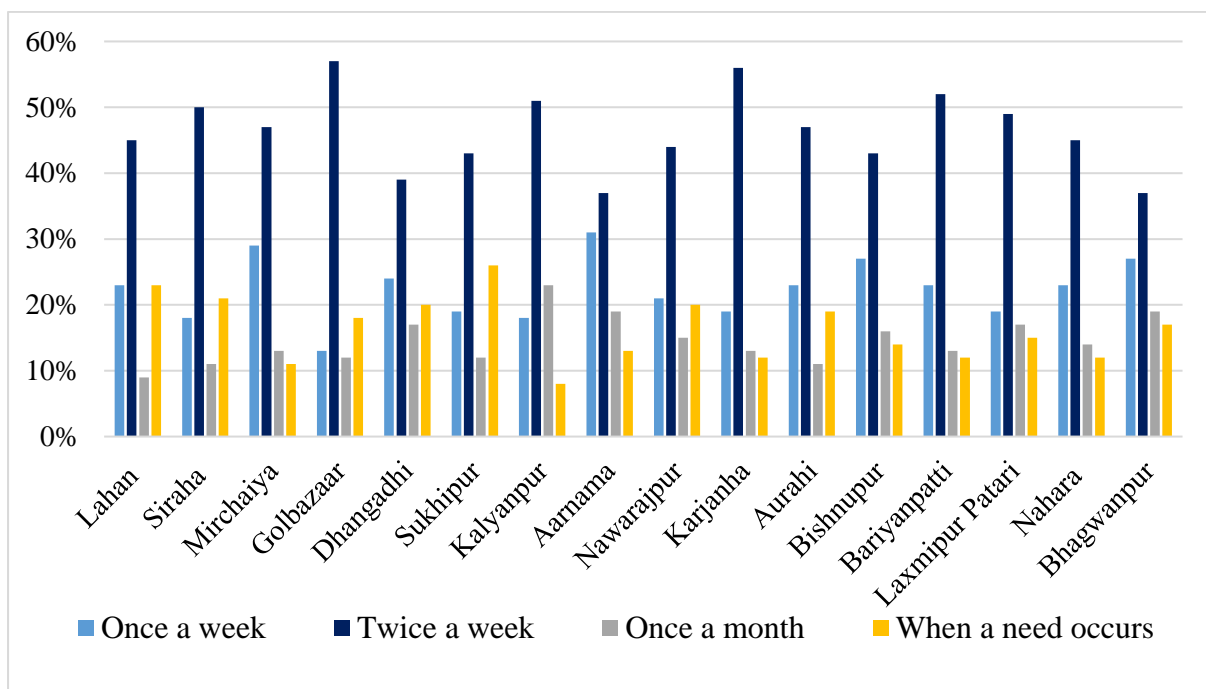


Source: Field Survey, 2021

The occupations of the sample customers are divided into five major categories. They are such as agriculture, service, labour, business and livestock. Others refer to those occupations, which are not included in the types mentioned here. Main occupation of customers is agriculture about 45% and followed by business and services. The hinterlands people are mainly based on agriculture.

5.6.1.3 Frequency of Visiting People in Small Towns

Figure 15: Frequency of visiting people in towns

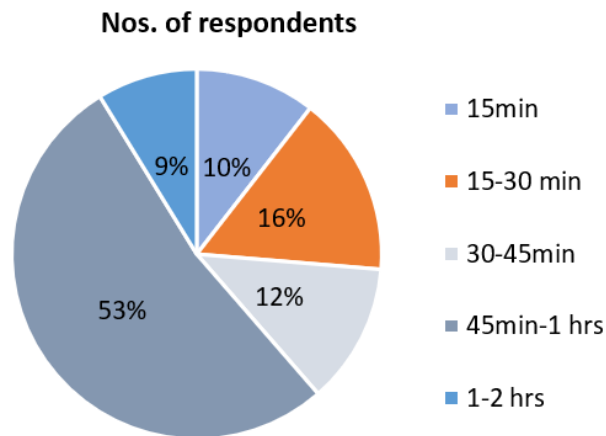


Source: Field Survey, 2021

Maximum people visiting town twice a week for period market due to high population density of surrounding area and minimum customer visiting town monthly and sometimes due to lack of service facilities in the towns.

5.6.1.4 Travel Distance by Consumer to Travel Small Towns

Figure 16: Travel distance by consumer to travel towns



Source: Field Survey, 2021

The maximum customer about 53% consumers travel time to visit the market towns by Motorcycle is 45 min-1 hrs. This data show that within 15-30 min normally people can travel by on foot near to the market centre.

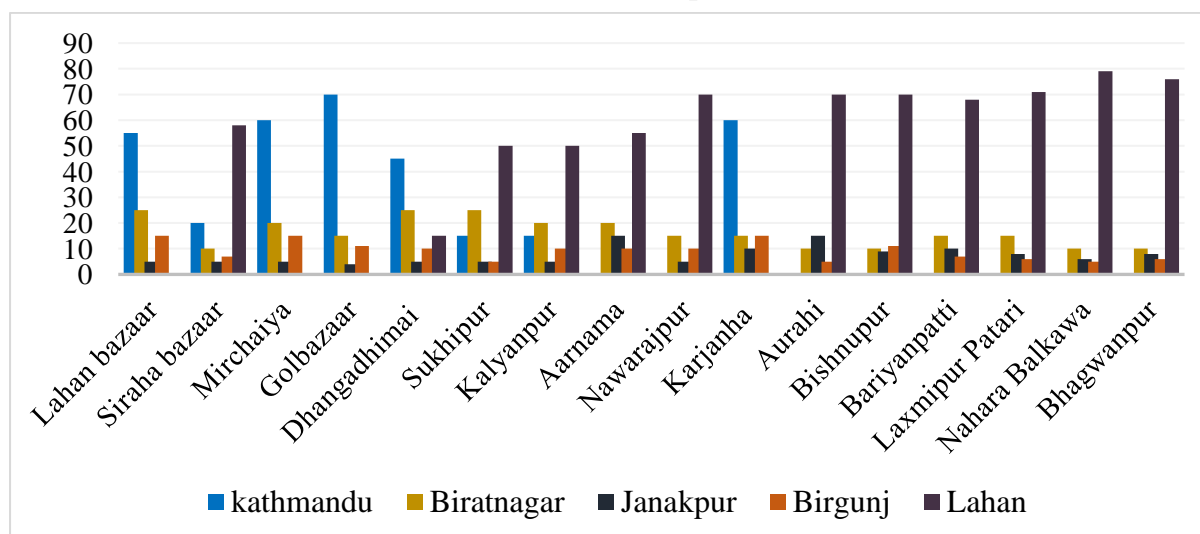
5.6.2 Sample Traders/Shopkeepers Survey

The total 119 sample trades were interviewed. Sample traders represent from various caste as well as various age, sex, religion and education. In this survey those traders were taken under consideration who deals with trade business like retailing, wholesaling, catering and personal service. And also, it will include clothes shop, medical shop, vegetable shop, electrical shop, tea shops, hotels, hair dressing and other services. This analysis shows studies concern about the function and structure of the market center and backward and forward linkage between market center and their hinterland village.

In the district, 119 people have been interviewed overall. Out of 119 respondents, 97 male and 22 female have been interviewed. 40-60 years respondents are more active than 20-40 and above 60 years old respondents. Most of customers have formal education of SLC about 50% and followed by +2 or diploma level. Survey show that Shah, Muslim, Gupta, Yadav and Marwaris are major shopkeepers' caste and ethnic group in main market centre in Siraha district.

5.6.2.1 Commodity Imports to Small Towns

Table 16: Commodities imports to towns

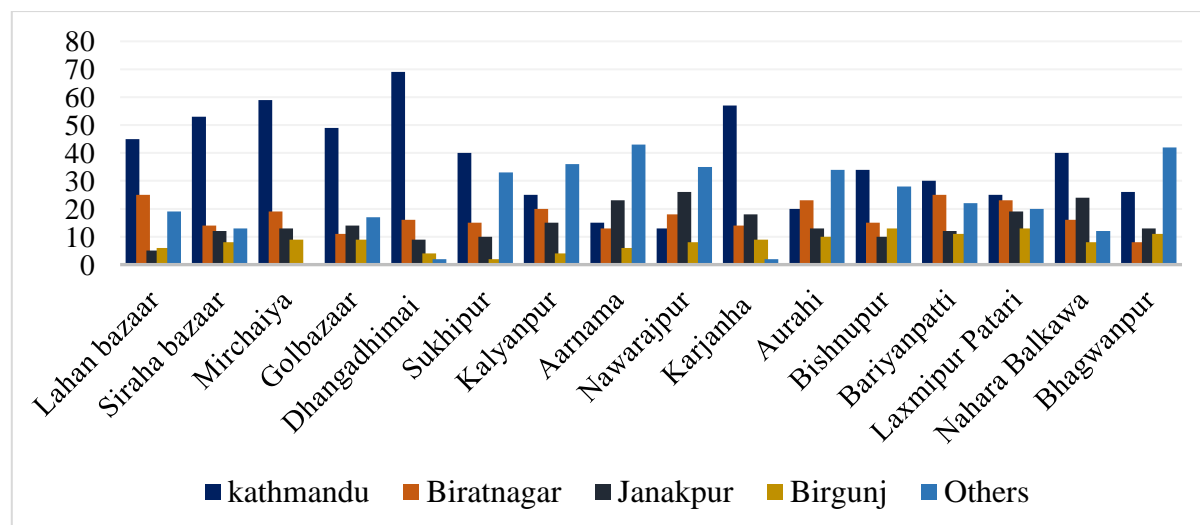


Source: Field Survey, 2021

The graph shows, main market towns along highways are imports commodity from Kathmandu, Biratnagar, Birgunj and Janakpur includes Chinese clothes, and other foreign goods including gold, silver for jewellerys and other commodity. Local marker towns are depending on small towns along highways for clothes, medicines, groceries items, stationery items. About 36% local area people are depends on Lahan bazar. Commodity such as clothes and electrical instruments are imported from Kathmandu and daily use commodity such as oil, salt, surf, utensils are imported from India.

5.6.2.2 Commodity exports to Small Towns

Figure 17: Commodities exports to towns

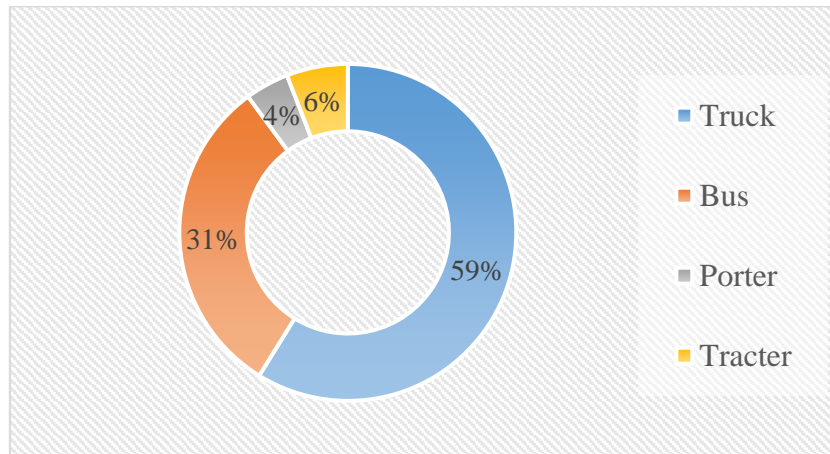


Source: Field Survey, 2021

The above graph shows that, main market towns along E-W highways such as Lahan, Dhangadhimai, Golbazaar, Mirchaiya, karjanha and Siraha are exports commodity to Kathmandu, Biratnagar, Birgunj and Janakpur includes rice, mango, wheats, fish, cash crops and sugarcane etc and other local market towns acts as collecting and distributing point for local surrounding areas.

5.6.2.3 Modes of Transportations for Trading

Figure 18: Modes of transportations for Trading

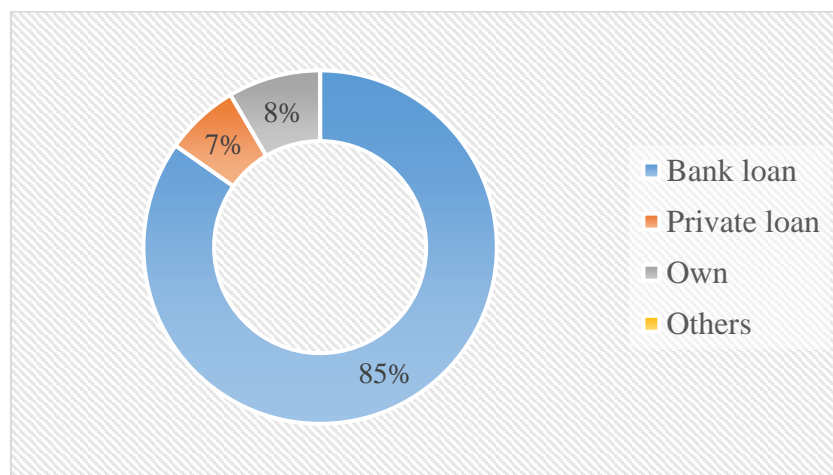


Source: Field Survey, 2021

Survey show that commodity is exporting by truck about 59% and followed by bus, tractor and porter.

5.6.2.4 Source of Investment for Business

Figure 19: Source of Investment for Business



Source: Field Survey, 2021

According to field survey, about 85% shopkeepers are depends on the bank loan for operating to the business and followed by private loan and own.

5.7 Functional Range of Small Towns in the District

Table 17: Functional range of small towns in the district

| Towns | Functions | | | | | | | | | | | Total |
|-----------------|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | |
| | | | | | | | | | | | | 11 |
| Lahan | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | 11 |
| Siraha | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | 11 |
| Mirchaiya | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | 11 |
| Golbazaar | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | 11 |
| Dhangadhi | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | 11 |
| Sukhipur | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | 10 |
| Kalyanpur | No | Yes | Yes | Yes | No | Yes | Yes | Yes | Yes | Yes | Yes | 9 |
| Aarnama | No | Yes | Yes | Yes | No | Yes | Yes | Yes | No | Yes | No | 7 |
| Nawarajpur | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No | Yes | No | 8 |
| Karjanha | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | 10 |
| Aurahi | No | Yes | Yes | Yes | No | Yes | Yes | Yes | No | Yes | No | 7 |
| Bishnupur | No | Yes | Yes | Yes | No | Yes | Yes | Yes | Yes | Yes | Yes | 9 |
| Bariyanpatti | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | 10 |
| Laxmipur Patari | No | Yes | Yes | Yes | No | Yes | Yes | Yes | Yes | Yes | Yes | 9 |
| Nahara | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | 10 |
| Bhagwanpur | No | Yes | Yes | Yes | No | Yes | Yes | Yes | Yes | Yes | Yes | 9 |

Legends

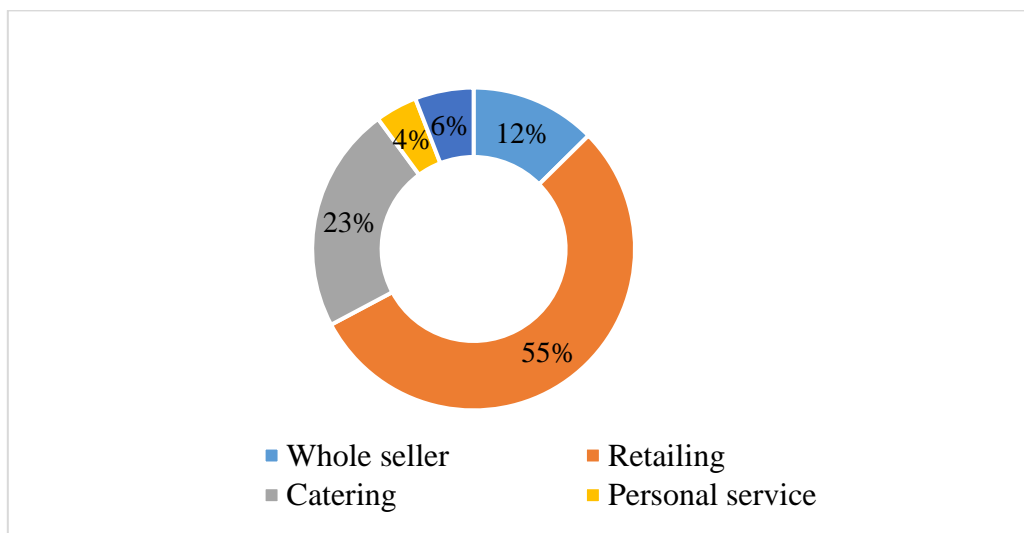
1. Water supply
2. Telephone
3. Electricity
4. Health Service
5. Industry
6. Education
7. Commercial unit
8. Period market
9. Financial service
10. Govt. service
11. Transport

This table shows that, highway towns have all facility, shows the more development of towns than towns south of highways.

5.8 Functional Structure Analysis

Function includes all administrative, financial, social, commercial, and institutional activities that are connected to the market town as its focal point. Specifically, centrality may be defined as ability of the center to provide goods and services in excess of need of its own residents as well as to the people of surrounding hinterlands. Functional unit shows the trade area of towns and also link to the surrounding area.

Figure 20: Functional structure of towns in the district



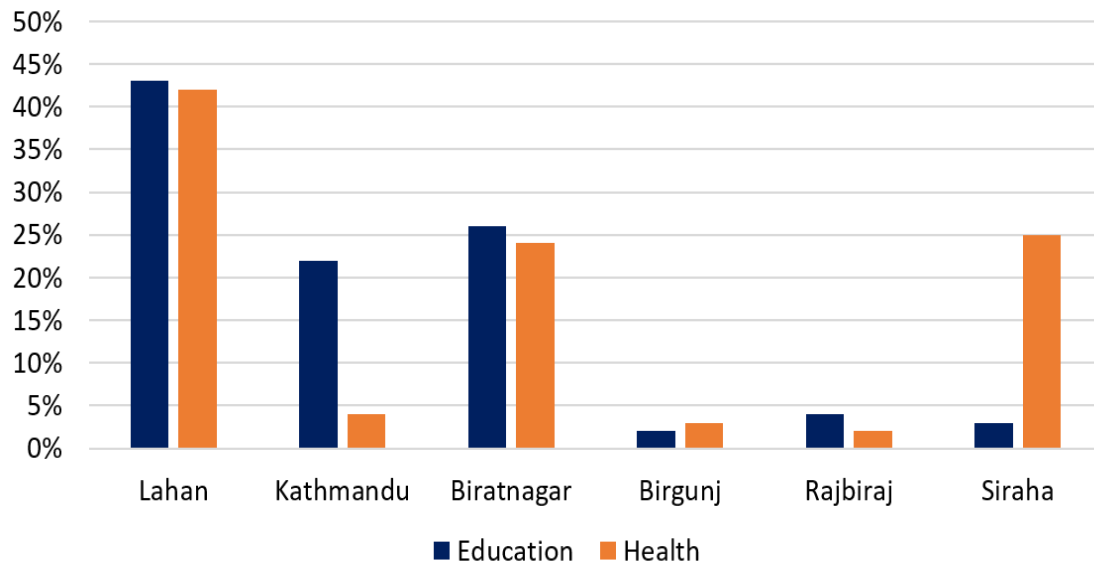
Source: Field Survey-2021

The functional establishments of towns are grouped into three broad categories, such as (i) commercial, (ii) industry, and (iii) institution. These broad groups are further broken down into sub-groups. For instance, the commercial activity is further divided into five sub groups such as retailing, wholesaling, catering, and personal service and others. The major types of retailing are clothes, food grains, medicine, hardware, groceries, readymade items, Utensil shop, book and stationery shop etc. According to the field survey, retailing is the biggest functional unit in Siraha district about 55% and catering is the second functional unit due to commercial and development centre. The nature of retail stores appears to depend on the immediate requirements of the locals, who typically like to purchase numerous times in the same market. The most frequent element of the main market towns in Siraha district is a retail shop.

5.9 Social Linkage Analysis

5.9.1.1 Health and Education linkage with consumers

Figure 21: Health and Education linkage with consumers



Source: Field Survey, 2021

The survey shows about 42% patients are frequently go for treatment in Lahan and followed by Biratnagar, Siraha, Kathmandu and Birgunj. This relation show that Lahan is main market towns in Siraha district compared to other market towns. The maximum travel time for the treatments to the market towns is about 0-1 hour.

The survey shows about 43% of respondents have an educational link with the Lahan town and followed by Kathmandu, Biratnagar, Rajbiraj. The above graph shows local surrounding area students, whose economic condition are week, go to study in Lahan for diploma level and bachelors and remaining are Kathmandu, Biratnagar, Rajbiraj and Pokhara. This show that Lahan is main market town in Siraha district compared to other market towns and Lahan is also linkage to other market towns in district.

The towns south of the highway depends on Lahan, Siraha, Mirchaiya and Golbazaar for health and education services. This shows the near highway towns are more developed than towns south of highways.

6 CHAPTER-VI: REMITTANCE ANALYSIS

6.1 Remittance Situation in Nepal

Remittance inflow has drawn intense attention in Nepal's macroeconomic environment as the inclination of Nepali employees to emigrate has increased over the past decade. In the fiscal year 2019–20, Nepal received remittances worth Rs. 875 billion, or 23.23 percent of GDP (NRB 2020). With remittance inflows accounting for more than a quarter of the nation's GDP, Nepal appears to be a remittance-based economy. From 2009 to 2019, the Department of Foreign Employment (DoFE) issued more than 4 million work permits to Nepali workers. The top five labor migration destinations out of 110 total countries are Qatar, the United Arab Emirates, Saudi Arabia, Kuwait, and Malaysia. According to the NLSS III (2010/11), 56 percent of Nepalese households receive remittance and one in every two rural households received remittance. Poverty reduced from 25.2 percent in 2010 to 16.6 percent in 2019.

Table 18: Summary statistics of remittances and transfers

| Description | Nepal Living Standards Survey | | |
|---|-------------------------------|-----------|------------|
| | 1995/96 | 2003/04 | 2010/11 |
| Percent of all households receiving remittances | 23.4 | 31.9 | 55.8 |
| Nominal average amount of remittance per recipient household (NRs.) | 15,160 | 34,698 | 80,436 |
| Share of total amount of remittances received by household | | | |
| From within Nepal | 44.7 | 23.5 | 19.6 |
| From India | 32.9 | 23.2 | 11.3 |
| From other countries | 22.4 | 53.3 | 69.1 |
| Share of remittances in total household income among recipients | 26.6 | 35.4 | 30.9 |
| Nominal per capita remittance received for all Nepal (NRs.) | 625 | 2,100 | 9,245 |
| Nominal total amount of remittance received (million NRs.) | 12,957.80 | 46,365.50 | 259,088.50 |

Source: Nepal living standards survey (NLSS) 2010/11

6.2 Remittance Analysis

About 50-60% of household migrated to the town from nearby rural village. The data shows that when rural villagers have the remittance money they move towards the nearby towns for education, business, service and for better way of living. The survey show that remittance is the main source of income about 50-60% of the household in the Siraha district and followed by agriculture, business and others. The income of about 50% of the household have NRs. 20,000-30,000.

In a survey of rural hinterlands for remittance, it was shown that 50–60% of people had left their native countries in search of job abroad, particularly in Gulf countries like Malaysia, Qatar, Saudi Arabia, and the United Arab Emirates. People are more likely to build new houses, make repairs to older structures, or purchase land in the village for farming when they return with such a large amount of money. After then, it's more possible that they will relocate to surrounding towns where they can find better business facilities, contemporary meals and services, and better educational opportunities for their children. The typical trend demonstrates that people typically buy land and build new house in due course after relocating to the new town. This leads to the qualitative development of the real estate market, the construction industry, and other economic activities like banking.

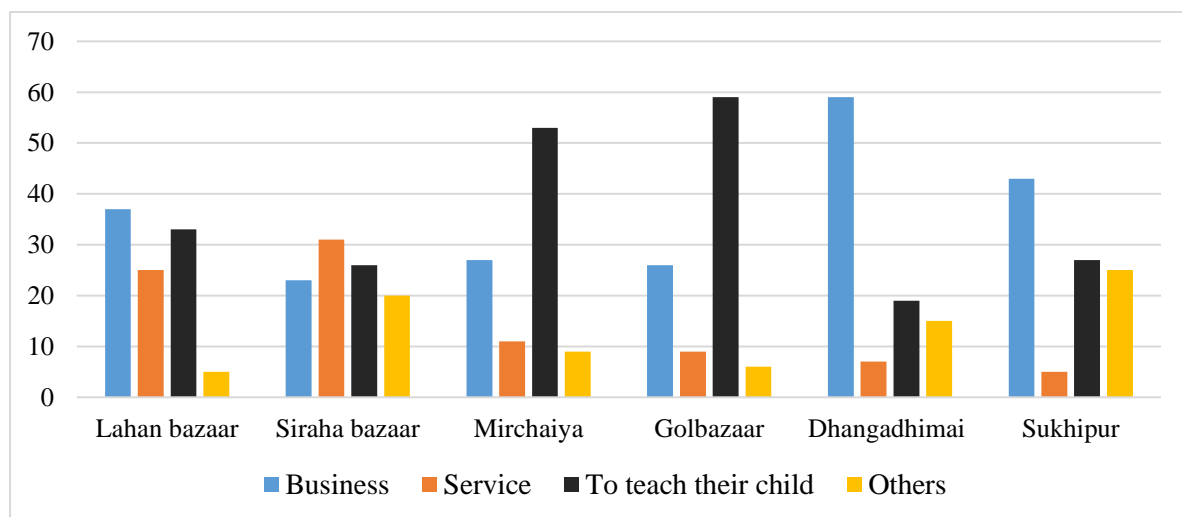


Figure 22: Reason for migration trend in major towns

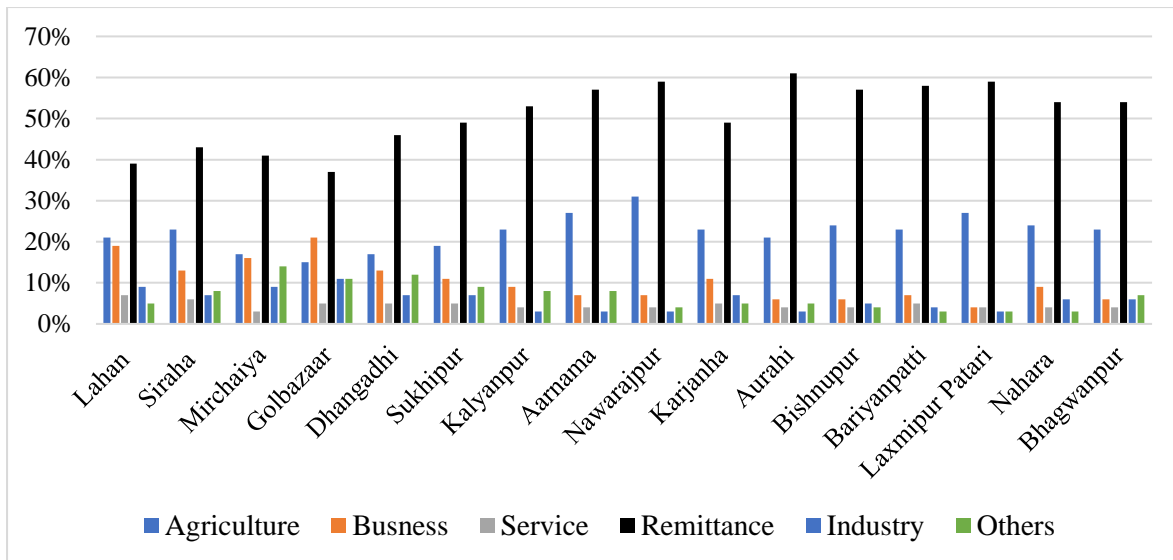


Figure 23: The main source of income in the district

It demonstrates that remittances are a new source of money for the village in the hinterland. Remittance has a good effect on both the development of towns and villages as well as the linkages between them. Remittances contribute to the integrated development of the sub-region in this way. But it has some negative impacts such as sprawl development, development of house without any basis services and infrastructure and unplanned structure. As a result, the government should start implementing planning interventions. If not, it will be extremely challenging to provide infrastructure and services during an emergency.

7 CHAPTER-VII: CONCLUSION

7.1 Conclusion

There are many factors that enhance the backward and forward linkage between small towns and their hinterland village, so that small towns act as integrated development of the district, according to a thorough analysis of various aspects of towns, including transportation, telecommunication, market center and its interlinkage, economic, and social analysis. The functional structure of Siraha district shows that the commercial function dominates all other functions. Of all functional types, retailing is by far the largest number. The wholesaling and personal services units, which are considered important market functions, are relatively few in number.

There are many road networks connecting the main small towns in Siraha district to hinterlands village by national highways, district roads, gravel road and earthen roads, which develop the growth of the towns. It deals with the road connectivity between main market center in Siraha district and their hinterland villages. The major towns are located along E-W highway such as Lahan, Golbazaar, Mirchaiya, Dhangadhi and Bandipur. So that road connectivity is very important for the development of towns and also helps to linkage the towns and its hinterland areas. The types and condition of road pavement affect the activities and linkage between market centre and their hinterland village. This linkage is important because they are the main vehicles for spatial integration of human activities and also indicates flow of goods in market Centre and surrounding areas.

The telecommunication facilities increased the linkage between towns and also their hinterland villages. The telecommunication pattern shows that outgoing calls from Siraha district has maximum linkage with capital city of Kathmandu. This data shows that town has strongest linkage with Kathmandu due to temporary migration, professional and for higher and quality education. The telecommunication linkage shows the flow of people to the towns and level of human resource development and also helps to the linkage between towns and villages.

Siraha district has 17 small towns with 50 and more than 1000 commercial units. These towns are located in different places of the district. These small town and market centre has an important role in the rural development process of the district. The relative importance of all these towns is not equal. 17 small towns are identified based on aspects such as historical

development process, location opportunities, commercial importance, transportation facilities and regional role have been identified as potential bazaar settlements from the development point of view.

The market centre is not merely a place for the exchange of goods. It is also a place for the exchange of services and ideas a place for agro-processing mills of small-scale industries, a place for community and production services, and a place for fair or hat (periodic market) or social gatherings and a place of transport service or break of-bulk service. Lahan, Golbazaar and Mirchaiya, are major small towns in Siraha district are located along E-W highway, followed by Dhangadhimai, Sukhipur Bariyanpatti. Siraha is administrative centre in Siraha district. Many people are dependent on this market for buying and selling of daily consumables. Lahan, Golbazaar and Siraha has to and fro linkage. So, this is the main centre for business, educational and administration works of this district. Highway towns such as Lahan, Golbazaar, Mirchaiya and Dhangadhi imports commodity from Kathmandu, Biratnagar, Birgunj and India and local market center are depending on Highway towns. Biratnagar is the biggest centre for Golbazar, Mirchaiya and Sukhipur. It was found that grains mainly flowed from the local settlements, while clothes, kerosene etc. were supplied from the outside of the district and exports commodity to Kathmandu, Biratnagar, Janakpur includes rice, mango, wheats, fish, cash crops and sugarcane etc and other local market centre acts as collecting and distributing point for local surrounding areas. Farm surplus is the major goods to be supplied to the market centers and in return flow of capital towards them. The best places to provide services to locals are Lahan, Mirchaiya Golbazar, Dhangadhi and Sukhipur. Lahan, Siraha, Mirchaiya Golbazar, Dhangadhi and Sukhipur are the dominant trading centre in the district. Lahan serve 7 market towns and surrounding area. Mirchaiya serve 8 towns. Golbazar serve 9 towns and Sukhipur serve 3 towns and surrounding village area and growth of small towns also enhance the development of village. So that small towns area crucial for integrated development of sub-region. Agriculture is the prime occupation of the hinterland people and source of income. As obtained from the sample customers, the hinterland area of Siraha district is potential for development particularly in primary production activities such as, fish, mango, grain, vegetable Fruits and dairy products.

Remittance is new source of income for the people of Siraha district. It is new phenomenon that people are migrating to nearby towns for get better goods and service. It will also help to linkage the development of towns and village and thus, this is how remittances enhance the development of sub-region.

7.2 Recommendation

Since small towns and market centers are where most socioeconomic activities take place for those living in rural areas, additional expenditures should be made there to ease tension between rural and urban areas. Small towns like Lahan, Siraha, Mirchaiya, Golbazzar, Dhangadhi, and Sukhipur should improve their employment and service sectors, educational infrastructure and services, agricultural production services, market and connectivity to other major markets, better health infrastructure and services, and information flow. Consideration should be given to Lahan, Siraha, Mirchaiya, Golbazzar, Dhangadhi, and Sukhipur because they connect more hinterlands than other towns. This may eventually help in promoting integrated rural-urban development and mitigating trends in rural-to-urban migration. For their economic activities, rural people depend on periodic markets (Haat bazars). The importance of these markets in boosting the rural economy cannot be overstated. So, planned investments in regular markets should be carried out, and links between these markets and other significant markets should be improved. The concept of development of market towns should be taken as an integral part of the district development plan to be formulated according to the decentralization law and regulations. The development of towns as a result of remittance money has benefits and drawbacks of its own. Remittance money has caused the highway towns like Lahan, Mirchaiya, Golbazzar, Dhangadhi, Choharwa, and Bandipur to grow rapidly. Nepal government has to select such towns which are growing very fast and conduct research in the field of their social and physical aspects. This will help to control the sprawl development and make proper land use and give a proper direction to develop in a planned way. It also helps to examine the potential of rural hinterlands for their surplus products and provide a market for their goods and services.

7.3 Topic for Further Research

There has to be research on how rural residents migrate based on their economic status. It is important to research the socioeconomic changes in the population who have moved to the Terai region from hill towns. Additionally, it is important to research how small towns and periodic markets affect the socioeconomic development of rural hinterlands. For the purpose of evaluating the various roles played by small towns and market centers, similar studies must also be conducted in other geographical regions of Nepal.

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LIST OF APPENDICES

Appendix-1: List of small towns in Nepal

| Table: Showing the 132 small towns of Nepal which was declared by DUDBC under ministry of physical development | | |
|---|----------------|---|
| Terai Region | | |
| S.N. | District | Small Towns |
| 1 | kanchanpur | Banwasa |
| 2 | Kailali | Attaria, Chisapani, Bhajani |
| 3 | Bardia | Rajapur, Bhurigaon |
| 4 | Banke | Kohalpur, Khajura |
| 5 | Dang, Deukhuri | Lamhi, Bhaluwang |
| 6 | Nawalparasi | Sunwal, Bardaghat, Gaidakot, Kawasoti |
| 7 | Kapilvastu | Chanouta, Krishnanagar |
| 8 | Rupandehi | Ramnagar, Manigram |
| 9 | Chitwan | Meghauri, Parsa |
| 10 | Parsa | Jeetpur, Pokhariyya |
| 11 | Bara | Simra, Amlekhganj |
| 12 | Rautahat | Chandranigahpur, |
| 13 | Sarlahi | Barahathawa, Lalbandi |
| 14 | Mahottari | Bardiwas |
| 15 | Dhanusha | Dhanushadham, Dhalkewar |
| 16 | Siraha | Siraha Bazar |
| 17 | Saptari | Hanumannagar |
| 18 | Udayapur | Katari |
| 19 | Sunsari | Duhabi, Jhumka |
| 20 | Morang | Ulambari, Rangeli, Birat Chowk, Letang, Belbari |
| 21 | Jhapa | Biratamode, Surudda |
| Mountainous Region | | |
| 22 | Darchula | Darchula |
| 23 | Bajhang | Chainpur |
| 24 | Bajura | Martadi, Kolti |
| 25 | Baitadi | Baitadi, Khalnga, Patan |
| 26 | Accham | Mangalsen, Safebagar |
| 27 | Dailekh | Dailekh |
| 28 | Jajarkot | Khalanga |
| 29 | Salyan | Khalanga, Sitalpati |
| 30 | Rolpa | Liwang, Sulichaur |
| 31 | Mayagdi | Beni |
| 32 | Lamjung | Besishahar, Sundar Bazaar, Kunchha |

| | | |
|---------------------|----------------|--|
| 33 | Parbat | Kushama |
| 34 | Gulmi | Tamghas, Ridi, Santipur |
| 35 | Arghakhanchi | Sandhikharka |
| 36 | Dhading | Dhadingbesi, Gajuri |
| 37 | Sindhupalchok | Chautara, Brabise |
| 38 | Ramechhap | Manthali, Ramechhap |
| 39 | Okhaldhunga | Okhaldhunga |
| 40 | Khotang | Diktel |
| 41 | Bhojpur | Bhojpur |
| 42 | Terhathum | Terhathum, Basantpur, Magalung |
| 43 | Panchathar | Fidim |
| 44 | Dadeldhura | Jogbuda, Budor |
| 45 | Dailekh | Dullu |
| 46 | Surkhet | Chhinch |
| 47 | Gorkha | Arughat, Abu Khaireni |
| 48 | Kaski | Hyamza |
| 49 | Tanahu | Dumre, Bandipur, Khairenitar |
| 50 | Palpa | Dumre |
| 51 | Dolakha | Jiri, Charikot |
| 52 | Nuwakot | Ranipauwa, Betrabati |
| 53 | Kathmandu | Sankhu, Thankot, Pharping |
| 54 | Lalitpur | Bajrabarahi, Bugmati, Chapagaun, Lubu, Lele, Saibu |
| 55 | Kavrepalanchok | Bhakundebesi, Bahubise |
| 56 | Sindhuli | Dumja |
| 57 | Makwanpur | Palung, Kulekhani, Bhimphedi |
| 58 | Sankhuwasabha | Chainpur, Tumlingtar |
| 59 | Dhankuta | Hile |
| 60 | Illam | Pashupatinagar, Fikkal |
| Hilly Region | | |
| 61 | Humla | Simikot |
| 62 | Mugu | Gamagadhi |
| 63 | Dolpa | Dunai |
| 64 | Kalikot | Manma |
| 65 | Jumla | Jumla |
| 66 | Rukum | Musikot |
| 67 | Mustang | Jomsom, Kagbeni |
| 68 | Manang | Manang, Chame |
| 69 | Rasuwa | Dhunche, Syabrubesi |
| 70 | Solukhumbu | Saleri, Lukla, Phaplu |
| 71 | Taplejung | Taplejung |

Source: DUDBC, Babarmahal

Appendix-2: Market Service Inventory Sheet

Name of Small towns/Market Centre:

VDC's Name:

General Survey Forms

1. Physical attributes of sites of small towns/Market Centre
 - a. Flat Area
 - b. Ridge top
 - c. Hill slope
 - d. Undulating

2. Location of Small towns/Market Centre
 - a. River bank
 - b. Highway/Road
 - c. Major trail
 - d. Break off the bulk point
 - e. Nodal point of a population and productions area

3. Morphological form
 - a. Crisscross
 - b. Linear
 - c. Other form

4. Type of road links of small towns/market centre
 - a. Metalled motorable
 - b. All-weather motorable
 - c. Fair-weather motorable
 - d. Foot track

5. Population Size: (Detail of Population such as household, size, sex, etc.)

6. Problems Related to Small towns/Market Centres

Appendix-3: Customers Questionnaire Survey

1. Name of the Small towns/Market Centre

2. Name of the respondent

3. Gender
 - a. Male
 - b. Female
4. Age (Years)
 - a. 0-20
 - b. 20-40
 - c. 40-60
 - d. 60-80
5. Caste

6. Religion
 - a. Hindu
 - b. Buddhist
 - c. Muslim
 - d. Christian
7. Education
 - a. 8 class passes
 - b. SLC
 - c. +2
 - d. Bachelor's degree
 - e. Master degree
8. Where are you originally from (Name of village/ VDC)?

9. What is your main occupation?
 - a. Agriculture
 - b. Business

- c. Service/Administrative Jobs
- d. Livestock
- e. Wage Labours
- f. Other (Please specify)

10. What is your monthly income level (NRS/-)?

- a. 5000-10000
- b. 10000-20000
- c. 20000-30000
- d. 30000-40000
- e. Above 40000

11. For what purpose do you visit this small towns/market center?

- a. Business
- b. Administrative
Purpose/Jobs
- c. Purchasing/Selling
- d. Other (Please specify)

12. Means of transportations?

- a. Bus
- b. Bicycle
- c. Motorcycle
- d. On foot
- e. Tempo
- f. Other (Please specify)

13. How usually do you travel to small towns/market center?

- a. Once a week
- b. Twice a week
- c. Once a month
- d. when a need occurs

14. When you travel to market centers and small towns, do you sell any agriculture

products?

- a. Yes
- b. No Maybe

15. If yes, what types of produce you sell and buy in the markets?

16. What potential do you feel for the development of these markets?

17. What problems do you think are hampering the growth of this market?

Education

1. Where do students who graduate from school go to continue their studies?

- a. Lahan
- b. Rajbiraj
- c. Biratnagar
- d. Birgunj
- e. Kathmandu
- f. Pokhara
- g. Other (Please specify)

2. What are the major problems facing your family in using educational services?

- a. Unaffordability
- b. Poor quality of education
- c. Poor transportation
- d. Need children for working at farm
- e. Other (Please specify)

3. What are your suggestions regarding improving the use of educational services?

Health

1. In last two years, for what diseases did you get treatment?

2. Where do patients frequently go for treatment?
 - a. Lahan
 - b. Rajbiraj
 - c. Biratnagar
 - d. Birgunj
 - e. Kathmandu
 - f. Siraha
 - g. Other (Please specify)

3. How far did you have to go for treatment(hours)?
 - a. 0-1
 - b. 1-2
 - c. 2-3
 - d. 3-4
 - e. 4-5
 - f. 5-6

4. What are the major problems regarding use of health services?
 - a. Expensive
 - b. Difficulty in transportation
 - c. Poor quality of services
 - d. Other (Please specify)

5. What are your suggestions regarding improving the health services?

Appendix-4: Traders/Shopkeepers Questionnaire Survey

1. Name of the Small towns/Market center
2. Name of the respondent
3. Gender
 - a. Male
 - b. Female
4. Age (Years)
 - a. 0-20
 - b. 20-40
 - c. 40-60
 - d. 60-80
5. Caste
6. Religion
 - a. Hindu
 - b. Buddhist
 - c. Muslim
 - d. Christian
7. Education
 - a. 8 class passes
 - b. SLC
 - c. +2
 - d. Bachelor's degree
 - e. Master degree
8. Where are you originally from (Name of village/ VDC)?
9. Why do you select this place for trading?
 - a. Parental
 - b. Roads
 - c. Lack of other jobs
 - d. Near home
 - e. Other (Please specify)
10. What type of trade business do you operate?
 - a. Wholesaling

- b. Retailing
- c. Both
- d. Catering
- e. Personal Services
- f. Others (Please specify)

11. What type of Shop by Items Solds?

- a. General Shop
- b. Cloth Shop
- c. Electronic Shop
- d. Motor Parts Shop
- e. Vegetable Shop
- f. Utensil Shop
- g. Book and Stationery
- h. Medical Shop
- i. Other (Please specify)

12. Where do you get the commodities for this trading?

- a. Dealer
- b. Agencies
- c. Farmers
- d. Other (Please specify)

13. Which places do you import commodities for your business?

- a. Rajbiraj
- b. Janakpur
- c. Birgunj
- d. Biratnagar
- e. Kathmandu
- f. Lahan
- g. Golbazar
- h. India

14. Which places do you exports commodities for your business?

- a. Surrounding local area
- b. Janakpur
- c. Birgunj
- d. Biratnagar
- e. Kathmandu
- f. India

15. What is the Means of transportation for your trading?
- Truck
 - Bus
 - Tractor
 - Porter
 - Others
16. Source of Investment for business?
- Bank loan
 - Private loan
 - Own
 - Other (Please specify)
17. Which place, costumers come to buy goods in the shop?
- Surrounding local area
 - Outside area
 - Other (Please specify)
18. What percentage of costumers are from surrounding villages?
- 0-20
 - 20-40
 - 40-60
 - 60-80
 - 80-100
19. What percentage of costumers are from other areas?
- 0-20
 - 20-40
 - 40-60
 - 60-80
 - 80-100
20. What potential do you feel for the development of these markets?
21. What issues, in your opinion, are hampering the growth of this market?

Appendix-5: Checklist for Development of small towns/market centres

Physical Development

- a. Planning framework
- b. Organizational set-up
- c. Street
- d. Drainage and Sewage Disposal
- e. Public and Private Toilet
- f. Bus Terminal
- g. Hat Bazar
- h. Park & Playground
- i. Others

Services

- a. Educational Institutes
- b. Health Institutes
- c. Communication
- d. Drinking Water
- e. Electricity
- f. Transport Services
- g. Others

Economic Sector

- a. Agriculture
- b. Industry
- c. Trade/Commerce
- d. Banking/Finance
- e. Professional and Personal Services
- f. Others

Appendix-6: The rural village surplus products and goods

| S.N. | Items | Rural village surplus products and goods |
|------|-----------------|--|
| 1 | Vegetable | Seasonal vegetables: Kauli, Mula, Bhenta, Lauka etc. |
| 2 | Bamboo products | Bamboo for house construction |
| 3 | Wood | Wood for house construction, fire wood |
| | | |
| 4 | Leaf | Festival leaf |
| 5 | Food grain | Rice, oil seed, dal etc. |
| 6 | Animals | Buffalo, cow, goat etc. |
| 7 | Equipment | Agriculture equipment s (Hasuwa, Khurpi) |
| 8 | Others | Sugar cane |
| 9 | | Goods from outside the towns |
| 10 | Clothes | Cloth shops, ready mate shops |
| 11 | Vegetable | Vegetable products |

Source: Field survey, 2021

Appendix-7: Photographs



Sukhipur Market Centre



Lahan chowk



Lahan bazaar



Siraha bazaar



E-W highway



Kamala River



Dhangadhimai bazaar



Golbazaar



Mirchaiya bazaar



Bariarpatti bazaar



Postal highway



Nawarajpur bazaar



Bhagwanpur bazaar



Bishnupur bazaar



Kalyanpur bazaar



Lahan (MRM)-Bhagwanpur-Thadi road

Appendix-8: Comments from External Examiner

| S.N. | Comments | Response to the Comments |
|-------------|--|---------------------------------|
| 1 | Mention of Three-tiered Nepalese Governance structure in literature review. | Page no.- 15 |
| 2 | Elaboration of small towns and their linkage with hinterlands village in district. | Page no. 54-56 |
| 3 | Potential development activities of small towns in district | Page no.-59 |
| 4 | Mention of Remittance economy analysis | Page no. 78-79 |
| 5 | Elaborate of conclusion and recommendation in details | Page no. 80-82 |