FOREIGN DIRECT INVESTMENT IN NEPAL: DETERMINANTS AND ROLE IN MANUFACTURING SECTOR

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LETTER OF RECOMMENDATION

We certify that this dissertation, entitled *Foreign Direct Investment in Nepal: Determinants and Role in Manufacturing Sector,* was prepared by Bashu Dev Dhungel under our guidance. We hereby recommend this dissertation for examinations by the Research Committee of the Faculty of Humanities and Social Sciences, Tribhuvan University, in fulfillment of the requirements for the Degree of DOCTOR OF PHILOSOPHY in ECONOMICS.

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APPROVAL LETTER

This dissertation entitled **Foreign Direct Investment in Nepal: Determinants and Role in Manufacturing Sector** was submitted by **Bashu Dev Dhungel** for final examination to the Research Committee of the Faculty of Humanities and Social Sciences, Tribhuvan University, in fulfillment of the requirements for the degree of **Doctor of Philosophy** in **Economics**. I, hereby, certify that the Research Committee of the Faculty has found this dissertation satisfactory in scope and quality and has therefore accepted for the degree.

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DECLARATION

I hereby declare that the dissertation, entitled *Foreign Direct Investment in Nepal: Determinants and Role in Manufacturing Sector*, is the result of my original research work under the guidance of Prof. Dr. Ram Prasad Gyanwaly and Dr. Gunakar Bhatta.

I further declare that it has not been previously submitted either in part or full to this or any other university for any degree. Due acknowledgements have been made whenever anything has been borrowed or cited from other sources.

Bashu Dev Dhungel

Date: February 2022

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ABSTRACT

Foreign direct investment (FDI) is a long-term commitment for investment in developing host countries like Nepal as the major sources of capital for investment, the transfer of advance technology, and knowledgeable management skills. However, Nepal has received a very small amount of FDI compared with other developing countries during the study period. Thus, this dissertation, on *Foreign Direct Investment in Nepal: Determinants and Role in Manufacturing Sector,* explores the major determinants of FDI inflows and its contribution to the manufacturing sector.

The main objectives of this dissertation are to investigate the trends, growth, and sources of FDI flows into Nepal with the special focus on the postliberalization periods; to explore the causes of the gap between actual and proposed FDI inflows; to analyze the determinants of FDI inflows; and to examine the contribution of FDI to the manufacturing sector of Nepal. To achieve these objectives, primary data from 100 samples, as well as secondary data (1995/96-2017/18), has been collected.

To address the first objective, committed and actual FDI data have been used to show trend, composition, and growth of FDI flows into Nepal. The research has found that the trend and growth of FDI flows into Nepal is inconsistent during the study period. The magnitude of FDI from China is maximum, followed by India during the study period.

To achieve the second objective, principal component analysis has been used to abstract crucial factors causing the high discrepancy between actual and committed flows of FDI into Nepal. To check the significance level of these abstracted factors, one sample *t* test has been made. The results show that high inflation rate, high volume of debt, high volume of trade deficit, and corporate tax rate are the pivot elements discouraging the foreign investors from investing their capital even after commitments. Similarly, the prominent factors causing the gap between actual and committed FDI flows are the low performance of bureaucrats in their respective fields, bureaucrats' corruptive attitudes, unnecessary complex process created by bureaucrats for foreign investors, poor research and development facilities, less development of transportation facilities, and policy complications to approve the FDI.

To address the third objective, OLS regression has been employed to investigate the key determinants of FDI flows into Nepal. The regression analysis reveals that the availability of infrastructure, corporate tax rate, political stability, human capital, openness, consumer price

index, gross domestic product, NEPSE index, broad money supply, and tertiary education enrollment, infrastructure, market size, human capital, country-risk factors, and financial variables are found to be major determinants of FDI.

To meet the fourth objective, instrumental variables and two stage least squares method have been used to explore the contribution of FDI to the manufacturing sector. The finding shows that the FDI has made a positive and significant impact on the manufacturing GDP and generated employment opportunities in the manufacturing sector during the study period.

Finally, this dissertation concludes that FDI is a source of investment for a developing country—as well as main drivers of employment, technological progress, productive improvement, and ultimately economic growth of the nation. In order to raise the inflows of FDI, therefore, policy makers should develop infrastructure, moderate corporate tax rates, control corruptive attitudes of bureaucrats, reform policy complications to approve the FDI, and further liberalize the policies for foreign investors.

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LIST OF ABBREVIATIONS/ACRONYMS

AL	:	Adult Literacy Rate
ARDL	:	Autoregressive Distributed Lag
BTR	:	Black Topped Road
CBS	:	Central Bureau of Statistic
CEECs	:	Central and East European Countries
CPI	:	Consumer Price Index
CRV	:	Country Risk Variables
CT	:	Corporate Tax Rate
DOI	:	Department of Industry
DW	:	Durbin-Watson
EFA	:	Explanatory Factor Analysis
ELEC	:	Election as Dummy Variable
EM	:	Employment
EU	:	European Union
EV	:	Economic Variables
FDI	:	Foreign Direct Investment
FV	:	Financial Variables
GCF	:	Gross Capital Formation
GDP	:	Gross Domestic Product
GMM	:	Generalized Method of Moments
GNI	:	Gross National Income
HC	:	Human Capital

IBN	:	Investment Board of Nepal
IMF	:	International Monetary Fund
INFRA	:	Infrastructure
KMO	:	Kaiser-Meyer-Olkin
LE	:	Life Expectancy at Birth
Ln	:	Natural Log
M	:	Volume of Import
M_2	:	Broad Money Supply
MI	:	Maoist Insurgency as Dummy
MENA	:	Middle East and North Africa
MGDP	:	Manufacturing Gross Domestic Product
MEM	:	Manufacturing Employment
MNCs	:	Multinational Companies
MNEs	:	Multinational Enterprises
MoF	:	Ministry of Finance
MS	:	Market Size
NRB	:	Nepal Rastra Bank
NRs	:	Nepalese Rupees
NGDP	:	Nominal Gross Domestic Product
Obs	:	Observed
OECD	:	Organization for Economic Co-operation and Development
OLS	:	Ordinary Least Squares
OWS	:	One Window Service
PCA	:	Principle Component Analysis

RMGDP	:	Real Manufacturing Gross Domestic product
RFDI	:	Real Foreign Direct Investment
RGEIM	:	real Government Expenditure in Manufacturing Sector
RX	:	Real Export
SAARC	:	South Asian Association for Regional Cooperation
TB	:	Trade Balance
TCON	:	Total Consumption
TE	:	Percentage of Tertiary Education Enrollment
TOPEN	:	Openness ($\frac{X+M}{GDP}$)
TTFM	:	Total Transection in Financial Market
UK	:	United Kingdom
UNCTAD	:	United Nations Conference on Trade and Development
UNCTAD	:	United Nations Conference on Trade and Development
US	:	United State
USA	:	United State of America
WDI	:	World Bank Development Indicators
X	:	Volume of Export

CHAPTER I

INTRODUCTION

1.1 Background of the Study

Nepal has faced the deficiency of capital resources for development of different sectors of Nepalese economy because the gap between gross domestic saving and gross investment at GDP has been negative and rising: from -12.8% in 2003/04 to -36.7% in 2017/18 (Ministry of Finance [MoF], 2018). In addition, the population of Nepal, as of 2011 census, is 2.64, million; the total number of households are 5.4 million with the average annual growth rate of population being 1.35%, whereas the average gross domestic product (GDP) growth rate of Nepal is 4.3% (MoF, 2018). This data exhibits that the average annual GDP growth rate is low in relation to population growth. To mitigate the gap between population growth and demand for capital, therefore, it is necessary to raise the domestic savings and domestic capital formation.

However, the nation has not been able to increase domestic savings and capital formation, thereby causing poverty and stagnation. The economy, additionally, is suffering from the hidden unemployment and resource cultivating with restricted possibility for mechanization where foreign capital flows have kept on assuming a basic part throughout the years in supporting the economy. Foreign capital flows can be divided into the debt creating and non- debt creating inflows. Debt creating capital flows encompass external assistance, borrowing and loan of different maturities whereas, non-debt creating capital flows refers to long term investment (foreign direct investment), portfolio investment and bank deposits. Furthermore, nondebt-creating capital flows can be divided into the short term (portfolio investment, bank deposits) and long term foreign direct investment (FDI) flows (International Monetary Fund [IMF], 1993). Among these different kinds of capital flows, the focus of this study is long term nondebt capital flows (FDI flows) in Nepal.

Nepal's macroeconomic indicators show that the country's economic situation is poor in terms of per capita income, the salability of common resources, the amount of poverty, and the manufacturing sector's standing. Developing

nations, such as Nepal, have been attempting to attract foreign direct investment in a variety of areas in response to this predicament. The bulk of foreign investment is concentrated in a few advanced and middle-income developing nations, with low-income countries attracting proportionately less investment. The economic characteristics of these countries, such as a huge local market, abundant natural resources, and opportunities for export-oriented industry, explain the significant concentration of overseas capital investment in these countries. IMF (2010) states that those nations—with narrow internal business sectors, helpless normal assets, a generally immature foundation and restricted opportunities for fabricated fares—will be unable to draw in significant direct speculation even with liberal guidelines and liberal motivations. It ought to, in any case, be recalled that the enormous nations with rich regular assets additionally can't draw in FDI if their strategies are prohibitive.

The non-industrial nations having acknowledged unfamiliar speculation as one of their advancement systems run over two significant issues; (a) how to rise flow of FDI? and (b) how to generate profit from FDI?

A major concern of the developing countries is how to attain the objective of more inflow of foreign investment—and at the same time obtaining the sustainable economic development from the investment (Mottaleb, 2007).

As a small low-income country with relatively under developed infrastructure, Nepal lacks the capital, technical knowhow, and managerial skills for the development of overall economy. The country is, however, trying to attract foreign investment through its open-door policy to uplift the economy. The country has a number of positive factors that can give many sources to foreign investors: strategic location between the two most populous nations in the world—China and India; trainable workforce; low setting of costs; and good environment for development of service related industries like medical colleges, nursing homes, bank industry, Insurance Company and other manufacturing industry.

However, Nepal has attracted only low volume of FDI compared with other developing countries like China and India. Furthermore, a large number of foreign firms are interested in establishing their branches in Nepal, and they have fulfilled the rules and regulations for establishment of new company. After the completion of company rule, however, they do not seem to be interested in

investing the capital within the country, thereby leading to low actual inflows of FDI. Owing to the low actual inflow, therefore, this study has tried to examine the difference between actual inflows of FDI and proposed volume of FDI in Nepal—and to examine the factors that have hindered the inward inflows of foreign capital after being proposed in our respective office.

Promulgation of the Foreign Investment and One Window Policy 1992, Industrial Policy 1992, and Foreign Investment and Technology Transfer Act1992 were huge strides towards drawing in foreign capital in Nepal—the demonstration that assumed an essential part in improving foreign capital, moving cutting edge innovation, and making productive administration. Foreign direct investment happens when financial backer's dependent on one nation get resources from another nation to deal with the resources. FDI is viewed as a method of acquiring innovation and capital as well as scant administration—and as a method of ability, improved administration 'skill', source for non-conventional fares of makers, prepared items, and exchanged administrations. Foreign capital may likewise set out work open doors and increase the living expectation of individuals. FDI has improved the conveyance of pay, cultivated development and increased the living expectation of individuals by growing the chances for beneficial business and pay age (Mottaleb, 2007). In this manner, special attention has been given to various plans to mobilize foreign capital to meet the expanding investment requirement of the nation through the production of speculation amicable climate.

Key policies of the Public authority of Nepal (GoN) for rising foreign capital flows into Nepal are as follows:

a. Foreign capital flows have energized in areas, for example, hydropower, the travel industry, farming and non-wood based high worth items, advancement of training and wellbeing related offices, monetary administrations, data innovation, and biotechnology-related businesses.
b. FDI has encouraged export-oriented industries, excavation of available usual resources, erection of physical convey, and enhancing the management.

c. FDI has encouraged individuals intended to investing in infrastructural development to spread employment-based technology well suited with the available economic structure of the nation.
d. FDI has encouraged formulating appropriate policy to receive skills, efficiency, technology, and capital from non-resident Nepalese.
e. A Nepalese conciliatory mission abroad has been activated to advance unfamiliar speculation.
f. An undeniable level speculation advancement board has been detailed to work with unfamiliar venture. This board capacities as a 'one-window' look for meeting the essential of ventures
g. Opportunities have been given to global oil organizations to the investigation of oil at doable areas.
h. Efforts made to advance passage of unfamiliar speculation and innovation, to rise near benefit and need areas, has made by establishing a venture cordial climate.

Unfamiliar capital is a class of cross-line venture from an occupant in one economy (The unfamiliar direct financial backer) to set up enduring revenue in an endeavor (the unfamiliar direct speculation project) that is inhabitant in an economy other than that of the immediate financial backer (Association for Monetary Co-activity and Advancement [OECD] Benchmark, 2008) FDI makes the significant effect on global business as well as marketing channels of their products by establishing foreign firms within the country. It is a way of getting capital, technology, scarce management, and traded services from different countries in the form of foreign capital. All of these are prerequisite of economic growth and development of Nepalese economy.

The FDI consigned hypotheses pushed that public and unfamiliar capital-based endeavor, whenever permitted to work in country or cutthroat market circumstances, prompts openings for agricultural nations to gas pedal monetary development. This action has given freedom to non-industrial nations to add new assets—like capital, innovation and the board—to have economy and assists with raising proficiency that rolls out sure improvement. Unfamiliar venture additionally sets out business open doors and raises the pay of individuals. Thusly, FDI would help make occupations, better appropriation of pay and cultivate

development. Along these lines, FDI is probably the best mean of monetary advancement for non-industrial nations like Nepal. This relies on the association of the country with new business sectors in abroad, the new information acquired, and its commitment to existing innovative to raise their ability and usefulness (Katerina, John, and Athanasios, 2004).

Government of Nepal, therefore, has given a first priority to attract long term, nondebt creating foreign capital (FDI) in recent years. The previous plans have emphasized to raise the inflows of foreign capital, technology, technical, and managerial skills, particularly for the development of infrastructure, manufacturing industry, tourism industry and other sectors. The major objective of ensuring the safe entry of foreign capital in different sectors is to expand the employment opportunities, to raise the growth rate of GDP, to raise the per capita income, and to uplift living standard of Nepalese people. As a result, previous efforts to recruit foreign capital to meet the country's growing investment needs were given special attention. The Industrial Policy of 1992, the Foreign Investment and One Window Policy of 1992, and the Foreign Investment and Technology Transfer Act of 1992 were all significant steps in attracting foreign capital to Nepal, allowing it to play a vital role in improving foreign capital, technology transfer, and efficient management.

Nepal has been attempting to attract foreign investment in a variety of areas in order to close the gap between capital demand and supply. Nonetheless, the bulk of foreign investment is concentrated in a few advanced and middle-income developing nations, with low-income countries attracting proportionately less investment. Out of total FDI inflows ($1.4 trillion), developing countries received the 41% ($646 billion) of FDI in 2017. Nevertheless, the percentage share of south Asian country is very low 3.1%. India received the $9.8 billion, Pakistan $0.1 billion and Sri-Lanka received the $0.07 billion. Nepal has only received $0.106 million FDI in 2017 (United Nations Conference on Trade and Development [UNCTAD], 2018). The committed data for FDI shows that 4,505 foreign capital-based projects are registered in Nepal comprising all categories of industries, worth of total foreign capital equal to NRs 269,943.83 million. The total fixed capital is estimated to be NRs 378,045.47 million as of 2017/18. FDI based industries on the basis of commitment are provided employment to 244,939 people

in Nepal. Out of total project (4,505), 3000 are service-related projects with total investment of worth NRs 88,104.29 million. FDI based enterprises in service sector are likely to provide employment about 121,500 people. Similarly, 1,237 projects are production industries with NRs 300,742 million project cost (Department of industry [DoI), 2018).

As a result, Nepal's FDI inflows have been quite modest when compared to other developing countries. Given the beneficial impact and significance of FDI flows, it is vital to investigate the reasons for Nepal's low FDI flows. In this context, it is critical to examine the factors that influence FDI flows into Nepal.

1.2 Statement of the Problem

FDI has played the important role, to fulfill the shortage of foreign capital, to develop the efficient management, and carry of modern technology from abroad to Nepal. FDI is a major source of capital that helps to fulfill the shortage of demand for capital for investment in relation to existing mobilized savings. Developing countries like Nepal are unable to properly develop their capital market and they feel the shortage of capital requirements to establish the big projects; besides, the access foreign currency required to buying goods is not conceivable locally. FDI, therefore, resolves both the complications simultaneously because it is one of the major sources of foreign assets. FDI can also fill the gap between actual and desired foreign currency requirements with in the country by establishing exportable industries as well as direct flows of foreign currency in the form of FDI (Hymer, 1960).

Apart from the problem of foreign currency, Nepalese economy has been also grappling with other economic problems like burden of external debt, low level of investment, unemployment or underemployment, low level of GDP growth, and so on. At this critical situation, the government of Nepal scripted a new chapter in the history of Nepalese economy by initiating a programme of macroeconomic stabilization and adjustment supported by the IMF and World Bank during the period of 1990s. Nepalese economy was not considering foreign alignment favourably before the restoration of democracy 1990, at the time the world economy was hit by the wave of globalization. As a result, Nepal started receiving FDI at the end of 1980s, but the major determinants and their

contribution to the manufacturing sector have not been fully analyzed—the situation against the backdrop of FDI in the country. Furthermore, FDI in Nepal has not fully translated into the economic growth and development, and this has raised the questions on the main determinants of FDI during the period of postliberalization of the Nepalese economy. The problem has remained as to whether appropriate measures have been adopted to really attract FDI in the country.

FDI flows have increased significantly in Nepal since 1990s, and they remained a prominent source to bridge the deficiency of capital investment in Nepal. However, the FDI inflows into Nepal have been extremely low as compared to neighboring countries like India and China. Given the positive effects and importance of FDI flow, another problem arises on investigating its main potential determinants in Nepalese economy.

Because there is the scarcity of research in Nepal from an academic perspective, Nepal provides a fertile ground—due to several unique characteristics—for developing and testing a new theory of location determinants of FDI. Nepal's unique features—such as high level of risks associated with political, economic, and financial sectors—make it necessary for the economy to understand the role of macroeconomics variables, financial variables, and country-risk variables in determining FDI flows into Nepal.

The objectives and scope of this study have been determined on the basis of the growing interest in FDI in Nepal among policy makers and investors, the lack of academic research on the topic, and the specific characteristics of the Nepal. As a result, the study has aimed to contribute to understanding the key determinants of FDI in Nepal. Furthermore, many more potential foreign multinational firms and individual investors have committed a large volume of FDI in the company register's office in Nepal, but the actual inflow of FDI in Nepal is less than their commitments. This problem makes it necessary to examine why Nepal is unable to receive the all committed chunk of FDI within the country.

The growth rates of GDP, agriculture, and nonagriculture, on average, seem to be 4.3%, 2.9%, and 4.9%, respectively—low growth rates for developing countries like Nepal. Similarly, unemployment and underemployment rates are growing at 2.3% and 30% a year, respectively (MoF, 2018). The low growth rates, as well as high unemployment and underemployment rates, make it essential to

examine the contribution of FDI to the growth of GDP and the generation of employment in manufacturing sector.

1.3 Research Questions

It is in this background, this study has raised the following research questions

a. How is the nature of movement and growth in FDI inflow in Nepal? Why such movement and growth are in Nepal?
b. Why there is the gap between proposed and actual FDI inflows in Nepal?
c. What are the major determinants of FDI inflows in Nepal?
d. What is the contribution of FDI in manufacturing sector of Nepal?

1.4 Objectives of the Study

General objective of this study is to make a critical analysis of FDI inflow in Nepal. However, its specific objectives are-:

a. to explore the movement, growth, and sources of FDI inflow into Nepal with special focus on the post liberalization periods;
b. to examine the causes of gap between proposed and actual FDI inflows in Nepal;
c. to identify the determinants of FDI inflows in Nepal; and
d. to examine the contribution of FDI in manufacturing sector of Nepal.

1.5 Hypotheses

This study has formulated the first hypothesis to address the objective b, the second hypothesis to address the objective c, and the third hypothesis to address the objective d.

Hypotheses 1

H_0: $\beta = 0$. That is, there is no significance difference between proposed and actual inflows of FDI in Nepal.

Hypothesis 2

H_0: $\beta = 0$. That is, FDI flows in Nepal are not associated with macroeconomic variables.

Hypothesis 3

H_0: $\beta = 0$. That is, there is no significance relationship between FDI inflows and its contribution to GDP growth and employment generation in manufacturing sectors.

1.6 Significance of the Study

There is substantially switching the view of both advance and less advance countries about FDI. They both believe that FDI as one of the suitable form of external finance. Nowadays, there has been an increase in competition for FDI inflows particularly developing nations like Nepal. Thus, this study is appropriate to understanding the determinants of FDI inflows during 1995/96-2017/18.

This study is based on FDI theory of *Eclectic Paradigm to Foreign Direct Investment* (Dunning, 1977). The eclectic theory of FDI inflows depends upon the conceptual framework of OLI advantages. 'O' refers to the ownership advantages, which are the intangible assets and exclusive to the firm at least for a period of time. It is useful to foreign firms either gain higher income or reduces costs of productions. 'L' refers to location advantages to the foreign firms and 'I' refers to internalize these advantages to foreign firms. Out of the OLI, this study is based on Location advantage theory for the determinants of FDI.

This study primarily deals with the major determinants of FDI inflows in Nepal during the study period by employing econometric models. Previous studies did not pay any attention to show the potential determinants of FDI inflows including financial variables, economic variables, and country risk variables in Nepal. This study males the detail and separate analysis of financial factors, economic factors, and country risk factors of FDI inflow in Nepal. Finally, it explores the overall factors of FDI inflow in Nepal. This is a new contribution in Nepalese context. Further it contributes to existing study by exploring the major reasons for the gap between actual and commitment of FDI in Nepal through survey method. It is another new contribution so far this researcher has known. Further this study provides more updated and fresh analysis and of contribution of FDI in manufacturing sectors in Nepal.

Moreover, this study seems useful as a reference for teachers and students who do the research in this field in future, using time-series data as well as primary data. This study is also important for potential investors in the sense that

this dissertation provides information on the key determinants of FDI and its impact on manufacturing sector of Nepal that would help investors to analyze every aspect of the targeted investment in the country.

1.7 Limitations of the Study

Owing to time and data constraints, this study has put the following limitations:

a. FDI inflow has not been institutionalized systematically yet in Nepal. The source for the proposed-FDI data has been taken from the Industrial Ministry, Government of Nepal, and real flows of FDI from Nepal Rastra Bank. The scope of study has been delimited due to the unavailability of the data related to FDI.
b. The real inflows of data have not been found industrywise and sectorwise; thus, only total inflows of time series data have been used in this study. Furthermore, although Nepalese economy was liberalized in 1990, the data on real FDI have been found only since 1995/96.
c. This study has not covered the micro-level study or firm-based study, but it has explored the only factors that caused the big gap between proposed and actual flows of FDI. This study has covered the macroeconomic variables responsible for affecting the inward inflows of FDI in Nepal but not outflows.
d. This study has examined the contribution of FDI only to manufacturing sector, not other sectors like primary and tertiary sectors. The contribution of FDI has also examined manufacturing GDP growth and employment generation at macro level, but not at micro or firms' level. This study has only covered the period of 1995/96 – 2017/18 because it is the period of postliberalization in the Nepal. Before liberalization in the economy, there was completely restricted to inward flows of FDI within the country.

1.8 Organization of the Study

This study is divided into eight chapters. Chapter one includes the background to the subject and highlights some aspects of FDI inflows in Nepal. This chapter also includes the objectives of the study as well as significance of the study. Furthermore, it also draws attention to some of the research issues involved.

It raised the research questions addressed in the dissertation. Chapter two is associated with the review of relevant literature to establish valid explanation for the research questions. It consists of theoretical review as well as empirical review. The theoretical review provides the knowledge about the main theoretical explanation of FDI developed by various scholars' theories of international trade and firms, eclectic O (ownership)-L (Location)-I (internalize) paradigm, and so forth. The main empirical review gives the knowledge about the main determinants of inward inflows of FDI and it helps to develop the research framework and hypotheses. It also provides a brief review of the empirical studies relating to FDI in Nepal. Chapter three is related with the research methodology; explains the variables and statistical techniques employed to test the hypotheses; and incorporates research design, nature and sources of data, population and sample, methods of analysis and limitation of the study.

Chapter four analyzes the trend and composition of FDI inflows in Nepal after restoration of democracy. This chapter examines the year wise, sector wise and source of FDI inflow in Nepal. Furthermore, this chapter presents the growth rate of FDI inflows in Nepal. Chapter five explores the reasons for the gap between proposed and actual FDI inflows in Nepal by using primary data covering sample size of 100. This chapter provides the idea about factors responsible for the inflows of FDI within the country, and it also examines the factors responsible to return back to the capital from Nepal to respective country. Chapter six analyzes the potential determinants of FDI inflows in Nepal. It attempts to identify country specific determinants of FDI in Nepal through macroeconomic variables. It presents detailed analysis of the nature, pattern of constraints affecting FDI inflows in Nepal, using econometric models. Chapter seven analyzes the data to examine the contribution of FDI to manufacturing sector of Nepal by employing econometric model. This chapter examines the role of FDI in industrial production and employment generation in industrial sectors. Chapter eight includes the major findings, conclusions, and recommendation of the study.

CHAPTER II

LITERATURE REVIEW

2.1 Introduction

Since the 1980s, foreign direct investment has been growing significantly in most of the developing countries like Nepal. The reason is that many developing countries have made favourable policies of FDI to raise the inflows of FDI by providing tax incentives and reducing FDI barriers. These efforts made by the developing countries lead to the inflows of FDI that enhances sustainable economic growth in host country (Herzer, Klasen, & Nowark, 2008). Along these lines, the motivation behind this part is to review the theories of FDI that could give a system to an exact examination of the determinants of FDI and its contribution to industrial sector in Nepal.

Review of literature is systematized into two sections: The primary segment briefly describes the various theories of FDI that helps to explore the main determinants of FDI and its role in manufacturing sectors and the subsequent segment summaries the prevailing empirical studies on the major factors that affecting inflows of FDI and the role of FDI in manufacturing sectors. These reviews explain the core factors that affect flows of FDI and its contribution to manufacturing sector of Nepal. The concluding segment of this chapter ascertains the knowledge gap in the scholars' literature and summaries them.

2.2 Determinants of FDI: A Theoretical Review

Various theories of foreign direct investment (FDI) have made different explanations about determinants of FDI:

2.2.1 Theories of FDI Based on Mercantilism

Between the periods of 1500 to 1800, most of the states used the mercantilism policy to achieve economic unity and political control. Mercantilism theory stated that wealth of the country depends more upon its holding of treasure, like gold, and on a country's volume of export than import in order to raise national wealth and to have a favourable balance of trade. Hill (2001) argued that mercantilism

is an old doctrine; however, its role is still useful for modern political debate as well as trade policies for many developing countries. According to mercantilism theory, deficit of current account is not good for the country, and larger volume of imports reduce the employment opportunity of the domestic country. Thus, this doctrine also indirectly identified the potential determinants of FDI in a host country: net export, condition of trade, volume of wealth in the country, and so on.

2.2.2 Theories of FDI Based on Absolute Advantage

Musonera (2005) developed the theory of determinants of FDI based on absolute advantage theory of international trade which was first evolved by Adam Smith at 1776. Absolute advantage refers to ability of producers, individuals or firms to produce particular products and services as possible as at minimum resources. This theory explained the nature of markets which is based upon the invisible hand of allocating resources that leads to specialization in mass production as possible as in accelerator rate. Prices played important role to raise the supply of goods and services where and when there was a shortage. This theory argued that market forces are the major factor which helps to raise the production of appropriate goods and services at appropriate place and that ensure to expand the market size. Expansion of market was the main determinants of foreign direct investment.

Absolute advantage theory stated that a collusive relationship between firms and government is dangerous for the people. In an open economy, without government intervention, public welfares would increase due to exhibits of competition. In that situation, when firms try to outsell each other, prices would go down, and there is an only normal profit. However, if there were competition, nation would able to attract more national as well as international producer to produce the goods and services which helps to raise the inflows of foreign capital with in the country.

2.2.3 Theories of FDI Based on Perfect Competition

MacDougall (1958) propounded the theory of FDI based on the assumption of perfect competitive market. This theory is related to a two-country model where a price of capital is equal to its marginal productivity. When there are no barriers to shifting capital from one country to another, this theory stated, the marginal

productivity of capital is equal between investing country and host country. There is no problem of the national income of an investing country because investment is made on other countries and because the investing country receives a large amount of income from its investment abroad. However, these theories were based on the assumption of perfect competition prevailing in factor and product markets which helps to increase inflows of FDI. But this theory is unable to identify the nature and pattern of FDI.

Kemp (1964) developed the theory based on perfect competition market structure. This theory stated that when there is free movement of capital from one country to another country, both countries have equal marginal productivity. However, the marginal productivity of the country depends upon the existing facilities for the investors like transportation and communication facilities, availability of resources, size of markets, price of factor inputs etc. But the fact is that in a practical ground perfect competition market does not exist all over the world.

2.2.4 Theories of FDI Based on Imperfect Competition

In order to address the shortcoming of the perfect competition market trade theory, imperfect competition trade theory to FDI is developed by various authors.

Kindleberger (1969) put forward the decisive assumption that FDI relies on severe monopoly market power. This hypothesis shows that the advantages of multinational companies are only useful when the market is imperfect. The advantages of this hypothesis, such as better innovation, efficient management, and licensing; these benefits encourage companies to put resources abroad and abuse them completely, rather than offering them to potential competitors in unfamiliar markets. The more significant the power of restrictive infrastructure and the benefits of syndicates are the more prominent the support from unknown financial supporters. Although, this hypothesis expresses the different types of advantages the company obtains from the host-country company, this hypothesis is not sufficient to clarify which interests the company should focus on. In addition, an unknown company can make full use of its monopoly profits only if the strategy of the host country allows it. Under normal circumstances, the host country will not grant free partial consent to unknown companies out of public interest.

Buckley and Casson (1976) developed the internalization theory of FDI. This theory gave the emphasis on intermediate inputs and technology. According to this theory inflow of FDI depends upon the nature of country, volume of industry and firms. This theory highlights the following things:

a. Firms get the more profits in an imperfect market.
b. When intermediate markets are imperfect, there is a chance of creating internal markets,
c. Internalization of market all over the world leads to raise inflows of FDI or MNCs.

A firm involved in research and development generates a new technique, and technology, and a new method of production. Innovation of new technique and technology creates the problem to other firms to transfer technology or sell the inputs because those other firms bear high transaction costs. A firm chooses to internalize through the use of backward and forward integration, that is, the production of one subsidiary can be used as an input for the production of another subsidiary, or the technology developed by one subsidiary can be used in other subsidiaries. When internationalization involves operations in different countries, it does not necessarily mean foreign direct investment. They identified five types of market imperfections that result in internalization:

a. A long-time lag is required for coordination of resources.
b. Discriminatory pricing is necessary for exploitation of market power.
c. Unstable bargaining situations arise due to a bilateral monopoly.
d. A consumer cannot properly know the selling price of goods.
e. And Government interferences in internalization markets create in inducement for pricing.

This market imperfection is the main determination of foreign direct investment. Although, the theory of internalization explained the risk of the domestic government intercession, government did not consider the difference in the degree of this threat across several industries.

Knickerbocker (1973) developed the theory of determinants of FDI based on market imperfections of oligopoly market. This theory has stated that there are three important motives for selecting an investment location:

a. Market size.

b. Firms want to utilise relatively sufficient factors of production available in the host country.
c. Firms frequently engage in imitative behaviour, i.e., they follow rivals' internationalization efforts in order to maintain their strategic advantage.

This theory has argued that firms in an industry tend to follow each other under an oligopoly market because firms have no sufficient knowledge about production costs. That is, the firms promptly export their goods to reduce the risk of being undercut and being crowded out by a rival firm. By following the rival's FDI, the firm can avoid being under-priced. Thus, the oligopoly market structure is the main determinants of FDI inflows in host countries.

2.2.5 Eclectic Paradigm to Foreign Direct Investment

Dunning (1973) developed the eclectic theory based on combination of three economic theories i.e., theory of firms, industrial organization and industrial trade theory to explain capability and inclination of firm to work for markets in a foreign country via foreign direct investment. According eclectic approach FDI inflows depends upon the conceptual framework of OLI advantages.

'O' refers to the possession benefits, that area unit the incorporeal properties and exclusive to the firm a minimum of for an amount of your time. It's helpful to foreign corporations either gain higher financial gain or reduces prices of productions.

When the foreign corporations enter within the country, they face some extra prices. Therefore, to with success inhume in foreign market, a distant firm should have distinctive characteristic that will minimize the prices on foreign markets. These benefits are the property of foreign firm. The firm has monopoly power over its own specific benefits and victimization them abroad ends up in higher profit or lower price than alternative competitive corporations. There are 3 types of specific advantages:

a. Monopoly gains of foreign firms to entree in foreign market over possession of limited natural resources, patents right, trademark etc.
b. Economise in the large size of production such as economies of scale and scope, greater access to financial markets etc.

c. Innovation activities of firms related to technology, knowledge (Dunning, 1973).

'L' refers to location benefits to the foreign corporations. If the two previous requirements are met, it should be advantageous for the business to take use of these advantages beyond its home nation with a minimum of problem inputs (location specific advantages). In the absence of location-specific benefits, local manufacturing and export would be the only way to reach the international market. Firms may have a variety of motivations for pursuing ownership, acquisition, and location advantages (Dunning, 1973).

'I' refers to internalize these advantages to foreign firms. It should be additional useful for the firm to use possession blessings itself and attribute instead of externalize these possession blessings through licensing or similar contracts with freelance corporations (Dunning, 1973).

Dunning (1977) identified four types of MNE activities: (a) Market– seeking investment, (b) Natural resource–seeking investment, (c) Strategic assets –seeking investment, and (d) Efficiency–seeking investment.

i. Natural Resource- Seeking Investment

Foreign firms are induced to invest in any country when there is sufficient supply of resources at low-cost relative to their home countries. Sufficient supply of resources motivates the investors to make the investment and it helps to minimize the cost of production. In such firms as petrol, chemicals and other natural resources are major determinants of cost of the firms. Thus, international investors need to confirm that either foreign firm get abundant of natural resources or not in production process before the firm stablish in any nation. Furthermore, the inflow of FDI depends upon the availability of inputs, skill manpower or other assets and access of technology and managerial capacity–how available in key market. Furthermore, many companies establish a joint venture in another country as a forerunner to fully owned FDI. Collaboration with a local partner lowers the risk of entrance while allowing the entrant to gather local experience before entering the market on its own (Dunning, 1977).

ii. Market- Seeking Investment

Investor seeks new market opportunity either as a result of unfavourable development of their home market which pushed in to international market or attractive opportunities abroad which pulled in to international markets. The main element of market seeking investment is to avoid the restriction of international trade like by the host government. The host government, on the other hand, hopes to defend its sectors from foreign imports by putting taxes and controls on imports. To get a sense of the local market, products have to be tweaked. As a result, international customers must be present on the market. Furthermore, to service customers in other countries, physical presence is required in banking, trade, and hotels (Dunning, 1977).

iii. Efficiency–Seeking Investment

Efficiency – investment is sought to reorganize and expand current foreign business operations in order to increase the efficiency and worldwide competitiveness of the investing foreign firms. It only appears in marketplaces that are regionally connected. This form of investment is in reaction to the importance of technological advancement and cross-border market liberalization. There are two forms of efficiency: investment-seeking and non-investment-seeking. The first is intended to lower sourcing and production costs by gaining access to low-cost labour and other low-cost inputs to the manufacturing process, resulting in investment in nations with similar economic growth. The second is designed to take advantage of economies of size, scope, and consumer preferences (Dunning, 1977).

iv. Strategic Assets –Seeking Investment

The goal of this form of investment is to boost a company's worldwide competitiveness versus its primary domestic and international competitors. Furthermore, the goal of this type of investment is to achieve a long-term strategic goal through acquiring the assets of foreign companies. The divestment of non-core resources and capabilities of foreign firm assets to invest in a domestic firm might uplift the restructuring of the later firm. The major contribution of eclectic paradigm

is to combine various complementary theories and identify the various determinants of FDI. For this reason, this theory is more applicable for empirical investigation of determinants of foreign direct investment. However, this theory unable to describe the growth of FDI flows into developed nations at a time of decreasing trade obstacles. Thus, it is necessary to examine the new theory of determinants of foreign direct investment (Dunning, 1977).

2.2.6 New Trade Theory Approach to Foreign Direct Investment

Various authors (Markusen, 1984; Helpman, 1984; Ethier, & Horn 1990) have proposed a novel trade theory approach to FDI. This theory is developed in general equilibrium model to predict the pattern of trade by including location advantage, internalization advantage and ownership advantages. Location advantage is determined by market size, trade cost, availability of resources, tax and subsidy rate etc. for MNEs. Ownership advantage includes the knowledge – capital. Internalization advantage arises from joint – input characteristics of knowledge capital. The location decision of foreign investors depends upon the two hypotheses i.e., the proximity concentration and factor proportion hypothesis (Markusen, 1984).

According to factor proportion hypothesis, foreign firms locate their different stage of production in different countries on the basis of advantage of differences in factor cost. If the foreign firms produced the inputs with skilled labour in their headquarters could easily be carried to the foreign affiliates at low cost which make possible to differentiate in factor cost. Headquarters of the MNEs is located in the country with large numbers of skilled labour and their production activities locate in country with abundant of unskilled labour. Thus, the expansion of firm is determined by differences in factor cost. The foreign investment depends upon the factor cost difference between the developed and developing countries as the factor proportion hypothesis predicts (Ethier, & Horn 1990).

MNEs can arise in a single direction between nations if they are able to dominate a certain industry in terms of factor percentage. Then these companies ship their goods to the headquarters. The impact of this inter-industry trade is determined by how MNEs in this nation satisfy their input demands, whether through imports from foreign countries or local providers. Furthermore, regional

block external tariffs hinder input commerce and encourage MNEs to trade inside the region.

Proximity concentration hypothesis based on the assumption of market size, factors endowments and technological developments are symmetries in all countries where the MNEs want to expand their investment. This hypothesis revels that firms prefer FDI over exporting provided that firms are motivated by proximity consumer at the expense of reduced scale. There is positively correlated, where MNEs existence, between high transportation cost, trade barriers, low investment barriers and the ratio of scale economies at the plant level relative to corporate level. MNEs are motivated to invest in foreign market to minimize transport cost associate with exporting at given the symmetries in country market size, factor endowment and technologies. This induces for horizontal investment. There is two ways investment between similar countries in terms of both relative and absolute factor endowment occurs. Thus, according to proximity hypothesis large volume of FDI flows toward the development country (Helpman, 1984).

Kojima (1985) integrated trade theories with determinants of foreign direct investment theories. This theory identified the main determinants of FDI which are competitive and efficient resources available in the domestic country as well as technique of production and production process in the country. Furthermore, resources labour and market orientation as the major motives behind international investment by a firm.

According to Helpman (2004), heterogeneity exists in every industry, and as a result, company productivity varies. As a result, businesses are arranged according to their production. Low-productivity enterprises offer their products solely in domestic markets, whereas high-productivity firms sell their products both domestically and internationally. However, depending on the firm's production levels, the forms of operation in international markets will vary. High-productivity companies choose to service overseas markets through FDI, whereas low-productivity companies offer their products in foreign markets through export. When the benefits of avoiding transportation, expenses outweigh the costs of operating facilities abroad, companies invest abroad. Thus, the inflow of FDI in any country depends upon the cost of production, market size, government policy, situation of corruption and other environment for investment.

To explain the main determinants of FDI (Nocke & Yeaple, 2004) developed the assignment theory of FDI. Mergers and acquisitions, it is believed, assist businesses in using complementarities in their firm-specific assets. As a result, the merger and acquisitions market allow heterogeneous businesses to sell and purchase corporate assets in order to take advantage of complementarities. FDI, on the other hand, aids in the expansion of production capacity overseas, allowing a company to relocate its assets to another nation. Assume two nations have a free trade agreement; in this scenario, variations in factor costs between them lead to FDI and cross-border acquisitions, while disparities in entrepreneurial talents between them lead to mergers and acquisitions from one country to the next. Two-way FDI flows exist, according to this concept, if there is no transportation and factor cost disparities between two countries.

Furthermore, conventional FDI necessitates a higher outlay for the construction of new facilities in a foreign nation; such an outlay will be worthwhile only if the gains from reassigning production are considerable and sufficient. According to this idea, companies that engage in traditional FDI are more efficient than those that engage in cross-border acquisitions.

These above reviewed theories are the mainstream theories on determinants of FDI. However, these theories of FDI are unable to deal about effects of environmental risk on FDI. Thus, the environmental risk theories of FDI are reviewed as follows:

2.2.7 Environmental Risk

In the context of FDI inflow determinants, the unpredictable condition that enters from the external environment is referred to as environmental risk (Anderson & Gatignon, 1988). Country risk is another term for it. External risk was described by Agarwal and Ramaswami (1992) as the uncertainty about the continuity of current economic and political conditions, as well as government policies, which are crucial for the survival and profitability of a company operating in the nation.

Root (1994) stated the four-type's risk which directly affects the inflows of FDI; these are political instability, rate of inflation, operational risk and transfer risk. Countries have stable institutions; political change is less likely to have positive impact on business activities and it helps to raise the inflows of FDI.

When risk is high, investors typically want a bigger return on their investment as compensation for the risk they are taking. As a result, certain investment projects are appealing in one nation but not in another, riskier country. Similarly, if an investor had the option of investing in one of two countries, investors select the country with the lowest risk. Thus, the interconnection of national economies through foreign capital depends upon the major elements of environmental risk like, corruption, inflation rate, credit risk, political instability, exchange rate volatility etc.

World Bank (2006) published the indicators of environmental risk which directly affect the inflows of foreign capital. These indicators cover the wide range of country's risk including;

a. Voice and accountability

b. Political stability

c. Government effectiveness

d. Regulatory quality

e. Rule of law

f. Control of corruption

According to this theory, government stability, the lack of internal conflict and ethnic tensions, basic democratic rights, and the rule of law are the major factors of foreign direct investment inflows into emerging nations. FDI flows in developing nations are also influenced by the quality of bureaucracy, inflation rate, and currency rate volatility.

The mainstream theories of FDI are reviewed in previous section, the empirical studies related to determinants of foreign direct investment inflows are reviewed in the next section.

2.3 **Determinants of FDI: An Empirical Review**

The goal of this study is to look at FDI theories that might be used to conduct an empirical inquiry into the factors that influence FDI in Nepal. Theoretical literature

has paved the way for a critical examination of empirical findings. As a result, past empirical research helps to evaluate the major determinants of FDI flows into Nepal.

2.3.1 Location Determinants of FDI

The theory of determinants of FDI is related to the two sides of production abroad: the availability of resources used in production abroad and the location of such production activities. Investors choose the appropriate location for investment abroad on the basis of minimizing the cost of production (Buckley, 1988).

Dunning (1993) empirically examined the location choice of FDI affected by profitability of investing firms. Investors choose the appropriate place of investment, making the comparison between two or more places, which is more gainful to produce goods and services in this location to compare with others. Furthermore, inflows of FDI in any location also depends upon their national environment, such as tax rate, market size, existing human capital, labour cost, international trade, and development of infrastructure.

The components of location motives could be classified into two types: First, there are traditional factors consisting of natural resources available in the country, volume of human capital, market size, and so forth; second, there exists environmental variables, such as inflation rate, political situation of the country, exchange rate, corruption, volume of government intervention in market, and so on. These determinants of FDI seem to be differing from country to country. In addition, determinants of FDI differ across nature of industry, production technique, nature, and sources of investment. However, this study found the tax rate, labour cost, market size, and human capital of that location, where the investors want to invest, to be the main determinants of FDI.

a. Tax Rate

Hartman (1984) examined the ratio of foreign direct investment to US GDP as a function of tax rates and the rate of return on that investment, using data from 1965 to 1979. The regression analysis approach was used to estimate the results of this study, using the tax rate on earnings, corporation tax rate, and return on investment as explanatory factors. The findings of this analysis support the premise that FDI funded by retained earnings responds more favourably to investment tax

rates, but FDI financed by fresh funds has no effect on host nation tax rates. Hartman's study was the first to divide FDI into two sources (retained earnings from FDI and tax rates) and to examine the effect of tax rate on flows of FDI.

Slemord (1990) analysed the effect of tax rate on flows of aggregate FDI in USA. This study developed hypothesis based on the tax system of host country and the financing firm's home country and tested the hypothesis that the country having a lesser tax rate receives larger volume of FDI than other countries having a greater tax rate. This study collected the data from 1964 to 1987, used the regression analysis to examine the role of marginal tax rate in FDI inflows in USA, found that retained earnings from FDI were not responsive to US taxes—whereas transfers of funds were significantly elastic for FDI—and concluded that there was an inverse relationship between tax rates and inflows of FDI in US.

Jun (1994) studied the influence of FDI on the tax system in host and home countries, using the data of FDI inflows from 10 countries from 1980 to 1989, found that tax rates of host country significantly affected the flows of capital through foreign direct investment, and concluded that the enacted tax rate negatively affected inflows of FDI.

Moore, Steece, and Swenson (1987) analysed the effect of corporate income tax rate in inflows of foreign capital in manufacturing sectors. This study looked into the notion that tax rates had a negative link with the amount of foreign capital inflows. Rather than aggregate demand theory, the model used in this study was supply-side economic theory for regional investment. As a consequence, both the regional investment and location selection models were equivalent. According to this study, which examined time-series data from 1977 to 1981, the primary drivers of FDI inflows were tax structure and business climate.

Belington (1999) used the aggregate inflows of FDI into UK to estimate the tax elasticity on FDI. The key predictors of FDI location choice were identified using a variety of parameters in this study. In the UK, it employed a multi-country model with seven countries and a multi-regional model with eleven regions. Both of these models used a general to specific strategy, and they discovered that GDP growth and interest rates were positive functions of FDI inflows, but corporation tax rate was a negative function. Furthermore, it was shown that a high unemployment rate (abundant labour where the investors choose to invest) has a beneficial influence on FDI inflows. In both the multi-regional and multi-country

models, high population density (which alludes to market size) and infrastructural development were possible predictors of FDI.

Mutti and Grubert (2000) used a dataset of 500 United State multinational corporations to investigate the effect of tax rate on foreign capital inflows in certain locations of a country. The objective of this study was to assess the sensitivity of taxes on the location choice in US. This study applied the OLS model to examine the sensitivity of taxes on inflows of FDI in a particular location (state) of the US and found that average tax rate of the state highly affected the investment decisions of foreign capital in US manufacturing companies.

Having set the role of tax rate in the business location decision of firms in Canada as an objective, Blonigen and Davies (2004) applied a three –dimension panel data set for a period of 1970 to 1997 and found an inverse relationship between corporate tax rate and inflows of FDI. Furthermore, the study envisaged the existence of a negative relationship of wage rate and energy cost with inflows of FDI, while government spending on transportation seemed to be a positive function of firm's investment location choice.

Rezin and Sadka (2006) stated that higher tax rates adversely affect the capital inflows from abroad. This study applied the gravity model, with supplementary variables such as statutory taxation and implicit taxation, to inspect the relationship between tax and inflows of capital within EU countries and found the statistically significant effect of implicit taxation and statutory tax rates on FDI.

Benassy-Quere, Coupet, and Mayar (2007) used a panel data of two-sided flows of FDI among eleven OCED countries to detention the outcome of corporate tax on FDI flows. This study found that nations with squat tax rates failed to obtain FDI though greater tax rates were discouraging new inward FDI.

Leitao and Faustino (2011) examined the relationship between tax rate and inflows of FDI in Portugal. The main aim of this paper was to investigate the effect of host country tax rates on investment decision of foreign investors. To investigate the relationship between Portugal tax rates and inflows of FDI, it applied a static and dynamic panel data approach (fixed effect estimator and GMM system estimator) and found the inverse relationship between Portugal tax rates and flows of FDI from European countries. Thus, investment decision of foreign firms within the country had adversely affected the corporate as well as other tax rates of the

country. Similarly, this study found the positive relationship between market sizes, openness trade, labour costs, economic stability, and FDI.

Beck and Chaves (2012) investigated the proposition that other forms of taxation might affect FDI. This study used tax ratio, i.e. average effective tax rates on consumption, labour, and capital income for a panel of 25 OCED countries from 1975 to 2006. It applied the gravity model to estimate the effect of different tax rates on FDI inflows and found that increase in relative tax rates on capital income leads to inverse effect of capital inflows whereas increase in labour income tax rates raised the inflows of FDI.

In short, all of the above empirical study showed the inverse relationship between the tax rate of host country and inflows of FDI within the country. Thus, the expected result of this research has to be found the inverse relationship between Nepalese tax rate and inflows of FDI with in the country.

b. Market Size

The mainstream literature of FDI showed that market size was the main determinants of FDI. The main motivation for market seeking FDI was to avoid the trade barriers between the countries. Furthermore, another motivation of FDI inflows was the local market size of the host countries. Thus, potential market size was a very important variable of firm's location choice decision (Harris, 1954).

Agarwal (1980) examined the importance of market size as a location factor in the determinants of FDI inflows. This study formulated the hypothesis that larger economies were able to offer opportunities to explore economies of scale which helps to rise the market size as well as inflows of FDI. Increase in market size refers to increase in economies of scale that motivated to inflows FDI. In case of service sector, market size indicated that the availability of financial institutions and hotel services in the host countries. On the real sector, a high economic growth rate of a host country, referring to the larger expansion of market size, has promoted the inflows of FDI. Thus, market size of the country was represented by the GDP growth, GNI, per capita income and trade openness. This study applied the regression model to examine the importance of market size as a location factor in the determinants of FDI and found that economic growth rate; nominal GDP, and per capita income were the main determinants of market size. In other words, this

study found the direct positive relationship between market size and inflows of FDI within the country. Lunn (1980) for USA FDI, Karvis and Lipsy (1982) for USA multinational, Schneider and Frey (1985) for 54 less developed countries, Tsai (1994) for both developed and developing countries, Wang and Swan (1995) for FDI in China found the important determinants of FDI inflows within the country which was the existing market size of the country. These studies used the GDP and GNP or GDP per capita and GNP per capita of the host country were the proxy for market size.

Stevens (1998) examined the relationship between values of US dollar and FDI inflows into US during the period of 1973 - 1988. Real exchange rate, relative labour cost, and relative wealth were the explanatory variables and FDI was the explained variables. The ordinary least squares regression analysis found the negative and statistically significant relationship between real exchange rate and inflows of FDI into US economy.

Aizeman (1992) analyzed the relationship between flexible exchange rate and inflows of FDI between two countries within two periods. This study used the correlation method to explore the effect of exchange rate on foreign investment. This study exhibited that in case of flexible exchange rate regime the correlation depends upon the nature of shocks. It followed the assumption of risk neutrality; that refers those foreign investors did not change behavior according to the degree of risk. The correlation coefficient showed that if the dominant shocks were nominal, there was negative correlation, where as if the dominant shocks were real, there were positive correlation between the exchange rate volatility and FDI inflows.

According to Blomstrom and Kokko (2000), using investment incentives to encourage more FDI is often ineffective in raising national welfare. The main theoretical incentives for financial subsidies to attract investment are spillovers of foreign technology and expertise to local industry, and it is claimed that these advantages are not always a result of foreign investment. Only if local enterprises have the ability and motive to invest in absorbing foreign technology and talent can the potential spillover advantages be achieved. In order to encourage foreign investment subsidies, it was also required to encourage learning and investment in local businesses. Furthermore, this study found that high growth rate of GDP, low

level of labour cost, and openness made the more profitable of foreign investment that was the motivation of firms to invest in domestic country.

Sahoo (2004) analysed the determinants and impact of FDI on Indian economy, employing the OLS regression model and using time series data of the period of 1980 to 2001. FDI was used as dependent variable and GDP, exchange rate, interest rate, gross capital formation, and whole sale price index were the independent variables. Estimates regression result found the inverse relationship between GDP growth and FDI inflows in Indian economy. Furthermore, this study also found the positive relationship between gross capital formation and FDI inflows in India. Similarly, this study found that exchange rate and FDI flows have positive relationship and interest rate and FDI flows have negative relationship.

Jaumotte (2004) stated that inflows of FDI in Middle East and Central Asia depend upon the market size. To test the hypothesis on whether the market size of a regional trade agreement was determinants of FDI received by countries participating in regional trade agreement, this study covered 71 developing countries during the period of 1980-1999, employed autoregressive model, and found that the regional trade agreement market size had positive impact on FDI inflows in member countries. Similarly, the volume of domestic population seemed to matter because of its positive effect on availability of labour in low cost. Furthermore, the country having more educated and skill labour force and comparatively stable financial situation received more amount of FDI.

Asiedu (2006) explored the role of market size to promote the FDI inflows in Africa, employing regression models. In African countries, inflows of FDI were found to be directly associated with the size and structure of local market. Larger local market has promoted the inflows of FDI in Africa. The local market size of the Africa was indicated by the existing condition of infrastructure, GDP growth, per capita income of the people, gross capital formation, and trend of the expenditure on consumption.

Coleman and Tettey (2008) persuaded that market size played active role to raise the inflows of inward FDI. This study recognized regional power pool market that ensured sufficient availability of reliable and low-cost energy supplies, integrated transportation, communication, and other necessary elements. It used the correlation and regression analysis to examine the relationship between market size

and FDI inflows in Ghana and found that market size was a most important determinant for locating FDI. Furthermore, it found the positive relationship between FDI inflows and market size—like GDP growth, gross capital formation, per capita income trade policy of the nation. However, the coefficient trade openness is statistically insignificant.

Ahamad and Tanin (2010) examined the relationship between market size and inward inflows of FDI in Bangladesh. This paper employed time series datasets from 1975 – 2006 using economic growth, degree of openness, exchange rate, per capita income and labour cost in the model as determinants of inward FDI inflows. The size of local market was indicated by the GDP per capita. Larger market size has provided various opportunities for foreign firms—like sales, profit, and, so on that motivated the foreign firms to make the more investment in host country. Thus, larger market size motivated the more amounts of inward FDI inflows. This study applied co- integration model to examine the role of market size on inward FDI inflows in Bangladesh and found that there was statistically significant and positive relationship between market size and inflows of FDI in Bangladesh.

Mottaleb and Kalirajan (2010) made the comparative study of the determinants of FDI covering of 68 developing countries with panel datasets from 2005 – 2007. This paper analyzed why low- and middle-income Asian countries attract more FDI then low income African and Latin American countries. The determinants of FDI in this model included GDP, GDP growth rate, trade, per capita income, exchange rate, broad money supply, industrial value added, availability of business environment, and labour cost in host countries. This paper found that market size positively and significantly affected the inflows of FDI to lower- and middle-income countries. Trade openness was essential in motivate FDI as it links the one country with other in global market through international trade. However, this study found the insignificant relationship between FDI and Openness. Furthermore, estimates demonstrated that countries with larger GDP, high per capita income, larger GDP growth rate and friendly business environment received larger volume of FDI.

To examine the main determinants of FDI in 57 developing countries, Hussain and Kimuli (2012) used the panel data covering 10 years' data from 2000 to 2009, employed the instrumental variable approach to investigate the role of market size on inward inflows of FDI in developing countries, and found a positive

relationship between market size and FDI inflows in developing countries. Moreover, availability of cheap and skill labour force, better institutional development, and global integration helped to raise the inflows of FDI. However, this study found a positive, and statistically insignificant, relationship between FDI and openness. Thus, developing countries seem to be able to attract more FDI by enlarging market size or formulating the more liberal trade policy. This study used such variables as gross domestic product, openness, broad money supply, per capita income on purchasing power parity basis as the proxy for market size (i.e., the business environment of the country), and purchasing power of the people.

Renani and Mirfatah (2012) explored the main determinants of inward FDI into Iran covering the period of 1980 - 2006. This study used the gross domestic product, openness, crude oil price, and exchange rate as explanatory variables and FDI as explained variable. The Johansen and Juselius's approach to cointegration model found the positive and statistically significant relationship between FDI and gross domestic product in Iran. Furthermore, the finding of this study revealed that world crude price and exchange rate had negative and statistically significant relationship with foreign direct investment.

Phung (2016) used market size, macroeconomic stability, broad money supply, gross capital formation, and trade openness variables to examine the determinants of FDI in Latin America and African developing countries. The market seeking investors gave the emphasis on size of their possible consumer base and stability of the country's trade policy. Thus, market size was the widely accepted as a significant determinant of foreign direct investment. This study used the three stage least square methods to analyze the main determinants of FDI in developing countries by covering the data 1990 to 2014. It found that market size had statistically significant impact on FDI inflows in developing countries.

Khan, Sultan, and Rehman (2017) examined the impact of exchange rate, GDP, openness, and current balance account on FDI. The ARDL approach to cointegration was used to explore the main determinants of FDI in Pakistan covering the period of 1981 - 2015. The bound test results revealed that exchange rate volatility and current account balance have negative and statistically significant relationship with FDI in short as well as in long run. Furthermore, the test found that GDP and openness have positive and statistically significant relationship with FDI inflows into Pakistan.

To sum up, GDP growth and per capita income on purchasing power parity basis as the proxy for market size were expected to have a positive effect on FDI inflows in Nepal.

c. Human Capital

Human capital was another important determinant of FDI. From a foreign investor's side, quality production, cost minimization and better allocation of resources could be stimulated directly by availability of skill and low-cost manpower in the country. Therefore, development of human capital was the main instrument in attracting foreign direct investment in developing countries (Lall, 1978).

Lucas (1990) argued that human capital was one of the major determinants of inward flows of FDI to a country. Underdeveloped countries were poor due to having lesser amount of human capital. Thus, the developing countries were received low amount of FDI. Inward inflows of FDI were directly linked with number of skilled labour available in a host country. The paper also stated that human capital and foreign direct investment had highly non- linear relationship and host economics with relatively high level of human capital able to attract a large amount of technology intensive FDI.

Wang and Swan (1995) examined the determinants of foreign direct investment in Hungary and China during the period of 1978 – 1992 by using least squares method. This study introduced human capital as the main determinants of FDI inflows in these countries. Labour cost, adult literacy rate, government expenditure on health sector, education sector and economic growth were independent variables, within the framework of one equation model. Time series data of Hungary and China were plotted in to one equation model to examine the role of explanatory variables on inflows of FDI in Hungary and China. Estimates found the positive relationship between existing human capital and FDI inflows in these countries. Furthermore, low costs of labour and high economic growth were the positive function of FDI inflows in these countries.

Zhang and Maskusen (1999) analyzed the determinants of inward FDI in developing countries. This study used the least squares technique to identify the main determinants of FDI related to indicators of human capital. Total health

expenditure and literacy rate were used as a proxy of human capital. This study faced the problems to gather consistent cross-country variables. However, this paper used datasets that cover the period 1960 - 1987and estimates found the positive relationship between dependent and independent variables.

Hanson (1996) examined the role of human capital on inward inflows of FDI in 58 developing countries. Human capital: literacy rate, school enrolment and the availability of technical and professional workers were the explanatory variables. This paper used the least squares technique to examine the relationship between human capital and inward of FDI inflows in developing countries covering the datasets of 1960 to 1990. Estimates found that human capital was the statistically significant determinants of inward inflows of FDI in developing countries.

Kapstein (2001) stated that the relationship between FDI and economic growth were the function of technology and human capital. By enhancing knowledge and transferring technology generated externalities with broad economic effects. The trained and skill workers within the host country brought their skills and know – how to use the modern technology in production sectors and that have encouraged inward inflows of FDI. Thus, the purpose of this paper was to investigate the relationship between human capital formations and FDI inflows in developing countries. Government expenditure on health, education, training of workforce and research and development were the proxy of human capital. This study performed regression model to test the major factors that motivating FDI and found that human capital formation as a potential determinant of inward inflows of FDI in developing countries. This study made the policy recommendation that developing countries formulate policies that improved skill of local labours and quality as well as capabilities of human resources. Increase in quality of human resources raised the attraction of FDI in developing countries.

Noorbakhsh, Youssef, and Paloni (2001) stated that FDI was not only sources of finance and employment but, it was a means for acquiring skills, technology, managerial capacity and access to market. Furthermore, developing countries had required FDI to avoid the problems of resources and skill constraints. But foreign investors were interested to choose the appropriate location where investors found the efficient manpower. The aim of this study was to investigate the role of human capital in FDI inflows in 36 developing countries from Asia, Africa and Latin America during the period of 1980 – 1994. Using a regression model

employed based on panel and cross-country data, this study found human capital—higher levels of education—positively and significantly affect FDI inflows. Moreover, low skill labour, even with low cost of labour, found it difficult to attract FDI inflows towards developing countries.

Nunnenkamp and Spatz (2002) analyzed the effects of both flow and stock of the human capital on flows of FDI in 28 emerging countries. This study based on the ordinary least squares methods by covering 1980s to late 1990s datasets. This paper used average years of education of total population age 15 and above and found that education became an important determinant of inward FDI inflows in developing countries. Thus, cross – country evidence indicated that human capital was a positive function of inward FDI especially among efficiency seeking investment.

To explain the correlation among human wealth and flows of FDI, Ritchie (2002) used random effect model by covering the datasets of 1980s to 2000 and found a human capital to be a key determinant and a positive function of inward FDI inflows in developing countries. Without human capital, a country did not get civil liberties, political stability, good education facilities, and health facilities and was unable to reduce crime and corruption. Without reducing the crime and corruption, the FDI inflows are not attracted.

Blomstorm and Kokko (2003) examined the relationship between human capital development and inflows of FDI in Latin America. In this paper, training expenditure per employ, basic level of education (secondary level), adult literacy rate and life expectancy were the indicators of human capital. The researcher stated that the quality of labour force within the host country determines the economy's ability to create new ideas and replaced old ones. The quality of labour force was determined by the existing education policies and system, accumulated experience, formal training, government expenditure on education, and health sector and, so on. The improvement of human capital and education system were necessary for adopting new technology which was prerequisite to raise production and productivity to achieve sustainable high economic growth within the country. To explain the correlation between human capital and FDI, this paper employed regression model and found the positive and statistically significant relationship between human capital and FDI flows into Latin America. Furthermore, FDI flows resulted in knowledge spillovers to the local workforce, whereas the quality of

human capital in the host nation impacted how much FDI was attracted and whether local businesses absorbed the spillover advantages. As a result, it's probable that host nations with a high level of human capital attracted a greater volume of FDI in the form of technology-intensive foreign MNEs, which aided in the development of labor skills.

Bevan and Estrin (2004) explored the appropriate location of central and Eastern European for foreign investment based on various economic factors related of human capital (unit labour costs, government expenditure on education, health, and market size) by employing co-integration approach. This paper found that human capital was the positive function of FDI inflows in European countries.

Majeed and Ahmad (2008) stated that human capital was the significant instrument in attracting FDI in developing countries. This study used fixed effects model to investigate the role of human capital on inward inflows of FDI in developing countries. It used panel data of 23 developing countries covering 35 years (1970 – 2004). This study employed two indicators of human capital development that were health expenditure and literacy rate of these developing countries. Empirical estimates found the positive and statistically significant relationship between health expenditure and inward inflows of FDI in study area. The fact was that the productivity of labour force was depending upon their good health. Furthermore, the good health of the workers raised the learning capacity of workers that helped to raise the production as well as productivity of workers and it raised the efficiency- seeking investment. The impact of literacy rate of FDI inflows was also statistically significant. The fact was that the skilled (literate) workers were able to perform the task as possible as at low cost that helped to raise the qualitative products with in the country. Low cost of labour raised the inflows of FDI with in the country.

Talpos and Enache (2010) investigated the factors that influence foreign direct investment and human capital in Central and Eastern Europe. The researcher chose ten European Union member nations to empirically explore the causes of FDI flows. The statistical significance as determinants of FDI flows for many measures of human capital, such as those related to health (life expectancy at birth, fertility rate), and those related to education, was tested in this study using a specific panel data technique (rate of enrolment in secondary education, role of enrollment in tertiary education, average number of foreign languages learned per people, literacy

rate, and so on). Human capital metrics were shown to be positively linked with FDI flows into Eastern Europe in this study.

Dutta, Nabamita, and Kwasi (2013) stated that the sufficient availability of human capital in domestic country helps to minimize the operation costs as foreign investors need not requires making the too much expenses on personal training. Furthermore, another factor of human capital was the health of the host country's workers. Healthy workers were physically as well as mentally fit to perform their task in a better way than unhealthy workers that also reduced the health expenses of the foreign investors. This empirical study found that health and education indicators had positive and significant impact on inward inflows of FDI in low- and middle-income countries. This paper applied Granger causality approach to shows the relationship between human capital and inflows of FDI in low- and middle-income countries. It concluded that good education facilitates the civil rights as well as stable political situation of the host country that was the main determinants of FDI inflows within the country.

The linkage between human capital development and FDI flows in developing nations was studied by Gittens and Pilgrim (2013). Increases in the average level of human capital in the host country led to technical breakthroughs, which in turn led to a rise in the accumulation of future generation human capital and increased FDI inflows to developing nations. This study argued that development of human capital within the country led to rise the economic activities—like infrastructure development, production, and productivity, as well as rise economic growth of the nation— that were the main determinants of inward inflows of FDI. This paper applied the regression model with the time series and cross-sectional datasets by covering the 1970-2010 periods. Government spending on education and health were the main indicators of human capital. The educational indicator of this study was the average secondary school enrollment. This paper found the positive and statistically significant relationship between development of human capital and inwards inflows of FDI in developing countries. Furthermore, the research concluded that human capital in terms of the sort of human capital required to attract FDI, which might lead to even more human capital growth and FDI inflows.

Dorozynska and Dorozynski (2014) defined human capital which means the knowledge and skill embodied in human that were acquired from schooling,

training, and experience. It was a set of characteristics, natural talents, politeness, attitude, acquired knowledge, and abilities that received through investment. Human capitals affected business location decisions as well as build the capabilities of technological development in other countries. High levels of human capitals were able to rise growth rate of the country that attracted foreign enterprises within the country. The objective of this paper was to investigate the role of human capital in inwards inflows of FDI in Poland. Researcher used the explanatory variables in terms of ability of workforce with academic qualification of workers, labour related cost, level of education in terms of vocational, secondary level, higher level, post graduate, and educational profile in terms of technical, economic, information technology, and so on. Estimates found the positive and statistically significant relationship between explanatory variables and inward inflows of FDI in Poland. This paper concluded that investing in human capital was significant for creating good environment for foreign investors. Minimum level of education was prerequisite for a country to make healthy environment to attract FDI. Thus, human capital was the main determinants of FDI in developing countries.

Abbas and Mosallamy (2016) analyzed the primary elements that influence FDI flows and the barriers that have hampered FDI flows and economic growth. The Middle East and North Africa (MENA) area was the subject of this study from 2006 to 2013. Regression using time serious data on stationary and random effect panel data analysis were used to accomplish this investigation. The explanatory factors in this study were market openness, infrastructural development, political stability, and human capital. Skill human resources implemented the new technology faster and raised the qualitative production at low cost. Increase in qualitative production with low cost led to expand the market size in international market. Hence, improvement of human capital led to raise infrastructure development as well as enlarge the market size which was the main determinants of FDI. This study found that infrastructure, market size and human capital were the significant determinants of FDI in MENA region. Furthermore, investment in human capital also created the competitive environment within host country which was a potential determinant of inward FDI inflows in developing countries.

Gupta (2017) examined the relationship between development of human capital and inward inflows of FDI in Indian economy. The results of Granger Causality approach found that the improvement in human capital does not cause

growth in FDI inflows in India. This study used the time serious data on annual percentage change in FDI during 1975 – 2013. The human capital index comprises of education parameters which have been indicated by gross enrollment ratio in secondary and tertiary education. The human capital also indicated by health parameter which was indicated by life expectancy at birth rate of India. The estimates concluded that India has highly qualified workers in the field of information technology as well as other sectors and they were ready to perform their work at low wage rate which was drive the FDI in India.

d. Infrastructure

Another variable which has been frequently used to examine in the determinants of inward FDI inflows was effects of infrastructure on FDI. Countries with better development of infrastructure would motivate foreign firms to invest within the country. Development of infrastructure enables firms to transport goods from manufacturing center to market center, raw materials and communication easily. Therefore, transportation and communication infrastructure constituted an advantage for foreign investors within the country which led to raise the inward inflows of FDI. Infrastructure covers many dimensions ranging from ports, roads, railway, and telecommunication system to institutional development (Culem, 1988).

Wheeler and Mody (1992) examined the role of quality infrastructure in inward inflows of FDI in USA. This study employed the random effect model and verifies the positive relationship between availability of infrastructure and inflows of FDI in manufacturing and electronic sector of USA. Availability of road transportation, telephone services, availability of financial institution, supply of energy and quality of education were the indicators of infrastructure. Empirical examination found that those state which have sufficient development of infrastructure they had received large volume of FDI in USA. Thus, quality of infrastructure was the dominant factor for inward inflows of FDI.

Cheng and Kwan (2000) used three different proxies for infrastructure: all roads, railway and paved road. The objective of this study was to investigate the relationship between development of infrastructure and inflows of FDI in Chinese economy over the period of 1985-1995 by covering 29 Chinese regions. The Granger causality approach to co-integration found the long run and short run

significant positive relationship between all road transportation and FDI inflows in China.

Smarczynska and Wei (2001) used the per capita energy consumption and the number of hospital availability to measure a quality of infrastructure in influencing inward inflows of FDI. The ordinary least squares method found the positive relationship between quality of infrastructure and inwards inflows of FDI in China.

Asiedu (2001) used the number of telephone lines available for 100 habitants as a proxy for infrastructure in Sub-Saharan Africa. This paper employed the regression analysis to examine the role of infrastructure on determinants of inward FDI inflows in Africa by using time series data over the period of 1970 -1999. Estimates found the positive relationship between good infrastructures and inward inflows of FDI in Africa.

Rahman (2003) stated that presence of infrastructure facilities, like electricity and transportation networks, insurance, telecommunication efficient, finance and banking facilities led to raise the efficiency in production and productivity of goods and services at minimum cost. Thus, increase in productivity and production of goods and services at low level of costs have identified the appropriate location for inward inflows of foreign capital. This study used regression model to investigate the relationship between quality of infrastructure and inward inflows of FDI and found the positive relationship between quality of infrastructure and inflows of FDI.

Jordaan (2004) stated that good quality and well-developed infrastructure in terms road transportation and communication raised the productivity of potential investment within a host country and that motivated inward FDI inflows. This study employed co-integration approach to examine the role of infrastructure on determinants of inwards inflows of FDI and found the positive and statistically significant relationship between infrastructure development and inward inflows of FDI within the country.

Haile and Assefa (2006) stated that availability of quality infrastructure was essential for smooth functioning of multinational company's production and trade activities in Ethopia. Better infrastructure had sufficiently reduced the cost of production. This paper utilized gross capital formation as proxy for infrastructure availability over the period of 1974-2001. Gross capital formation includes land

improvement in terms of fences, drains, ditches, irrigation facilities, and so on; plant equipment and machinery purchases; and construction of road, railways, schools, offices, hospitals, commercial and industrial buildings, and so on. Estimates used the regression model to examine the relationship between improvement of infrastructure and inwards inflows of overseas investment. This study found the significant impact of infrastructure development on inwards inflows of FDI in south Asian countries. Thus, gross capital formation positively influenced the inward inflows of FDI.

Mlambo (2006) revealed that poor infrastructure causes rise the transportation cost and limits access to both local market and international markets which discourages foreign firms in developing countries. A better efficiency has been achieved by expanding infrastructure facilities like road transportation, railway, and telecommunication, and so on. Thus, quality of infrastructure made positive effect on inflows of FDI in developing countries. This paper employed autoregressive distributed lag approach to co–integration and error correction model using time series data sets for the period of 1970 – 2005 and found a strong short run as well as long run positive impact of infrastructure to inward inflows of FDI in South Africa.

Rehman, Ilyas, Alam, and Akram (2011) analyzed the role of infrastructure on inward inflows of FDI in Pakistan by using time series data for the period of 1975- 2008. The cardinal variables of this study were government expenditure on infrastructure like, telephone lines as proxy for communication, the expenditure on road as proxy for transportation, and expenditure on construction of hospital as proxy for health infrastructure. This paper employed autoregressive distributed lag (ARDL) approach to co-integration and error correction model based on ARDL approach to investigate the impact of infrastructure development on inward inflows of FDI in Pakistan. Estimates found the development of infrastructure (more government spending) was positive function of inward FDI inflows in Pakistan. Furthermore, infrastructure was a life blood for business activities because it reduced the cost of production as well as transport of goods and services from productive centre to market. Thus, infrastructure made positive and significant impact in short run and long run-on determinants of inflows of FDI in Pakistan.

Bakar, Chemat, and Harun (2012) examined the role of infrastructure to determine the FDI inflows in Malaysia during the period of 1970 – 2010. This study

employed the ordinary least squares (OLS) methods to identify the role of hard infrastructure consist of railway, highway, and soft infrastructure including transparent institution, and deeper reforms of organization on inward FDI inflows towards the Malaysia. This paper found that development of soft infrastructure was more important determinants of inward FDI inflows then the hard infrastructure. However, both soft as well as hard infrastructures were the positive and significant determinants of FDI inflows in Malaysia.

Shah (2014) examined the importance of infrastructure availability in developing countries. The aim of this study was to investigate the role of infrastructure on attractiveness of overseas investors. This paper applied regression model and random effect model to investigate the impact of infrastructure on inward inflows of FDI in developing countries by covering 1980 – 2007 periods and found that infrastructure made significant and positive effect on inward inflows of FDI. Infrastructure availability measured through telephone- density and gross capital formation of south Asian countries. The nature of increasing communications requirement between headquarters of multinational firms and the subsidiaries indicated the existence of dynamic relationship between communication infrastructure and information flows about trade, economic, and financial interactions. Consequently, development of telecommunications network led to decrease in co-ordination costs between multinational firms and their affiliates that helped to select the appropriate location for investment.

e. Environmental Risk

Alfero (2009) stated that foreign direct investment provides the skill, knowledge and transfer of technology for a domestic country that raise the various benefit for domestic companies that stimulated the economic growth within the country. The increase in economic growth within the country helped to control the economic, political as well as social factors which led to rise the inflows of FDI within the country. Thus, there were two main types of factors namely economic factors and country risk factors that determined the inflows of FDI. The first contained the quality of infrastructure, existing human capital, tax rates, market size, cost of active labour, openness to international market, and so on. The later

contained political instability, fiscal and non-fiscal incentives, corruption, inflation rate, volume of debt, exchange rate, ethnic tension, war, and so on.

In this context, country risk was the major determinant of FDI inflows within the country. Thus, the situation of country risk was the major factor for the investment decision for foreign investors.

The uncertain situation exhibits in economy due to the external environment was called environmental risk or country risk. It was a situation that made adverse effect on country's environment in terms of political, economic, and financial environment. Country risk adversely affected the inward inflows of foreign capital (Petrovic & Stankovic, 2009).

Adji, Ahn, and Thomas (1998) analyzed the relationship between political risk and inward inflows of FDI in 23 developing countries over the year 1970 – 1981 using cross- sectional and time serious data. This study used the regression model to investigate the impact of political stability on determinants of inward inflows of FDI. Estimates found that political instability like strike, corruption, political demonstration adversely affect the inward inflows of FDI due to lack of security on person and property as well as uncertainty about expected future profits.

Abed and Davoodi (2000) examined the effects of corruption on per capita FDI inflows into the developing countries. Cross sectional as well as panel data were used to investigate the impact of country risks on inward inflows of FDI in transition economies. This paper found that country with low corruption as well as low level of risks factors attracts more per capita FDI. Furthermore, this paper used the structural reform factors which were more significant factors to encourage the inward inflows of FDI then corruption.

Wei (2000) analyzed the impact of taxation, consumer price index, political stability, and corruption on inward inflows of FDI in 45 developing countries. This paper used the three different measures of corruption to investigate its role on inflows of FDI. Estimates concluded that an increase in tax rate on multinational firms and rise in corruption and political instability in the host countries would reduce the inward inflows of FDI in developing countries. Furthermore, this study found that the increase in demand pull inflation leads to rise the profit that makes the positive impact on inflows of FDI.

Akcay (2001) examined the impact of corruption on inward inflows of FDI in 52 developing countries. This paper used the two different indices of corruption

to estimate its role on FDI inflows. This study found the positive and significant relationship between corruption and inward inflows of FDI in developing countries and concluded that the most important determinants of FDI were tax rate, political stability, and rule of law then the existing level of corruption.

According to the United Nations (2001), nations that attract substantial amounts of FDI often have solid economic circumstances, a high level of education, a high degree of macroeconomic and political stability, favourable growth prospects, and favourable investment environments. This analysis split the EU member nations into two groups when it came to economies in transition. The Czech Republic, Hungary, Poland, Slovenia, and Estonia make up the first group, while Bulgaria, Romania, Latvia, Lithuania, and the Slovak Republic make up the second. The first category got over 60% of the total yearly FDI flow due to solid policy decisions and minimal political risk, which drew in more FDI. Those countries in the second group were received the low amount of FDI due to the unfavourable strategies for overseas financiers and high political risk. Thus, this paper concluded that those countries receive the more amounts of FDI that have favourable country risks factors and vice versa.

Bassu and Srinivasan (2002) analyzed the role of country risk on determinants of inflows of FDI in seven African countries. This study used dynamic panel data in the models as explanatory variables were political stability, good governance, and level of corruption. Estimates found the statistically significant and positive relationship between political stability and inward inflows of FDI and inverse relationship between corruption and inward inflows of FDI in African countries. Moreover, this study underlined the lack of connection between the good governance and inflows of FDI. This paper employed the regression model to investigate the role of country risk on determinants of inward inflows of FDI in seven African countries.

Drabek and payne (2002) examined the role of transparent country's economic policies and activities of government institution on inward flows of FDI. This study applied gravity model to investigate the impact of transparency on inward capital flows in developing countries. This model used the transparency in economic policies, government institution, and stability of government as explanatory variables and composite form of flows of foreign capital in the form of FDI, equity share, and debt was the dependent variables. This study found the positive and

statistically significant impact of these explanatory variables on inward inflows of capital in developing countries.

Smarzynska and Wei (2002) analyzed the impact of country risks factors namely, corruption, inflation rate, political instability, bureaucratic efficiency, fiscal policy, and incentives on inward inflows of FDI in developing countries. This study used the firm level data set and regression model to investigate the role of country risk on determinants of inward inflows of FDI. Regression model estimated that corrupt and high-risk countries only receive the FDI in the form of joint ventures with a domestic partner to save the transaction costs and other obstacles than to full owned investment.

Li and Resnick (2003) examined the role of democratic institution on determinants of FDI in 53 developing countries over the period of 1982 – 1995. This empirical study examined the two effects of democratic institution on determinants of inward inflows of FDI. On the one hand, the democratic institution limited the oligopoly or monopolistic power of foreign firms and raised indigenous business to pursue protection against foreign capital and constraint the host government ability to offer generous financial and fiscal incentives to foreign investors. On the other hand, democracy has strengthened the property right and reduced the risks that encouraged the inward inflows of FDI. The regression result underlined the significant and positive effect of democracy on FDI inflows in developing countries. In regression equation explanatory variables were rule of law, bureaucratic quality, corruption, contract repudiation by government, and expropriation risk.

Starky (2003) stated that the investment environment of the country directly affects the political, institutional and social factors of the country. The investment environment of the country was determined by the level of corruption, political stability, economic policies of the country, and rule of law. Thus, by using OLS method it examined the positive and significant impact of bureaucratic efficiency, political stability, and transparent government institution to raise the stock of foreign direct investment liabilities within the country.

Alfero, Kalemli, and Volosovych (2005) analyzed the determinants of capital flows and their volatility in 72 developing countries during 1970 – 2000. Total capital flows were consisting of the FDI, portfolio equity flows and debt flows. This study FDI flows expressed as US dollars using the consumer price index which was developed by World Banks indicators. This paper also made the composite

index including government instability, external and internal conflict, law and order, corruption, religious tensions, democratic accountability, and bureaucratic quality. Regression analysis was used to investigate the role of country risk on inward capital flows in 72 developing countries. This empirical study found that country risks were the important determinants of inward inflows of FDI in developing countries. This paper concluded that a country that improve political situation, economic situation, and financial environment that raised the economic growth of the nation which encourage the inflows of foreign capital within the country. Furthermore, the paper suggested that stable political situation, better economic and financial environment makes stronger property rights as well as maximize the benefits from their investment that attracted flow of capital.

Li (2006) investigated the impact of country risks on determinants of inward inflows of FDI in developing countries by using regression models and found the positive and significant effect of country risks-minimizing factors (political stability, rate of inflation, transparency, democratic institution, exchange rate volatility, and bureaucratic efficiency) on inflows of FDI. The study concluded that economically poor countries received the huge amount of FDI if countries have stable political situation, no corruption, favorable fiscal policies and incentives and low rate of inflation. Thus, FDI flows are determined not only by economic factors—such as market size, infrastructure development, and availability of natural resources—but also by country risk factors. (Many small countries were able to receive large volume of FDI by improving their country risks factors, even if countries had poor economic factors.)

Milner and Buthe (2008) stated that economy with high unfavorable country risks factors tends to discourage the inward inflows of FDI due to reduction of profitability of foreign investors. The major unfavorable country risk factors were possibility of nationalization of foreign firms, policies instability and war and political violence. These types of country risks factors damaged the foreign assets and profits of the investors and discouraged the attraction of foreign capital within the country. This empirical study found the inverse relationship between country risks factors and inward inflows of FDI by employing regression model.

Sadig (2009) analyzed the effect of host country risk level on determinants of inflows of FDI. This empirical study used the cross – sectional and panel data set of 117 developing countries over the period of 1984–2004. The paper employed

regression model whereas FDI inflows was the dependent variables and corruption index, exchange controls, tax assessments, policy protection and amount of loans were the explanatory variables. The regression results found the statistically significant and negative relationship between country risks level and inward inflows of FDI.

Desbordes (2010) examined the relationship between country risk and inflows of FDI in Tunisia. This study asserted that increase in economic, financial, and political risk directly affects the stability of government, security of the investment, public corruption, no protection of public property, low volume of bilateral and multilateral credit flows, volatility of exchange rate, hyper inflation rate, low volume of investment, and economic imbalance. This paper used the regression analysis to find out the relationship between country risk and inflows of FDI in Tunisia and that found the inverse relationship between the elements of country risk and inflows of FDI within the Tunisia. Furthermore, this study emphasized that the country risk provided good idea for foreign investors to make the appropriate investment decision.

Marani and Daniele (2011) stated that good governance, quality of institution, rule of law, favorable fiscal policy and incentives and political stability determined the inflows of FDI. A good business environment solely depended upon the fiscal policy and incentives, political stability, good governance and quality of government institutions. Thus, the favorable country risks factors encouraged the attraction of more FDI within the country. This paper found that low corruption, good institutions, rule of low, political stability has created a positive environment to inflows of FDI in Italy.

Samara (2012) examined the environmental risk into the three categories ie economic, political, and financial risk to find the effect of these risks on FDI inflows. Economic risk was measured by traditional methods of fiscal policy and monetary policy. The effect of fiscal policy on FDI inflows was measured by government expenditure, public debt/GDP and deficit financing. Similarly, the effect of monetary policy on FDI inflows was measured by inflation rate, nominal and real interest rate and unemployment rate. The effect of political risk on determinants of FDI was measured by government instability, corruption, size of public sector and relation with neighboring countries. Moreover, the effect of financial risk on inflows of foreign capital was measured by current account

balance, gross international currency reserves, gross capital formation, foreign debt, and interest rate. This study employed the regression analysis in order to investigate the effect of economic risk on determinants of inward inflows of FDI. Estimates found that FDI inflows were the inverse function of economic, political, and financial risk of the country. Thus, minimizing of environmental risk positively affected the inward inflows of FDI in developing countries.

Bouyahiaoui and Hammache (2014) analysed the impact of country risk on inflows of FDI in MENA region. As any investment decision, FDI inflows were the subject to the country risk relationship. Thus, this paper analyzed the different categories of risks like economic, political, sovereign, capital transfer, exchange rate, and financial risks. The regression model found that these categories of risks were major concern of foreign investors for selecting host country for making investment decision. Furthermore, better benefits enhanced the productivity and raise the competitiveness that also motivated the foreign firms to make the investment within the country. Thus, this paper concluded that country received the high volume of FDI with positive country risks variables as well as with high benefits of foreign investment.

Elleuch, Jaouadi, and Said (2015) examined the causal relationship between country risk (political, economic, and financial risk) and the decision of foreign investors. The aim of this study was to investigate the causal relationship between country risk and determinants of inward inflows of FDI in Tunisia during the period of 1990 – 2014. This paper applied the Ganger causality co integration test to investigate the impact of country risk on FDI inflows in Tunisia. In case of country risk, the empirical study found inverse relationship between country risk and inward inflows of FDI. This implies that high rate of inflation, corruption, lack of good governance, high rate of tax, no fiscal incentives, volatility of exchange rate, fear of war, weak protection of public property, and bad international relation led to no attraction of foreign capital within the country. Thus, higher the country risks had lowering the inward inflows of FDI in Tunisia. Moreover, improvement in the political situation was positive impact on FDI inflows in Tunisia. This paper concluded that inward inflows of foreign capital directly associated with the stable political situation of the developing countries like Tunisia.

Belgibayeva and Plekhanov (2015) analyzed the impact of corruption on determinants of inward inflows of FDI. The gravity models found that high level of

corrupt countries receive the low volume of FDI then cleaner countries. This paper used the quality of institution, level of corruption (corruption index), and political stability as explanatory variables by covering the cross-country data sets over the period of 1992–2011. The gravity model found the positive and statistically significant impact of good qualities of institutions, no corruption (cleaner) and political institution on determinants of inward inflows of FDI. Furthermore, this paper suggested that bad quality of institution, high level of corruption, and political instability created the poor business environment that reduced the inward inflows of FDI.

2.4 Contribution of FDI to Manufacturing Sector

The contribution of FDI from the perspective of the target nation has also been widely investigated, although empirical results were mixed. Multinational firms' transmission of FDI has numerous benefited consequences, the key consequences is the contribution of FDI to the receiving country's economic growth in the manufacturing sector. The majority of academics focused on the impacts of FDI on various sectors—such as primary, secondary, and tertiary—and on the economies of the United States and Western Europe. The influence of FDI is the expansion of industrial sectors in the target countries had substantial policy ramifications. If FDI had a good role in manufacturing, a host nation should have supported FDI flows by providing tax breaks, infrastructural subsidies, import duty exemptions, and other incentives. If FDI has a detrimental impact on manufacturing sectors, a host nation should take steps to dissuade and limit such capital inflows. Along with bank loans and portfolio capital, FDI was one of the three primary private capital inflows to host nations (Agrawal, 2000).

2.4.1 Contribution of FDI to Manufacturing Gross Domestic Product

The experimental study on FDI and economic growth in various sectors revealed a number of positive effects on the host country's economy (such as productivity gains, technology transfers, the introduction of new processes, managerial skills and know-how, and employee training), it was a significant factor in modernizing the host country's economy and promoting its various sectors growth in general. The recent global changes in the 1990s caused developing countries to

see various FDI favourably since they were deemed to aid the host country's economic progress. As a result, the focus of this study was on the effects of foreign direct investment on industrial sectors (Kriti & Prasad, 2016).

According to Bos, Sanders, and Secchi (1974), FDI target nations gained very little advantages because the majority of benefits were moved to the transnational corporation's home country. FDI had a detrimental effect on the host country's industrial, service, and agriculture sectors. FDI, on the other hand, increased the amount of investment and the productivity of investments in various industries, as well as the local country's consumption pattern. Due to factor pricing distortions and resource misallocations by foreign enterprises, this finding demonstrated a negative association between these two variables.

Saltz (1992) looked at the impact of foreign direct investment on third-world economies. During the decade 1970-1980, the findings of this empirical test demonstrated a negative association between the level of FDI and growth. This explanation agreed with that of Bos, Sanders, and Secchi (1974), who claimed that in cases of FDI, the level of output of the host country was stagnated due to monopolization and pricing transfers, which caused underutilization of labor, which caused a lag in domestic consumption demand, and eventually led to stagnation in domestic growth.

Borensztein, Lee, and Gregorio (1998) analysed the relationship of FDI and economic growth in developing countries. This study showed that FDI enhanced entering technology within domestic country and raised the production and productivity in different sectors which was the main source of the economic growth of host country. The major method that FDI boosts economic growth is via enhancing technical advancement, rather than raising total capital accumulation in the host nation, according to regression model estimates. This study utilized gross FDI, which exclusively refers to inflows, as recorded in international financial data, and the growth rate of income as the average annual rate of per capita real GDP during each decade for economic growth. Furthermore, the study found that economic growth in host nations is directly influenced by FDI inflows as well as the availability of human capital.

For the period 1978-1995, Bosworth and Collins (1999) assessed the effects of capital inflows in the form of FDI, portfolio investment, and bank loans for 58 developing nations. These were Latin American, Asian, and African countries. For

the years 1990-1995, the majority of inflows were located in Asia and Latin America. The nature of these capital inflows switched from loans to FDI in the 1990s, and only in the last decade have inflows as portfolio capital been recorded (equities and bonds). Prior to 1982, bank loans accounted for the majority of capital inflows. The influence of capital inflows on GDP growth was investigated using regression analysis on panel data in this study. Total capital inflows had a beneficial influence on investment, particularly in manufacturing, and a negligible negative effect on the saving rate, according to this study. When the three forms of capital inflows were separated, the results showed that FDI had the strongest positive link with investment, followed by portfolio inflows and loans on GDP growth.

Barrell and Pain (1999) used regression analysis to investigate the benefits of FDI by US firms in four European Union nations. This study discovered that FDI has a favourable impact on the economies of host countries throughout modernization by increasing investment in manufacturing sectors and transferring technology and knowledge to the host economy. Agrawal (2000) investigated the economic impact of foreign direct investment in south Asian nations by conducting a time-series, cross-section analysis of panel data from India, Pakistan, Bangladesh, Sri Lanka, and Nepal. This study discovered a strong correlation between foreign and domestic investment in these nations. Furthermore, the impact of FDI inflows on GDP growth rate was negative before to 1980, marginally positive in the early 1980s, and considerably favourable in the late 1980s and early 1990s, according to this article. Furthermore, the regression analysis revealed that FDI inflows had a statistically significant and favourable influence in several sectors in these nations.

Carkovic and Levine (2002) looked at the influence of foreign direct investment on economic development in 72 countries from 1960 to 1995. The influence of FDI inflows on economic development in different sectors was determined using the Generalized Method of Moments (GMM) panel estimator in this study. According to the estimates, FDI inflows have no direct impact on the economic development of host nations in both developed and developing economies. Even after controlling for the receiving country's level of education, economic development, financial development, and trade openness, the exogenous component of FDI did not have a dependable beneficial influence on economic growth in many sectors.

Alfaro, Chanda, Kalemli, and Sayek (2002) investigated the significance of well-developed financial markets in attracting FDI and their impact on economic growth in various industries. The lack of development of local financial markets, according to this research, limited the domestic economy's potential to profit from FDI inflows into various industries. For economic growth, they used the growth rate of output measured as the growth of real per capita GDP in constant dollars, as reported in the IMF publication International Financial Statistics (2000), and the growth rate of output measured as the growth of real per capita GDP in constant dollars, as reported in World Development Indicators (2000). Their findings showed that FDI had a negative impact on economic growth in the majority of the 71 developing nations in their sample. The adverse effect of FDI on economic growth was insufficient development of financial markets and institutions.

Campos and Kinoshita (2002) examined the effects of FDI on GDP growth over the period of 1990-1998, for 25 Central and Eastern European and former Soviet Union transition economies. In these countries FDI was pure technology transfer. This paper found the statistically significant and positive relationship between FDI inflows and industrial development through transfer of technology as well as knowledge as a form of FDI with in selected country.

Metwally (2004) tested the process of interaction between foreign direct investment, exports, and economic growth in three Middle Eastern countries: Egypt, Jordan, and Oman, using the simultaneous equations model and regression analysis. The simultaneous equation model discovered that the volume of foreign capital inflow determines the rate of economic growth of the sample nations. According to the regression results, the volume of FDI inflows into industrial sectors has the greatest impact on the country's economic growth. The regression findings confirmed the hypothesis that inflows of foreign capital affected exports of goods and services, resulting in increased investment in the export industry and the creation of new overseas markets for local products. As a consequence, direct investment was expected to contribute towards improving the current account.

The study indicated that the link between economic growth and capital influx had a feedback effect. Foreign capital inflows increased, resulting in economic development in several sectors such as primary, manufacturing, and tertiary. The rise of these industries has resulted in higher GDP growth, which stimulates the influx of additional foreign money.

Sahoo (2004) stated that FDI was process of transferring the package of resources from one country to another including managerial expertise, modern technology as well as technological knowledge, ability to obtain funds, credit, and so on. The transformations of such managerial resources made a big contribution to development of manufacturing sector of India. The main objective of this study was to investigate the role of FDI inflows in both macro level as well as micro level development of industrial sector of India. In order to investigate the role of FDI in manufacturing sector this study used the regression analysis as well as Granger causality test. The time series data set from 1980 to 2001 was used to investigate the impact of FDI in development of manufacturing sector and found that FDI made a positive and significant impact on development of manufacturing sector in India. Both study micro level as well as macro level data found that FDI raised the industrial product, productivity and industrial exports.

Katerina, John, and Athanasios (2004) analysed the effects of foreign direct investment on economic growth in USA and western European countries mainly focused on manufacturing sectors. The main objective of this study was to investigate the role of FDI on economic growth in manufacturing sectors. This paper employed Bayesian analysis to investigate the existence and the nature of the effect of FDI on the rate of industrial growth in USA and western European countries. The result of this study indicated that FDI had positive and significant effects on the manufacturing GDP.

Using single equation and simultaneous equation techniques, Li and Liu (2005) investigated the relationship between FDI and economic growth for 84 countries over the period 1970–1999, Finding a beneficial influence of FDI on economic growth in emerging nations through its interaction with human capital, but a negative impact of FDI on economic growth through its relationship with human capital in developing countries with the technology gap.

Mottaleb (2007) looked at the factors that influence FDI and how it affects growth in developing nations. The goal of this research was to look at the link between foreign direct investment and a country's economic growth. Foreign direct investment has a considerable impact on economic growth in emerging nations, according to this study. Furthermore, estimates found that among the various sector of the economy, FDI made the significant effect on manufacturing sectors of the developing countries.

Tanggapan, Geetha, Mohidin, and Vincent (2011) stated that FDI was an important variable to raise the economic growth in Malaysia. FDI was a bridge to fill the gap of skills, knowledge, technology as well as financial crisis or volume of capital. FDI was a medium in order to acquire knowledge in the field of international business that raised the international trade and reduced the debt within the country. This study based on the ordinary least squares estimation to analyse the role of FDI on economic growth in Malaysia. This paper found that FDI was an important tool to transfer the technology in a host country and there was strong positive relationship between FDI inflows economic growth in Malaysia.

Goel, Phanikumar, and Rao (2012) analysed the trend patterns and role of FDI in economic growth of Indian economy over the period of 1991 – 2010. This study used the regression analysis to investigate the impact of FDI on manufacturing sector of the India. This paper noticed negative growth rate of FDI during the period of 1998 – 2000 in India due to falling share of major investor countries. However, traditional industries in India like food processing industries, textile were continuously received a certain volume of FDI. Keeping in view of current requirements and benefits of the nation the Indian government reform the policies that raised the inflows of FDI in traditional as well as modern industries in India. Estimates found that FDI as a major factor that influenced the growth of Indian industries as well as economic growth of India. Furthermore, FDI played an important role in enhancing the economic growth and in raising international trade in the country.

Rahman (2015) examined the role of FDI on economic development of Bangladesh. This paper argued that FDI was an important variable to facilitate capital formation for host country, to transfer of technology, and knowledge, to create employment opportunity that made direct impact to stimulate economic growth in host country. Time series data sets over the period of 1999 - 2013 was used to evaluate the impact of FDI on economic growth in Bangladesh. Multiple regression analysis found the positive and significant impact of FDI on economic development of Bangladesh. FDI directly linked to bridge the resource gap of developing countries that raised the production and productivity of different sectors, export, employment opportunity, and so on. These factors were the engine of economic development of a country.

2.4.2 Contribution of FDI on Employment Generation

Buffie (1993) analysed the power of foreign capital on employment generation and national capital formation in manufacturing sector. This study employed OLS technique to inspect the role of FDI on employment generation in high wage manufacturing sector and low wage manufacturing sector. The regression equation estimated that FDI in high wage manufacturing sector created crowding out effect on domestic capital and it adversely affected the employment generation in long run. On the other hand, foreign capitals in low wage manufacturing sector reduced the export of domestic capital and it reduced unemployment in developing countries. Furthermore, FDI created new job opportunities in domestic firms by transferring technology, skills as well as productivity of labour force. This study concluded that FDI generates multiplier effect on domestic employment in developing countries.

Altzinger and Bellak (1999) examined the contribution of FDI on employment generation in Central and East European Countries (CEECs). The objective of this paper was to analyse the role of foreign direct investment on employment generation to compare with role of indirect foreign investment on employment generation in CEECs. Regression result confirmed that foreign direct investment creates more employment opportunities to compare with indirect FDI. Empirical results confirmed that FDI based firms determined the appropriate labour cost it helps to create the employment opportunity at domestic country.

Nunnenkamp, Bremont, and Waldkirch (2007) raised the question whether foreign direct investments raised the employment opportunities in Mexico and it helped to overcome the unemployment problems. This study was collected disaggregated FDI and employment data covering almost 200 manufacturing firms. This paper developed the dynamic labour demand function related to black and white colour workers including FDI based firms and domestic investment major industry. This paper employed the GMM estimator to estimate the role of FDI on employment generation in Mexico by using time series data sets over the period of 1994 to 2006. Estimates found that FDI had a significant and positive impact on manufacturing employment in Mexico. Moreover, this paper applied to both white colour and black colour employment.

Ajaga and Nunnenkamp (2008) investigated the long-run relationships between FDI inflows and creation of employment opportunities in US states. This study used co- integration model and causality test to investigate the role of FDI in manufacturing firms of USA on the basis of time series data sets over the period of 1977 to 2001. Estimates found that co-integration as well as two-directional causality between FDI and employment situation in USA. Furthermore, empirical study estimated that inflows of FDI transfer the knowledge and technology within the domestic country and it raised the production and productivity of labour as well as employment opportunity.

Desai (2011) used correlation and regression model to observe the effect of FDI in health sector in India. Foreign investment in the service sector, such as health care, has several favourable consequences, according to this study. Foreign investment has had a significant influence on the building of critical infrastructure as well as job possibilities in a variety of service-related industries. FDI aided in the expansion of the health-care sector's physical capacity, such as expanding the number of hospital beds, diagnostic centres, and speciality medical specialty centres. FDI might also assist raise service standards and quality, upgrade technology, and provide economic possibilities such as employment and income-generating activities, all of which could benefit the health sector and the economy as a whole. The major goal of this research was to look at the impact of foreign direct investment on job creation in the health-care industry.

Mathew and Johnson (2014) stated that FDI was a driver of employment, transfer of technology, improvement of production and productivity, and economic growth in developing countries. FDI improved the productivity, distribution of income that helped to create jobs opportunity in different sector of the developing countries. In order to quantify the association between FDI and employment rate in developing nations, this study used a single equation model (ordinary least squares approach). According to estimates, there is a positive and statistically significant association between FDI inflows and employment rates in emerging nations.

Kirti, and Prasad (2016) stated that foreign funds inflows became one of the major sources of filling the gap of excess demand for capital in relation to supply in India. The inward inflow of FDI was the major sources of industrial development and generation of employment opportunity in India. The prime objective of this study was to examine the role of FDI on employment generation capacity and GDP

growth in India. This paper employed the correlation and regression analysis to investigate the impact of employment and GDP growth in India. Estimates found that there was positive and statistically significant relationship between inward FDI inflows and employment generation as well as GDP growth in India.

2.5 Review of Studies on Foreign Direct Investment in Nepal

The literature on FDI in Nepal had mostly related to trend, composition and challenges of FDI and its role in economic development of Nepal. But determinants of inward inflows of FDI in Nepal have been limited in comparison to other types of literature. The progressive liberalisation of the FDI policy in 1990s (restoration of democracy in Nepal) has generated more interest on researcher to examine the impact of FDI on Nepalese Economy as well as determinants of inward inflows of FDI in Nepal.

The influence of foreign direct investment and technology transfer on Nepal's economic development was investigated by Dahal and Aryal (2003), who used primary and secondary data sets from both India and Nepal. The major goal of this research was to look at the factors that influence FDI inflows and their impact on total revenue, employment, trade, and industrialization in Nepal. According to the descriptive findings, both Nepal and India have liberalized their foreign investment policies to encourage FDI in Nepal. Furthermore, Nepal attracted 53% of total FDI from India owing to Nepal's liberalized policies, short distance between Nepal and India, cheap cost of production, low labor cost, and low raw material cost and cultural similarity.

Maskey, Panta, and Sharma (2006) examined the character and determinants of FDI in Nepal. The prime objective of this paper was to investigate the factors that influenced the inflows of FDI in Nepal and its role in different sectors. This study employed the descriptive research method to investigate the main determinants of FDI and its effect on economic development of Nepal. This study concluded that Nepal had started to receive FDI after liberalisation policy, thus, liberalisation and various incentives in service sectors was the main determinants of inward inflows of FDI in Nepal. Furthermore, development of infrastructure, availability of low-cost skill and unskilled labour and different incentive for foreign investors were the main determinants of FDI.

Nepal had received modest volume of FDI in different sectors. It made positive impact on exports, particularly garments and non-traditional product of micro transformers. FDI in Nepal highly concentrated in manufacturing sectors, which accounted more than forty-five percentages of approved FDI project.

The influence of FDI on Nepal's economic development was investigated by Athukorala and Sharma (2006). The study's main goal was to look at the nature, trend, and factors that influence FDI in Nepal. The descriptive technique used in this article was based on time series data sets from 2088 to 2001. This study discovered that a new policy framework (the Foreign Investment Act of 1994) attracted FDI to Nepal's various industries. Export-oriented industries drew the most FDI, although their exports were mainly reliant on a generic system of incentives and quotas, rather than the country's comparative advantage. In the Nepalese manufacturing sector, FDI drawn to "Easy Profit" activities (import substitution manufacturing and quota-protected sectors) did not appear to contribute much to productivity increase.

According to Pant (2010), Nepal has attempted a variety of measures to increase foreign direct investment flows into the nation, but none of them have had a significant impact. Nepal had been unable to benefit from the potential technical and other contributions that FDI may make to the development process. This highlighted the importance of appropriate policy interventions aimed at maximizing the benefits of FDI for Nepal's development in a free market. Nepal also needs a policy framework to improve the country's and region's infrastructure. The descriptive technique was used in this study, which was based on the idea of foreign direct investment inflows. According to the findings of the study, a healthy enabling environment supports both local and international investment, providing incentives for innovation and improving the climate to reap the maximum benefits.

Ghimire (2011) investigated Nepal's present foreign direct investment situation. The major goal of this research was to highlight the current state of FDI in Nepal. According to this report, foreign investment is the most essential resource for the country's economic development. Competition, productivity, and creativity were all boosted as a result. It also produced income and job possibilities, leading in greater wages, lower prices, more revenue, talent and technology transfer, and higher foreign exchange revenues. The descriptive analysis was used in this investigation. According to the descriptive analysis, capital is one of the criteria for

economic growth that must be provided from internal sources or handled by external sources. FDI was one of the most important external sources of capital for the country. However, the inflow of FDI in Nepal was very low.

Adhikari (2013) looked at the present state, potential, and problems of foreign direct investment in Nepal, as well as the trajectory of FDI inflows into South Asian nations. South Asia as a whole attracted a substantial amount of FDI, despite the region's overall FDI influx accounts for just 2.6 percent of worldwide FDI input. Despite this, India received 80% of FDI, leaving the remaining 20% to the remaining seven nations in the area. Despite recent increases in FDI, Nepal continues to get the least amount of FDI in the region, according to the report.

Manufacturing received the most FDI approvals (38%) followed by energy (21%) and services (19%). Agriculture received the least FDI approvals (1%). Although it was not always necessary for FDI to follow the pattern of contribution of various sectors to GDP, it appeared that the manufacturing sector, which accounts for 7% of GDP in Nepal, received a disproportionate share of FDI, while the agriculture sector, which accounts for 35% of GDP, only received 1% of total FDI inflows.

According to the research, FDI in agriculture has the more capacity to generate employment (intensity 1.71), manufacturing sector has (1.34) and service sector has (1.32) and the energy (0.24) and construction industries (0.48) have the lowest and second lowest employment intensity, respectively. This revealed that FDI in agriculture was worth more per dollar in terms of prospective job opportunities than FDI in any other industry. By dividing the proportion of employment produced by FDI by the entire amount of FDI, the employment intensity index of FDI was computed.

Nepal Rastra Bank (2018) explored the current status of FDI inflows in Nepal. this study employed the survey method to examine the real stock of FDI in different sectors of the country. This survey report found that 39 countries made the investment in 252 firms in Nepal. The total FDI stock in Nepal reached Rs 137.7 billion in 2015/16. it was the 6.1 percent of GDP. The highest amount of FDI, 96.67 billion (70.2 percent), was recorded in service sector. The second position was recorded in manufacturing sector which was Rs 40.62 billion and agriculture sector received the just 3.95 billion. This survey report categorised the total enterprises into three groups; larger firms (29 enterprises) those have more than 500 million

capitals, medium firms (40 enterprises) those have 100 to 500 million capital and small enterprises (183 enterprises) have less than 100 million capital investment.

The above Nepalese studies examined the current status of FDI in different sectors and volume of FDI flows into Nepalese economy. These studies made more interesting in investigating the trend of FDI flow into Nepal and the main factors that directly or indirectly affected the flows of FDI. However, these studies did not give the more attention on determinants of FDI and its contribution to manufacturing sector. Thus, this study examined the major determinants of FDI flows into Nepal and its contribution on employment generation and GDP growth in manufacturing sector of Nepalese economy.

2.6 Summary of Review

In this section, this study highlights the main findings from the review of theoretical and empirical literature on determinants of inward inflows of FDI.

2.6.1 Summary of the Main Theories of FDI

The theoretical review of literature found the large number of theories that explained the reason for movement of international capital. The first and old doctrine of this theory was mercantilism. This theory has indirectly identified the net export, accumulation of wealth, and condition of trade were the main determinants of FDI.

Followed by mercantilism theory, absolute advantage theory of international trade was found that based on the assumption of invisible hand of allocating resources that led to specialization in mass production as possible as in accelerator rate (Musonera, 2005). This theory argued that market forces were the major factor that helped to raise the production of appropriate goods and services at appropriate place and that ensured to expand the market size. Expansion of market was the main determinants of foreign direct investment.

Another theory of FDI was based on perfect competition market structure. This theory stated that when there was free movement of capital from one country to another country, both countries have equal marginal productivity. However, the marginal productivity of the country depended upon the existing facilities for the investors like transportation and communication facilities, availability of resources,

size of markets, price of factor inputs, and so on. These facilities available in the country were the main determinants of FDI.

Advancing theory based on perfect competition market structure, theory based upon the imperfect competitive market power has been discussed which stated that the benefits from MNCs could be useful only in the case of market imperfection. The greater monopoly power led to large volume of monopoly profits that encouraged the inflows of foreign capital within the country.

Eclectic theory based on combination of three economic theories i.e. theory of firms, industrial organization, and industrial trade theory to explain ability and willingness of firm to serve markets abroad via foreign direct investment. According eclectic approach FDI inflows depends upon the conceptual framework of OLI advantages. 'O' refers to the ownership advantages, which were the intangible assets and exclusive to the firm at least for a period of time. It was useful to foreign firms either gain higher income or reduces costs of productions. 'I' refers to internalize these advantages to foreign firms. It must be more advantageous for the business to exploit its own ownership advantages and internalize them rather than externalize them through licensing or similar agreements with independent enterprises. The letter 'L' stands for geographical benefits for international enterprises. If the two preceding requirements were met, the business might profitably use these advantages in condition with at least some factor inputs (location specific advantages) outside its home nation.

2.6.2 Summary of the Empirical Study on Determinants of FDI

In this section, this study attempts to draw the conclusions of the review of empirical literature on determinants of FDI.

a. Economic Determinants

Among economic determinants market size has been identified as a major determinant of inward inflows of FDI. Market size included the GDP growth rate, nominal GDP, per capita income, availability of financial institutions, hotel services, and openness. The market size of the country also exhibited the business environment of the country that motivated the inflows of FDI (Hussiness, & Kumuli, 2012). Availability of cheap labour had been widely found to be positive and

significant determinants of inward inflows of FDI in developing countries. Furthermore, government expenditure on development of infrastructure, human capital had found positive and significant determinants of inward inflows of FDI.

b. Financial Determinants

Financial environment has been found another important determinant of inward inflows of FDI in developing countries. Tax rates, openness, investment incentives, volume of broad money supply, volume of debt, and financial liberalization were found to be the financial determinants of FDI that created positive financial environment for foreign investors.

c. Environmental Risk

The environmental risk was the political instability, fiscal and non-fiscal incentives, corruption, inflation rate, volume of debt, exchange rate, ethnic tension, war, and so on (Alfero, 2009). In this context, country risk had been found the major determinant of FDI inflows within the country. For developing country, political instability had been found to affect entry decisions for investors.

The main summary of the empirical review on determinants of FDI are exhibited in Table 2.1:

Table 2.1
Summary of Various Studies on Determinants of FDI

Author(s)	Type of Data	Sample	Variables	Methodology	Main Results
Hartman (1984)	Time Series	US, 1965-1979	Tax rates and returns	Regression Analysis	Direct relationship between tax and FDI inflows.
Slemord (1990)	Time Series	US, 1964 – 1987	Tax rate	Regression Analysis	Inverse relationship between tax rate and inflows of FDI.
Jun (1994)	Time Series	Developing Countries 1980-1989	Tax	Regression Analysis	Tax rate has Negative effect on inflows of FDI

Moore et al. (1987)	Time Series	Developing Countries 1977-1981	Business tax structure	Regression analysis	Business tax structure is main determinants of FDI
Belington (1999)	Cross - section	UK	GDP growth, interest rate, corporate tax	Multi-regional model	Positive relationship between GDP, interest rate and FDI and negative relationship between corporate tax and FDI inflows
Grubert, and Mutti (2000)	Cross - Section	US (500 multinational corporations)	Corporate tax rate	OLS model	Tax rate highly affects the investment decision in US
Blonigen, and Davies (2004)	Time Series	Canada 1970 -1997	Income tax, corporate tax	OLS model	Inverse relationship between corporate tax and FDI inflows
Razin, and sadka (2006)	Cross-section	EU member countries	Income tax, corporate tax	Gravity model	Significant effect of implicit taxation on FDI
Benessy-Quere et al. (2007)	Panel data	OCED member countries	Corporate tax	OLS model	Countries with low tax rate fail to receive FDI
Leitao, and Faustino (2011)	Panel data	Portugal	Corporate tax and income tax rate	GMM model	Inverse relationship between corporate tax, income tax and FDI inflows
Beck, and Chaves (2012)	Time series	25 OECD members 1975 -2006	Corporate tax and income tax	Gravity model	Inverse relationship between tax rateand FDI

Agarwal (1980)	Time series	USA	Market size (GDP, GNI, Per capita income)	OLS model	Direct relationship between market size and FDI
Lunn (1980)	Time series	USA	GDP, GNI, Per capita income)	OLS model	Direct relationship between market size and FDI
Blomstrom, and Kokko (2000)	Panel data	Europe	GDP growth, cost of labour, openness,	Autoregressive model to co - integration	Significant and positive relationship between dependent and independent variables
Jaumotte (2004)	Time series	Asian 71 developing countries 1980-1990	Labour cost, GDP growth, openness	Autoregressive model to co - integration	Market size and low labour cost are the positive function of FDI inflows
Asiedu (2006)	Time serious	Africa	Infrastructure, GDP, per capita income, consumption expenditure.	OLS model	Market size is the positive function of FDI inflows
Coleman, and Tettey (2008)	Time series	Ghana 1970 – 2002	Transportation, communication, cost of energy supply, GDP, trade policy	OLS model	Market size is a significant determinant of FDI
Hussain, and Kimuli (2012)	Time series	57 developing countries 200 -2009	GDP, per capita income on purchasing power, cost of labour, business policy	Instrumental variable approach	Market size is important determinants of FDI

Phung (2016)	Time series	Latin America and African developing countries 1990- 2014	GDP, GDP per capita, trade policy, infrastructure	Three stage least squares methods	Market size is a significant determinant of FDI inflows.
Lucas (1990)	Panel data	Developing countries	Skill labour, enrollment in higher education, life expectancy at birth	Regression model	Human capital and FDI inflows have nonlinear relationship
Wang and Swan (1995)	Time series	China and Hungery 1978-1992	Labour cost, adult literacy rate, government expenditure on health sector	Least squares Method	Positive relationship between human capital and FDI inflows in China and Hungery
Zhang, and Muskusen (1999)	Time series	China 1960- 1987	Human capital	Least squares Method	Significant and positive relationship between FDI inflows and human capital
Hanson (1996)	Cross section data	51 developing countries 1960-1990	Literacy rate, school enrollment, technical and professional workers	Least squares Method	Human capital is the significant determinants of inflows of FDI
Kapstein (2001)	Cross section	Developing countries	Government expenditure on health, education, training of workforce, research and development	Regression model	Human capital formation is a main determinant of FDI

Ritchie (2002)	Time series	Developing countries 1980 -2000	Political instability, expenditure on health and education	Random effect model	Human capital is a key determinant of Inward inflows of FDI
Blomstorm, and Kokko (2003)	Panel data	Latin America	Education policies, formal training, government expenditure on health and education	Regression model	Significant positive relationship between human capital and FDI inflows
Bevan, and Estrin (2004)	Cross section data	Eastern and central European countries	Unit labour cost, government expenditure on health and education and market size	Regression model	Significant positive relationship between human capital and FDI inflows
Majeed and Ahmed (2008)	Panel data	23 developing countries (1970-2004)	Health expenditure, literacy rate	Fixed effect model	Positive and statistically significant relationship between human capital and FDI inflows
Talpos and Enache (2010)	Panel data	10 Eastern European countries	Life expectancy at birth, fertility rate, rate of enrollment in secondary school and tertiary sector	Regression model	Human capital measures are positively correlated with FDI inflows
Dutta, Nabamitta, and Kwasi (2013)	Time series	Low- and middle-income countries	Expenses on training, health expenses and expenses on education	Granger Causality approach to co integration	FDI Granger cause human capital

Gittens, and Pilgrim (2013)	Time series and cross section	Developing countries 1970- 2010	Government expenditure on health, education sector, average secondary school enrollment	Regression model	Positive and statistically significant relationship between human capital and FDI inflows
Abbas, and Mosallamy (2016)	Time series and panel data	Middle East and North Africa 2006 - 2013	Openness, political stability, enrollment in higher education, life expectancy at birth	Regression and random effect model	Human capital is a main determinant of FDI
Gupta (2017)	Time series	India 1975-2013	Gross enrollment ratio in secondary and tertiary education, life expectancy at birth	Granger causality test	Human capital is a main driver of FDI inflows in India
Wheeler, and Mody (1992)	Panel data	USA	Availability of road transportation, telephone services, financial institution, supply of energy	Random effect model	Quality of infrastructure is the dominant factors for inward inflows of FDI
Cheng, and Kwan (2000)	Time series	29 Chinese regions 1985- 1995	All roads, railway and paved road	Granger causality test	Positive relationship between availability of road transportation and inflows of FDI
Asiedu (2001)	Time series	Sab-Saharan Africa	Number of telephone lines available for 100	Regression model	Positive relationship between quality of

		1970-1999	habitants, openness, road facility		infrastructure and FDI inflows
Rahman (2003)	Panel data	India	Electricity and road network, telecommunicati on, financial institution	Regression analysis	Positive relationship
Jordan (2004)	Panel data	African countries	and road network, telecommunicati on, financial institution	Co-integration test	Short run and long run significant relationship between infrastructure and FDI inflows
Haile, and Assefa (2006)	Time series	Ethiopia 1974-2001	Gross capital formation, Machinery purchases, road railways.	Regression model	Significant impact of Infrastructure development on inflows of FDI
Mlambo (2006)	Time series	Developing countries 1970-2005	Road, railways and telephone services	Autoregressi ve distributed lag model	Short run and long run positive impact of infrastructure on inflows of FDI
Rehman, Ilyas, Alam, and Akram (2011)	Time series	Pakistan 1975-2008	Government expenditure on road transportation, communication, hospital and education	Autoregressi ve distributed lag model	Short run and long run positive impact of infrastructure on inflows of FDI
Bakar, Chemat and Harun (2012)	Time series	Malasia 1970-2010	Railway highway and transparent institution	Ordinary least squares method	Hard and soft infrastructure are Significant determinants of FDI

Shah (2014)	Time series	South Asian countries 1980- 2007	Telephone density, gross capital formation	Regression model	Development of telecommunications network leads to reduces in coordination costs between MNEs and rise inflows of FDI
Adji, Ahn, and Thomas (1998)	Cross-sectional and time series	23 developing countries 1970-1981	Political instability: strike, corruption and political demonstration	Regression model	Political risk inversely affects inflows of FDI
Abed, and Davoodi (2000)	Cross-sectional and panel data	Developing countries	Low corruption, political stability, structural reform	Regression model	Political risk inversely affects inflows of FDI
Wei (2000)	Cross-sectional and panel data	45 developing countries	Tax rate on multinational firms, corruption, political instability	Regression model	High tax rate, corruption and political instability inversely affects inflows of FDI
Akcay(2001)	Panel data	52 developing countries	Tax rate, political stability, rule of law and corruption index	Regression model	Inverse effect on inflows of FDI
United Nation (2001)	Cross sectional and panel data	EU member countries	Good policy, political stability, low level of corruption	Random effect model	Direct relationship between the dependent and independent variables

Bassu, and Srinivasan (2002)	Panel data	Seven African countries	Political stability, good governance, level of corruption	Regression model	Positive relationship between political stability and inflows of FDI and inverse relationship between corruption and inflows of FDI
Drabek, and Payne (2002)	Panel data	Developing countries	Transparent policy, government institution and political stability index	Gravity model	Statistically significant relationship between dependent and independent variables
Smarzynska, and Wei (2002)	Time series	Developing countries	Corruption inflation rate, political instability, bureaucratic efficiency	Regression model	Corrupt and high-risk countries only receive FDI in the form of joint ventures
Li, and Resnick (2003)	Cross sectional and panel data	53 developing countries 1982-1995	Rule of law, bureaucratic quality, corruption, contract repudiation by government	Regression model	Positive effect of democracy on inflows of FDI
Alfero, et al. (2005)	Time series	72 developing countries 1970-2000	Political instability, conflict, law and order, corruption, bureaucratic quality	Regression model	High country risk adversely affects the inflow of FDI
Sadig (2009)	Time series	117 countries 1984-2004	Corruption index, exchange controls, tax	Regression model	Inverse relationship between country

			assessments, volume of loans		risk and FDI inflows
Samara (2012)	Time series	Developing countries	Government instability, corruption, size of public sector, inflation rate, unemployment rate	Regression model	Inverse relationship between country risk and FDI inflows
Elleuch et al. (2015)	Time series	Tunisia 1990-014	Inflation rate, corruption, lack of good governance, high tax rate, volatility of exchange rate, no protection of public property	Granger causality test	Inverse relationship between country risk and inward inflows of FDI
Belgibayeva, and Plekhanov (2015)	Time series and cross-countr y data	Developing countries 1992-2011	Quality of institution, corruption, and political stability index	Gravity model	Inverse relationship between corruption and inflows of FDI

2.6.3 Summary of the Contribution of FDI in Manufacturing Sectors

The contribution of FDI inflows in to the domestic economy has found to be conflicting result on economic growth i.e., positive effect as well as negative effect. Empirical literature supporting FDI have positive effect on economic growth believe that FDI could transfer the technology, rise the production and productivity, domestic investment, employment, rise the export and domestic saving which are the components of economic growth. On the other hand, empirical literature supporting FDI have negative effect on growth have found that FDI creates crowding out effect on domestic investment and reduce the GDP growth of the host country.

The main summary of the empirical review on contribution of FDI are shown in Table 2.2:

Table 2.2

Summary of Various Studies on contribution of FDI in Manufacturing Sectors

Author(s)	Type of Data	Sample	Variables	Methodology	Main Results
Bos, Sanders, & Secchi (1974), Saltz (1992),	Time series	Developing countries	Manufacturing GDP	Regression, Correlation analysis	Direct positive and significant relationship between FDI and GDP growth
Borensztein et.al (1998)	Time series	Developing countries	GDP growth, per capita real GDP	Regression model	Host countries economic growth directly depends upon inflows of FDI
Bosworth and Collins (1999)	Time series	58 developing countries 1978-1995	GDP growth, FDI	Regression analysis	Positive effects on manufacturing investment and negative effect on saving
Barrell and Pain (1999)	Time series	European countries	Transfer of technology, Knowledge, GDP in manufacturing sector	Regression analysis	Positive Impact
Agrawal (2000)	Time series and panel data	Five south Asian countries	GDP growth	Regression analysis	Significant and positive relationship between FDI inflows and GDP growth
Carcovic and Levine (2002)	Time series	72 countries 1960- 1995	GDP growth,	GMM model	Negative impact on GDP growth

Alfero et al. (2002)	Time series and cross section	71 developing countries	GDP growth, real GDP per capita	Regression analysis	Adverse effect of FDI on GDP growth
Campos and Kinoshita (2002)	Time series	Central and Eastern Europe 1990-1998	Technology transfer, GDP growth, marginal productivity	Regression analysis	Positive impact on transfer of technology, GDP and marginal productivity
Metwally (2004)	Panel data	Middle Eastern countries	Export, GDP and BOP	Simultaneous regression model	Positive and significant impact on export, GDP and current account of BOP
Sahoo (2004)	Time series	India (1990-2001	Transfer of knowledge, export, GDP and transfer of technology	Regression analysis	Positive and significant contribution of FDI on transfer of technology, export, GDP and Knowledge
Li and Liu (2005)	Time series	84ncountries (1970-1999)	GDP growth, investment on human capital.	Simultaneous equation model	Negative impact on GDP growth and Positive effect on Human capital
Tanggapan et al. (2011)	Cross section	Malaysia	Export, debt, GDP. and transfer of technology	Regression analysis	FDI is an important tool to transfer technology, rise GDP and export and reduce external debt.
Rahman (2015)	Time series	Bangladesh 1999 - 2013	Capital formation, transfer of technology, GDP and export	Multiple regression model	FDI made the positive effect on export, GDP capital formation and transfer of technology

Buffie (1993)	Cross section	Developing countries	Employment, capital formation, transfer of technology	Regression analysis	FDI has multiplier effect on employment generation and transfer of technology which leads to rise GDP
Altzinger and Bellak (1999)	Panel	Central and East European countries	Labour cost and employment	Regression analysis	FDI determined the appropriate labour cost and create employment opportunity
Nunnenkamp et al. (2007)	Time series	200 manufactures in Mexico 1994-2006	Number of employed labour, domestic investment, transfer of technology	GMM estimator	FDI has significant and positive impact on manufacturing employment in Mexico
Ajaga and Nunnenkamp (2008)	Time series	USA 1977-2001	Number of employed labour, transfer of technology and knowledge	Co-integration model	Bi directional causality between FDI and employment in USA
Mathew and Johnson (2014)	Time series	Developing countries	Employment, transfer of technology, productivity and GDP	Single equation regression model	Positive and significant relationship between FDI and employment
Kirti and Prasad (2016)	Time series	India 1999-2013	Employment and GDP	Regression analysis	FDI has significant impact on employment and GDP in India.

These empirical studies did not fully find the country specific effects as well as industry specific effects of FDI. Most of the empirical literature on FDI was premature and focus on developed countries. With developing countries like Nepal has started to

receive large volume of FDI. Thus, this study has attempted to examine the contribution of FDI on manufacturing specific in Nepal.

2.7 FDI in Nepal

The empirical studies for Nepal have pointed to the trend, challenges and prospects of FDI in Nepal. The empirical study in Nepal found that new policy regime (foreign investment Act 1994) has attracted the FDI in different sectors of Nepal. The main attraction area of FDI was in export-oriented industries, but their exports were largely depending upon the generalized system of preferences and quotas rather than the country's comparative advantage (Athukorala & Sharma, 2006).

2.8 Research Gap

In this section, this study has highlighted the research gap of the study. This study found that the present availability of empirical literature related to economic determinants, financial determinants and country risk variables of FDI has failed to arrive at a broad consensus regarding several determinants of FDI. Thus, this study has used the various economic variables (e.g., market size, availability of human capital, openness, total consumption expenditure, and availability of infrastructure), financial variables (broad money supply, NEPSE index, and total transaction in financial market) and country risk variables (rate of inflation, level of corruption, lack of good governance, rule of law, volume of debt, political instability as proxy for dummy variable Maoist struggle, and corporate tax rate) that were the expected determinants of FDI in Nepal. Most of these empirical studies on determinants of FDI were based on cross-countries studies on aggregate sense; however, this study has assessed the country-specific determinants of FDI. Therefore, this study has tried to fill this gap by capturing the role of all country risk variables on determinants of inward inflows of FDI in Nepal. Therefore, this study has tried to fill this gap by capturing the role of economic, financial and country risk variables on determinants of inward inflows of FDI in Nepal.

Thus, this study has attempted to fill the gaps by including these variables in the analysis of determinants of FDI in Nepal at macro level. Similarly, it has tried to analyse the main factors, causing the greater discrepancy between the proposed FDI and real flows of FDI in Nepal, the gap that has not yet been filled in the world. Furthermore,

Nepalese studies so far have not covered the contribution of FDI to manufacturing sectors. This study, therefore, has plugged the gap by analysing the contribution of FDI to the GDP and employment generation in manufacturing sector of Nepal.

CHAPTER III

RESEARCH METHODOLOGY

3.1 Introduction

The basic structure for this research work is presented in this section. The methodology used in research is very important because it establishes the overall plan for the study. This section of the study contains information on the research methodology and strategy used to answer the research questions. Following the establishment of the research topic's foundation through a larger literature study and the identification of the knowledge gap, the next logical step is to build a path map for addressing the research questions. As a result, this chapter has examined the research methodology, research strategy, and data gathering procedures as means of determining the research topic's responses. Literature review has been adopted to have the understanding about the trend of FDI in Nepal and the potential determinants of inward inflows of FDI in Nepal. The data were collected from secondary source related to trend of FDI and macroeconomic and non-economic variables which directly or indirectly affected inflows of FDI in Nepal. Next chapter of this thesis is about the analysis and interpretation of data which was broadly based on this chapter.

3.2 Research Design

The plan, strategy, and structure of an inquiry planned to find answers to research questions are known as research design. To meet four objectives, this study applied descriptive, explorative, and inferential research design. This research design needed four key factors: (a) objectives of the research (b) accessible data sources (c) the importance of the decision and (d) the expense of collecting the information (Zikmund, 2002). The first objective—to explore the movement, growth, and sources of FDI inflow into Nepal with special focus on the postliberalization periods—was descriptive and explained by tables and graphs. The second objective—to examine the causes of gap between actual and proposed FDI inflows in Nepal—was inferential and analyzed by using factor analysis as well as one sample *t* test. The factor analysis was used for reducing a large number of variables to construct appropriate variables. The *t* test was used to test whether the constructed variables are significant or not.

The third objective—to identify the determinants of FDI flows into Nepal—was also based on inferential research design. The third objective employed ordinary least squares (OLS) method and elasticity coefficient for each parameter because the estimated model does not violate the assumptions of classical normal liner regression model. So the estimators are unbiased, efficient, BLUE, asymptotically unbiased, consistent and asymptotically efficient. So there is nothing wrong in OLS estimation. Estimators possess all the desirable finite and large sample properties. So, estimated relationship is not spurious in the sense of Granger & Newbold (1974). The fourth objective—to examine the contribution of FDI to manufacturing sector— employed instrumental variable and two-stage least squares (2SLS) method to avoid the problem of simultaneous equation bias and inconsistent estimates.

3.3 Research Framework

Economic growth and development are the major objective of any nation. Growth requires production of goods and services which in turn, requires investment. There are many areas where the foreign investors are interested to invest. Some of these areas include manufacturing, tourism, healthcare, services sectors, banking and insurance sector and so on. Development of these sectors generates employment opportunities as well as enhances the economic growth of Nepal. However, Nepal has received low volume of FDI even if Nepal has followed the liberalization policy. Thus, it is necessary to investigate the factors that caused the gap between proposed and real flows of FDI and key determinants of FDI flows into Nepal. Furthermore, it is necessary to examine the role of FDI in development of manufacturing sector.

To explore causes of the gap between proposed and real flows of FDI, country risk factors, bureaucratic quality, infrastructures, financial factor, market size, and bureaucrat's performance were constructed through factor analysis, and *t* test was used to check whether these variables were significant. The result of factors that caused discrepancy between proposed and real flows of FDI was expected to be negative with country risk factors but positive with market size, bureaucratic quality, bureaucrat's performance, infrastructure, and financial variables. According to location theory of FDI (Dining, 1977), big market size, sufficient infrastructure, development of financial indicators, best quality and bureaucrat's performance were the major factors for choosing

the location for investment, and country risk factors were the negative factors to choose the location for FDI.

Three sets of variables were identified to examine the key determinants of FDI inflows into Nepal: the economic variables, financial variables and country risk variables. The variables are related in terms of FDI inflows as dependent variables and economic variables, financial variables, and country risk variables are independent. On the basis of location theory of FDI, the expected sign between FDI inflows and economic and financial variables is positive whereas FDI and country risk factor is negative.

To explore the contribution of FDI to manufacturing sector, furthermore, manufacturing GDP and total employment in manufacturing sector were taken as dependent variables, and FDI was independent variable. The result between them was expected to be positive.

The following diagram is used to show the potential determinants of FDI and its effect on manufacturing sector:

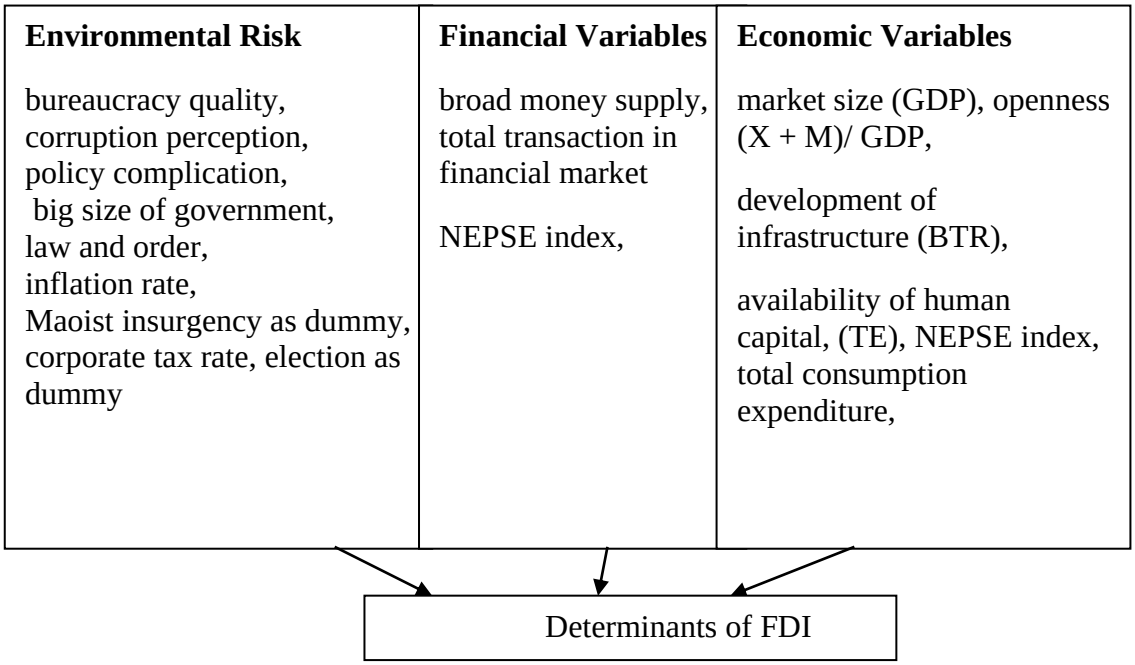

Figure 3.1. Schematic diagram of the research framework.

Manufacturing GDP was the dependent variable and foreign direct investment, adult literacy rate, labour force, export, and Maoist insurgency were independent variables.

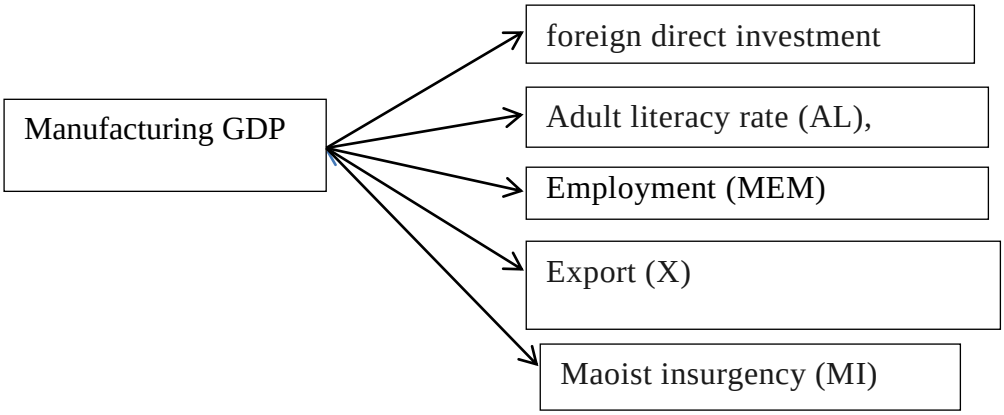

Figure 3.2: Schematic diagram of the research framework

Similarly, Figure 3.3 shows the contribution of FDI to employment generation in manufacturing sector. Employment was the dependent variable whereas independent variables were real flows of FDI (RFDI), real government expenditure in manufacturing sector (RGEIM) corporate tax rate (CT), NEPSE index, and real manufacturing GDP.

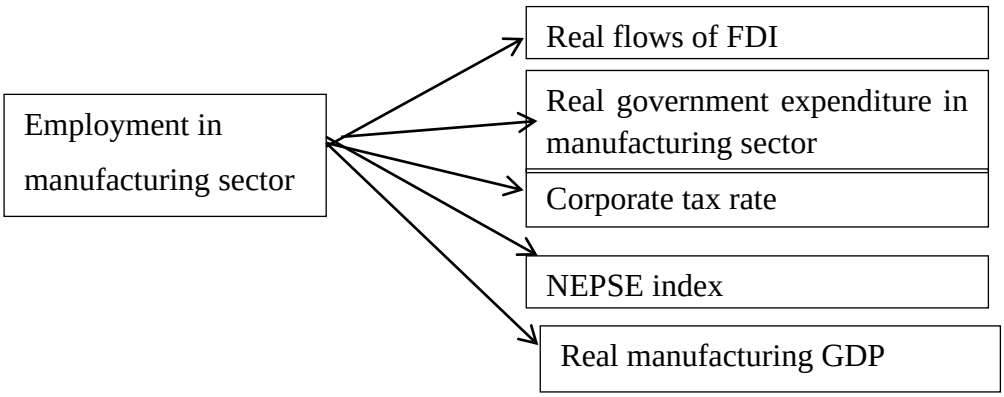

Figure 3.3: Schematic diagram of the research framework

3.4 Sources of Data and Data Collection Tools

Data and material essential for the research work were obtained from primary (for second objective) as well as secondary (first, third, and fourth objectives) sources. Primary data were collected from the method of structured questionnaire. The structured questionnaire was designed by using the 5-Point-Likert scale: 1= *Strongly disagree*, 2 = *Disagree*, 3 = *No idea*, 4= *Agree*, 5 = *Strongly agree* due to positive statement of questionnaire. To minimize the response bias, the respondents

like FDI expert-related bureaucrats, professor and FDI-based industries were selected through sampling method.

The secondary information was collected form library research and the Nepalese governments' ministry of industry, ministry of education, ministry of finance, planning commission research organization, Nepal Rastra Bank (NRB), Central Bureau of Statistic (CBS), World development indicators developed by World Bank and other institution. The Ministry of Industry provided the data about the commitment of foreign capital in different sectors of Nepalese economy's during a period of FY1995/96-FY2017/18. The ministry of finance provides the data on GDP and its growth, Per capita GDP, export and import, gross capital formation etc. NRB provides the data about actual inflows of FDI in Nepal (during a period of 1995/96 -2017/18), Broad money supply, and Inflation rate. The sources of secondary data assortment are exhibit in Table 3.1

Table 3.1

Sources of Secondary and Primary Data

Variable Definition	Data Source
Real flows of foreign direct investment	Nepal Rastra Bank, FDI report and Quartile Economic Bulletin
Proposed FDI inflows	Department of Industry, Ministry of Industry, Commerce and Supplies
Gross domestic product (GDP)	Central Bureau of Statistics
Volume of export (X)	Nepal Rastra Bank, Quartile Economic Bulletin
Volume of import (M)	Nepal Rastra Bank, Quartile Economic Bulletin
Black topped road (BTR)	Ministry of Finance, Economic Survey
Tertiary education enrollment (TENROLL)	Central Bureau of Statistics
Total consumption expenditure (TCON)	Central Bureau of Statistics
NEPSE index	Nepal Rastra Bank, Quartile Economic Bulletin
Broad money supply (M_2)	Nepal Rastra Bank, Quartile Economic Bulletin

Table 3.1 (Continue)

Total transaction in financial market (TTFM)	Nepal Rastra Bank, Quartile Economic Bulletin
Corporate tax rate (CT)	Ministry of Finance, Various Budget Speech
Consumer price index (CPI)	Nepal Rastra Bank, Quartile Economic Bulletin
Adult literacy rate (AL)	Central Bureau of Statistics
Employment in manufacturing sector (MEM)	Central Bureau of Statistics
Government expenditure in manufacturing sector (RGEM)	Central Bureau of Statistics
Manufacturing gross domestic product (MGDP)	Central Bureau of Statistics
Maoist insurgency (MI)	Dummy variable for political instability
GDP deflator	World Bank, World Development Indicators
Bureaucracy quality, corruption, country risk factor, financial factors, market size, bureaucrat's performance, rule of law	Field survey (2018)

3.5 Sampling Design

Sampling design was divided into three parts: probability sampling, nonprobability sampling, and mixed sampling. Out of these three, the mixed sampling was employed in this study. The mixed sampling is further divided into these parts: systematic sampling, stratified sampling, cluster sampling, area sampling, multistage sampling, and sequential sampling. Out of these methods, the stratified sampling was used to select the sample. At the first stage, population was nonrandomly stratified into two sub populations: experts and FDI-based industries: experts related to infinite population and FDI-based industries associated with a finite population of 252 [Nepal Rastra Bank (NRB), 2018]. At the second stage, the sample size of 30 was randomly selected from the infinite subpopulation of experts, such as bureaucrats, professors, and research-division heads of Nepal Rastra Bank; the sample size of 70 was randomly

selected from the finite subpopulation of FDI-based industries of Nepal. The nonpropertionate random sampling was employed to select two types of samples (30 and 70) from two sub population: The sample size of 70 represented 27.77 percent of total population of 252; however, sample size of 30 was selected from the infinite population of experts to avoid biased results from these three types of experts.

3.6 Description of Variables

Three sets of variables were identified to examine the key determinants of FDI inflows into Nepal: the economic variables, financial variables and country risk variables.

3.6.1 Economic Variables

Market size (GDP), development of infrastructure (road transportation, communication), human capital, NEPSE index, total consumption expenditure, and openness (X + M)/ GDP were economic variables, and Maoist insurgency was identified as a dummy variable for political instability.

3.6.2 Financial Variables

Financial variables consisted of the composition of corporate tax rate, openness, NEPSE index, total transection in financial market, and broad money supply. These variables were directly affecting the financial investment environment of the nation.

3.6.3 Country Risk Variables

The uncertainties arising from the economic, financial, and political situations, as well as government policies, for foreign investors' investment—which are called country risk—are critical for the survival and firms' profitability and their operation in the country. The country risk contained bureaucratic quality, corruption index, democratic accountability, political stability, law and order, consumer price index, Maoist insurgency, corporate tax rate, and NEPSE index.

3.6.4 Economic Growth in Manufacturing Sector

Gross domestic product from manufacturing sector is the proxy for economic growth of manufacturing sector of Nepal. Similarly, also examined in this study were the employment opportunities in manufacturing sector due to FDI. The employment data were extracted from different manufacturing and industrial surveys (conducted in every five-year gap) of Central Bureau of Statistic (CBS) in Nepal. This study has converted

the employment data into time-series data on the basis of five-year gap; for this reason, the employment data are expressed in decimal forms.

3.6.5 Foreign Direct Investment (FDI)

FDI is an international investment category that reflects a resident's objective to obtain lasting interest in a company residing in a different economy (the direct investor). Durable interest means that the direct investor and the direct investment company have a long-standing relationship. Direct investment relationships are established by acquiring 10% or more of the common shares or voting power of the company abroad (IMF, 2008). FDI, a dependent variable used as both proposed FDI and its real inflows, was included in the study. Real flows of FDI were negative during the period of 2000/01, 2001/02 and 2005/06; because outbound capital from Nepal to other countries is greater than inbound capital.

3.7 Specification of Model

The following econometric models were used on the basis of location theory of FDI to investigate the key determinants of FDI inflows in Nepal and its role in manufacturing sectors over the period of 1995/96 to 2017/18. The FDI flows began in Nepal since the postliberalization of the 1990s, but the systematic record of the FDI data was available only since 1995/96. For this reason, this study covered the period of 1995/96-2017/18.

3.7.1 Models

Various theories and models of FDI were propounded by Hymer (1960), Kindleberger (1969), Dunning (1973), Agarwal (1980), Dunning (1980), Hartman (1984), Dunning (1993), Belington (1999), Blonigen and Davies (2004), Sahoo (2004), Helpman (2004), World Bank (2006), Mottaleb and Kalirajan (2010), and Phung (2016. The following models in this study were developed, based on location theory and the above empirical studies:

FDI = F (economic variables, financial variables, country risk variables) (1)

Economic variables = F (market size, infrastructure, human capital, openness, structure of capital market, gross consumption expenditure) (2)

Financial Variables = F (corporate tax rate, NEPSE index, broad money supply, total transaction in financial market) (3)

Country risk variables = F (bureaucratic quality, corruption index, democratic accountability index, political stability index, law and order index, CPI index, corporate tax rate, and Maoist insurgency as a dummy variable) (4)

Firstly, models were estimated, using a transformed FDI variable known as FDISTAR. The origin of FDI was changed by constant term "A" to convert the negative term of FDI (i.e., FDISTAR = FDI +A) into positive one. Because all the independent variables were in log scale, this FDISTAR variable was further transformed into a log scale to consistently estimate the coefficient of the regression model. To make the economic interpretation, however, elasticity was estimated in original variable (FDI), based on estimated coefficient of transformed variable. The only dependent variable (FDI) was transformed into FDISTAR.

FDI =F (financial variables which influences the inward inflows of *FDI*)

$$FDI = \alpha + \beta_1 NEPSE\ index + \beta_2 TTFM + \beta_4 M_2 + \mu_i \quad (5)$$

Equation (5) was monotonically transformed into log value

Model 1

$$\text{Ln}FDISTAR = \alpha + \beta_1 \text{Ln}NEPSE + \beta_2 \text{Ln}TTFM + \beta_3 \text{Ln}M2 + \mu_i \quad (6)$$

Where,

Ln*FDISTAR* = inflows of *FDI* in Nepal (transformed into logged)

TTFM = total transaction in financial market

M_2 = broad money supply

Ln = natural log

Model 1 based on financial variables.

FDI = *F* (economic variables which influences the inflows of FDI)

$$FDI = \alpha + \beta_1 MS + \beta_2\ INFRA + \beta 3 HC + \beta_4 GCE + \mu_i \quad (7)$$

Where *MS* was used to refer to the market size that was represented by *GDP*; *INFRA* was use to refer to the infrastructure of the economy (the infrastructure that was represented by the blacked topped road); *HC* was used to refer to human capital, composed of active labour and percentage of enrollment in tertiary education; *GCE* was used to refer to gross consumption expenditure.

Model 2

$$\text{Ln}FDISTAR = \alpha + \beta_1 \text{Ln}GDP + \beta_2 \text{Ln}NEPSE + \beta_3 \text{Ln}TOPEN + \mu_i \quad (8)$$

Model 3

$$\text{Ln}FDISTAR = \alpha + \beta_1 \text{Ln}CON + \beta_2 \text{Ln}NEPSE + \beta_3 \text{Ln}TOPEN + MI + \mu_i \quad (9)$$

Where,

NEPSE = NEPSE index

GDP = gross domestic product

MI = Maoist insurgency as dummy

TOPEN = Openness $\left(\frac{X+M}{GDP}\right)$

CON = Gross consumption expenditure

Here model 2 and 3 are related to economic variables

FDI =F (Country risk variables which influences the inward inflows of *FDI*)

$$FDI = \alpha + \beta_1 NEPSE + \beta_2 MI + \beta_3 TOPEN + \beta_4 CT + \mu_i \quad (10)$$

Equation (10) was monotonically transformed into log value

Model 4

$$\text{Ln}FDISTAR = \alpha + \beta_1 \text{Ln}CT + \beta_2 \text{Ln}NEPSE + \beta_3 \text{Ln}TOPEN + MI + \mu_i \quad (11)$$

Where,

NEPSE = NEPSE index

MI = Maoist insurgency as dummy

TOPEN = Openness $\left(\frac{X+M}{GDP}\right)$

CT = corporate tax rate

Ln = Natural log

Model 4 is related to country risk variables.

$FDI = \alpha + \beta_1 EV + \beta_2 FV + \beta 3 CRV + \mu_i$ (12)

Equation 12 was the combined model of economic, financial, and country risk variables

α = Intercept

EV = Economic variables

FV = Financial variables

CRV = Country risk variables

μ_i = Errors terms

Model 5

$\text{Ln}FDISTAR = \alpha + \beta_2 \text{Ln}TENROLL + \beta_2 \text{Ln}CT + \beta_3 \text{Ln}NEPSE + \beta_4 \text{Ln}TOPEN + \beta_5 MI + \mu_i$ (13)

Model 6

$\text{Ln}FDISTAR = \alpha + \beta_2 \text{Ln}GDP + \beta_2 \text{Ln}CT + \beta_3 \text{Ln}NEPSE + \beta_4 \text{Ln}TOPEN + \beta_5 MI + \beta_5 ELEC + \mu_i$ (14)

Model 7

$\text{Ln}FDISTAR = \alpha + \beta_2 \text{Ln}BTRTM + \beta_2 \text{Ln}CT + \beta_3 \text{Ln}NEPSE + \beta_4 \text{Ln}TOPEN + \beta_5 MI + \beta_5 \text{Ln}CPI + \mu_i$. (15)

Where,

TENROLL = Total enrollment in tertiary education

GDP = Gross domestic product

BTRTM = Total length of black topped road

NEPSE = NEPSE index

MI = Maoist insurgency as dummy for political instability

TOPEN = Openness ($\frac{X+M}{GDP}$)

CT = Corporate tax rate

CPI = Consumer price index

ELEC = Election as dummy variable of democracy.

Ln = Natural log

3.7.2 Impact of FDI on Manufacturing Sectors

The impact of FDI on the manufacturing sector was divided into three models:

3.7.2.1 FDI and Its Impact on Manufacturing GDP

The impact of FDI on productivity was derived from the neoclassical production function as shown in Equation 16

$$Y_t = A_t F(K_t, L_t,) \quad (16)$$

A_t represented the state of economic environment. The state of the economy was defined in this way to include a variety of control and policy variables that influence the economy's productivity level. Physical capital was denoted by the letter K, labor was denoted by the letter L, and production was denoted by the letter Yt. Assume that physical capital and labor are combined to produce goods in the recipient country. Assume that the physical capital is the total of domestic (Kd) and foreign-owned (Kf) capital created via FDI. Similarly, political stability also enhances the production of goods and services. Thus, Maoist insurgency (*MI*) was used as another explanatory variable in the model, and *AL* and L were used to stand for active human capital in the recipient country. The models were estimated, using a transformed FDI variable known as FDISTAR. The origin of FDI was changed by constant term *"A"* to convert the negative term of FDI (i.e., FDISTAR = FDI +A) into positive one; this FDISTAR variable was further transformed into a log scale for estimating the coefficients of 2SLSregression model in a more consistent manner, because all the other variables were expressed in a log scale.

$$lnRMGDP = \alpha + \beta_1 \ln FDISTAR_{t-1} + \beta_2 MI + \beta_3 \ln AL + \beta_4 \ln MEM + \beta_5 \ln X + \mu \quad (17)$$

Where, *RMGDP, RFDI(FDISTAR$_{t-}$,) AL, MEM, MI, X,* and μ stand respectively real gross domestic product at manufacturing sector, real *FDI* flows into Nepal, adult literacy rate, labour force, Maoist insurgency as a dummy, export of goods and services, and stochastic disturbance term.

The regressor *RFDI* does affect the *RMGDP* but at the same time other variables such as real export, labour employment in manufacturing sector (*MEM*), *NEPSE* index etc also affects the *RMGDP*. Similarly in employment equation, labour employment is affected by *RMGDP* and other exogenous variables. Thus, there is joint dependency between *RMGDP* and *MEM*. Ordinary least squares estimation of these equations produces simultaneous equation bias. To avoid the biased and inconsistent estimates, instrumental variable and 2SLS estimation methods are applied. Note that *RMGDP* and *MEM* are endogenous variables and the others are the exogenous variables.

The endogenous variables (jointly determined variables) of the model are: FDI and MGDP and the other variables are ln*RGEIM*, ln*RFDISTAR*(-1), *FDISTAR*, ln*NEPSE*, *MI*, ln*LR*, ln*X*, and *MI*lnRMGDP*$_{t-1}$ are treated as exogenous (or predetermined).

3.7.2.2 Impact of FDI on Employment Generation

The host economy's revenue is impacted by FDI flows; nevertheless, any economy's income rises only when the economy's unemployed resources are utilized, which might be done by a local content requirement policy of the same nations (Lahiri & Ono, 1998). Here, employment is the real value all; that is, explanatory variables were converted into real values (real = $\frac{nominal}{GDP\ deflator} X\ 100$) . Therefore, the impact of FDI on employment generation can be written as

$$EM = F\ (FDI, Y) \qquad (18)$$

On the basis of Equation 18 statement, this study developed the following models:

$$\ln EM = \alpha + \beta_1 \ln RFDISTAR + \beta_2 \ln RMGDP + \beta_3 \ln RGEM + \beta_4 \ln NEPSE + \mu \qquad (19)$$

Here, *EM* was used to stand for employment level in manufacturing sector, *CT* to mean the corporate tax rate, *RGEM* to represent real government capital expenditure in manufacturing sector, *RFDISTAR* to refer to the real *FDI*, *NEPSE* to denote the NEPSE

index, *RMGDP* to indicate real manufacturing GDP, ln to represent the logarithm, and μ to refer to the error term.

The endogenous variables (jointly determined variables) of the model are: *RFDI* and *MEM* and the other variables are ln*RGEIM*, ln$RFDISTAR_{(-1)}$, ln*FDISTAR*, ln*NEPSE*, *MI*, ln*AL*, ln*X*, and *MI**ln*RGDP*(-1) are treated as exogenous (or predetermined).

3.8 Method and Tools Used in the Study

Various statistical approaches were applied to achieve the objective of the study. Especially, these analytical tools were used to estimate the main determinants of inward inflows of FDI in Nepal. The empirical literature found that market size, financial development, and country risk variables were the main determinants of FDI. Thus, various econometrics tools were used to investigate the potential determinants of FDI and its impact on Nepalese economy. Principal component analysis (PCA), Cronbach's Alpha test(α), line graph and descriptive statistics, one sample *t* test, linear regression analysis, and two-stage least squares method were used to investigate the potential determinants of FDI and its contribution to manufacturing sector over the period of 1995/96 – 2017/18.

a. Line Graph and Summary Statistics

Summary statistics of the variables were used to identify the behavior and characteristics of the data sets included in the study. Mean showed the average value of the data set. Median represented the mid value of the series of data, and standard deviation showed the variability of the variables include in the study. Skewness provided the information, about the data sets, on whether the data were positively or negatively skewed. Similarly, Jarque-Bera test showed the nature of whether the series in data sets was normal. The line graphs showed the movement of each variable included in the study.

b. Principal Component Analysis

Principle component analysis (PCA) is a valuable method of reducing complex data by reducing the number of variables being studied, and it specifies the underlying structure among the variables. It has provided the tools for analyzing the structure of the inter-correlationship among a set of highly correlated variables known as factor. That was

assumed to represent dimensions within the data (Hair, Anderson, Tatham, & Black, 1998).

In factor analysis, it is assumed that each of the variables is made up of a linear combination of common factor and a specific component unique to the variable—the linear combination and unique type of specific component that is called a factor analysis. P (i.e., standardized random variables K_1, K_2, ... Kp) can be written as the sum of linear combination of similar set of M common factors F_1, F_2 .....F_m, and P is specific components (ϵ_1 ϵ_2 ..... ϵ_1) shown as follows:

$K_1 = I_{11} + I_{12}F_2 + \ldots\ldots\ldots I_{1M}F_M + \epsilon_1$

$K_2 = I_{21} + I_{22}F_2 + \ldots\ldots\ldots I_{2M}F_M + \epsilon_2$

.. ..

... .

$K_P = I_{P1}F_1 + I_{P2}F_2 + \ldots\ldots\ldots I_{PM}F_M + \epsilon_P$

The initial factor model can be written as $K = LF + \epsilon$, where K is Px_1 vector of standardized random variables. L is PxM matrix of factor loadings, F is Mx_1 vector of common factor, and ϵ is Px_1 vector of specific factors, where $M < P$. Explanatory factor analysis (EFA) was applied for each item scale to reduce the total number of items to a smaller number of underlying variables and to uncover the primary determinants impacting real FDI inflows into Nepal. Factors were extracted using EFA (Eigen value >1). The use of factor analysis was validated using the Bartlett's test of sphericity and the Kaiser-Meyer-Olkin criteria of sample adequacy. The factor matrix was interpreted more easily using Varimax rotation. EFA was carried out on a number of variables, including nation risk, bureaucrat quality, infrastructure, financial considerations, market size, and bureaucrat performance.

c. Reliability Analysis

A popular and frequently used procedure for reliability, Cronobach's Alpha (α) is an index of internal consistency or reliability of psychological measure that demonstrates a function of interrelatedness of the item in a test and the test length. The coefficient of Alpha (Cronbac, 1951) was denoted as

$$\alpha = \frac{rv}{[1+(v-1)r]}$$

Where v used to indicate the number of items, and r to represent the mean of the inter item correlations. George and Mallery (2009) described a rule of thumb that applies to most situations as follows:

α > 0.9 — Excellent

α > 0.8 — Good

α > 0.7 — Acceptable

α > 0.6 — Questionable

α > 0.5 — poor

α < 0.5 — Not acceptable

d. One Sample *t* Test

One sample *t* test, a very popular parametric test, was used to test whether the sample mean of constructed variables extracted from EFA were statistically different from a hypothesized population mean. The data were collected from survey method; that is, observed variables were measured by a 5-point Likert scale ranging from 1(*strongly disagree*) to 5 (*strongly agree*). Therefore, cut-off point of 3 assigned to indicate the difference between disagree and agree options for each of statement: Hypothesized mean was 3. Here, the test variable was compared with the test value—hypothesized value (3) of the mean in population. The one sample *t* statistic was calculated as follows:

$t = \frac{\bar{X}-\mu}{S_{\bar{X}}}$ where, $S_{\bar{X}} = \frac{S}{\sqrt{n}}$

μ = hypothesized mean

$\bar{X}$ = sample mean

n = sample size

S = sample standard deviation

$S_{\bar{X}}$ = estimated standard error of the mean.

e. Regression Analysis

Linear regression was used to model a dependent variable's value based on its linear relationship to one or more predictors. The model of linear regression assumes that the dependent and every predictor have a linear relationship. The regression analysis was applied to demonstrate the relationship between economic variables and inflows of FDI. Likewise, a regression analysis has revealed the association between financial indicators and country-risk variables and FDI inflows into Nepal.

The trends of FDI flows into Nepal were very low before 1990s. This low FDI flows were mainly due to the fact that Nepal adopted closed macroeconomic policies, such as import substitution policies and high import tariffs. The substantial increase in FDI inflow to the Nepal during 1990s was mainly due to the market-oriented reforms that include gradual liberalization of trade and consistent change in FDI policy, such as withdrawing government requirements for foreign investment approval, allowing for foreign equity participation of up to 100%, permitting negotiations and the condition of royalty payment. The study was therefore limited to 1995/96-2017/18.

f. Two-Stage Least Squares Method

2SLS estimation method is used to estimate the over identified equation in simultaneous equation system. It provides the remedies for simultaneous equation bias. Estimators, derived from 2SLS methods, are consistent. In manufacturing sectors, RMGDP and EM are two endogenous variables. Equations, related to RMGDP and EM, were over identified. So, these equations are estimated by 2SLS method.

g. Instrumental Variable Method

Another solution for simultaneous equation bias is instrumental variable method. Thus, as an alternative method, instrumental variable method has been used to estimate manufacture GDP equation and manufacturing employment equation in simultaneous equation system.

h. R^2 and Adjusted R^2 Estimation

The degree of relation between dependent and independent variables was demonstrated by the coefficient of determination (R2). The explanatory power of the

independent variables was therefore calculated for each case with the coefficient of determination (R^2).

After estimating the regression parameters, the explanatory power of R^2 used to measure the dispersion of remarks on the regression line was assessed. R^2 is essential because the closer to the line the more clarified the changes of the explicative variables of Y (dependent variable). Thus, R^2 was calculated to indicate the percentage of the total variation in the dependent variable by the independent variables (Gujarati, 2003). The formula to derive R^2 was mentioned below:

The model with K explanatory variables

$$R^2 = 1 - \frac{\sum e^2}{\sum y^2} = \frac{\hat{a}_i \sum yx_i}{\sum y^2} = \frac{\hat{a}_1 \sum yx_1 + \hat{a}_2 \sum yx_2 + ... + a_k \sum yx_k}{\sum y^2}$$

Where,

$$y = Y - \overline{Y}\ ,\ x = X - \overline{X}$$

Similarly, adjusted (R^2) can be calculated by using the following formula and denoted by $\overline{R}^2$.

$$\overline{R}^2 = 1 - \frac{\sum e^2 / n-k}{\sum y^2 / n-1}$$

Where,

n = total number of observations.

k = the number of parameters.

i. **T-Test**

The small sample test, *t*-test, is used to check the significance level of parameters (coefficients) used in the regression model and it is calculated by using the following formula

$t = \hat{a}_i / SEa_i$

Where, $\hat{a}_i$ = estimated value of a_i,

S.E. ($\hat{a}_i$) = standard error of $\hat{a}_i$ or $\sqrt{\text{var } \hat{a}i}$

j. F-test

F-test has been used to measure the total significance of the estimated regression model whereas R2 is used to test explanatory power of the Model. A greater value of R2 refers to the greater value of F; if R2 = 0, F is zero and if R2 = 1, F is infinite. A large F-test value therefore implies that the overall importance of the estimated regression is good (Gujarati, 2003). The *F* value can be computed as:

$$F = \frac{R^2/(k-1)}{(1-R^2)/n-k}$$

Where,

k = total number of parameters to be estimated.

n = the number of observations

R^2 = coefficient of determination.

k. **Autocorrelation** (**Durbin Watson Test)**

Autocorrelation, a statistical test, determines whether a random number generator generates random numbers independently in a sequence. A widely used method to test for autocorrelation is the Durbin-Watson test. This data is used for autocorrelation testing in the first order (Dimitrios & Hall, 2011). The *DW* was used to detect the presence or absence of autocorrelation.

$$DW = \sum_{i=2}^{t} (e_i - e_{i-1})^2 / \sum_{i=1}^{t} e_i^2$$

Where,

e = the estimate error

To determine the critical *DW* value, the degrees of freedom used '*k*' and '*n*', where '*k*' represented the number of explanatory variables and '*n*' indicated the number of observations. Therefore, computed and critical *DW* values were compared to see existence of autocorrelation.

l. Breusch–Godfrey LM Test

In time series data, the models can only be valid if the residuals are not serially correlated. To check this serial correlation, this study applied the Breusch-Godfrey LM test. To perform the test, following linear regression model was used

$$Y_t = \beta_1 + \beta_2 X_t + \mu_t \quad (1)$$

Assume that the error term μ_t follows the *p*th-order autoregressive, AR(*p*), scheme was shown as follows:

$$\mu_t = \rho_1 \mu_{t-1} + \rho_2 \mu_{t-2} + \ldots + \rho_p \mu_{t-p} + \varepsilon_t \quad (II)$$

where,

ε_t is white noise error term.

The null hypothesis H_0 to be tested was set as

$$H_0 : \rho_1 = \rho_2 = \ldots\ldots = \rho_p = 0 \quad (III)$$

That is, there is no serial correlation of any order (Gujarati, 2003).

m. Breusch–Pegan–Godfrey Heteroscedasticity Test

In another step of residual testing procedure, this study applied the Breusch-Pegan-Godfrey heteroscedasticity test. This study tested the null hypothesis that the residuals are homoscedastic against the alternative hypothesis that the residuals are heteroskedastic (Breusch & Pagan, 1979). To perform the test, following linear regression model was used

$$Y_t = \beta_1 + \beta 2 X_{2i} + \ldots\ldots + \beta_n X_{ni} + \mu_i \quad (1)$$

where μ_i represented the residual and β_s stood for the estimated parameters in the equation.

Assume that the error variance σ_i^2 was described as

$$\sigma_i^2 = f(\alpha_1 + \alpha_2 Z_{2i} + \ldots\ldots + \alpha_m Z_{mi})$$

That is σ_i^2 is a linear function of the Zs. If $\alpha_2 = \alpha_3 = \alpha_m = 0$, $\sigma_i^2 = \alpha_1$, which is a constant. To test whether σ_i^2 is homoscedastic, therefore, this hypothesis was tested: $\alpha_2 = \alpha_3 = \alpha_m = 0$ (Gujarati, 2003).

n. Jarque-Bera Test

The Jarque-Bera test developed by Jarque and Bera (1980) was used to test whether the residuals are normally distributed within the series. Here, this study tested the null hypothesis of normal distribution. The equation for Jarque-Bera test was as follows:

$$\text{JB} = \frac{n}{\sigma}\left(S^2 + \frac{(K-3)^2}{4}\right)$$

Where, JB was used to refer to the Jarque-Bera; *S* denoted the skewness and *K* indicated the kurtosis expressed in this equation.

CHAPTER IV

TREND, GROWTH, AND SOURCES OF FOREIGN DIRECT INVESTMENT IN NEPAL

4.1 Historical Trend of Foreign Direct Investment Inflows

Developing countries faced the difficulty of insufficient capital investment to meet the goal of economic development throughout the postwar period. The Big Push hypothesis gained hold at this period, resulting in increased investment in these countries through enhanced mobilization of internal resources and foreign help. It was widely assumed that the advantages of economic expansion would naturally flow down to the bottom of the economic ladder. Despite considerable investment, however, the pace of growth remained low. Structural flaws and inadequate macroeconomic policies impeded the growth process. Developing nations have been susceptible to substantial external shocks in addition to structural problems at home. International oil prices and manufacturing-goods imports threw the balance of payment situation of net-oil and manufacturing-goods importing nations for a loop. All of these variables have had an influence on the economic growth of developing nations such as Nepal. Economic policies and initiatives have failed to bring developing nations like Nepal out of stagnation during the last three decades. Meanwhile, rising economies have been persuaded that economic liberalization and globalization may help them break out of stagnation. As a result, many emerging economies have opened up to international commerce (Athukorala & Sharma, 2006).

In this context, Nepal began progressively liberalizing its economy in 1981, attempting to overcome the issue of a closed economy. A new administration was created with the restoration of democracy, led by former Prime Minister Girija Prasad Koirala. The IMF and the World Bank sponsored this government's macroeconomic stabilization and structural restructuring agenda. This initiative, which was considerably distinct from the others, brought a flood of policy changes with it. FDI was regarded to be the cheapest and most effective means of receiving the latest technology from outside, rather than licensing or directly purchasing capital goods. Apart from many structural changes in the domestic and foreign economies, the new economic strategy aims to promote investment (Dahal & Aryal, 2003).

Since 1981, Nepal has pursued a liberal foreign investment policy and worked to build an investor-friendly environment in order to attract FDI. However, after the passage of the Foreign Investment and Technology Transfer Act of 1992, major capital inflows began. In 1996 and 2005 AD, the statute was changed twice to make the atmosphere more beneficial and encouraging. Foreign investment promotion is identified in the industrial policy of 1992 as a key method for attaining the goals of boosting industrial production to meet people's fundamental requirements, creating maximum job possibilities, and paving the road for improved balance of payment. Foreign capital flow, technological transfer, increased management skill and productivity, and improved access to international markets are all expected to support domestic private investment (Dahal & Aryal, 2003). In this setting, Nepal's government is promoting FDI by following a liberal and open policy that includes attractive incentives and facilities, and FDI is a welcome move in three forms:

a. investment in stocks or shares,
b. reinvestment of earnings from foreign investment, and
c. investments made in the form of loan or loan facilities.
d. the initial investment must be at least $20,000 in US dollars.

4.2 Foreign Direct Investment in Panchayat Era (1961- 1990)

After a democratically elected government was toppled by a royal coup in 1961, Nepal installed the Panchayat system, which lasted for nearly three decades. The economic policy regime at the period was characterized by a protectionist industrial investment scenario governed by a rigorous licensing system. Licenses were provided only to major enterprises and persons with links to the royal family. In Nepal, both the Company Act of 1936 and the Industrial Policy of 1957 were inward-looking, emphasizing import substitution and self-sufficiency. Thus, the dominance of public sectors was marked in Nepalese liberalization history over three decades, from 1960 to 1990. Public entities were licensed to safeguard economic activities, foreign investment was restricted, and the government assumed responsibility for the provision of goods and services such as cement, potable water, electricity, roads, health, and so on for its citizens. Thus, a vast number of state-owned companies were created during the period with the aim of encouraging industrialization, creating employment opportunities and generating income for the government (Dahal & Aryal,

2003). The reason is simple: the government's financial burden was mounting and state-owned companies did not do well to foster domestic growth.

4.3 Foreign Direct Investment in Policy Making

For the first time, a policy for use of foreign capital and technology as a valued additive was included in plan six (FY 1980/81-FY1984/85). The plan stated that the main requirements were international investments and technology in large and mineral industries. The Act of Foreign Investment and Technology Transfer 1992 were initiated to raise foreign capital.

The Foreign Investment and Technology Transfer Act, 1992, treated foreign investors in a similar manner as local investors. This same act prevailed with respect to foreign investors' incentives and facilities. Incentives and facilities have been designed to ensure a viable investment and competitive product. Some of them have the following information: (a) foreign investors were allowed to own 100 percent of the industry except for the cottage and security industries, (b) technology transfer is permitted, even in areas not permitted by FDI, in all types of industries, (c) the amount received by a Technology Transfer Agreement was allowed for repatriation in full, (d) a business and resident visa has been issued to foreign investors, (e) only raw materials were charged nominal import duty. The country could not significantly attract foreign capital for economic development despite the implementation of most of the policy measures of the FDI and the Technology Transferal Act, 1992. The promotion of domestic and foreign investment to economic development of the country was one of the main policies of the three-year interim plan (2007/08-2009/10). The main objectives of increasing FDI were to extend the industrial base, seeking external aid for resources needed to make economic growth sustainable, to create jobs, to increase technology and to pass on management skills.

4.4 Institutional Arrangements

In accordance with the 1992 industry law, a one window service (OWS) was established to provide all the services under one roof by foreign investors. The policy listed two types of services to be provided within OWS: (a) the Foreign Investment and Technology Transfer Act (1992), authorization, facilities and other administrative services, and (b) other infrastructures such as land, registration, electricity, water,

telecommunications and more, and the other services required by investors. OWS has, however, failed to respond to investors' real needs. Under the chairmanship of the Minister of Industry a Board of Industrial Promotion was established under the Foreign and Industrial Law of 1992. The Board's main goals are (a) to provide the necessary coordination in policy development and implementation, (b) to develop guidelines for the achievement of the country's objectives in the areas of liberal, open and competitive economic policies and (c) to coordinate the level of policy and the level of industrial policy implementation.

Under the chairmanship of the Prime Minister, Nepal established an Investment Board of Nepal (IBN) in 2001. The IBN was set up to encourage and enhance transparency and reliability of domestic and foreign investments. However, the IBN did not operate smoothly according to its goals. The FDI in Nepal is encouraged and attracted by a powerfully institutional arrangement with a proper policy. In summary, the efforts of policymakers in the period following the Liberalization have been gradual, honest and sustained to boost the FDI influx into Nepal.

4.5 Global Flows of Foreign Direct Investment

Global inflows of FDI decreased by 76 billion in 2017 compared to 2016. A scenario of FDI inflows is given in Table 4.1.

Table 4.1

FDI Inflows by Group of Economies and Region

Group of Economies	2014	2015	2016	2017	% Share of FDI
World	1324	1774	1746	1670	-
Developed Economies	563	984	1032	940	56.28
Europe	272	566	533	560	33.53
North America	231	390	425	360	21.55
Developing Economies	704	752	646	660	39.52
Africa	71	61	59	65	3.89
Asia	460	524	443	130	7.78
Latin Africa and Caribbean	170	165	142	130	7.78
Transition Economies	57	38	68	75	4.49

Source: UNCTAD, World Investment Report (2018)

Out of total FDI inflows in world, the magnitude of FDI was highest in developed economies (56.28%) and developing economies occupied the second position scoring 39.52 %.

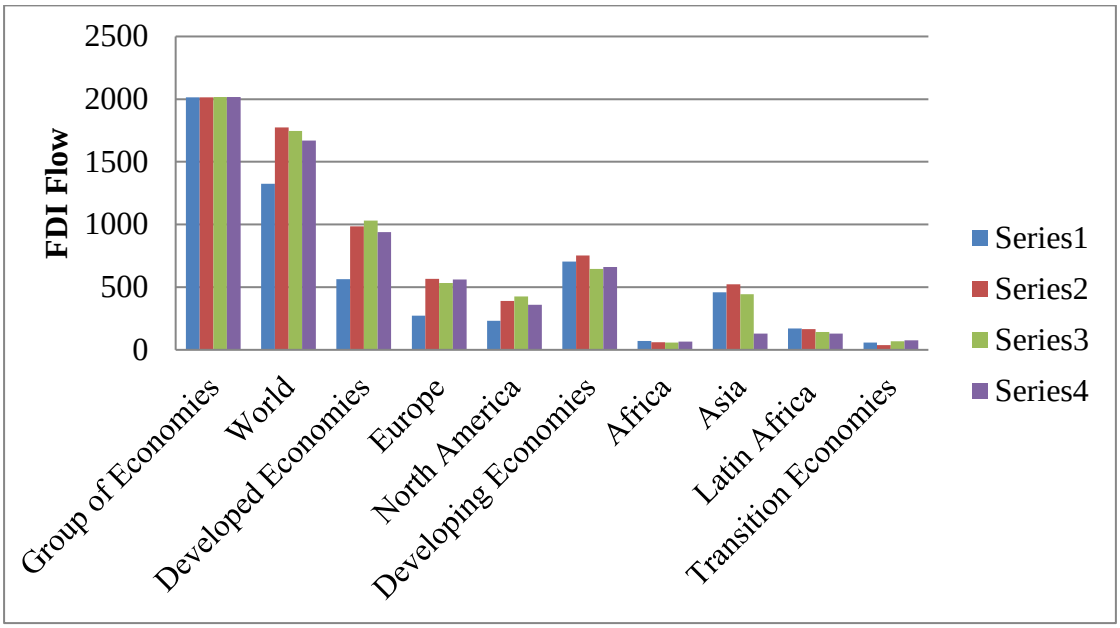

Figure 4.1. Global inflows of FDI.

Europe got the 33.53 % of FDI during a period of 2017. All over the world, Asia got only 130 billion dollar (7.78%), followed with Latin Africa and Caribbean (7.78%) and Transition Economies (4.49%) of the total inflows of FDI. Similarly, African economies received the 65 billion dollars (3.89%) of the total global inflows.

4.6 Foreign Direct Investment Flows in SAARC Countries

The largest economy of SAARC, especially India, has received largest amount of FDI among the member countries of SAARC (Table 4.1). Nepal, a land-locked country, has got the lowest chunk of FDI, compared with India, Pakistan, Bangladesh, and Sri-Lanka. The net inflows of FDI in Nepal was negative during 2000 ($US -0.48). In terms of the FDI potential index, similarly, Nepal ranks the lowest in the region—that is, 175 out of 182 countries ranked globally (UNCTAD, 2018).

Table 4.2

Trend in Net Flows of Foreign Direct Investment in SAARC Countries

(in millions of dollars)

Name of The Country	Year					
	1990	2000	2010	2012	2014	2016
Bangladesh	3.23	578.64	913.3	990.0	1551	2333
Bhutan	1.6	0	25.84	15.91	17	12
Nepal	5.94	-0.48	86.74	92	30	106
Maldives	5.6	22.26	216.47	293.98	333	448
India	236.69	3597.66	21125.45	24196	34582	44486
Pakistan	278.33	309	222	859	1867	2006
Sri-Lanka	43.35	172.95	477.6	941	894	898
Afghanistan	-	-	211.25	93.8	37	100

Source: UNCTAD World Investment Report (2018)

Out of total FDI inflows in South Asian countries, the magnitude of FDI was highest in India that marked 44,486 million dollars (88.28%) in 2016. Bangladesh occupied second position in SAARC countries with 2,333 million dollars (4.63%), a very low percentage. Of the total inflows of FDI in eight South Asian countries, Nepal got only 106 million dollars (o.21%), followed by Afghanistan (0.19%) and Bhutan (0.023%). This analysis indicates that Nepal has received very small chunk of FDI, compared with other South Asian countries owing to political instability, as well as poor infrastructure development of road transportation, rail ways, and energy supply in Nepal.

4.7 Commitment of Foreign Direct Investment After Liberalization

To identify the effect of macroeconomic stabilization policy, structural adjustment programme and the changes in the foreign investment policy on the FDI inflows, there is the need for the quantitative information of FDI on three dimensions: national-level flows and its distribution across sectors and regions; however, there is a considerable amount of ambiguity on the quantitative data on FDI in Nepal and dissimilar type of secondary data sources published by authorities. Because of these problems, this study has described the FDI data given by the Ministry of Industry to assess the trend of proposed FDI in Nepal.

This chapter analyzes secondary data related to foreign direct investment. In this section of the study, the researcher has attempted to present and explain the results of these data. The major objective of this study is to analyze the trend, growth, and source of proposed FDI in Nepal. The data collected are presented and analyzed here with detailed elucidation of the results.

In this section, structure of foreign direct investment in Nepal has been examined for the period of 1995/96 to 2017/18; foreign investment projects in Nepal have been analyzed year wise, sector wise and category wise. The trend, growth, and source of proposed FDI inflows in Nepal can be explored under the following heads:

4.7.1 Commitment of Foreign Direct Investment in Scale-wise Industry

According to industrial policy of Nepal 2010, the industries having fixed investment up to Rs 50 million are taken as small-scale industries, and those having fixed capital from Rs 50 million to Rs150 million as medium scale ones, and those having fixed capital above Rs 150 million as large-scale industries. The number of industries with proposed foreign capital in Nepal totaled 4,505 as of 2018. The data reflect the size of total project cost to be Rs 438,618.42 million and FDI to account for Rs 269,943.83 million during the period of 1995/96- 2017/18. The industries—by the end of FY 2017/2018 on the project cost basis—appear to get their approvals in three numbers: large scale industries (289 or 6.42%), medium scale industries (404 or 8.97%), and small-scale industries (3812 or 84.61 %).

Table 4.3

Licensed Industries for Foreign Direct Investment on Project Cost Basis

Types of Industries	Number of Industry	Total Project cost (Rs. in million)	Total fixed Capital (Rs. in million)	Foreign Direct Investment (Rs. in million)	Percentage Share of FDI
Large Scale	289	334,038.29	310,363.48	190,425.31	70.54
Medium Scale	404	42,446.29	26,931.48	27,501.71	10.19
Small Scale	3,812	62,134.01	40,750.55	52,016.81	19.27
Total	4,505	438,618.42	378,045.47	269,943.83	100

Source. Department of industry, GoN (2019)

Out of total foreign investment of Rs. 269,943.83 million, the share of large-scale industries has been the highest (70.54%), while those of medium and small-scale industries are 10.19% and 19.27%, respectively.

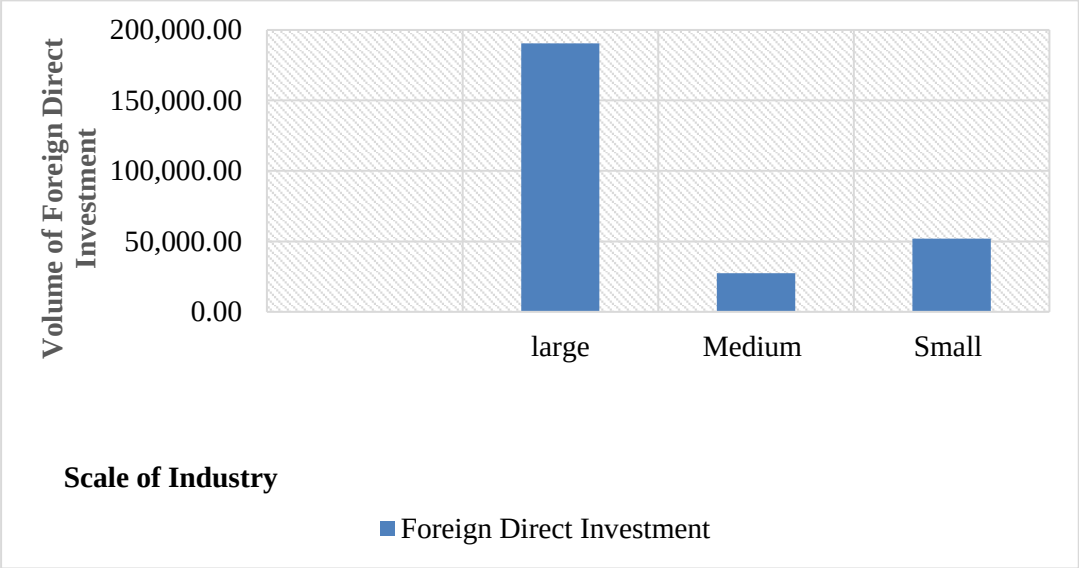

Figure 4.2. FDI approval in scale-wise industry.

4.7.2 Year-wise Committed Foreign Direct Investment Project

The growth rate of proposed FDI in Nepal is not significant until 1990 due to the regulatory policy framework. Under the new policy regime, however, it is expected to get momentum and to assume a much larger role in catalyzing Nepal economic development. Table 4.4 shows the approval FDI in Nepal during 1995/96-2017/18.

Table 4.4

Year wise Foreign Investment Project in Nepal

Fiscal Years	No. of Industry	Total Project Cost(Rs.in million)	Total Fixed Cost (Rs. in million)	FDI Inflows (Y) (Rs. in million)	Trend value of FDI (Y_c)	Growth Rate of FDI Flows (%)	$Y-Y_c$
UP to 1995/1996	317	41609	40039	9014			
1996/1997	77	8559	6692	2396			
1997/1998	77	5573	5146	2000	2158.508	-16.53	-158.508
1998/1999	50	5324	4380	1666	3350.158	-16.7	-1684.16
1999/2000	71	2669	1910	1418	4541.808	-14.89	-3123.81
2000/2001	96	7918	6122	3103	5733.458	118.83	-2630.46
2001/2002	77	3319	1560	1210	6925.108	-61.01	-5715.11
2002/2003	74	4922	3608	1794	8116.758	48.26	-6322.76
2003/2004	78	4324	3776	2765	9308.408	54.12	-6543.41
2004/2005	63	1796	1149	1636	10500.058	-40.83	-8864.06
2005/2006	116	4121	3297	2606	11691.708	59.29	-9085.71
2006/2007	188	3426	2651	3186	12883.358	22.26	-9697.36
2007/2008	213	20406	16898	9813	14075.008	208	-4262.01
2008/2009	231	9418	7530	6255	15266.658	-36.26	-9011.66
2009/2010	171	13954	14988	9100	16458.308	45.48	-7358.31
2010/2011	210	11252.69	9377.26	10052.21	17649.958	10.46	-7597.75
2011/2012	226	11909.82	10736.33	7138.31	18841.608	-28.99	-11703.3
2012/13	317	51990.78	41046.35	19818.73	20033.258	177.64	-214.528
2013/14	307	40737.27	35048.93	20132.42	21224.908	1.58	-1092.49
2014/15	370	81370.6	77436.34	67455.04	22416.558	235.06	45038.48
2015/16	348	20543.89	14165.34	15254.33	23608.208	-77.39	-8353.88
2016/17	400	17123.51	12416.39	15206.46	24799.858	-0.31	-9593.4
2017/18	426	62727.11	58053.73	57001.88	25991.508	274.85	31010.37
Total	4505	438618.2	378045.47	269943.83			

Source: Department of Industry, GoN (2019*)*

Table 4.4 manifests the number of approved foreign investment projects (4,505) in Nepal for the period 1995/96 - 2017/18. Total project cost is estimated to be Rs 438,618.42 million. Total fixed cost is estimated to be Rs 378,618.47 million, and FDI to be equal to 269, 943.83 million. The size of FDI is very minimal (Rs. 1,210 million) in 2001/02 due to the regulatory policy framework, the FDI size that increased to Rs 57,001.88 million in 2017/18. The FDI increased by Rs 67,455.04 million in 2014/15 and 15,254.33 million in 2015/16. Then, it decreased to Rs 52,200.71 million from 2014/15 to 2015/16. Similarly, the FDI accounts for

15,206.46 million in 2016/17 and it increased to Rs. 57,001.88 million in 2017/18, up by Rs. 41,795.42 million from 2016/17 to 2017/18. The annual average inflow of FDI in Nepal is Rs 9,308.408 million. The FDI inflows in Nepal before 2007/08 are below the average but above the average after 2010/11. Moreover, the annual inflow of FDI during the period 2007/08 is above the average, whereas annual inflows of FDI during period of 2008/09 and 2009/10 were below the annual average. The trend value of FDI inflows in Nepal showed the high fluctuation of FDI inflows during the study period. There are various reasons behind the fluctuation in FDI inflows in the study period. One of the strong reasons for the fluctuation is the political instability and its resultant conflict. Maoist insurgency, which started from 1995 in the country, started to put negative impact on the FDI inflows. The Maoist insurgency continued for 11 years till 2006, leading to a high fluctuation in FDI inflows. When Maoist insurgency ended, FDI inflows began to increase. Therefore, the political instability and conflict are major reasons for the fluctuation in FDI inflows in the country. The other reason might be the frequent changes in policies, corruption, bureaucratic complexity, insufficient infrastructure, and so on.

Table 4.4 indicates that the percentage change in FDI approval has not been consistent: the highest growth rate of commitment FDI (274.85%) in a fiscal year 2017/18, followed by 235.06% in a fiscal year 2014/15. Similarly, there was negative growth rate of FDI in nine fiscal years out of twenty-three years. The maximum growth rate of FDI was -77. 39% in fiscal year 2015/16 and the minimum growth rate was -0.31% in fiscal year 2016/17.

The trend of FDI inflows in different fiscal year has been shown in following trend line:

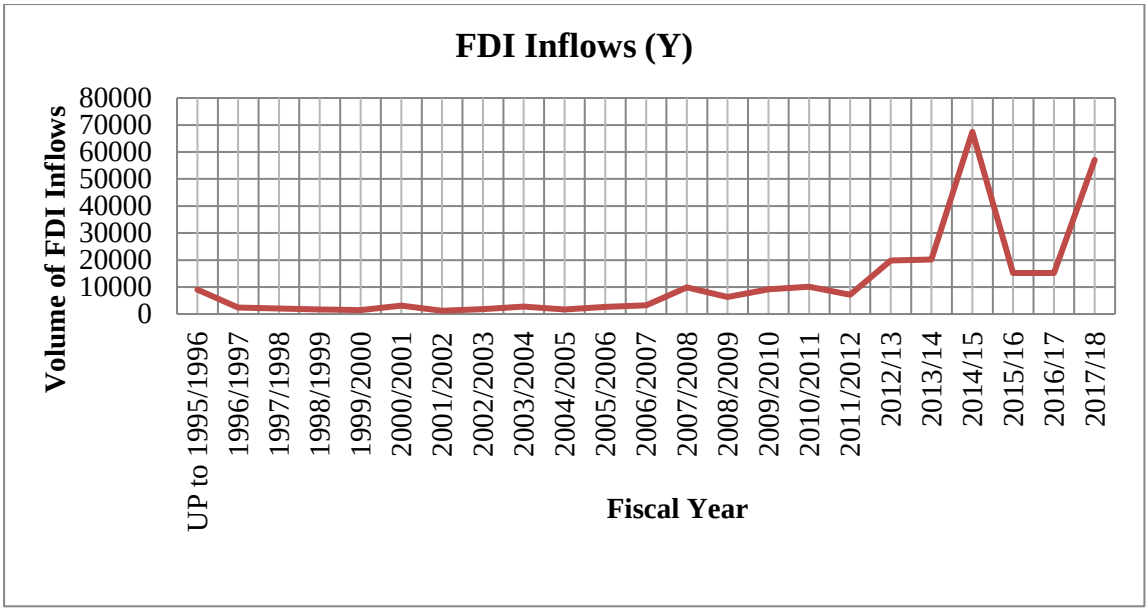

Figure 4.3. Year-wise FDI approval.

Figure 4.3 depicts a fluctuating trend of committed FDI inflows during a period of 1995/96 - 2017/18 and high FDI in 2014/15, compared with other fiscal years.

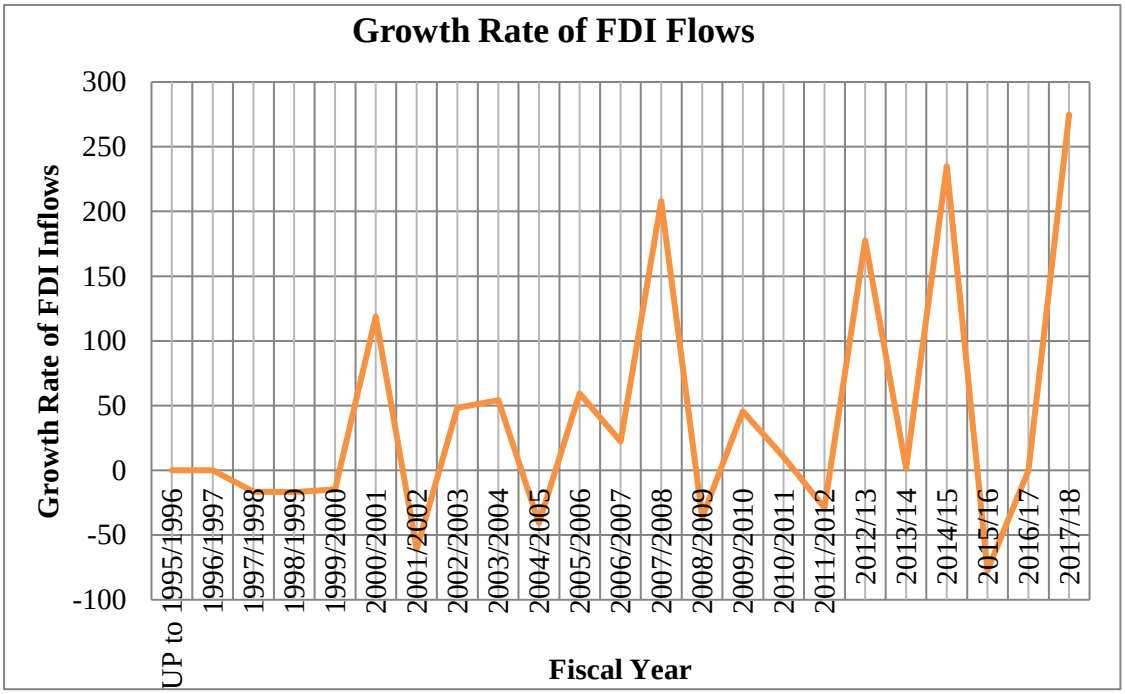

Figure 4.4: Year wise growth rate of FDI approval.

Figure 4.4 depicts the annual growth rate of approval FDI in Nepal. The percentage change in FDI seems to have been highly fluctuating during the study

period. The reasons for inconsistent inflows of FDI could be political instability due to Maoist insurgency, frequent changes in policies, corruption, bureaucratic complexities, and complex process of approving FDI within the country.

4.7.3 Committed Foreign Direct Investment by Provinces

Because province-wise actual inflows of FDI are not available, this study tries to form committed province-wise FDI from the perspective of its district-wise approvals. The detailed distribution of FDI approved up to 2017/18 among all provinces is exhibited in Table 4.5. The province-wise approvals of FDI up to 2017/18 in value terms showed high concentration in Bagmati province (57.21%), followed by Gandaki province (17.59%), Karnali province (14.28%), province one (3.96%), Madhesh province (3.48%), Lumbini province (2.98%), and Far Western province (0.46%). The reasons behind the high concentration of FDI in Bagmati province may be the country's capital, large size of market, provision of good security on investment, and the basic infrastructure facilities available in the Bagmati province.

Table 4.5

Foreign Direct Investment Projects in Nepal (Province-wise)

Province	No. of Industry	Total Project Cost (Rs. in million)	Total Fixed Cost (Rs. in million)	FDI Inflows (Y) (Rs. in million)	Employment	FDI Inflows (%)
One	127	18,379.08	15,049.48	10,713.01	15,264	3.968607
Madhesh	134	18,938.76	14,839.27	9,414.66	14,108	3.487637
Bagmati	3,613	233,194.1	188,116.7	154,436.5	17,6228	57.21061
Gandaki	402	90,396.61	85,832.52	47,497.32	22,300	17.59526
Lumbini	146	21,683.05	20,553.87	8,062.86	11,105	2.986866
Karnali	28	53,128.76	51,064.81	38,555.22	1,436	14.28268
Farwestern	55	2,898.09	2,589.5	1,264.25	4,498	0.468338
Total	4,505	438,618.42	378,045.47	269,943.83	244,939	100

Source: Department of industry, GoN (2019)

Out of total foreign-based industries, 3,613 industries are found to be in Bagmati province (80.19%), but only 28 industries to be in Karnali province (0.62%).

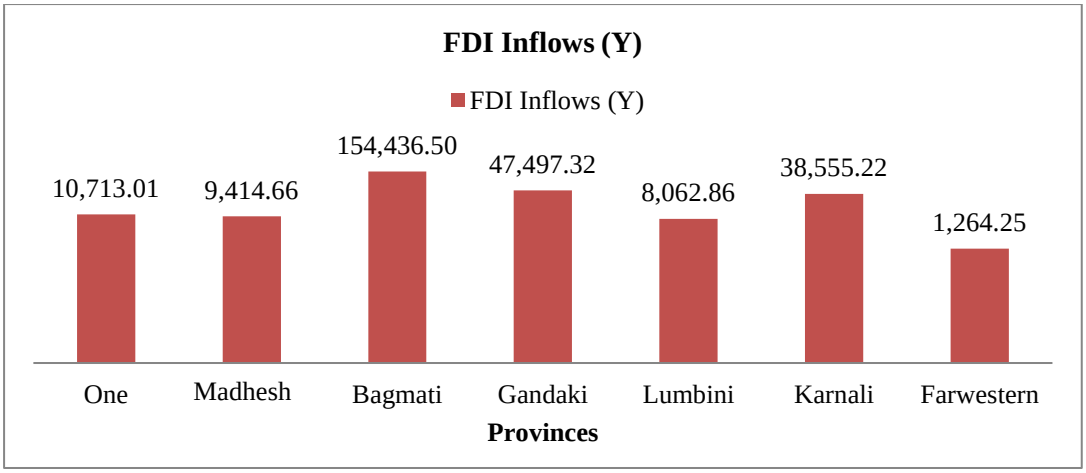

Figure 4.5. FDI Approval by Provinces.

4.7.4 Foreign Direct Investment Projects by Category (Approval)

An analysis of sector wise FDI stock over the study period shows that, manufacturing, service, tourism, energy based, construction and agriculture sector attracted FDI in Nepal.

Table 4.6

Foreign Direct Investment Projects by Category

Types of industries	No. of Industries	Total project cost (Rs. in million)	Total Fixed cost (Rs. in million)	Foreign Investment (Rs. in million)	FDI (in %)
Agriculture	268	7,935.62	6,608.22	6,238.53	2.32
Construction	46	3,842.34	2,866.30	2,983.01	1.11
Energy based	82	191,487.22	187,763.53	123,832.97	45.87
Information Technology	36	878.74	503.38	711.54	0.26
Manufacturing	1,109	105,412.20	83,642.70	48,785.02	18.07
Mineral	70	10,348.12	8,221.80	7,967.85	2.95
Service	1,516	71,197.73	45,269.47	48,223.12	17.86
Tourism	1,378	47,516.45	43,170.08	31,201.78	11.56
Total	4,505	438,618.42	378,045.47	269,943.83	100

Source: Department of Industry, GoN (2019)

Table 4.6 shows that out of total committed FDI, energy-based industries account for Rs.123, 832.97 million (45.87 %)—the highest amount. Manufacturing sector occupies second position (Rs.48, 785.02 million or 18.07 %) to attract FDI. In the context of FDI, service sector has gained third priority (Rs. 48,223.12 million or

17.86%), while tourism sector occupies fourth position (Rs 31,201.78 million or 11.56%). Lowest priority in obtaining FDI has been given to construction (1.11%), agriculture (2.32 %), mineral sectors (2.95 %), and information technology (0.26 %). Thus, energy-based industries achieve highest percentage of proposed FDI, and information technology sector receives lowest percentage of FDI.

Structure of FDI reflects that the number of total Industries under different categories constitute 4,505 in Nepal during 1995/96 - 2017/18. Out of total industries of 7,334 (MoF, 2017/18) in Nepal, 4,505 industries are the proposed-foreign-capital based (61.42%). Total proposed investment is found to be Rs 156, 3,177 million, total fixed capital to be Rs 139, 1,878 million, and total FDI to be Rs 269,943.83 million. According to economic survey 2017/18, total amount of fixed capital is Rs 139, 1,878 million at the end of 2017/18.

Table 4.7

Sectoral Foreign Investment Projects by Commitment (Rs in million)

Types of Industries	No.	Total Project Cost	Total Fixed Cost	Foreign Investment	FDI (%)
Agriculture and Forestry	268	7,935.62	6,608.22	6,238.53	2.31
Manufacturing	1,237	300,742	274,272.53	175,601.00	65.05
Service sectors	3,000	129,941.04	97,164.73	88,104.29	32.64
Total	4,505	438,618.42	378,045.47	269,943.83	100

Source: Department of industry, GoN (2019)

(Note: manufacturing refers to the sum of construction, energy based, manufacturing, mineral, and tourism, information technology and service sectors refer to the sum of service and tourism sectors.)

Table 4.7 shows 1,237 proposed-FDI based manufacturing industries. Of total commitment FDI in Nepal during the study period, manufacturing sector has received highest volume of FDI amounting to Rs 175,601 million (65.05%) of total during the period 1995/96- 2017/18; service sectors included 3,000 industries (Rs 88,104.29 million or 32.64%); and agriculture sector has achieved the minimum magnitude of FDI equal to Rs 6,238.53 million.

The structure of FDI reflects the number of total industries (4,505) during 1995/96 - 2017/18 under different categories. Of the total 4,505 industries, 268 are agro- based, 1,237 are manufacturing, and 3,000 are service based. The statistical data displays that highest number of FDI-based industries are in service sector, followed by manufacturing and agriculture sector. Of total, FDI in agriculture sector is very low (1.8%). The total project cost of the FDI-based industries is Rs. 438,618.42 million. Out of total project cost, FDI occupies 45.6%. Out of total FDI, manufacturing sector holds 68.56%, and service sector 29.62. All of the industries related to FDI, on average, occupy more than 45% of foreign capital on their total project cost in different sector.

Table 4.8 exhibits that the amount of approval FDI in different sectors (agriculture, manufacturing, service) during 1995/96-2017/18. Of total proposed FDI, manufacturing sector has been given top priority (Rs 211,570.06 million or 78.37%), followed by service sector (54,744.77 million or 20.28 %), and agriculture sector (Rs3, 628.97 million or 1.34%). It is important to note that an agriculture and forestry sector has been accorded less priority by foreign investors.

Table 4.8

Foreign Direct Investment, Nepal: Approval by Sector (1995/96-2017/18)

Year	FDI in Agriculture sector (in Rs. million)	Growth rate of FDI (in %)	FDI in Manufacturing sector (in Rs. million)	Growth rate of FDI (in %)	FDI in Service sector (in Rs. million)	Growth rate of FDI (in %)
Up to 1995/1996	73.39		4152.25		3017.26	
1996/1997	1.39		846.22		1,547.92	
1997/1998	-	0	394.7	-53.36	1,605.58	3.72
1998/1999	4.7	0	1,259.85	219.19	401.88	-74.97
1999/2000	-	0	513.02	-59.28	904.59	125.09
2000/2001	10	0	2,211.61	331.10	880.95	-2.61
2001/2002	4.9	-51.00	967.57	-56.25	237.18	-73.08
2002/2003	-	0	1,129.78	16.76	603.99	154.65
2003/2004	-	00	1,020.36	-9.69	1,744.44	188.82
2004/2005	7.38	0.00	1,245.93	22.11	382.46	-78.08
2005/2006	-	00.00	1,108.7	-11.01	1,497.61	291.57
2006/2007	5	00.00	1975.66	78.20	1,205.32	-19.52
2007/2008	10.735	114.70	8,145.37	312.29	1,559.88	29.42
2008/2009	30.207	181.39	3,953.95	-51.46	1,999.08	28.16
2009/2010	10	-66.90	7,466.35	88.83	1623.64	-18.78
2010/2011	36.67	266.70	7,580.46	1.53	2,163.14	33.23
2011/2012	16.22	-55.77	4,143.71	-45.34	2,835	31.06
2012/2013	91.36	463.26	740.54	-82.13	1151.73	-59.37
2013/2014	101.38	10.97	1312.03	77.17	577.33	-49.87
2014/2015	735.88	625.86	56729.69	4223.81	1005.21	74.11
2015/2016	297.3	-59.60	5005.08	-91.18	9828.14	877.72
2016/2017	256.46	-13.74	3874.49	-22.59	11075.52	12.69
2017/2018	1936.	654.89	46897.47	1110.42	6896.92	-37.73
Total	3628.97		211570.06		54744.77	

Source: Department of industry, GoN (2018/19

(Note: percentage growth rate is calculated)

The data in Table 4.8, relating to FDI proposed in agricultural and forestry sectors, reveal the poor situation—in some year zero FDI and in other years very low. The growth rate of FDI in the sector calculated in Table 4.8 has also shown an inconsistent trend—and highly insignificant growth rate—of FDI. During the study period, the committed FDI in the sector are highly fluctuating as it is zero at the

period of 1997/98, 1999/2000, 2002/03, 2003/04, and 2005/2006 and positive growth of FDI at the other period. The highest FDI proposed in volume during the study period is 1936 million rupees (654.89%) in this sector in the year of 2017/18.

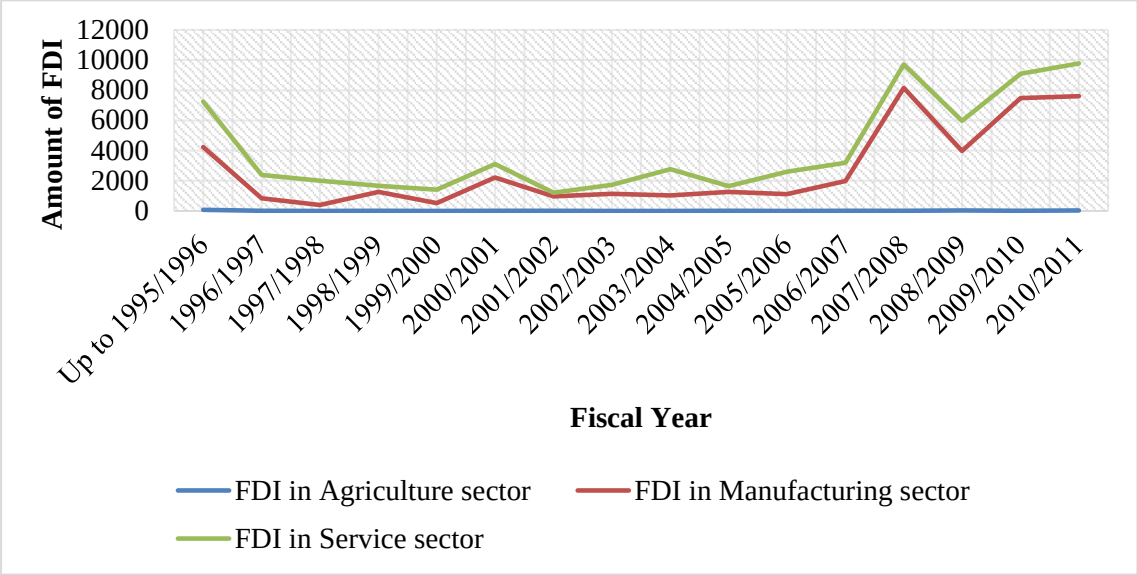

Figure 4.6. Sector-wise FDI approval.

The growth rate of proposed FDI in the agriculture sector is negative in most of the years in study period and very insignificant, even if it is positive in other years except in the year 2014/15 and 2017/18. This data have proved that agriculture sector is unable to attract a significant level of foreign capital and other resources though this sector has very significant and important role in the national economy. The data relating to proposed FDI in manufacturing sector have also been shown in an inconsistent trend as presented in Figure 4.6. The volume of FDI commitment— as well as its growth rate—in this sector seems to be highly fluctuating—the lowest volume of FDI (Rs. 394.7 million) in 1997/98 and the highest volume (Rs. 56729.69 million) in 2014/15. The growth rate in most of the years during the study period is negative: The growth rate of FDI in the sector is highest (4223.81%) in 2014/15, though this manufacturing sector has more FDI proposed in volume, compared to agricultural and forestry and the service sectors.

Besides agriculture and manufacturing sectors, Table 4.8 also presents the FDI commitment in the service sector in Nepal. The trend of FDI commitment in this service sector also seems inconsistent and highly fluctuating: During the study period, amount of FDI commitments is lowest (Rs. 237.18 million) in 2001/02 and highest (Rs. 11075.52 million) in 2016/17. The growth rate of FDI commitments in this sector

is also highly fluctuating. Of the total study period of 23 years, the growth rate of proposed FDI appears positive only for 12 years and the growth rate of FDI is negative for the remaining 11 years; the growth rate of FDI in service sector is highest (877.72%) in 2015/16. From 2004/05 to 2011/12, the volume of FDI is increasing, but its growth is rising at a nominal rate. Hence, the growth rate of FDI in different sectors does not seem to be consistent and encouraging, indicating that the above listed sectors in Nepalese economy are either unattractive or are yet to be developed when it comes to the FDI inflows.

4.7.5 Source of Foreign Direct Investment

The new policy has extended the source of FDI into Nepal, according to an examination of the origin of FDI into Nepal (following the restoration of democracy in 1990). In 2017/18, there are 93 nations, compared to 21 countries in 1995/96. As a result, the number of nations proposing to invest in Nepal has grown over the research period. Nonetheless, just a few nations account for the majority of FDI. Developing nations, such as India, China, South Korea, and others, feature on the list of big investors in Nepal throughout the research period, which runs from 1995/96 to 2017/118, according to an analysis. There are two types of developing nations who invest in Nepal. The first group includes emerging nations like as India, China, and South Korea, who have created their industrial base with the support of technology bought from the industrialized world and are now able to transfer technology and finance to Nepalese businesses. The second group of emerging nations, on the other hand, includes those that have not yet fully built their industrial foundation, such as Mauritius, Bangladesh, and others. Because the tax rates in these countries are so low, multinational corporations with headquarters in other countries—both developed and developing—are found diverting funds received in different accounts to these tax havens; in other words, these countries act as a host for multinational corporations' cash positioning. This way they possess huge investable surplus, a part of which has found its way in to Nepal.

Table 4.9

Foreign Direct Investment Projects in Nepal (By country)

SN	Name of Country	No. of industries	Total Project cost (Rs. in million)	Foreign investment (Rs. in million)	Employment
1	China	1,398	150,071	109,955.40	66,003
2	India	735	138,516.23	88,603.01	70,230
3	USA	399	21,894.31	8,813.07	18,268
4	S. Korea	337	16,448.71	11,675.83	11,361
5	Japan	255	7,286.53	2,910.51	9,845
6	UK	175	9,037.91	5,438.47	10,848
7	Germany	111	2,862.93	1,376.72	4,751
8	France	100	1,081.75	724.79	3,299
9	Netherland	78	2,496.63	1,585.40	4,099
10	Australia	70	849.16	669.91	1,868
11	Switzerland	58	5,280.37	2,902.67	1,533
12	Bangladesh	70	1,054.60	807.93	5,701
13	Singapore	46	8,256.82	3,012.39	3,292
14	Canada	46	7,348.22	2,836.59	2,408
15	Italy	37	1,838.73	623.86	1,014
16	Denmark	37	1,235.79	432.13	1,551
17	Russia	40	851.86	678.09	1,420
18	Malaysia	37	1,113.74	657.53	1,164
19	Pakistan	26	2,303.04	269.82	2,828
20	Other's countries	540	40790.09	25969.71	23456
Total	93	4,505	438,618.42	269,943.83	244,939

Source: Department of industry, GoN (2018)

Table 4.9 shows that the number of Nepal's joint ventures industry with China is highest (1,398), followed by India (735), USA (399), S. Korea (377), Japan (255), UK (175), Germany (111), France (100), Netherland (78), Australia (70), Bangladesh (70), and Switzerland (58), and so on. Twenty-three countries have proposed to invest in only one project in Nepal. The magnitude of FDI from China is Rs 109, 955.40 million (40.732%) of total FDI inflows in Nepal. The size of FDI commitment of total foreign capital from major countries, such as India, showed RS 88,603.01 million

(32.822%), followed by USA Rs 8,813.07 million (3.264%), South Korea Rs 11,675.85 million (4.325%), Canada Rs 2,836.59 million (1.05%), Japan Rs 2,910.51 million (1.078%), and UK Rs 5,438.47 million (2.014%). In this way, the FDI inflow from China is largest (40.73%), and other six countries—such as India, South Korea, USA, Canada, Japan and UK—collectively share 44.55% of the total FDI commitments in Nepal, implying that only seven countries account for well over 85.28% of FDI commitments during the study period.

The structure of FDI reflects the number of total 4,505 industries in Nepal during FY 1995/96-2017/18: Total investment commitment of FDI is found to be Rs 269,943.83million. Nepal has received highest FDI commitments (67,455.04 million) in FY 2014/15. Of FDI commitments during the study period, manufacturing sector has been given a top priority in terms of total project cost. China has the highest number of projects in the list of 93 countries. Of the total commitment, the magnitude of FDI from China is 44.732% during the same period.

4.8 Real Flows of Foreign Direct Investment

Foreign capital flows in the country puts the significant impact on an economy; therefore, the government of Nepal (GoN) has made the various efforts to raise the inflows of FDI. The major efforts of GoN to attract the large volume of FDI into Nepal are Foreign Investment and Technology Transfer Act, 1992, One Window Service (OWS) under Industrial Enterprises Act, 1992, the establishment of Board of Investment under Investment Board Act, 2010, Foreign Investment policy, 2015, and various Investment Summits organized by Government of Nepal [march 2-3, (2019), march 29-30, (2019)]. However, Nepal has received the very small portion of FDI, compared with neighboring countries China and India.

FDI flows into Nepal have started since 1951/52. Nepal established the Nepal Commercial Corporation with Indian investors as a joint venture with 67 percent equity. There was a provision of foreign investment in medium scale and large-scale industries with investment of Rs 50,000-500000 and more than 500000, respectively (Aryal, 2009). It is very difficult to capture the actual flows of FDI into Nepal. Department of industry has only recorded the committed FDI, and BOP statistics has captured the real flows of FDI into Nepal after 1995/96. Thus, this study based on the

time series data during the period of 1995/96 to 2017/18. Table 4.10 shows the trend of actual flows of FDI into Nepal.

Table 4.10

Real Flows of Foreign Direct Investment into Nepal

Year	Actual FDI (Rs. million)	Year	Actual FDI (Rs. million)
1995/96	388	2007/08	294
1996/97	162	2008/09	1829
1997/98	685	2009/10	2852
1998/99	578	2010/11	6437
1999/00	233	2011/12	9195
2000/01	-33	2012/13	9082
2001/02	-282	2013/14	3195
2002/03	961	2014/15	4383
2003/04	0	2015/16	5921
2004/05	136	2016/17	13504
2005/06	-470	2017/18	5275
2006/07	362		

Source: Nepal Rastra Bank (2019)

Table 4.10 depicts the trend of actual inflows of FDI in Nepal for the period 1995/96 - 2017/18. The actual inflows of FDI is negative during the period of 2000/01, 2001/02, and 2005/06 and zero during the period of 2003/04. The size of FDI is very minimal (Rs 136 million) in 2004/05 due to the regulatory policy framework and has increased to Rs 5275 million in 2017/18. The actual inflows of FDI is as high as Rs 13504 million in 2016/17, Rs. 9,195 million in 2011/12 and has significantly decreased to Rs 9082 million in 2012/13. Similarly, an actual flow of FDI in 2014/15 is Rs. 4383 million and has increased to Rs 5921 million in 2015/16. During the study period, the annual average inflow of FDI in Nepal is Rs 2812 million. The FDI inflows in Nepal before 2009/10 are below the average and after 2009/10 above the average. The trend value of FDI inflows in Nepal shows a high fluctuation of FDI inflows during the study period. There are various reasons for the fluctuation in FDI inflows in the study period: One of the strong reasons for the fluctuation is the political instability and conflict. Maoist insurgency started from 1995 in the country and FDI inflows started to have negative impact on the economy at the same time. During Maoist insurgency, the outflow of FDI is greater than

inflows of FDI into Nepal. Therefore, the fiscal years 2000/01, 2001/02, and 2005/06 saw greater outflows of FDI than its inflows into Nepal. The Maoist insurgency continued over 11 years till 2006, when there seems a high fluctuation in FDI inflows. When Maoist insurgency ended, FDI inflows have started to increase. Thus, the political instability and conflict are the major reasons for fluctuation of FDI flows in the country; the other reasons may be the frequent change in policies, corruption, bureaucratic complexity, insufficient infrastructure, and so on.

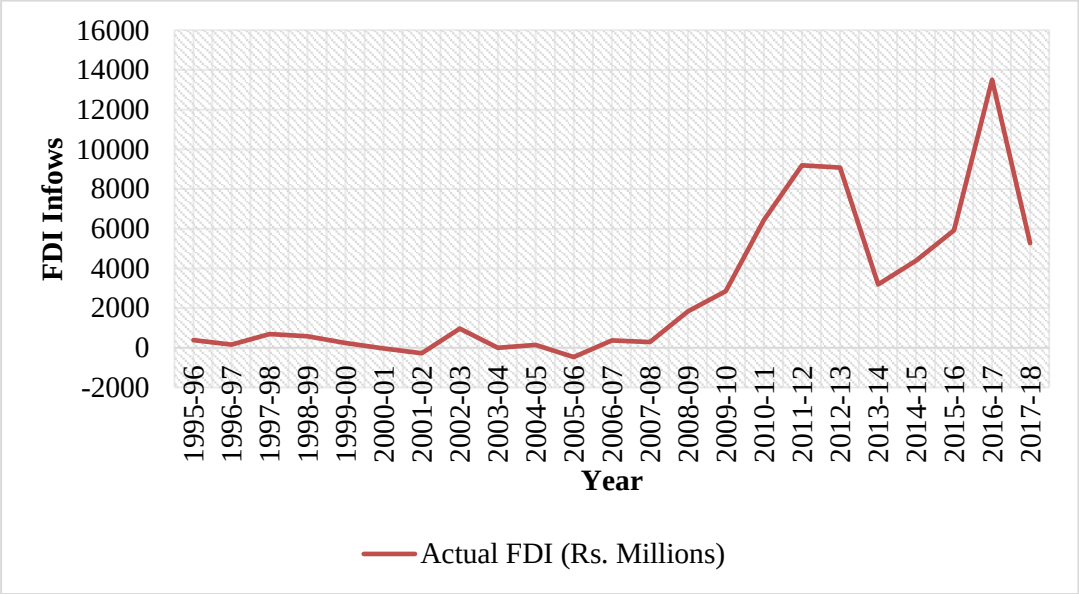

Figure 4.7. Actual inflows of FDI.

Figure 4.7 exhibits the actual inflows of FDI into Nepal during the study period; the trend line shows high fluctuation of FDI flows into Nepal during the study period.

4.9 Summary

As Nepal is undergoing the process of economic development, it needs higher amount of investment to meet the goal of economic development. But Nepal faces the problems of scarcity of resources to properly invest in different sectors on the one hand; on the other, government alone seems unable to fulfill the required investment in different sectors to create employment opportunities, as well as improve the real GDP growth. These facts justify that the ultimate solution of resource gap can be bridged with foreign direct investment. FDI is not only an instrument for obtaining investment capital to create employment opportunities and to raise the real GDP, but

also a medium to eliminate undesirable effects in the economy as well as an introducer of desirable effects.

During the study period, total FDI accounts for Rs 269,943.83 million and the total number of industries with foreign capital in Nepal comprises 4,505. Total project cost is estimated to be Rs 438,618.42million and total fixed cost to be Rs 378,045.47million. During the study period, the contribution of FDI is as high as Rs 67,455.04 million in 2014/15 and the annual average inflow of FDI in Nepal during the study period is Rs 9,308.408 million.

The sector-wise inflows of FDI demonstrates that the magnitude of FDI equal Rs 211,570.06 million (78.37%) in secondary sector of the total and Rs 54744.77 million (20.28%) in tertiary sectors that has occupied second position to attract FDI in Nepal. In the context of FDI, primary sector has been given least priority (Rs 3628.97 million or 1.34%).

The growth rate of FDI inflows has been shown in a highly insignificant and inconsistent trend: The FDI inflows in agriculture sectors reveal a poor situation (zero FDI inflows in some years and very low in other years).

The FDI inflows in manufacturing sector are also shown to be in an inconsistent trend: the lowest FDI (Rs. 394.7 million) in 1997/98 and highest (Rs. 56729.69 million) in 2014/15. The trend of FDI inflows in the service sector in Nepal is also highly fluctuating and inconsistent: lowest committed FDI (Rs. 237.18 million) in 2001/02 but highest (Rs. 11075.52 million) in 2016/17. The growth rate of FDI inflows in this sector, therefore, turns out to be also highly fluctuating.

China has provided the highest number of projects (1,398) and the magnitude of FDI from China is Rs 109,955.4 million (40.73%) of the total FDI during the study period. Likewise, the size of FDI from major countries such as India has marked as Rs 88,603.01 million (32.82%), followed by USA Rs 8813.07 million (3.26%), South Korea Rs 11,675.85 million (4.32%), Canada Rs 2,836.59 million (1.05%), Japan Rs 2,910.51 million (1.07%), and UK Rs 5,438.47 million (2.014%) inflows of total foreign capital.

The trend of actual inflows of FDI appears negative during the period of 2000/01, 2001/02, and 2005/06. The size of FDI is very minimal (Rs 136 million) in

2004/05 due to the regulatory policy framework and has increased to Rs 5275 million in 2017/18. The actual inflows of FDI are as high as Rs 13504 million in 2016/17; thus, the trend of the actual flow of FDI to Nepal is inconsistent and highly fluctuating during the study period.

In short, the Nepalese government has established a favorable environment for FDI inflows by implementing structural adjustment and stabilization measures. The Nepalese government has attempted to reform economic policies in order to increase international capital inflows into the country. The current government is following in the footsteps of past administrations by welcoming foreign capital into sectors of national significance such as infrastructure, core industries, hydro projects, service sectors, and, in the case of some consumer goods businesses, manufacturing. It has become evident that the government's goals are no longer in doubt, but the implementation remains. To increase FDI flows, it is therefore necessary to identify the factors that influence flows of FDI into Nepal.

CHAPTER V

A GAP BETWEEN APPROVED AND ACTUAL FLOWS OF FOREIGN DIRECT INVESTMENT

5.1 Net Inflows of Foreign Direct Investment

Foreign capital, a main source of capital formation, plays an important role in economic growth and development of developing countries like Nepal. It enhances international trade and brings in technology—as well as better management practices—to the host country, whereby creates the economy more competitive. It is a strategic asset for the economy in terms of brands, new technology, and distributive channel. Moreover, developing economy considers FDI as a key source of financial resource to bridge the gap between desired and actual level of capital stock, when domestic investment is not sufficient to provide the actual capital stock up to the desired level of capital stock. Thus, foreign capital flows are considered as a source of capital formation, economic growth, and source of employment (OECD, 2002).

Nepal has tremendously reformed legal infrastructures to attract FDI inflows after liberalization by employing technology transfer policy, corporate tax policy and tax, and subsidy policy for exportable goods. However, Nepal has not been successful to receive a large chunk of approved FDI. Out of total approved FDI, Nepal has received a low volume of FDI as compared with neighboring developing countries like China, India, Pakistan, and Shree Lanka.

Before 1990, real FDI flows and committed FDI were not noticeable due to restricted policies of the government. After the restoration of democracy, government has formulated favorable policies for foreign investors to attract a large chunk of FDI. However, Nepal has faced various obstacles in attracting all committed FDI and implementing approved FDI within the country: corruption, non-cooperation by government authorities, delay in implementing projects, procedural complications created by bureaucrats, and so forth. Table 5.1 shows that the magnitude of FDI flows is highest in 2016/17 (Rs 13,504 million or 88.80%) of approved FDI. Similarly, Nepal received the second highest volume of FDI in 2011/12 (Rs. 9,195 million or 128.81%) of the committed FDI. There are negative flows of FDI during the period of 2000/01, 2001/02 and 2005/06

owing to the political instability or Maoist insurgency in Nepal. There are negative flows of FDI because outbound capital from Nepal to other countries is greater than inbound capital.

Table 5.1

Approved and Actual Flows of Foreign Direct Investment (1995/96-2017/18)

Year	Approved FDI (Rs.in million)	Actual FDI (Rs.in million)	Actual inflows as % of Approved FDI	Year	Approved FDI (Rs.in million)	Actual FDI (Rs.in million)	Actual inflows as % of Approved FDI
1995/96	2,220	388	17.47	2007/08	9,813	294	2.99
1996/97	2,396	162	6.76	2008/09	6,255	1829	29.24
1997/98	2,000	685	34.25	2009/10	9,100	2852	31.34
1998/99	1,666	578	34.69	2010/11	10,052.21	6437	64.03
1999/00	1,418	233	16.43	2011/12	7,138.31	9195	128.81
2000/01	3,103	-33	-	2012/13	19,818.73	9082	45.82
2001/02	1,210	-282	-	2013/14	20,132.42	3195	15.87
2002/03	1,794	961	53.56	2014/15	67,455.04	4383	6.49
2003/04	2,765	0	0	2015/16	15,254.33	5921	38.81
2004/05	1,636	136	8.31	2016/17	15,206.46	13504	88.80
2005/06	2,606	-470	-	2017/18	57,001.88	5275	9.25

Source: Department of Industry, GoN and Nepal Rastra Bank (2018/19)

The committed investment totals Rs 269,943.83 million, but the actual inflows of FDI is only Rs. 64,960 million (24.06%) during the study period. Thus, Table 5.1 shows a very small chunk of FDI flows into Nepal out of total approved foreign capital. Figure 5.1 also reveals trends of actual and approved flows of FDI.

As Figure 5.1 reveals, there is an enormous gap between approved and actual flows of FDI into Nepal; the difference between proposed FDI and actual flows is also seen in a highly fluctuating trend during the study period. Thus, the aim of this chapter is to investigate the reason beyond the gap between approved and actual flows of FDI in Nepal through survey method.

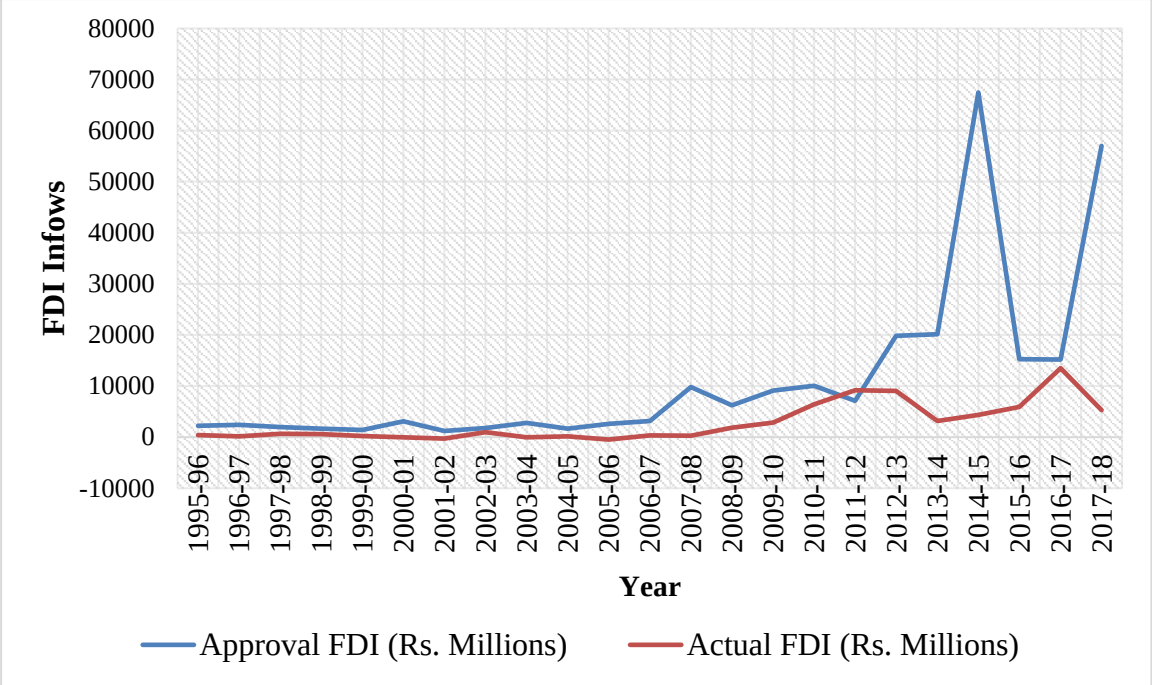

*Figure 5.*1. Trend of approved and real inflows of FDI.

This study has analysed primary data collected through questionnaire survey and in-depth interview, has provided the attributes of sample, and presented outcome of the statistical analysis.

5.2 Descriptive Analysis of the Variables

Descriptive analysis has explored the condition of political factors, rule of law, market size, financial factor, availability of infrastructure, country risk factor, and bureaucratic quality to identify the causes of the discrepancy between proposed and actual inflows of FDI in Nepal. Descriptive statistics, such as mean, standard deviation, skewness, and kurtosis of the respective variables of this study, are presented in Table 5.2.

Table 5.2

Descriptive Analysis of the Political Variables

Scale items	Mean	Standard deviation	Skewness	Kurtosis
Frequent change in government	4.20	1.05	-1.57	2.04
Frequently strikes	3.56	1.14	-.82	-0.37
Big government	2.85	1.05	-0.05	-0.74
Force donation with foreign investors	3.50	1.04	-0.41	-0.27
Lack of civil liberties.	2.92	1.21	-0.05	-0.85

Source: Field Survey 2018

All the observed variables are measured by a 5-point Likert scale ranging from 1(*strongly disagree*) to 5 (*strongly agree*). Thus, cut-off point of 3 is assigned to indicate the difference between disagree and agree options for each of statement. The average scores for each of the statements are presented in Table 5.2. The highest mean score (4.20) of a frequent change in government in the country is above score of cut-off point (3). Similarly, the mean value of frequent strikes by political parties (3.56) and forced donation imposed on foreign firms (3.5) are above the cut-off point 3. The lowest value below the cut- off point is big government (2.85) and the lack of civil liberties (2.92). The result indicates that respondents somewhat agree with the three statements (i.e., the mean scores above the cut-off point 3) which are responsible for raising the gap between committed FDI and actual FDI flows into Nepal. Standard deviation of each statement is almost near to one, implying that the variability of the respondents' views from the average is almost similar.

Descriptive statistics explore the scenario of political variables. The mean score more than 3 represents the intensity of political variables of the respondents. Respondents' opinions are observed by computing its mean and standard deviation. Mean values give the result of average conditions of respondents' feelings, and standard deviation shows the deviation from the average mean of respondent's views. On the basis of respondents' ideas, therefore, Table 5.2 indicates that political instabilities seem to have triggered the high discrepancy between proposed and actual flows of FDI in Nepal.

Table 5.3

Descriptive Analysis of Rule of Law Related Variables

Scale items	Mean	Standard deviation	Skewness	Kurtosis
Ineffective law about property rights	3.47	1.19	-.72	-.46
Policy complications to approve the FDI	4.04	.84	-.70	.09
Poor transparency in government activities on the FDI	3.97	1.03	-.93	.20
Insufficient government institutions to promote and regulate FDI	3.45	1.22	-.48	-.88
Low level of judicial independency	3.34	1.20	-.33	-.85

Source: Field Survey 2018

Table 5.3 explores the scenario of rule of law on respondents' views on five different statements (scale items), measured in 5-point Likert scales: 1- *strongly disagree*, 2 - *disagree*, 3- *no idea*, 4 - *agree*, and 5 - *strongly agree*. Therefore, a mean score more than 3 represents the intensity of rule of law-related variables of the respondents. The opinions of respondents are observed by computing its mean and standard deviation. Mean values give the result of average condition of respondents' ideas, and standard deviation shows the deviation from the average views of respondents. The average score for each of the variables are greater than cut-off point 3. Thus, on the basis of respondent's deliberation, rule of law is the prominent factors causing the high discrepancy between committed and actual flows of FDI into Nepal.

Table 5.4
Descriptive Analysis of Market Size

Scale Items	Mean	Standard deviation	Skewness	Kurtosis
Low per capita income	3.20	1.29	-.23	-1.20
Low GDP growth rate	3.24	1.15	-.48	-.82
Low competitiveness of domestic products in international market	3.84	1.09	-.88	.14
Difficulties in international marketing	3.67	1.10	-.83	-.01
Insufficient availability of factor inputs	3.48	1.19	-.57	-.67

Source: Field Survey 2018

Table 5.4 shows the average score, standard deviation, skewness, and kurtosis of market-size related variables whose average scores are greater than cut-off point value 3—implying a small market, another component on the basis of respondents' views, which makes the gap between real flows and proposed FDI in Nepal. The value of standard deviation is almost near to 1 for each statement; therefore, the variability of respondent reaction from average score is similar. The value of skewness and kurtosis are less than 2, implying that the data sets are normally distributed.

Table 5.5

Descriptive Analysis of financial Factor

Scale items	Mean	Standard deviation	Skewness	Kurtosis
Depreciating Nepalese currency against US dollar	2.70	1.18	.38	-.85
Fluctuations in Nepalese capital market	3.48	1.07	-.81	-.17
Insufficient financial institutions	2.74	1.18	.18	-1.07
Provision of low tax incentive	3.06	1.20	-.15	-1.05
Excessive legal protection for workers	3.23	1.17	-.23	-.75

Source: Field Survey 2018

All the observed variables are measured by a 5-point Likert scale ranging from 1(*strongly disagree*) to 5 (*strongly agree*). Thus, cut-off point of 3 indicates the difference between disagree and agree options for each of statement. The average score for each of the statements is presented in Table 5.5. Above the cut-off point 3 are the mean score (3.48) of inconsistent trends of Nepalese capital market, the mean value of excessive legal protection for workers (3.23), and provision of low tax incentive for investors (3.06)—these three statements that are responsible for the gap between committed and actual flows of FDI into Nepal.

Table 5.6

Descriptive Analysis of Availability of Infrastructure

Scale items	Mean	Standard deviation	Skewness	Kurtosis
Insufficient road transportation	3.77	1.15	-.90	-.06
Insufficient communication facilities	2.84	1.23	.14	-1.25
Inadequate energy	3.75	1.06	-1.11	.62
Poor research and development facilities	3.25	1.20	-.06	-1.18
Insufficient commercial and industrial buildings	3.30	1.18	-.39	-1.06

Source: Field Survey 2018

Table 5.6 indicates the average scores for each statement of the infrastructure's current situations in Nepal. The mean scores of the four statements—insufficient road transport (3.77), inadequate supply of energy in

investment area (3.75), insufficient commercial and industrial buildings (3.30), and poor research and development facilities (3.25) that are above the cut-off point—appear to be responsible for the gap between proposed and actual flows of FDI; however, the mean score (2.84) of insufficient communication facilities, below the cut-off point 3, is not liable for the gap.

Table 5.7

Descriptive Analysis of Country Risk Factor

Scale items	Mean	Standard deviation	Skewness	Kurtosis
High inflation rate	3.03	1.14	-.18	-1.12
High volume of debt	3.08	1.25	-.05	-1.22
High volume of trade deficit	3.60	1.17	-.74	-.42
High rate of corporate tax	3.28	1.07	-.28	-.88
Poor security for foreign investment	3.94	1.03	-.77	-.26

Source: Field Survey 2018

Table 5.7 presents country risk variables for Nepal. The mean scores of all five statements, above the cut-off point 3, imply that the respondents' views on country risk factors seem to have provided the evidences for the gap between proposed and real flows of FDI in Nepal. The consistency on respondents' views is supported by almost similar values of standard deviation of these five statements. In addition, all values of skewness and kurtosis, which are below 2, show that the data are normally distributed.

Table 5.8

Descriptive Analysis of Bureaucratic Quality

Scale items	Mean	Standard deviation	Skewness	Kurtosis
Low performance of bureaucrats	4.05	.96	-1.19	1.21
Corrupt attitudes of bureaucrats	4.15	.93	-1.21	1.47
Negative attitude of bureaucrats	3.40	1.17	-.21	-1.04
Bureaucrats' rude behaviour	2.96	1.08	.34	-.63
Red tape created by bureaucrats	3.92	1.04	-1.20	1.08

Source: Field Survey 2018

Table 5.8 highlights respondents' views on the present scenario of the bureaucrat's qualities. The mean scores of the four statements—that is, corrupt attitude of bureaucrats (4.15), low performance of bureaucrats in their respective

place (4.04), red tape created by bureaucrats for foreign investors (3.92), and bureaucrats' negative attitudes (3.40) that are above the cut-off point 3—are responsible for the gap between proposed and actual flows of FDI.

This descriptive analysis of all statements only shows respondents' average responses, but it does not show significant causes behind the gap between committed and actual inflows of FDI. The following principal component analysis, therefore, has been done to identify significant causes for the gap:

5.3 Factor Analysis

Factor analysis is used to extract the appropriate reasons making the discrepancy between real and committed flows of FDI. To extract the factors, various tests—for example, Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity (BTS), as shown in Table 5.9—are used for factor analysis to assess the suitability of the data from the respondents' views.

Table 5.9

Kaiser-Meyer-Olkin and Bartlett's Test

Kaiser-Meyer-Olkin measure of sampling adequacy		0.63
Bartlett's Test of Sphericity	approximate Chi-Square	862.58
	Df	25
	significance level	.00

Source: Calculation from Field Survey 2018

Table 5.9 shows the value of Kaiser-Meyer-Olkin (KMO) and Bartlett's test statistics for sample adequacy and significance level; here, KMO value greater than 0.5 is considered to be sample adequacy for the further analysis of the data (Kaiser & Rice, 1974). The value of KMO (0.63) is acceptable, thereby leading to a compact pattern of correlation, and hence factor analysis can yield distinct and reliable results. The significant result of Bartlett's test ($P<.00$) represents that factor is acceptable. For this reason, the items in the individual category subject to principal component analysis (PCA), with varimax rotation and Kaiser Normalization, have been done by SPSS version 25.

Table 5.10

Communalities

Variables	Initial	Extraction
pol_c	1.00	.66
rul_a	1.00	.55
rul_b	1.00	.65
rul_d	1.00	.84
mar_a	1.00	.73
mar_b	1.00	.76
mar_c	1.00	.48
mar_e	1.00	.49
Fina_a	1.00	.60
Fin_b	1.00	.78
Fin c	1.00	.68
Infra_b	1.00	.68
Infra_c	1.00	.73
Infra_d	1.00	.53
Crisk_a	1.00	.72
Crisk_b	1.00	.73
Crisk_c	1.00	.60
Crisk_d	1.00	.63
Bure.qu_a	1.00	.70
Bure.qu_b	1.00	.59
Bure.qu_c	1.00	.74
Bure.qu_d	1.00	.81
Bure.qu_e	1.00	.62

Note: Extraction method: Principal component analysis.

According to Table 5.10, the first communalities estimate of variance account for all components of variables. Extraction communalities are estimations of the variation in each variable that account for the solution's variables. A low value indicates that the variables do not match well with the factor solution and should be removed from the study. Principal component analysis is a statistical process that converts a large number of potentially linked variables into a smaller number of uncorrelated variables. Moreover, Table 5.10 exhibits all variances are common variances and the communalities of every variable is 1; thus, this method merely transposes the original data into a linear component.

Table 5.11

Total Variance Explained

	Initial Eigen-values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.73	20.59	20.59	4.73	20.59	20.59	3.0	13.31	13.31
2	2.67	11.610	32.20	2.67	11.61	32.20	2.39	10.42	23.73
3	2.23	9.71	41.92	2.23	9.71	41.92	2.19	9.54	33.28
4	1.98	8.60	50.52	1.98	8.60	50.52	2.17	9.47	42.75
5	1.48	6.45	56.98	1.48	6.45	56.98	2.13	9.29	52.04
6	1.19	5.20	62.18	1.19	5.20	62.18	2.03	8.83	60.88
7	1.08	4.71	66.90	1.08	4.71	66.90	1.38	6.02	66.90
8	.98	4.26	71.17						
9	.79	3.46	74.63						
10	.78	3.39	78.03						
11	.65	2.84	80.88						
12	.63	2.76	83.64						
13	.61	2.66	86.31						
14	.51	2.25	88.56						
15	.43	1.90	90.46						
16	.41	1.80	92.26						
17	.39	1.69	93.96						
18	.33	1.45	95.41						
19	.28	1.25	96.66						
20	.24	1.08	97.74						
21	.21	.92	98.67						
22	.16	.72	99.39						
23	.13	.60	100.00						

Note: Extraction method: Principal component analysis.

Eigen-values associated with each linear component (factor) have been included in Table 5.11. Before extraction (23), linear components are identified within the data sets. Eigen-values associated with each factor represent the variance explained by each linear component. Seven components are identified because seven components have an Eigen-value greater than one, and total cumulative contribution of seven factors is 66.90%.

Table 5.12
Rotated Component Matrix

	Component						
	1	2	3	4	5	6	7
Crisk_b	.809						
Crisk_a	.789						
Crisk_c	.680						
rul_a	.660						
Crisk_d	.588						
Bure.qu_a		.758					
rul_b		.746					
Bure.qu_e		.713					
Bure.qu_b		.606					
Infra_c			.680				
mar_e			.597				
Infra_b			.583				
Infra_d			.578				
pol_c				.736			
Fina_a				.717			
Fin_b				.639			
Fina c				.610			
mar_a					.813		
mar_b					.731		
mar_c					.669		
Bure.qu_d						.889	
Bure.qu_c						.786	
rul_d							.888

Note: Extraction method: Principal component analysis
Rotation method: Varimax with Kaiser Normalization.
Rotation converged in 10 iterations.

Table 4.12 explores components after varimax rotation. The matrix loading less than 0.5 and cross loadings is to be suppressed, or excluded, from the output. Table 4.12 exhibits rotated component matrix representing matrix of factor loading for each observed variable on to each factor. The items having factor loading less than 0.5 are to be eliminated. It is known from Table 4.12 that variables country-risk related criskb, criska, criskc, rulea, and criskd having the values of principal components (0.809, 0.789, 0.680, 0.660, and 0.588 respectively) have loaded on factor one. Factor one is termed as aggregate of country-risk factor. For factor two, it is seen that bureaucrats a, rule b, bureaucrats e, bureaucrats b having high loadings of 0.758, 0.746, 0.713, and 0.606 are clubbed into bureaucratic quality factor. For factor three, it is

combination of variables—infrastructure c, market size e, infrastructure b, and infrastructure d—with values 0.680, 0.597, 0.583, and 0.578, and it is grouped into infrastructure variable. Factor four—which is a combination of political c, financial a, financial b, financial c—has loading factors 0.736, 0.717, 0.639, and 0.610, respectively, and it was combined as the name of financial factor. Factor five is a combination of three observed variables (market size a, market size b, and market size c) with loading factors 0.813, 0.731, and 0.669, respectively; it is grouped as the market size factor. Factor six is a combination of two observed variables (bureaucrats d, bureaucrat's c) with loading of 0.889 and 0.786, and it is constructed as new factors bureaucrat's performance factors. Factor seven is the only one observed variable with loading 0.888, and it is named as rule of law factor. Rule of law factor—insufficient existing government institution to promote and regulate FDI—has a high loading value, a crucial factor that also affects the FDI inflows in Nepal. However, a single variable (insufficient existing government institution to promote and regulate FDI) is not included for further analysis. Thus, only six factors are used to check the reliability, and its effect is either significant, or it does not create the discrepancy between committed and real flows of FDI in Nepal.

5.4 Reliability Analysis

Result of Cronbach's Alpha analysis is used to examine the sensible and theoretical assurance of each question in the data set. Gliem and Gliem (2003) opined that the value above 0.7 is considered to be acceptable and reliable in the field of social science research. To prove the internal reliability of the model used, this study has performed Cronbach's Alpha test of reliability. Applying this test specifies whether the items pertaining to each dimension are internally consistent and whether they can be used to measure the same construct (dimension). The value of α-score exceeding 0.7 indicates high internal reliability of the scale items. Only loaded variable in rotated component matrix is included in reliability test.

Table 5.13

Reliability Test Using Cronbach's Alpha Coefficient of Country Risk Factors

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.798	.797	5

Intra Item Correlation Matrix

	Crisk_b	Crisk_a	Crisk_c	rul_a	Crisk_d
Crisk_b	1.00	.68	.51	.39	.37
Crisk_a	.68	1.00	.40	.50	.33
Crisk_c	.51	.40	1.00	.37	.39
rul_a	.39	.50	.37	1.00	.44
Crisk_d	.37	.33	.39	.44	1.00

Note. Cronbach's alpha and inter item correlation coefficient calculated from first loading factor of rotated component matrix.

Table 5.13 demonstrates the value of Cronbach's alpha and the intra item correlation matrix. The coefficient of alpha for country risk factors is 0.798, implying high and sufficient internal consistency. If the intra-item correlation coefficients lie from 0.3 to 0.8, then the constructed new factors related to country-risk variable are, as a rule, said to highly internal consistency and appropriate to further analysis.

Table 5.14

Reliability Test Using Cronbach's Alpha Coefficient of Bureaucrat Quality Factors

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No of Items
.735	.736	4

Intra Item Correlation Matrix

	Bure.qu_a	Bure.qu_e	Bure.qu_b	rul_b
Bure.qu_a	1.00	.45	.61	.38
Bure.qu_e	.45	1.00	.31	.37
Bure.qu_b	.61	.31	1.00	.32
rul_b	.38	.37	.32	1.00

Note. Cronbach's alpha and inter item correlation coefficient calculated from second loading factor of rotated component matrix

Table 5.14 shows the reliability of the items, indicating that the scale of bureaucrats-related questions on the basis of second loaded factors have good reliability. The score of alphas is 0.73. As a rule, all the values of inter-item correlation in Table 5.14 lies within 0.3 to 0.8; hence, the construct of bureaucrat factors seems to have high internal consistency.

Table 5.15

Reliability Test Using Cronbach's Alpha Coefficient of Infrastructure Factors

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.745	.747	4

Intra Item Correlation Matrix

	Infra_c	Mar_e	Infra_b	Infra_d
Infra_c	1.00	.68	.51	.39
Mar_e	.68	1.00	.40	.50
Infra_b	.51	.40	1.00	.37
Infra_d	.39	.501	.37	1.00

Note. Cronbach's alpha and inter item correlation coefficient calculated from first loading factor of rotated component matrix

Table 5.15 demonstrates the value of Cronbach's Alpha and the intra-item correlation matrix. The coefficient of Alpha for infrastructure factors is 0.74; it has high and sufficient internal consistency. Similarly, the values of the intra-item correlation coefficient justify the internal consistency of the constructed new factors related to infrastructure variable.

Table 5.16

Reliability Test Using Cronbach's Alpha Coefficient of Financial Factors

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.775	.778	4

Intra Item Correlation Matrix

	pol_c	Fina_a	Fin_b	Fin_c
pol_c	1.00	.38	.38	.39
Fina_a	.38	1.00	.36	.30
Fin_b	.38	.36	1.00	.34
Fin c	.39	.30	.34	1.00

Note. Cronbach's alpha and inter item correlation coefficient calculated from first loading factor of rotated component matrix

Table 5.16 shows the reliability of the items, indicating that the scale of finance-related questions on the basis of fourth loaded factors have good reliability. The score of Alpha (0.77) and inter-item correlation justify that the construct of financial factor is high internal consistent, and it seems appropriate for further analysis.

Table 5.17

Reliability Test Using Cronbach's Alpha Coefficient of Market Size Factors

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.795	.790	3

Intra Item Correlation Matrix

	mar_a	mar_b	mar_c
mar_a	1.00	.64	.33
mar_b	.64	1.00	.30
mar_c	.33	.30	1.00

Note. Cronbach's alpha and inter item correlation coefficient calculated from first loading factor of rotated component matrix

Table 5.17 exhibits the result of Cronbach alpha and inter-item correlation matrix. The value of Alpha (0.79) proves better internal reliability of all designed questions related to the construct of market size. The intra-item correlation matrix of the construct of market size also exhibits that the correlation coefficients between the items are greater than 0.3 and less than 0.8. Thus, the items indicating the scale have sufficient and high reliability.

Table 5.18

Reliability Test Using Cronbach's Alpha Coefficient of Bureaucrat Performance Factors

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.781	.782	2

Intra Item Correlation Matrix

	Bure.qu_d	Bure.qu_c
Bure.qu_d	1.00	.64
Bure.qu_c	.64	1.00

Note. Cronbach's alpha and inter item correlation coefficient calculated from first loading factor of rotated component matrix

Table 5.18 explores the result of Cronbach alpha and inter-item correlation matrix. The value of alpha (0.78) and the value of inter-item correlation confirm the better internal consistency and reliability between bureaucrat's performance construct. Thus, the items indicating the scale have been sufficient and high reliability.

5.5 One Sample *t* Test

One sample *t* test is used to determine whether the sample mean is statistically different from hypothesized population mean. In this study based on the 5-point Likert scale survey, 1 represents *strongly disagree;2 disagree*; 3 *no idea*; 4 *agree*; and 5 *strongly agree*. Thus, the hypothesized population mean is 3.

Table 5.19

One-Sample Statistics

	No.	Mean	Std. Deviation	Std. Error
Country Risk	100	3.29	.86	.086
Bureaucrats Quality	100	4.04	.70	.070
Infrastructure	100	3.33	.81	.081
Financial	100	2.98	.80	.080
Market Size	100	3.42	.93	.093
Bureaucrats Performance	100	3.18	1.02	.102

One-Sample Test

	Test Value = 3					
					95% Confidence Interval of the Difference	
	T	Df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Country Risk	3.36	99	.00	.29	.11	.46
Bureaucrats Quality	14.67	99	.00	1.04	.89	1.18
Infrastructure	4.03	99	.00	.33	.16	.49
Financial	-.15	99	.87	-.01	-.17	.14
Market Size	4.56	99	.00	.42	.24	.61
Bureaucratic Performance	1.76	99	.08	.18	-.02	.38

Note. The compare mean and *t* statistics calculated from the constructed value of different loaded factors from rotated matrix Table 4.12

Table 5.19 demonstrates the one sample test statistics. The first part of the Table 5.19 shows basic information on the six constructed variables: sample size, mean, standard deviation, and standard error of respective variables. The mean score of country risk variable (3.29) with 0.86 standard deviation is based on 100 non-missing observations. Similarly, the mean scores of bureaucrat's qualities, infrastructure, financial factor, market size, and bureaucrat's performance are 4.04, 3.33, 3.98, 3.42, and 3.18, respectively (with their standard deviations of 0.70, 0.81, 0.80, 0.93, and 1.02, respectively) without missing 100 observations.

The second section of Table 5.19 displays the results most relevant to one sample *t* test. The number entered as the test value in the one-sample *t* test is 3 dues to the 5-point likert scale questionnaire of the survey. The country risk factor is statistically significant at 1% level because the value of *t* statistic is 3.36. Similarly, mean difference refers to the difference between observed sample mean (3.36) and expected mean 3. The positive sign of mean difference (i.e., the positive sign of *t* statistics) indicates that the observed sample mean is greater

than hypothesized mean 3. Thus, this study concludes that country risk factors seem to have high inflation rate, high volume of debt, high volume of trade deficit, and corporate tax rate appears to be the major factors creating the discrepancy between committed and actual flows of FDI in Nepal.

The value of *t* statistics of poor bureaucrat quality (14.67), another factor causing the gap between the proposed and real flows FDI in Nepal, is positive and statistically significant at 1% level; the positive *t* statistics represents that the mean of the sample is greater than the assumed mean 3. The construct, poor bureaucrat's quality, consists of these four statements: the poor performance of bureaucrats in their respective field, corruptive attitude of bureaucrats, unnecessary complex process created by bureaucrats for foreign investors, and policy complication to approve the FDI. Hence, the process to approve the FDI, bureaucrat's attitude, and corruption are major factors affecting the flows of FDI into Nepal. The difference between the observed sample mean and the expected mean (1.04) is also positive. The result confirms that poor bureaucrat's quality seems to be the main causes for the discrepancy between proposed and real flows of FDI.

The availability of infrastructure in Nepal is a significant factor also affecting the inflows of FDI in Nepal. The score of *t* statistic (4.03) is positive and statistically significant; the positive score of *t* statistics implies that mean of sample is greater than hypothesized mean 3. Thus, the poor condition of infrastructure—such as inadequate supply of energy in appropriate area, poor transportation facilities, and poor research and development facilities—has created huge gap between actual FDI and proposed FDI inflows in Nepal.

Financial factor is insignificant and it does not affect the inflows of FDI in Nepal. The negative and statistically insignificant *t* statistics indicates that the mean of sample is less than hypothesized mean of 3; thus, the financial factors—depreciating exchange rate of Nepalese currency in relation to US dollar, inconsistent trends of Nepalese capital market, insufficient financial institutions, provisions of low tax incentive, and excessive legal protection for workers—do not cause the difference between proposed and real flows of FDI in Nepal.

The mean value of *t* statistics of the market size (4.56), another factor influencing the real flows of FDI in Nepal, is positive and statistically significant. The positive value of *t* statistics indicates that the sample mean is greater than

hypothesized mean 3; therefore, the market size—low level of per capita income, low level of GDP growth rate, and lack of competitiveness of domestic products in international market—is a key factor causing the discrepancy between real flows of FDI and committed FDI in Nepal.

Bureaucrats' negative rude and attitudes towards foreign investors are another factor leading to the big gap between committed and real flows of FDI in Nepal. The positive score of *t* statistics (1.76) indicates the sample mean is greater than hypothesized mean 3; hence, the bureaucrats' attitudes are a significant factor helping to determine the real flows of FDI in Nepal.

5.6 **Summary**

Because Nepal is undergoing the process of economic development, it needs a large chunk of investment to meet the pre-determined macroeconomic goals. The government of Nepal has tried to create a favorable environment for national and international investors to raise the volume of investment; most of the foreign investors also seem to make their commitments for investment, but they do not return to make the investment even after the commitment. Therefore, this study has explored the causes of discrepancy between committed amount and real flows of FDI in Nepal.

Foreign investors do not seem to be interested to make the investment even after commitments because of high inflation rate, high volume of debt, high volume of trade deficit, corporate tax rate, low performance of bureaucrats, corrupt attitudes of bureaucrats, red tape for foreign investors, and policy complication to approve the FDI. Moreover, low level of per capita income, low level of GDP growth rate, lack of competitiveness of domestic products in international market, inadequate supply of energy, insufficient factor inputs, poor road facilities, and inadequate research and development are other major factors causing the gap between real flows and proposed amount of FDI.

To sum up, Nepalese Government has created a congenial environment for FDI inflow by introducing structural adjustment and stabilization policies. The present government also appears to be following in the previous governments' footsteps for raising foreign capital in different sectors of national interest, such as infrastructure, core industries, hydro projects, service sectors, as well as some consumer goods industries. It is obvious that the government's intentions are no longer questionable, but the implementation side looks questionable. However, the

government of Nepal should improve complications in the field of FDI, bureaucrats' performances and attitudes, and infrastructures—and minimize the risk factors to boost up the flows of FDI.

CHAPTER VI

DETERMINANTS OF FOREIGN DIRECT INVESTMENT

6.1 Introduction

Foreign direct investment in the global economy has played a significant role in globalization and market integration. Both developed and developing countries have taken various measures to raise the inflows of FDI within the countries; however, Nepal has unable to attract a considerable amount of FDI. Thus, the aim of this chapter is to investigate the effects of economic and noneconomic factors affecting the inflows of FDI into Nepal. Dunning's (1977) location theory summarized the important determinants of FDI: market size, availability of natural resources, efficiency, asset seeking, and trade situation of the country. These motivations for inflows of FDI are related to location advantage. Nepal is a developing country with a small market size, lack of modern technology, and deficiency of capital; therefore, it needs a large amount of capital to fill the gap of poor technology, as well as deficiency of capital. Nepal has also been trying to overcome the problem of deficiency of capital by introducing various measures, like technology transfer act 1992, foreign investment policy 1992, and so on to attract foreign direct investment. Thus, the aim of this chapter is to investigate the factors affecting flows of FDI into Nepal by employing location theory of FDI.

Physical capital and volume of investment along with human capital are essential for economic growth and development of the country, but deficiency of capital put a limit to the country's overall macroeconomic variables. A low level of national income reduces the saving and investment, thereby limiting the economic growth of the country. The existing traditional technology is another factor that makes the negative impact on economic growth of the nation. FDI overcomes these problems and raises the overall macroeconomic indicators (GDP, per capita income, employment level, export, and so on). FDI and foreign technology are the important resources bringing the modern managerial practices. Therefore, included in the model to explore the location determinants of FDI are financial factors (total transaction in financial market [*TTFM*], broad money supply [M_2], and NEPSE index), economic factors (gross domestic product

[*GDP*], openness [{*export + import}/GDP*], gross consumption [*TCON*], Maoist insurgency [*MI*], human capital, and infrastructure development), and country risk factors (corporate tax rate [*CT*], NEPSE index, *MI*, and openness). Similarly, consumer price index (*CPI*) and election in terms of dummy are also used to explore the location determinants of FDI in Nepal.

The main objective of this chapter is to investigate the location determinants of FDI in Nepal by employing ordinary least square method (OLS). The OLS regression analysis helps to explore the major factors affecting inflows of FDI into Nepal.

6.2 Empirical Results and Discussion

The empirical analysis has been divided into various groups on the basis of the model developed in methodology section.

6.2.1 Estimated Relationship Between FDI and Financial Variables

In this analysis, *FDI* is taken as a dependent variable, and broad money supply (M_2), *TTFM*, and *NEPSE* index are regarded as independent variables. Besides, logarithms of these variables have been taken by using Eviews 9 to fix the data distribution problem for ordinary least squares method (OLS). Firstly, models are estimated, using a transformed FDI variable known as *FDISTAR* that is further transformed in log scale to consistently estimate the coefficient of the regression model because all the independent variables are expressed in a log scale. To make the economic interpretation, however, elasticity is estimated from the original variable (FDI) based on the estimated coefficient of transformed variable.

6.2.1.1 Descriptive Statistics

Because this study has employed descriptive research design, among others, descriptive statistics have been used to describe the characteristics and patterns of variables during the study period. Table 6.1 presents the summary statistics of the dependent (*FDI*) and the independent variables (*TTFM*, M_2, and *NEPSE* index) used for the study; it shows number of observations, measures of central tendency, measure of dispersion (standard deviation), minimum and

maximum values, skewness, kurtosis, and Jarque-Bera statistics. The descriptive statistics in Table 6.1 indicates that the data sets of ln*FDI*, ln*M*2, ln*NEPSE*, and ln*TTFM* are positively skewed; similarly, the coefficients of kurtosis of dependent (*FDI* = 4.71) and independent variables (lnM_2=1.80, ln*NEPSE* = 1.32, and ln*TTFM* = 2.48) indicate the normal distribution of data sets.

Table 6.1

Descriptive Statistics of Financial Variables

Variables	No	Min.	Max.	Median	Mean	Std. Dev.	Skewness	Kurtosis	*J.B.*
FDI	23	-470	17512.80	961.40	3408.	4821.54	1.59	4.71	12.56
lnM_2	23	11.43	14.94	12.88	13.10	1.08	0.18	1.80	1.49
ln*NEPSE*	23	5.09	7.44	5.96	6.15	0.71	0.25	1.93	1.32
ln*TTFM*	23	4.17	10.36	6.37	6.57	1.69	0.51	2.48	1.27

Note. Calculation based on data of Appendix A

Descriptive statistics for all the variables—*FDI*, lnM_2, ln*NEPSE*, and ln*TTFM*—have positive mean and median values, indicating that average broad money supply is 13.10% with minimum value of 11.43% and maximum of 14.94%. The standard deviation of broad money supply (1.08) shows the variability of broad money supply in Nepal. Similarly, the mean value of *FDI* is 3408 with minimum value of -470 and maximum value of 17512; the variability of *FDI* is represented by value of standard deviation (4821.54). Furthermore, the mean value of ln*NEPSE* and ln*TTFM* are 6.15and 6.57 with standard deviations of 0.71 and 1.69, respectively. Finally, Table 6.I also presents the value of Jarque-Bera to show the nature of distribution of the variables included in the model.

6.2.1.2 Regression Analysis

Regression analysis of dependent ln*FDISTAR* on the independent variables lnM_2, ln*NEPSE*, and ln*TTFM* is demonstrated in Model 6.1.

Model 6.1

Relationship Between FDI and Financial Factors

$$\ln FDISTAR = -0.26 + 0.91^{***}\ln M_2 + 0.28^{**}\ln TTFM - 0.91^{***}\ln NEPSE$$

$$T \qquad (-0.16) \quad (4.55) \qquad (2.72) \qquad (-3.34)$$

$$\bar{R}^2 = 0.77, \quad F = 26.03, \quad DW = 1.64, N = 23$$

Note. Author's estimate of regression equation through monotonically transformed FDI (by change of origin) using the data from Appendix A.
* significant at 10%; ** significant at 5%; *** significant at 1%.

Model 6.1 shows the relationship between *FDISTAR* and its determinants, such as broad money supply, total transection in financial market, and NEPSE index. The coefficients of all explanatory variables—lnM_2, ln*TTFM*, and ln*NEPSE*—are statistically significant. The coefficient of determination ($\bar{R}^2$ = 0.77) implies 77% of ln*FDISTAR* inflow in Nepal explained by broad money supply, ln*NEPSE* index, and ln*TTFM*. The *F* statistics value (26.03) indicates that the entire model is statistically significant. *DW* statistic value (1.64) confirms no problem of autocorrelation in the analysis. In line with mode of location determinants, financial factors are found to be vital and significant for influencing the level of FDI inflows in Nepal. This result based on the location theory of FDI is consistent with the result of Moore, Steece, and Swenson (1987; Grubert and Mutti (2000); Rezin and Sadka (2006); Leitao and Faustino (2011); Beck and Chaves (2012). To make consistent economic interpretation, however, elasticity in original FDI is estimated, based on coefficient of Model 6.1, as shown in Table 6.2.

Table 6.2

Estimated Elasticity Coefficient of Financial Variables

Variables	Coefficients of Ln*FDISTAR*	Elasticity for *FDI*
lnM_2	0.91	0.93
ln*TTFM*	0.28	0.28
ln*NEPSE*	-0.91	-0.94
C	-0.26	

Note. Author's estimation based on Model 6.1.

The elasticity coefficient of M_2 (0.93) implies a 1% increase in money supply leads to 0.93% increase in *FDI* inflows in Nepal. The result of this—that an increase in money supply enhances the economic condition of the nation

(liquidity facility) and ultimately raises FDI flows—is consistent with Mottaleb and Kalirajan (2010), Hussain and Kimuli (2012), and Phung (2016).

The coefficient of ln*TTFM* (0.28) indicates that a 1% increase in total transection in financial markets leads to a 0.28% rise in *FDI* inflows, indicating a direct and statistically significant relationship between FDI flows and total transaction in financial market.

The negative and statistically significant elasticity coefficient of ln*NEPSE* (-0.94) appears to put the negative impact of financial market on *FDI* flows into Nepal. The reason may be that most of the manufacturing firms do not seem to be listed in capital market. Thus, this study finds an inverse relationship between *NEPSE* index and foreign capital flows in Nepal.

6.2.1.3 Diagnostic Test Result of the Variables

Diagnostic test of Model 6.1 is presented here. To ensure that models are not misspecified, Table 6.3 presents the result of test for serial correlation and heteroscedasticity.

Table 6.3

Breusch-Godfrey Serial Correlation LM Test			
F-statistic	0.36	Prob. *F* (2,17)	0.70
Obs*R^2	0.93	Prob. χ^2 (2)	0.62
Heteroscedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	1.33	Prob. *F* (3,19)	0.29
Obs*R^2	4.01	Prob. χ^2 (3)	0.26
Scaled explained SS	1.44	Prob. χ^2 (3)	0.69

Note. Calculation based on Model 6.1.

Table 6.3 depicts the result of test for serial correlation and heteroscedasticity of Model 6.1. This result indicates that the model is well specified, that the estimated regression model performs well, and that there is no serial correlation problem in the model, because Breusch-Godfrey serial correlation LM test confirms no evidence of serial correlation in the model. Similarly, Breusch-Pagan-Godfrey of heteroscedasticity test also confirms no problem of heteroscedasticity.

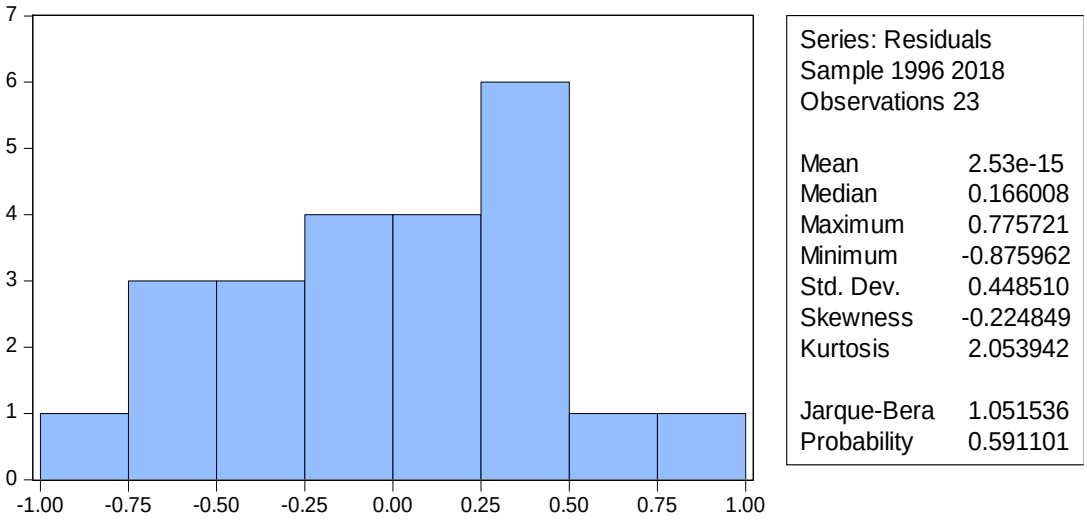

Figure 6.1. Plot of residual terms (normality test).

Besides, the residual terms in the model are normally distributed and their normality is tested in Figure 6.1. The Jarque-Bera test statistics (1.05) implies that there is evidence of normally distributed residual terms; hence, the regression model fulfills the normality assumption of OLS. All the above results, therefore, indicate that financial factors turn out to put the positive impact on FDI flows. The reason is obvious: All coefficients of financial variables are statistically significant; the model involves no problem of serial correlation; there is no problem of heteroscedasticity; and the model fulfills the requirement for normality.

6.2.2 Estimated Relationship Between FDI and Economic Variables

In this study, FDI has been taken as a dependent variable, and market size, NEPSE index, and openness are regarded as independent variables. Market size consists of the gross domestic product (GDP). In showing the relationship in the model, the base of FDI is transformed as FDISTAR, all variables are measured in log scale, regression coefficients are estimated, and eventually the elasticity is estimated in original variable (FDI) to make the economic interpretation, based on estimated coefficient of transformed variable.

6.2.2.1 Descriptive Statistics

As this study has employed descriptive research design, among others, descriptive statistics have been used to describe the characteristics of variables during the study period. Table 6.3 presents the summary statistics of dependent

(*FDI*) and independent variables (*NEPSE* index, gross domestic product [*GDP]*, and openness [*TOPEN*]) used for the study. It shows number of observations, measures of central tendency, measure of dispersion (standard deviation), minimum and maximum values, skewness, Kurtosis, and Jarque-Bera statistics.

The descriptive statistics in Table 6.4 indicate that the data sets of ln*GDP*, ln*NEPSE,* ln*TCON*, and ln*TOPEN* are positively skewed, and *FDI* is negatively skewed. Similarly, the coefficient of kurtosis of dependent variable *FDI* is 2.71, and the coefficients of four independent variables—ln*GDP*, ln*NEPSE,* ln*TCON*, and ln*TOPEN*—are 1.71, 1.93, 1.70, and 2.17, respectively.

Table 6.4

Descriptive Statistics of Economic Variables

Variables	No.	Min.	Max.	Med.	Mean	Std. Dev.	Skew.	Kur.	J.B.
ln*FDI*	23	-470	17512.8	961.4	3408.	4821.54	-1.59	2.71	12.5
ln*NEPSE*	23	5.09	7.44	5.96	6.15	0.71	0.25	1.93	1.32
ln*GDP*	23	12.42	14.91	13.49	13.61	0.77	0.13	1.71	1.64
ln*TOPEN*	23	-1.09	-0.82	-1.00	-0.98	0.07	0.50	2.17	1.62
ln*TCON*	23	12.27	14.72	13.39	13.49	0.78	0.09	1.70	1.63

Note. Calculation based on data of Appendix A.

Descriptive statistics for all the variables—FDI, lnGDP, lnTCON, and lnNEPSE—have positive mean and median values, but lnTOPEN has negative mean. The result indicates that average ln*GDP* is 13.61 with minimum value of 12.42 and maximum of 14.91. The standard deviation of ln*GDP* (0.77) shows the variability of *GDP* in Nepal; similarly, mean value of *FDI* is 3408 with minimum value of -470 and maximum value of 17512.80. The variability of *FDI* is represented by value of standard deviation (4821.54). Likewise, mean value of ln*NEPSE,* ln*TCON*, and ln*TOPEN* are 6.15, 13.49, and -0.98 with their standard deviations of 0.71, 0.78, and 0.07, respectively. Finally, Table 6.3 also presents the value of Jarque-Bera, which shows the nature of distribution of variables.

6.2.2.2 Regression Analysis

Regression analysis between dependent (ln*FDISTAR*) and independent variables—ln*GDP*, ln*NEPSE,* ln*TOPEN*, ln*TCON*, and *MI* as dummy for Maoist insurgency (hurdles for economic development during the period of 1996 - 2006)—is demonstrated in Model 6.2 and 6.3, respectively. These two models

(related to economic variables) are so formed to avoid the problem of multicollinearity.

Model 6.2

Estimated Relationship between lnFDSTARI and Economic Variables

$$\ln FDISTAR = -5.44 + 1.57^{***}\ln GDP + 3.39^{**}\ln TOPEN - 0.76^{**}NEPSE$$

$$T \qquad (-1.96) \qquad (6.25) \qquad (2.30) \qquad (-2.75)$$

$$\bar{R}^2 = 0.74, \quad F = 22.86, \quad DW = 1.32, N = 23$$

Note. Author's estimate of regression equation through monotonically transformed FDI (by change of origin) using the data from Appendix A.
* significant at 10%; ** significant at 5%; *** significant at 1%.

Model 6.2 exhibits the relationship between *FDISTAR* and its determinants, such as gross domestic product, openness, and *NEPSE* index; the coefficients of all variables included in the model are statistically significant. The coefficient of determination ($\bar{R}^2$) is 0.74, indicating that 74% of *FDI* inflow in Nepal is explained by *GDP*, *TOPEN*, and *NEPSE* index. The *F* statistics value (22.86) also explains the jointly significant impact of *GDP*, *TOPEN*, and *NEPSE* on flows of *FDI* in Nepal. *DW* statistic value (1.32) shows the problem of autocorrelation in Model 6.2; therefore, Breusch-Godfrey serial correlation (*LM*) test is applied to further check whether there is a serial correlation in the model 6.2. To make economic interpretation consistent, however, the elasticity from original FDI is estimated, based on coefficient of Model 6.2, and the result is shown in Table 6.5.

Table 6.5
Estimated Elasticity Coefficient of Economic Variables

Variables	Coefficients	Elasticity for FDI
lnGDP	1.57	1.61
lnNEPSE	-0.76	-0.78
lnTOPEN	3.39	3.49
C	-5.44	

Note. Author's estimation based on Model 6.2.

GDP, an indicator of market size of the host country, is assumed to have a positive impact on FDI flows; this positive impact is supported by the past evidences of various researchers (Dunning, 1980; & Li & Liu, 2005; Lucas, 1990). The elasticity coefficients of ln*GDP* (1.61) and ln*TOPEN* (3.49) are

positive, relatively elastic, and statistically significant—implying *GDP* and *TOPEN*-led expansion of market size that makes positive impact to attract huge amount of FDI because the large size of market motivates foreign investors to choose the appropriate location. This result aligns with the prior studies that also have indicated that market size makes positive impact on FDI flows (Agarwal, 1980; Bakar, Chemat, & Harun, 2012; Cheng & Kwan, 2000; Coleman & Tettey, 2008; Phung, 2016; Rahman, 2003; Sahoo (2004); Wheeler & Mody, 1992).

Relatively inelastic coefficient of ln*NEPSE* index (-0.76), a proxy of capital market, is negative and statistically significant, indicating that the instability of capital market adversely affects the FDI flows into Nepal.

6.2.2.3 Diagnostic Test of the Variables

To ensure that Model 6.2 is not misspecified, Table 6.6 presents the result from diagnostic test for serial correlation and heteroscedasticity. The results from Breusch-Godfrey serial correlation (*LM*) test confirm that Model 6.2 retains null hypothesis of no serial correlation (p value = 0.59 for χ^2[2] in Table 6.6) although earlier *DW* test reveals autocorrelation, indicating that the estimated regression model performs well. Similarly, Breusch-Pagan-Godfrey of heteroscedasticity test also shows no problem of heteroscedasticity in the regression model. The diagnostic test of estimated regression model suggests, therefore, that the model based on economic variable has no problems of serial correlation and heteroscedasticity.

Table 6.6

Breusch-Godfrey Serial Correlation LM Test

F-statistic	0.38	Prob. *F* (2,16)	0.68
Obs*R^2	1.04	Prob. χ^2 (2)	0.59
Heteroscedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	1.47	Prob. *F* (4,18)	0.25
Obs*R^2	5.67	Prob. χ^2 (4)	0.22
Scaled explained SS	4.59	Prob. χ^2 (4)	0.33

Note. Calculation based on Model 6.2.

Similarly, the residuals included in Model 6.2 are normally distributed and the normality of residuals is tested in Figure 6.2:

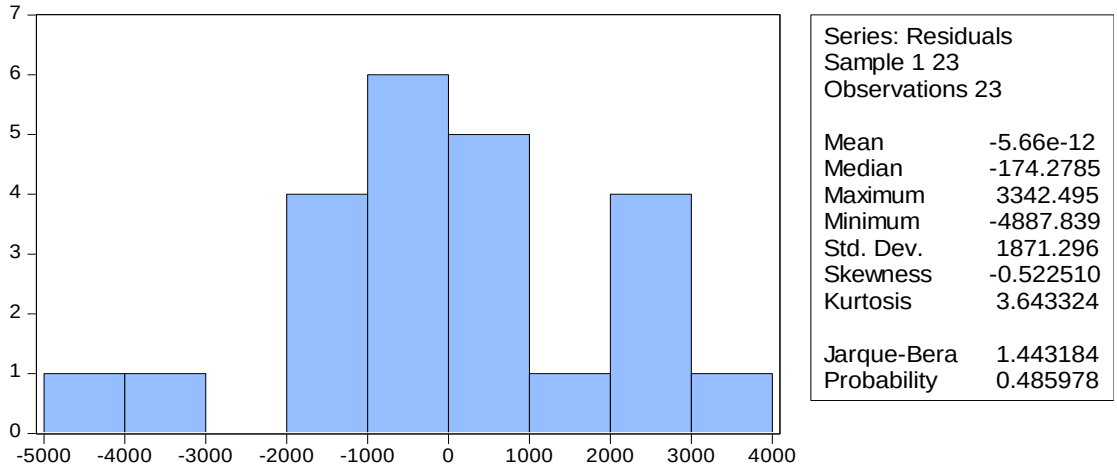

Figure 6.2. Plot of residual terms (normality test).

The Jarque-Bera test statistics (1.44) accepts the null hypotheses of the normal distribution of residuals (p = 0.48 in Figure 6.2) in Model 6.2. The stable results with no problems report that the model is a good fit and economic variables have made the positive impact on FDI flows into Nepal. For this reason, the findings of the location determinants model show that the above economic variables are pivot and significant, and the variables influence FDI flows into Nepal; thus, Model 6.2 fits well for policy analysis.

Model 6.3

Estimated Relation between FDI and Economic Factors

$$\ln FDISTAR = 8.91 + 1.05^{***}\ln TCON + 4.23^{***}\ln TOPEN - 0.89^{***}\ln NEPSE - 0.69 MI$$

$$T \qquad (3.05) \qquad (3.85) \qquad (3.07) \qquad (-3.47) \qquad (-1.63)$$

$$\bar{R}^2 = 0.75, \quad F = 22.35, \quad DW = 1.45, \quad N = 23$$

Note. Author's estimate of regression equation through monotonically transformed FDI (by change of origin) using the data from Appendix A.
* significant at 10%; ** significant at 5%; *** significant at 1%.

Model 6.3 also shows the relationship between ln*FDISTAR* and economic variables (ln*TCON*, ln*TOPEN*, and ln*NEPSE*) and *MI* as a dummy for hurdles of economic development within the country during the period of 1996 – 2006. The coefficients of all variables included in Model 6.3 are statistically significant, except the dummy *MI*. The coefficient of determination ($\bar{R}^2$ = 0.75) implies that 75% of *FDI* flow into Nepal is explained by total consumption, openness, and *NEPSE* index. The *F* statistic (22.35) also explains jointly significant impact of the three economic variables on FDI flows. Elasticity in original FDI is estimated to make a compatible interpretation of Model 6.3, as shown in Table 6.7.

Table 6.7

Estimated Elasticity Coefficient of Economic Variables

Variables	Coefficients	Elasticity for FDI
lnTCON	1.05	1.08
ln*NEPSE*	-0.89	-0.92
ln*TOPEN*	4.23	4.36
C	8.91	
MI	-0.69	-0.71

Note. Authors estimation based on Model 6.3.

The elasticity coefficients of three economic variables (ln*TCON*, ln*TOPEN*,and ln*NEPSE*) seem statistically significant, with former two being relatively elastic and the latter one being relatively inelastic, but Maost insurgency (MI)—as dummy for hurdles of economic development—appears to be statistically insignificant, as depicted in Model 6.3 and Table 6.7. The results from Model 6.3 and Table 6.7, therefore, indicate that two independent variables (*TCON* and *TOPEN*) seem to have positive impacts on the dependent variable (FDI), but the remaining two independent variables (NEPSE and MI) appear to put negative impact on the FDI.

6.2.2.4 Diagnostic Test of the Variables

Table 6.8 and Figure 6.3 report the residual tests (serial correlation, heteroscedasticity, and normality) for Model 6.3.

Table 6.8

Breusch-Godfrey Serial Correlation LM Test

F-statistic	1.74	Prob. *F* (2,16)	0.20
Obs**R*^{2}	4.11	Prob. χ^2 (2)	0.12

Heteroscedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.83	Prob. *F* (4,18)	0.52
Obs**R*^{2}	3.58	Prob. χ^2 (4)	0.46
Scaled explained SS	1.54	Prob. χ^2 (4)	0.81

Note. Calculation based on Model 6.3.

The results of the diagnostic test reveal that Model 6.3 fits well and it shows no serial-correlation problem (p value of χ^2 = 0.12 in the first part of Table

6.8) because Breusch-Godfrey serial correlation *LM* test confirms no evidence of serial correlation. Similarly, Breusch-Pagan-Godfrey of heteroscedasticity test also reveals no problem of heteroscedasticity in regression Model 6.3, as shown in the second part of Table 6.8. The diagnostic test of this estimated-regression model, therefore, suggests that Model 6.3, based on these three economic variables, has no problem of serial correlation and heteroscedasticity.

Similarly, the normally distributed residuals included in Model 6.3 are tested in Figure 6.3. The Jarque-Bera test statistics (0.62 with p = 0.73) accepts the null hypotheses of the residual normality.

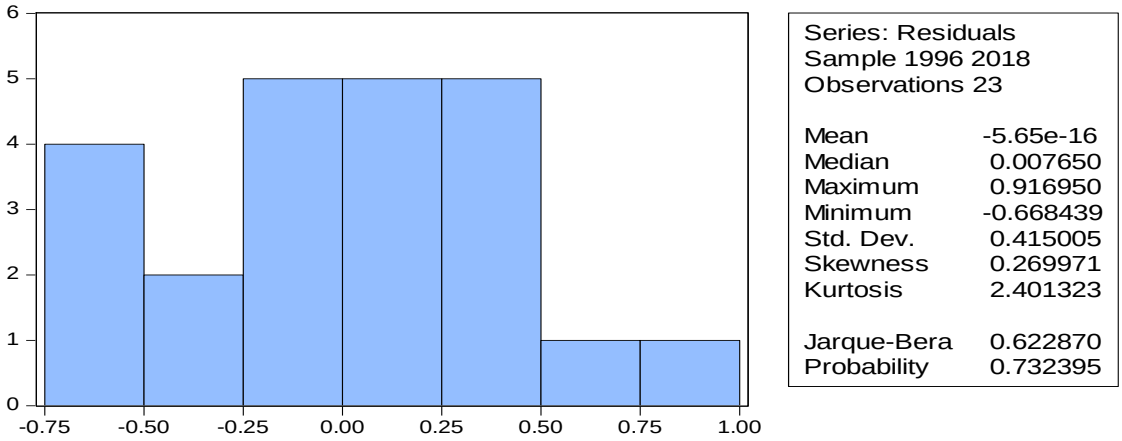

Figure 6.3. Plot of residual terms (normality test).

Model 6.3, therefore, is a good fit, and the three economic variables seem to put positive impacts on FDI flows into Nepal, suggesting that the model fits well for policy analysis.

6.2.3 Estimated Relationship Between FDI and Country Risk Factors

In this analysis, *FDI* is a dependent variable, and *CT*, *NEPSE* index, *MI*, and TOPEN are regarded as independent variables. Then, a regression model is estimated, using a transformed-FDI variable known as *FDISTAR*. This *FDISTAR* variable is further transformed into a log scale to estimate the coefficients of the regression model in a more consistent manner because all the independent variables are expressed in log scales. Furthermore, coefficients of elasticities, which are based on original FDI, are estimated to make the economic interpretation of the explanatory variables.

6.2.3.1. Descriptive Statistics

Because this study has employed descriptive research design, descriptive statistics have been used to describe the characteristics of variables during the study period. Table 6.9 presents the summary statistics of a dependent *FDI* and independent variables (*CT*, *MI*, *TOPEN*, and *NEPSE*) used for the study; it shows the number of observations, measures of central tendency, measure of dispersion (standard deviation), minimum and maximum values, skewness, kurtosis, and Jarque-Bera statistics.

Table 6.9

Descriptive Statistics of Country Risk Variables

Variables	No.	Min.	Max.	Med.	Mean	Std. Dev.	Skew.	Kurt.	J.B.
FDI	23	-470	17512.8	961.40	3408.	4821.54	-1.59	2.71	12.56
ln*TOPEN*	23	-1.09	-0.82	-1.00	-0.98	0.07	0.50	2.17	1.62
ln*NEPSE*	23	5.09	7.44	5.96	6.15	0.71	0.25	1.93	1.32
ln*CT*	23	2.78	3.28	3.17	3.12	0.15	-1.08	3.19	0.10

Note. Calculation based on data of Appendix A.

Table 6.9 demonstrates that the data sets of FDI and lnCT are negatively skewed. The coefficients of kurtosis of *FDI*, ln*TOPEN*, ln*NEPSE,* and ln*CT* are 2.71, 2.17, 1.32, and 3.19, respectively. The mean value of FDI is 3408 with standard deviation of 4821.54; similarly, the mean values of ln*TOPEN*, ln*NEPSE*, and ln*CT* are -0.98, 6.15, and 3.12 with standard deviations of 0.07, 0.71, and 0.15, respectively. The minimum and maximum values of ln*TOPEN*, ln*NEPSE*, and ln*CT* are -1.09, 5.09, 2.78 and -0.82, 7.44, 3.28, respectively. Finally, Table 6.9 also presents the value of Jarque-Bera to show the nature of distribution of the variables included in the study. This descriptive analysis shows the nature of data, and the result permits the further analysis of the data.

6.2.3.2 Regression Analysis

Regression analysis between a dependent variable (ln*FDISTAR*) and independent variables (ln*TOPEN*, ln*NEPSE*, ln*CT*, and *MI*) is carried out in

Model 6.4. *MI*, a dummy variable, represents a Maoist insurgency during the period of 1996 to 2006; the Maoist insurgency, a big country risk variable, is a political instability, security threat, and obstacles of development of infrastructure within the country.

Model 6.4

Estimated Relation Between FDI and Country Risk Factors

$\ln FDISTAR = 20.64 - 1.75^{**}\ln CT - 0.37\ln NEPSE - 1.99^{***}MI + 4.00^{**}\ln TOPEN$

T	(5.97)	(-2.05)	(-1.41)	(-5.42)	(2.30)

$\bar{R}^2 = 0.75, \quad F = 13.80, \quad DW = 1.47, \; N = 23$

Note. Author's estimate of regression equation through monotonically transformed FDI (by change of origin) using the data from Appendix A.
* significant at 10%; ** significant at 5%; *** significant at 1%.

The regression results in Model 6.4 shows the major country-risk factors (i.e., explanatory variables such as *CT*, *MI*, *TOPEN*, and NEPSE) negatively influencing the FDI flows into Nepal. All exogenous variables included in the model are statistically significant, except ln*NEPSE* index. The coefficient of $\bar{R}^2$ (0.75) implies that 75% of the variation in ln*FDISTAR* is explained by these four country-risk factors. The value of *F* statistic (13.80) indicates that Model 6.4 is a good fit. Because *DW* statistic value (1.47) lies in an indecisive zone in Model 6.4, Breusch-Godfrey test has been done in Table 6.11 to check whether there is autocorrelation. However, the coefficients of elasticities, based on coefficients of Model 6.4, are estimated in original FDI to make consistent economic interpretation, and their results are shown in Table 6.10.

Table 6.10

Estimated Elasticity Coefficient of Country Risk Factors

Variables	Coefficients of Ln*FDISTAR*	Elasticity for *FDI*
ln*CT*	-1.75	-1.81
ln*NEPSE*	-0.37	-0.38
ln*TOPEN*	4.00	4.11
MI	-1.99	-2.05
C	8.91	

Note. Authors estimation based on Model 6.4.

The elasticity coefficients for country-risk variables, as depicted In the Table 6.10, express a significant inverse relationship. The factors accounted for in the statistical analysis, such as CT and MI, seem to be highly responsive for a decline in FDI by 181% and 205%, respectively. Contrary to this, NEPSE index confirms a negatively insignificant coefficient. While the market size, as explained by the factor *TOPEN* in Model 6.4, has been found widening, that work positively increases the *FDI* flows into Nepal.This study's finding is consistent with the survey result in Chapter 5 and with the results of the prior studies that has also indicated that country-risk factors put negative impacts on FDI flows (Abed & Davoodi, 2000; Akcay, 2001; Belgibayeva & Plekhanov, 2015; Bouyahiaoui & Hammache, 2014; Wei, 2000; Sadig, 2009).

6.2.3.3 Diagnostic Test Result of the Country Risk Variables

To ensure that Model 6.4 is well specified, it is necessary to check the serial correlation and heteroscedasticity of the fitted regression. Table 6.11 shows the results of test for serial correlation and heteroscedasticity; the results of the diagnostic test reveal that the model is well specified.

Table 6.11

Breusch-Godfrey Serial Correlation LM Test			
F-statistic	0.84	Prob. *F* (2,16)	0.44
Obs**R*^{2}	2.18	Prob. χ^2 (2)	0.33
Heteroscedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	3.89	Prob. *F* (4,18)	0.09
Obs**R*^{2}	10.66	Prob. χ^2 (4)	0.06
Scaled explained SS	2.76	Prob. χ^2 (4)	0.84

Note. Calculation based on Model 6.4.

There is no serial correlation problem in Model 6.4 because Breusch-Godfrey serial correlation (*LM*) test provides no evidence of serial correlation (p value of χ^2 = 0.33) in the regression model. Similarly, Breusch-Pagan-Godfrey of heteroscedasticity test also confirms no problem of heteroscedasticity in the model. Similarly, the residual terms included in Model 6.4 are normally distributed; their normality is tested in Figure 6.4:

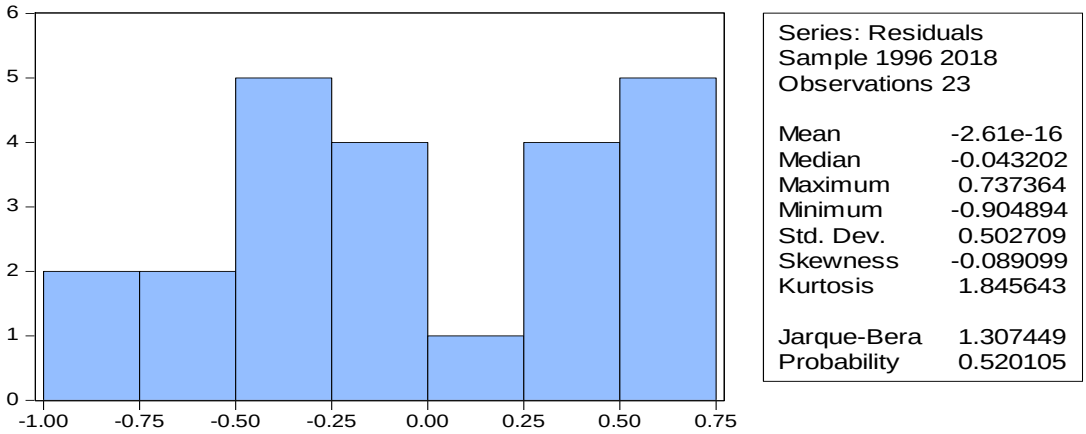

Figure 6.4. Plot of residual terms (normality test).

The Jarque-Bera test statistics and its corresponding probability value (1.30 and 0.52, respectively) accept the null hypothesis of residuals' normality. The stable results report that Model 6.4 is a good fit and country-risk variables place the negative impact on FDI flows into Nepal; thus, the model fits well for policy analysis.

6.2.4 Aggregate Model of Economic, Financial and Country Risk Variables

The above sectoral explanations from Models 6.1 to 6.4 only show the partial impact on FDI flows into Nepal. Thus, it is necessary to make a right combination of variables from all sectors (financial, economic, and country risk) on the basis of existing theoretical and empirical literatures to explain the variation in the FDI flows into specific location. Financial, economic, and country-risk variables are jointly estimated to make a best model for the determinants of FDI flows into Nepal. To avoid the problem of multicollinearity, however, three models (from 6.5 to 6.7) are jointly developed.

6.2.4.1 Descriptive Statistics

Descriptive statistics associated with descriptive research design have been used to describe variables' patterns and characteristics. Table 6.12 exhibits the summary statistics of all variables—such as a dependent variable (FDI) and seven independent variables (*BTRTM*, *GDP*, *TENROLL*, *CT*, *TOPEN*, *NEPSE*, and *CPI*). It shows number of observations, measures of central tendency, measure of dispersion (standard deviation), minimum and maximum values, skewness, kurtosis, and Jarque-Bera statistics.

Table 6.12

Descriptive Statistics of Variables

Variables	No.	Min.	Max.	Median	Mean	Std. Dev.	Skew	Kurtosis	J.B.
FDI	23	-470	17512.8	961.40	3408.	4821.54	-1.59	2.71	12.56
ln*TENROLL*	23	1.41	2.88	1.82	2.01	0.51	0.33	1.59	2.55
ln*CT*	23	2.78	3.28	3.17	3.12	0.15	-1.08	3.19	0.10
ln*NEPSE*	23	5.09	7.44	5.96	6.15	0.71	0.25	1.93	1.32
ln*TOPEN*	23	-1.09	-0.82	-1.00	-0.98	0.07	0.50	2.17	1.62
ln*GDP*	23	12.42	14.91	13.49	13.61	0.77	0.13	1.71	1.64
ln*CPI*	23	3.21	4.74	3.85	3.93	0.46	0.31	1.94	1.43
ln*BTRTM*	23	8.19	9.52	8.59	8.77	0.45	0.41	1.59	2.54

Note. Calculation based on data of Appendix A.

Table 6.12 shows the descriptive statistics of these eight variables: FDI, ln*TENROLL*, ln*CT*, ln*NEPSE*, ln*TOPEN*, ln*GDP*, ln*CPI*, and ln*BTRTM*. *FDI* and ln*CT* are negatively skewed whereas ln*TENROLL*, ln*NEPSE*, ln*TOPEN*, ln*GDP*, ln*CPI*, and ln*BTRTM* are positively skewed. The coefficients of kurtosis of *FDI*, ln*TENROLL*, ln*CT*, ln*NEPSE*, ln*TOPEN*, ln*GDP*, ln*CPI*, and Ln*BTRTM* are 2.71, 1.59, 3.19, 1.93, 2.17, 1.71, 1.94, and 1.59, respectively. The mean value of *FDI* is 3408 with standard deviation of 4821.54; similarly, the mean values of ln*TENROLL*, ln*CT*, ln*NEPSE*, ln*TOPEN*, ln*GDP*, ln*CPI*, and ln*BTRTM* are 2.01, 3.12, 6.15, -0.98, 13.61, 3.93, and 8.77, with standard deviation of 0.51, 0.15, 0.71, 0.07, 0.77, 0.46, and 0.45, respectively. Eventually, Table 6.11 presents the value of Jarque-Bera, which shows the nature of distribution of variables included in the study. This descriptive analysis shows the nature and pattern of data, and the results allow the further analysis of the data.

6.2.4.2 Regression Analysis

This study has used ordinary least-square regression method to find out the macro-level determinants of FDI flows into Nepal, based on the theoretical and empirical literatures of the FDI. This study has developed the regression model based on various theories, models, and empirical studies—propounded by Agarwal (1980), Belington (1999), Blonigen and Davies (2004), Dunning (1973),

Dunning (1980), Dunning (1993), Hartman (1984), Helpman (2004), Hymer (1960), Kindleberger (1969), Mottaleb and Kalirajan (2010), Phung (2016), Sahoo (2004), and World Bank (2006). The regression analysis has been carried out at two steps. In the first step, all possible variables are included in the model; in the second step, the insignificant variables are dropped from the model to avoid the multicollinearity problem. The main objective of this analysis, therefore, is to explore significant location determinants of FDI into Nepal, based on the previous theories and empirical literatures on FDI. The study period for this analysis constitutes 23 years from 1995/96 to 2017/18. The rationale for selecting this period in the study is that the FDI inflows data of Nepal is unavailable before 1995/96. To explore key determinants of FDI, this study has selected the major macro variables, such as ln*TENROLL*, ln*CT*, ln*NEPSE*, ln*TOPEN*, ln*GDP*, ln*CPI*, and ln*BTRTM*, and the relation of these variables with ln*FDISTAR* is specified in regression equations (Models 6.5 to 6.7).

Model 6.5

Estimated Impact of Economic, Financial, and *Risk Factors on FDI Flows*

ln*FDISTAR* = 16.40 + 1.62***ln*TENROLL* – 1.77**ln*CT* - 0.57***NEPSE*

T (5.73) (3.73) (-2.77) (-274)

+ 2.39*ln*TOPEN* - 0.75**MI*

T (1.72) (-1.74)

$\bar{R}^2$ = 0.82, *F* = 21.80, *DW* = 2.23 *N* = 23

Note. Author's estimate of regression equation through monotonically transformed FDI (by change of origin) using the data from Appendix A.

* significant at 10%; ** significant at 5%; *** significant at 1%.

Model 6.5 shows the impact of ln*TENROLL*, ln*CT*, ln*NEPSE* index, ln*TOPEN*, and *MI* on FDI flows into Nepal. All the variables included in Model 6.5 are statistically significant. The coefficient of determination ($\bar{R}^2$ = 0.82) implies 82% variation in ln*FDISTAR* explained ln*TENROLL*, ln*CT*, ln*NEPSE* index, ln*TOPEN*, and *MI*. The *F* statistics value (21.80) also explains the joint, significant impact of five independent macroeconomic variables on FDI flows into Nepal. Because *DW* statistic value (2.23) lies in indecisive region of negative autocorrelation, DW statistics fails to detect whether the model contain autocorrelation. Thus, this study has taken the help of another advanced test—

Breusch-Godfrey serial correlation (LM) test—to detect the problem of autocorrelation, as depicted in Table 6.14.

The findings of the location-determinants model show that macro variables are pivot and significant elements influencing the inflows of FDI in Nepal. To make economic interpretation consistent, however, the coefficients of elasticities in original FDI are estimated, based on Model 6.5, and the result is shown in Table 6.13:

Table 6.13

Estimated Elasticity Coefficients of Economic, Financial, and Country Risk Variables

Variables	Coefficients	Elasticity for FDI
ln*TENROLL*	1.62	1.67
ln*CT*	-1.77	-1.82
ln*NEPSE*	-0.57	-0.58
ln*TOPEN*	2.39	2.46
MI	-0.75	-0.78
C	16.40	

Note. Authors estimation based on Model 6.5.

The elasticity coefficients of ln*TENROLL*, ln*CT*, ln*NEPSE*, ln*TOPEN*, *MI* (1.67, -1.82, -0.58, 2.46, -0.78, respectively) imply that 1% rise in these five independent variables leads to a 1.67% rise, a 1.82% fall, 0.58% fall, 2.46% increase, and 0.78% fall, respectively, in FDI flows into Nepal. Human capital (*TENROLL*) and market size (*TOPEN*) make positive and strong impacts on FDI flows because their coefficients are relatively elastic. On the other hand, corporate tax rate (*CT*) and political instability due to Maoist insurgency (MI) are observed to have negative impacts on FDI flows: The *CT* is relatively elastic, but the *MI* is relatively inelastic. Thus, the above results show that the impact of corporate tax rate appears to be stronger than that of political instability on FDI flows into Nepal.

This study's result on human capital is in line with the results of the prior studies that also have indicated that human capital makes positive impact on FDI flows (Abbas & Mosallamy, 2016; Bevan & Estrin, 2004; Dorozynska & Dorozynski, 2014; Gupta, 2017; Hanson, 1996; Lucas, 1990; Maskusen, 1999; Nunnenkamp & Spatz, 2002; Zhang & Talpos & Enache, 2010).

The finding of this study, about the impact of tax rate on FDI flows into Nepal, is compatible with the results of the previous studies that have also shown an inverse relationship between corporate tax rate and FDI flows (Beck & Chaves, 2012; Blonigen & Davies, 2004; Dunning, 1993; Leitao & Faustino, 2011; Moore, Steece, & Swenson, 1987; Slemord, 1990). Thus, the corporate tax rate seems to be the negative determinants of FDI inflows into Nepal.

6.2.4.3 Diagnostic Test Result of the Regression Analysis

It is necessary to check the serial correlation, as well as heteroscedasticity, of Model 6.5 to ensure that model is well specified, as shown in Table 6.14:

Table 6.14

Breusch-Godfrey Serial Correlation LM Test			
F-statistic	0.26	Prob. *F* (2,15)	0.76
Obs*R^2	0.79	Prob. χ^2 (2)	0.67
Heteroscedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	1.09	Prob. *F* (5,17)	0.40
Obs*R^2	5.58	Prob. χ^2 (5)	0.34
Scaled explained SS	1.59	Prob. χ^2 (5)	0.90

Note: Calculation based on Model 6.5

As Table 6.14 depicts, the results of the diagnostic test reveal no problem of serial correlation in Model 6.5—even if *DW* statistic falls in the inconclusive region, because Breusch-Godfrey serial correlation (*LM*) test provides no evidence for serial correlation in the regression model—and no problem of heteroscedasticity because of the evidence as given by Breusch-Pagan-Godfrey of heteroscedasticity test; similarly, the residuals included in Model 6.5 are normally distributed because Jarque-Bera test statistics (1.30) and its corresponding probability value (0.52) accept the null hypotheses of the normally distributed residuals, as shown in Figure 6.5. Hence, Model 6.5 turns out to be a good fit for policy analysis.

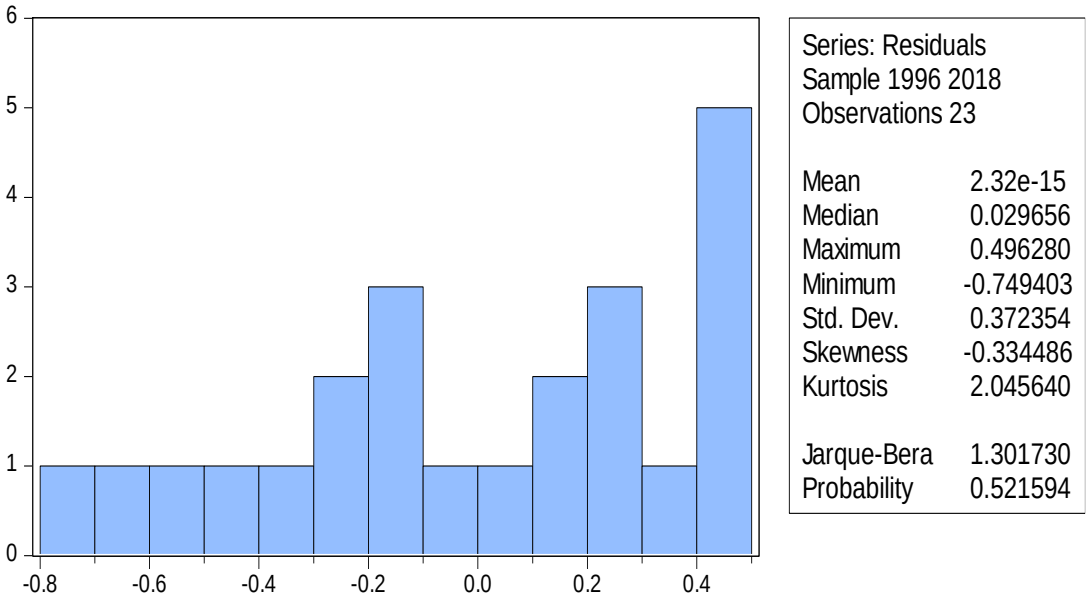

Figure 6.5. Plot of residual terms (normality test).

Model 6.6

Estimated Impact of Economic, *Financial,* and *Risk Factors on FDI Flows*

$$\ln FDISTAR = 6.71 + 1.98^{**}\ln GDP - 0.77^{**}\ln NEPSE - 1.05CT + 3.67^{**}\ln TOPEN —$$

$$T \qquad (1.19) \qquad (2.89) \qquad (-2.81) \qquad (-1.38) \qquad (2.45)$$

$$1.06^{**}MI — 0.05ELEC$$

$$T \qquad (-2.38) \quad (-019)$$

$$\bar{R}^2 = 0.78, \quad F = 14.26, \quad DW = 1.70, \qquad N = 23$$

Note. Author's estimate of regression equation through monotonically transformed FDI (by change of origin) using the data from Appendix A.
* significant at 10%; ** significant at 5%; *** significant at 1%.

Model 6.6 shows the major factors affecting the FDI flows into Nepal. The coefficient of determination ($\bar{R}^2 = 0.78$) denotes 78% variation in ln*FDISTAR* explained by these six exogenous variables—ln*GDP*, ln*CT*, ln*NEPSE* index, ln*TOPEN*, *ELEC*, and *MI*; the *F* statistics value (14.26) also explains the joint and significant impact of the six macroeconomic variables on inflows of FDI. *DW* statistic value (1.70) falls in the indecisive region; therefore, this study has taken the help of Breusch-Godfrey serial correlation (*LM*) test (as displayed in Table 6.16) to check whether there is the problem of autocorrelation in the model. Table 6.15 shows the elasticity coefficients of explanatory variables.

Table 6.15

Estimated Elasticity Coefficient of Variables

Variables	Coefficients	Elasticity for FDI
ln*GDP*	0.98	1.01
ln*CT*	-1.05	-1.08
ln*NEPSE*	-0.77	-0.79
ln*TOPEN*	3.67	3.78
MI	-1.06	-1.09
ELEC	-0.05	-0.05
C	6.71	

Note: Authors estimation based on Model 6.6

Table 6.15 demonstrates the elasticity coefficients of factors affecting FDI flows into Nepal. The elasticity coefficients of ln*GDP*, lnCT, lnTOPEN, and MI (1.01, -1.08, 3.78, and -1.09, respectively) are relatively elastic whereas those of lnNEPSE and election as a dummy (ELEC)—-0.79 and -0.05, respectively—are relatively inelastic. The market size (GDP and TOPEN) put positive and stronger impacts on the FDI flows, but tax rate (CT) and political instability (MI) have stronger, negative impacts on the FDI flows into Nepal. It follows from this result, therefore, that market size, tax rate, political instability, and trade liberalization appear to be the major factors influencing the FDI flows; nonetheless, the effects of election and NEPSE index on the FDI flows are weak.

6.2.4.4 Diagnostic Test Result of the Regression Analysis

To ensure that Model 6.6 is well specified, it is essential to check the serial correlation, heteroscedasticity, and normality of the fitted regression model.

Table 6.16

Breusch-Godfrey Serial Correlation LM Test			
F-statistic	0.28	Prob. *F* (2,14)	0.75
Obs*R^2	0.90	Prob. χ^2 (2)	0.63
Heteroscedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	0.94	Prob. *F* (6,16)	0.48
Obs*R^2	6.02	Prob. χ^2 (6)	0.42
Scaled explained SS	1.44	Prob. χ^2 (6)	0.96

Note: Calculation based on Model 6.6

Table 6.16 and Figure 6.6 exhibit the results for serial correlation, heteroscedasticity, and normality tests of Model 6.6—no problems of serial correlation, heteroscedasticity, and residuals' normality—because of the

evidences provided by Breusch-Godfrey test of serial correlation (P value of χ^2 = 0.63), Breusch-Pagan-Godfrey of heteroscedasticity test (P value of χ^2 = 0.96), as shown in Table 6.16, and Jarque-Bera test statistics (1.05 and the corresponding p value = 0.59) of normality, as demonstrated in Figure 6.6.

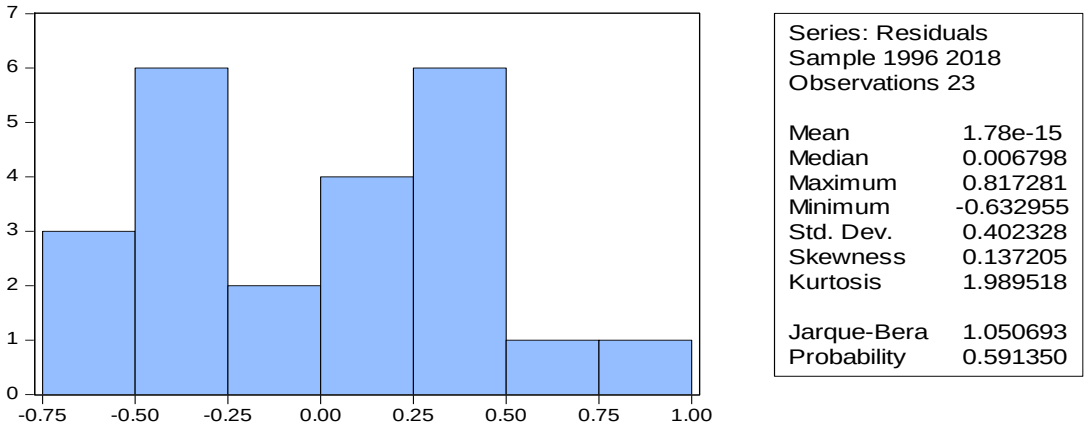

Figure 6.6. Plot of residual terms (normality test).

The results of regression analysis, therefore, indicate that Model 6.6 seem to have no problems on residuals, suggesting that the model is likely to be suitable for policy analysis.

Model 6.7

Estimated Impact of Economic, *Financial*, and *Risk Factors on FDI Flows*

ln*FDISTAR*=15.48 - 0.54**ln*CT*-0.59***ln*NEPSE*+1.79***ln*BTRTM*

T (5.81) (-2.45) (-3.07) (4.65)

+ 2.70**ln*TOPEN* - 1.06***MI* + 8.77** ln*CPI*

T (2.21 (-2.09) (2.22)

$\bar{R}^2$ = 0.86, *F* = 23.88, *DW* = 2.46 *N* = 23

Note. Author's estimate of regression equation through monotonically transformed FDI (by change of origin) using the data from Appendix A.
* significant at 10%; ** significant at 5%; *** significant at 1%.

Model 6.7 exhibits that these six explanatory variables—ln*BTRTM*, ln*CT*, ln*NEPSE*, ln*TOPEN*, *lnCPI*, and *MI*—are significant determinants of ln*FDISTAR*. The coefficients of determination ($\bar{R}^2$ = 0.86) implies the 86% variation in ln*FDISTAR* explained by ln*BTRTM*, ln*CT*, ln*NEPSE*, ln*TOPEN*, *lnCPI*, and *MI*;

the *F* statistics value (23.88) also explains the joint and significant impacts of these six macroeconomic variables on inflows of FDI. Because *DW* statistic (2.46) lies in the indecisive region, this study has resorted to Breusch-Godfrey serial correlation (*LM*) test (as shown in Table 6.18) to examine the problem of autocorrelation in the model. However, the elasticity coefficients in original FDI are estimated to do an economic interpretation based on the coefficients of Model 6.7, and Table 6.17 shows the results.

Table 6.17

Estimated Elasticity Coefficient of Variables

Variables	Coefficients	Elasticity for FDI
ln*BTRTM*	1.79	1.84
ln*CT*	-1.54	-1.58
ln*NEPSE*	-0.59	-0.61
ln*TOPEN*	2.70	2.78
MI	-0.74	-0.76
ln*CPI*	8.17	8.41

Note. Authors estimation based on Model 6.7.

Table 6.17 shows the elasticity coefficients of factors affecting FDI flows into Nepal; the elasticity coefficients of lnBTRTM, lnCT, lnTOPEN, and ln*CPI* (1.84, -1.58, 2.78, and 8.41, respectively) are relatively elastic; and those of lnNEPSE and MI—-0.61 and -0.76, respectively—are relatively inelastic. The market size (TOPEN), development of infrastructure (BTRTM), consumer price index (CPI) have positive and stronger impacts; tax rate (CT), strong and negative impact; and political instability (MI) and *NEPSE* index, weak and negative impacts on the FDI flows into Nepal.

The results from aggregate Models 6.5, 6.6, and 6.7, therefore, show that the significant determinants of FDI flows appear to be market size (GDP and TOPEN), tax rate (CT), availability of infrastructure (BTRTM), Political instability (MI and ELEC), financial factor (NEPSE index), and consumer price index (CPI).

This study's result on the infrastructure development is in agreement with the prior results that also found that the availability of infrastructure is one of the important determinants of FDI flows (Bakar, Chemat, & Harun, 2012; Cheng & Kwan, 2000; Rahman, 2003; Wheeler & Mody, 1992). All the above findings

about sectoral and aggregate analyses are also in consonance with the location theory that states choosing location for investment is strongly associated with financial environments of the economy, economic environments, and country risk factors.

6.2.4.5 Diagnostic Test Result of the Regression Analysis

Table 6.18 exhibits the result of test for serial correlation, and heteroscedasticity. The results in Table 6.18 reveal no serial-correlation and heteroscedasticity problems in Model 6.7 because the value of Breusch-Godfrey serial-correlation (LM) test (p value of $\chi^2 = 0.28$) and Breusch-Pagan-Godfrey of heteroscedasticity test (p value of χ^2 = o.99) find no evidences for serial-correlation and heteroscedasticity problems in the model. Because DW statistic lies in indecisive region, this test has failed to confirm the problem of autocorrelation; as a result, this problem has been resolved by LM test.

Table 6.18

Breusch-Godfrey Serial Correlation LM Test			
F-statistic	0.83	Prob. *F* (2,13)	0.45
Obs*R^2	2.49	Prob. χ^2 (2)	0.28
Heteroscedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	0.35	Prob. *F* (6,15)	0.89
Obs*R^2	2.71	Prob. χ^2 (6)	0.84
Scaled explained SS	0.65	Prob. χ^2 (6)	0.99

Note: Calculation based on Model 6.7

Figure 6.7 shows the normality of residuals. The Jarque-Bera test statistics (o.99) and its corresponding probability value (0.60) accept the null hypothesis of the residual normality in Model 6.7.

The results of the regression analysis have indicated that the Model 6.7 involves no problems of serial correlation, heteroscedasticity, and the residual normality; the resolution of the problems imply that the model appears to be a good fit for policy analysis.

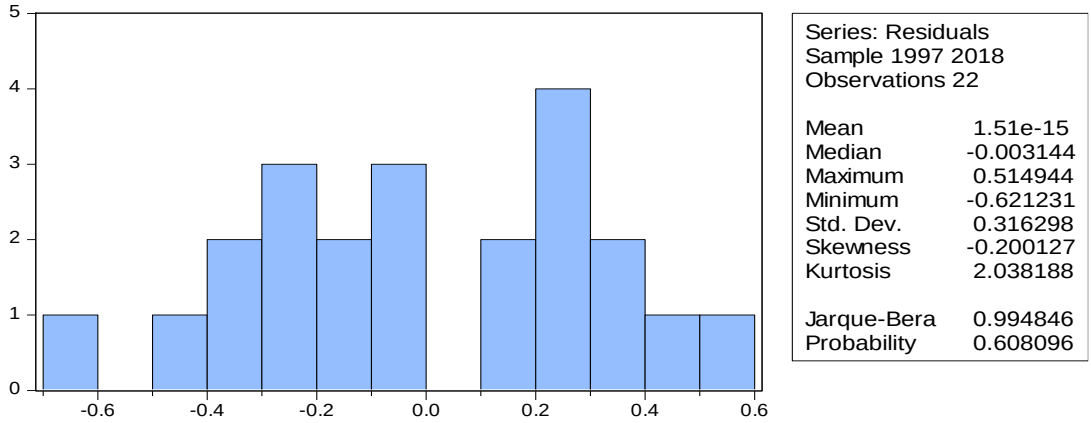

Figure 6.7. Plot of residual terms (normality test).

6.3 Summary of Empirical Findings

The regression analysis reveals that the major determinants of FDI inflows in Nepal are blacked topped road, corporate tax rate, political stability, human capital, openness, consumer price index, gross domestic product, NEPSE index, broad money supply, and tertiary education enrollment. This study has found a positive relationship of GDP and human capital with FDI flows into Nepal. The results from the impacts of blacked topped road, human capital, corporate tax rate, openness, produced a predicted impact on FDI flows into Nepal have been found as anticipated in Methodology chapter. Corporate tax rate and Maoist insurgency are the country-risk factors making the negative impact on flows of FDI into Nepal; the negative coefficient of country-risk factors depicts an inverse relationship between country risk factors and FDI flows into Nepal. Therefore, policy makers should make a sincere effort in reducing the adverse effects of country-risk factors on the FDI flows into Nepal.

Further, the consumer price index is a positive determinant of FDI in Nepal. Although the positive contribution of CPI towards the FDI inflow is an encouraging sign for Nepalese policy makers, the high positive rate of CPI tends to destabilize the economy; therefore, the high rate of CPI may not be taken as a reliable indicator for foreign investors to choose location. Thus, the policy makers should strive to control the inflation at appropriate rate.

Openness represents trade liberalization positively influencing the international trade, a proxy for a market size; the regression result gives a positive coefficient to the openness. Furthermore, blacked topped roads represent the infrastructure facilities within the country—the infrastructure that is a

positive determinant of FDI flows into Nepal and the contribution of NEPSE index that is a negative determinant.

All the above findings in the study, therefore, have helped to explore the key determinants of FDI flows into Nepal, and hence a proper attention should be given to these variables to draw policy conclusions at the macro level.

CHAPTER VII

CONTRIBUTION OF FOREIGN DIRECT INVESTMENT TO MANUFACTURING SECTOR

7.1 Introduction

Nepal has been trying to attract a large chunk of FDI to develop different sectors of the whole economy by strengthening the driving forces of the FDI flows into Nepal. In course of seeking more FDI inflows, host countries do not benefit equally from all sectors of the economy (Kumar 2000). The contribution of FDI on the domestic economy hinges on the policies, the kinds of FDI received by the domestic economy, and conditions of existing domestic enterprises. The aim of measuring the contribution of FDI flows into Nepal is relevant here because FDI has become an important source for investment in different sectors—primary, secondary, and tertiary—the economy and because the FDI has pushed the economy towards high economic growth and development trajectory. Thus, the aim of this chapter is to analyze the contribution of FDI to the manufacturing sector of Nepal.

This study has examined the relationship between FDI inflows and its contribution in secondary sector. To estimate the contribution of FDI to the manufacturing sector, this study has considered only two dependent macroeconomic variables, such as manufacturing GDP and manufacturing employment in Nepal.

Out of total committed foreign investment worth Rs 269,943.83 million, it can be seen from Table 4.7 that the share of manufacturing sectors is Rs 175,601.00 million (65.05%) of total FDI. Owing to the lack of the data on actual FDI flows in different sectors (primary, secondary, and tertiary sectors), this study has used the committed FDI flows as a basis and stated that more FDI have been flowing into manufacturing sector. The manufacturing sector plays a vital role in economic development that in turn relies on the development of the manufacturing sector, indicating an inextricable relationship between the two. Therefore, this study has examined the contribution of FDI to manufacturing sector, particularly the contribution of FDI to manufacturing GDP and its

employment. The employment data are extracted from different manufacturing and industrial surveys (conducted in every five-year gap) of Central Bureau of Statistic (CBS) in Nepal. This study has converted the employment data into time-series data on the basis of five-year gap; for this reason, the employment data are expressed in decimal forms.

7.1.1 Trend of Manufacturing Gross Domestic Product and Employment

Table 7.1 presents the volume of manufacturing GDP and the total number of people engaged in the manufacturing sector.

Table 7.1

Manufacturing GDP and Employment Level

Year	NMGDP (in Rs.million)	RMGDP (in Rs.million)	MEM	Growth Rate of RMGDP (%)	Growth Rate of NMGDP (%)	Growth Rate of MEM (%)
1995/96	22466	31686.88	197,366.60		-	-
1996/97	24816	32626.87	192,275.50	2.96	9.46	-2.57
1997/98	26987	34083.1	187,316	4.46	8.04	-2.57
1998/99	30337	35185.57	186,228.80	3.23	11.04	-0.58
1999/00	33550	37244.67	185,147.90	5.85	9.57	-0.58
2000/01	38409	38409	184,073.30	3.12	12.65	-58
2001/02	37736	36319.54	183,005	-5.44	-1.78	-0.58
2002/03	38826	36252.1	181,943	-0.18	2.80	-0.58
2003/04	41673	37341.4	179,466	3.00	6.83	-1.36
2004/05	44885	37909.63	177,022.8	1.52	7.15	-1.36
2005/06	47840	37639.65	174,612.8	-0.71	6.17	-136
2006/07	52172	38137.43	172,235.6	1.32	8.30	-1.36
2007/08	57185	39574.39	169,891	3.76	8.76	-1.36
2008/09	65447	39072.84	174,637.8	-1.26	12.62	2.79
2009/10	70924	36786.31	179,517.3	-5.85	7.72	2.79
2010/11	80531	37701.78	184,533.1	2.48	11.92	2.79
2011/12	91164	40019.32	189,689	6.14	11.66	2.79
2012/13	100312	41314.66	194,989	3.23	9.11	2.79
2013/14	112995	42559.32	236,380.2	3.01	11.22	21.22
2014/15	118980	42706.39	286,557.8	0.34	5.03	21.22
2015/16	120967	41285.67	347,386.7	-3.32	1.64	21.22
2016/17	133862	41649.66	421,128.2	0.88	9.63	21.22
2017/18	151251	44290.19	510,523	6.33	11.49	21.22

Source: Economic Survey (2019) and Central Bureau of Statistics (2020)

Note. NMGDP = nominal manufacturing gross domestic product; RMGDP = real manufacturing gross domestic product; MEM = manufacturing employment; MGDP = manufacturing gross domestic product. Growth rate is calculated by the author.

Table 7.1 shows the volume of manufacturing nominal and real gross domestic product (MGDP) and numbers of employed people in manufacturing sector (MEM). The volume of real MGDP is highest in 2017/18 and lowest in 1995/96. The growth rate of real MGDP is negative during the six fiscal years 2001/02, 2002/03, 2005/06, 2008/09, 2009/10, and 2015/16. The number of people engaged in the manufacturing sector is also demonstrated in Table 7.2. There is no consistent change in the employment level in manufacturing sector. The number of people employed in manufacturing sector is highest during the year of 2017/18 (510,523) and lowest in 2007/08 (169,891). The growth rate employment is negative from 1996/97 to 2007/08. The privatization of public 30 enterprises (Harisiddhi Itta Tile Factory, Nepal Bitumen and Barrel Industry, Bansbari Chhala Jutta Factory, Balaju Kapada Udhyog, etc.) during the period of 1992-2006/07 is the main reason for declining growth rate of employment during 1996/97-2007/08. The highest growth rate of employment is 21.22% during the period of 2013/14-2017/18. Figure 7.1 shows the trend of real MGDP and employment levels in manufacturing sector.

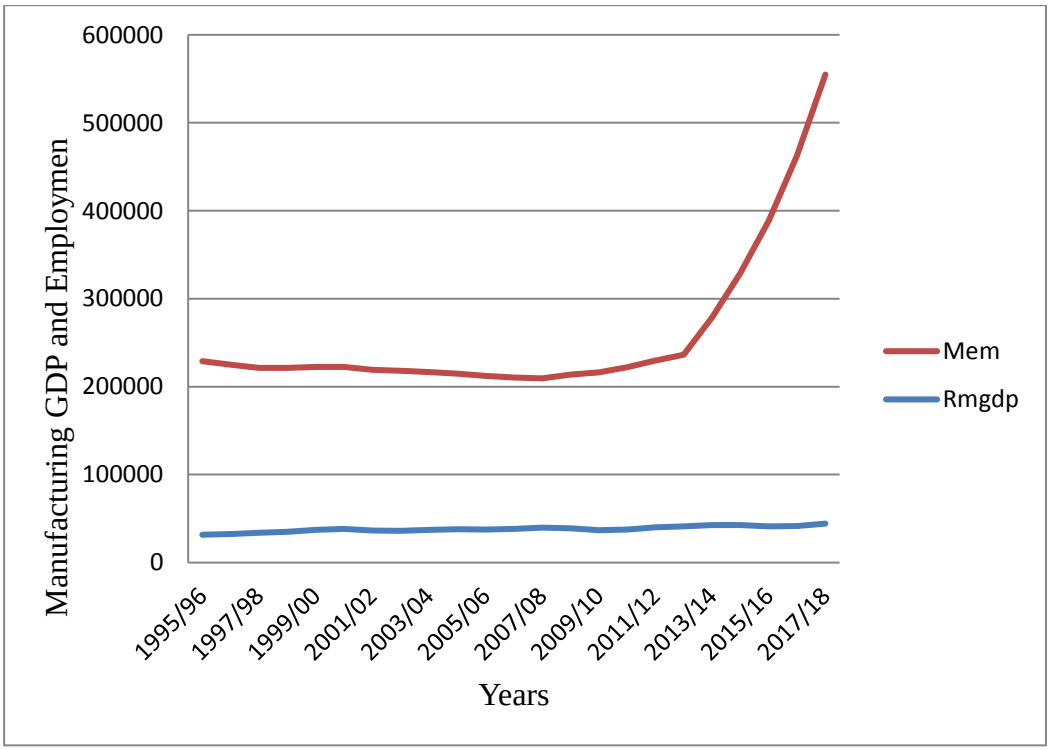

Figure 7.1. RMGDP and level of employment in manufacturing sector.

Figure 7.1 shows the trend of manufacturing real GDP and number of people employed in manufacturing sector during the study period 1995/96-

2017/18. The trend of employment level is fluctuating from 1995/96 to 2007/08; similarly, the trend of manufacturing Real GDP is also inconsistent. From 2007/08 onwards, MEM continuously trends upwards, but the RMGDP has shown a discontinuous trend.

7.2 Empirical Results and Discussion

The empirical analysis is divided into various groups on the basis of the model developed in Methodology section. The contribution of FDI to manufacturing sector has been explored by employing macroeconomic variables. The main macroeconomic dependent variables have been manufacturing real gross domestic product (RMGDP) and number of people employed in manufacturing sector (MEM), and an explanatory variable is FDI.

7.2.1 Contribution of Foreign Direct Investment to Manufacturing GDP

Nepal Rastra Bank (2018) has classified the manufacturing enterprises into two categories: fast-moving consumer- and industrial-goods enterprises. The firms producing food and beverages, tobacco, and soap are included under fast-moving consumers' goods, whereas the firms producing metal products, cement, and plastic and so on are categorized as industrial goods. Out of total manufacturing firms, 35% are fast-moving consumers' good firms, and the remaining 65% firms are industrial-good firms. These industries have made a significant contribution to the manufacturing GDP. Of total foreign capital-based industries, only 11 firms of the manufacturing sector export goods and services in foreign countries; among them, eight are industrial category firms and three are fast-moving consumer goods category firms. Of the total foreign capital-based firms, 16 firms have more than Rs. one billion turnovers during a year, whereas other firms have turnover less than Rs. one billion per year. These firms export Juice, tooth powder and paste, feeds, crude mustard and soybean oil, galvanize sheets, GI pipe, black pipe, fittings, loop mats, gabion boxes, and plastic closures. FDI-based industries have contributed significantly to the rise in GDP growth of Nepal.

Thus, this dissertation has explored the contribution of FDI to manufacturing GDP by employing real FDI, real export (RX), adult literacy rate

(AL), employed people in manufacturing sector (MEM), and Maoist insurgency (MI) as explanatory variables and manufacturing real GDP as an explained variable.

7.2.1.1 Descriptive Statistics

This study has performed descriptive statistics to describe the characteristics and patterns of variables during the study period, as shown in Table 7.2.

Table 7.2

Descriptive Statistics of Variables

	Mean	Median	Max.	Min.	Std. Dev.	Ske.	Kurt.	J-B
RMGDP	38252.02	37909.63	44290.19	31686.88	3195.25	-0.12	2.58	0.22
RFDI	1424.71	897.66	5128.19	-369.7	1584.99	0.95	2.76	3.53
NEPSE	602.56	389.70	1718.20	163.40	447.92	1.16	3.37	5.31
AL	47.88	48.61	59.63	32.98	10.23	-0.37	1.86	1.76
RGEIM	382.56	366.80	925.73	14.09	292.29	0.24	1.85	1.49
RX	37764	34748.04	55654.10	22728.41	9921.48	0.21	1.93	1.26
MEM	221562	185147.9	510523	169891	88260.88	2.24	3.95	2.25

Note. Calculation based on data of Appendix A

Table 7.2 presents the summary statistics of a dependent variable (manufacturing real gross domestic product [*RMGDP*]) and five independent variables (foreign direct investment [*RFDI*], adult literacy rate [*AL*], real government expenditure in manufacturing sector [*RGEIM*], real export [*RX*], labour force [*MEM*], and *NEPSE index*) in the study. Descriptive statistics shows the measures of central tendency, measure of dispersion (standard deviation), minimum and maximum values, skewness, kurtosis, and Jarque-Bera test.

The descriptive statistics in Table 7.2 indicates that the data sets of *RX*, *RFDI*, *NEPSE*, *MEM*, and *RGEIM* are positively skewed, and *AL* and *RMGDP* are

negatively skewed. The coefficients of kurtosis of a dependent variable (*RMGDP*=2.58) and those of independent variables (*RFDI*=2.76, *NEPSE* = 3.37, *AL*= 1.86, *RGEIM* = 1.85, *MEM* = 3.95, and *RX* = 1.26) indicate that the data sets are normally distributed.

Descriptive statistics for all the variables—*RMGDP*, *RFDI*, *NEPSE*, *RGEIM*, *RX*, *MEM*, and *AL*—have been positive mean and median. The result indicates that the average manufacturing *RGDP* is Rs. 38252.02 million with minimum value of 31686.88 and maximum of 44290.19 million. The standard deviation of *RMGDP* is 3195.25. Similarly, the mean value of *RFDI* is Rs. 1424.71 million with minimum value of -369.7 and maximum value of 5128.19. The variability of *RFDI* is represented by value of standard deviation (1584.99). Moreover, the mean value of *NEPSE*, *GEIM*, *RX*, *MEM*, and *AL* are 602.56, 382.56, 37764, 221562, and 47.88, with standard deviations of 447.92, 292.29, 9921.48, 88260.88, and 10.23, respectively. Table 7.2 also presents the value of Jarque-Bera to show the nature of distribution of variables included in the study.

7.2.1.2 Instrumental Variable Method

Model 7.1 demonstrates the instrumental method of estimation between a dependent variable (ln*RMGDP*) and five independent variables (ln*RFDISTAR*, ln*RX*, ln*MEM*, ln*AL*,and *MI*). In the model, *RMGDP* affects the *FDI* flows and FDI flows affects the *RM*GDP—there is joint dependency between *RMGDP* and *MEM*—therefore, to avoid the problems of joint dependency and inconsistent estimates, instrumental variable estimation method is applied. MEM (-1) has been used as an instrumental variable.

Model 7.1 shows the impact of *RFDI* on *RMGDP* through instrumental variable method. The result shows that the contribution of *FDI* to *RMGDP* is significant. The coefficient of ln*FDISTAR* (0.02) implies that 1% increase in inflows of *RFDISTAR* leads to 0.02% increase in ln*RMGDP* in Nepal: The coefficient is positive and statistically significant. An increase in capital flows (in one period back) enhances the investment activities of the nation and that enhancement ultimately raises manufacturing GDP in current period. This result is consistent with the results of the previous studies that also found that FDI

flows raise the manufacturing GDP (Goel, Phanikumar, & Rao, 2012; Li, & Liu, 2005; Mottaleb, 2007; Rahman, 2015).

Model 7.1

Estimated Impact of lnRFDISTAR on lnRMGDP

$$\ln RMGDP = 7.50 + 0.02^{***}\ln RFDISTAR(-1) - 0.09^{***}MI + 0.12^{***}\ln AL$$
$$T \qquad (27.12) \qquad (4.98) \qquad (-8.03) \qquad (5.22)$$

$$+ 0.18^{***}\ln MEM(-1) + 0.25^{***}\ln RX$$

$$T \qquad (10.16) \qquad (10.06)$$

$$\bar{R}^2 = 0.95, \quad F = 94.55, \quad DW = 2.34, N = 22$$

Note. Author's estimate of instrumental method of regression equation through monotonically transformed FDI (by change of origin) using the data from Appendix A. * significant at 10%; ** significant at 5%; *** significant at 1%.

Coefficient of ln*AL* (0.12) implies that a 1% increase in adult literacy rate leads to a 0.12% increase in manufacturing *R*GDP; the elasticity coefficient is less than one. Thus, the relationship between human capital and production of output in manufacturing sector is relatively inelastic. The result is positive and statistically significant. Adult literacy rate represents the availability of human capital within the country. If the country has more human capital, there is the high volume of real manufacturing GDP, and vice versa. Educated human capital is able to utilize and distribute the available resources in a proper place, leading to the rise in *RMGDP*; thus, the adult literacy rate is a leading factor to make the positive impact on *RMGDP*.

The coefficient of ln*MEM* (0.18) is positive and statistically significant; the positive value indicates direct relationship between labour force and manufacturing *RGDP* in Nepal. Availability of labour force in manufacturing sector directly affects the national product of manufacturing sectors. Nepalese products seem able to rise with rise in labour force. A 1% increase in employment rate in manufacturing sector, therefore, leads to a 0.18% increase in manufacturing product.

The coefficient of real export (0.25) implies that 1% rise in real export increases *RMGDP* by 0.25%; the coefficient is positive and statistically

significant. The increase in export refers to the expansion of market size up to the international sectors, whereby inducing domestic producers to raise the production and productivity within the domestic territory. Hence, real export positively affects the real manufacturing gross domestic product of Nepal.

The coefficient of dummy variable Maoist insurgency (*MI*) refers to negative and statistically significant. During the period of Maoist insurgency, there is high political instability due to a political deadlock; and there was unstable government. As a result, investors have felt unsecure on their investment in manufacturing sectors, which adversely affects the *RMGDP*. The reason is obvious: The coefficient of *MI* (-0.09) is negative and statistically significant.

The coefficient of determination ($\bar{R}^2$ = 0.95) suggests that 95% of variation in *RMGDP* in Nepal has been explained by *RFDISTAR*, *MEM*, *RX*, *AL*, and *MI*; the *F* statistic (94.55) also shows a joint, significant impact of explanatory variables on *RMGDP*. *DW* statistic (2.34) falls in the indecisive region and this statistic fails to decide on the problem of autocorrelation; therefore, this study has taken the help of another tool (Breusch-Godfrey serial correlation test as displayed in Table (7.3) to check whether Model 7.1 has a problem of autocorrelation.

7.2.1.3 Diagnostic Test Result of the Variables

Table 7.3 presents the results of the diagnostic tests, for serial correlation, and heteroscedasticity, that Model 7.1 is well specified, indicating that the estimated regression model performs well. Even though DW statistic lies in an indecisive region, but Breusch-Godfrey serial correlation test (P value of χ^2 = 0.63) confirms no evidence of serial correlation in the model; similarly, Breusch-Pagan-Godfrey of heteroscedasticity test (P value of χ^2 = 0.68) also ensures no problem of heteroscedasticity because the F-statistic and obs* R^2 values are greater than 0.05. Hence, it rejects the hypothesis of serial correlation as well as heteroscedasticity prevailing in the Model 7.1.

Table 7.3

Breusch-Godfrey Serial Correlation LM Test			
F-statistic	0.29	Prob. *F* (2,14)	0.74
Obs*R^2	0.89	Prob. χ^2 (2)	0.63
Heteroscedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	0.52	Prob. F (5,16)	0.75
Obs*R^2	3.12	Prob. χ^2 (5)	0.68
Scaled explained SS	1.24	Prob. χ^2 (5)	0.94

Note: Calculation Based on Model 7.1

Similarly, the residuals included in the Model 7.1 are normally distributed. The normality of residual terms is tested in Figure 7.2

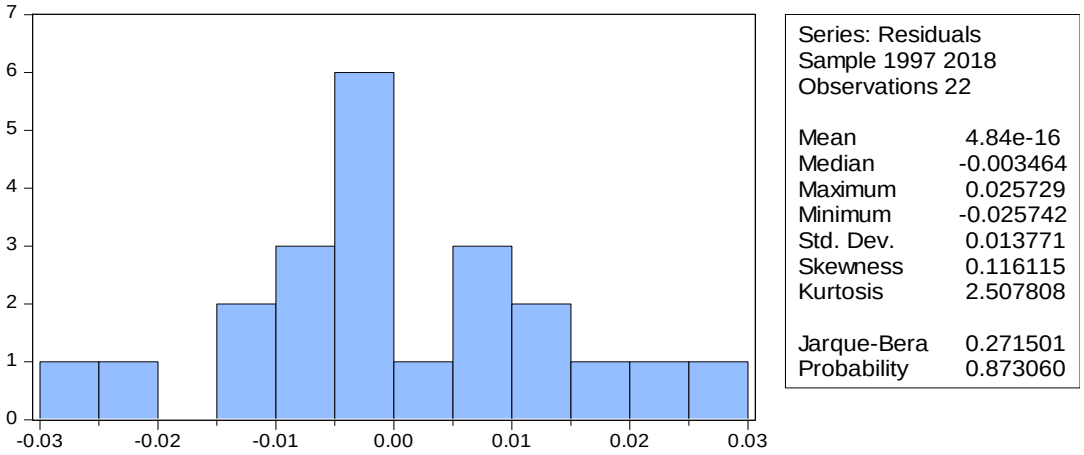

Figure7.2. Plot of residual terms (normality test).

The Jarque-Bera test statistic (0.27) implies retains the hypotheses that the residuals are normally distributed in Model 7.1; hence, Model 7.1 has no problem of normality.

7.2.1.4 Two-Stage Least Squares Regression Analysis

Model 7.2 reports 2SLS estimation result between a dependent variable (ln*RMGDP*) and five independent variables (ln*RFDISTAR*, ln*RX*, ln*MEM*, ln*AL*,and *MI*).

Model 7.2 reports the two-stage least square estimates, dependent variable is manufacturing *RGDP* and *RFDISTAR(-1)*, *MI*, *AL*, *MEM*, and *RX* are independent variables. This study finds a strong relationship between manufacturing *RGDP* and *FDI* flows into Nepal. The 2SLS regression shows the

effects of *FDI* flows on *RMGDP* is statistically significant. All coefficients are statistically significant with appropriate sign.

Model 7.2

Estimated Impact of lnRFDISTAR on lnRMGDP

$$\ln RMGDP = 7.63 + 0.01^{***}\ln RFDISTAR(-1) - 0.08^{***}MI + 0.10^{***}\ln AL + 0.15^{***}\ln MEM + 0.25^{***}\ln RX$$

$$T \qquad (32.67) \qquad (4.65) \qquad (-8.83) \qquad (5.18) \qquad (10.73) \qquad (11.23)$$

$$\bar{R}^2 = 0.96, \quad F = 125.50, \quad N = 22$$

Note. Author's estimate of two-stage method of regression equation through monotonically transformed FDI (by change of origin) using the data from Appendix A. * significant at 10%; ** significant at 5%; *** significant at 1%.

The coefficient of determination ($\bar{R}^2$ = 0.96) suggests that 96% of variation in *RMGDP* in Nepal has been explained by *RFDISTAR, MEM, RX, AL*, and *MI*; the *F* statistic (125.50) also shows a joint, significant impact of explanatory variables on *RMGDP*. The residual diagnostic tests—Breusch-Godfrey serial correlation (corresponding p value = 0.19), Pagan-Godfrey of heteroscedasticity test (corresponding p value = 0.36), and normality (corresponding p value = 0.80)—reports the Model 7.2 has no problems of serial correlation, heteroscedasticity, and normality.

7.2.2 Contribution of FDI to Employment Generation

FDI has played a significant role in creating employment opportunities. The firms operating through foreign capital employed 87% of domestic workers and remaining 13% of foreign workers (NRB, 2018). This dissertation has employed the data on total manufacturing employment to investigate the impact of FDI on employment generation. Therefore, the contribution of FDI to employment generation in Nepal has been explored by using macroeconomic variables, such as manufacturing employment in manufacturing sectors (*MEM*), real flows of *RFDI*, real government expenditure in manufacturing sectors (*RGEIM*), corporate tax rate (*CT*), *NEPSE* index, real manufacturing GDP (RMGDP), and Maoist insurgency (*MI*) used as a dummy variable that is the proxy for political instability.

7.2.2.1 Descriptive Statistics

Descriptive statistics have been used to explore the nature and characteristics of variables during the study period. Table 7.4 presents the summary statistics of a dependent variable—manufacturing employment (*MEM*)—and independent variables [real foreign direct investment (*FDISTAR*), corporate tax rate (*CT*), real government expenditure in manufacturing sector (*RGEIM*), and Maoist struggle (*MI*)] used for the study. It shows number of observations, measures of central tendency (mean and median), measure of dispersion (standard deviation), minimum and maximum values, skewness, kurtosis, and Jarque-Bera test.

Table 7.4

Descriptive Statistics of Variables

	Mean	Median	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis	J-B
MEM	221562	185147.9	510523	169891	88260.88	2.24	3.95	2.25
RFDI	1424.71	897.66	5128.19	-369.7	1584.99	0.95	2.76	3.53
CT	23.10	24	26.8	16.15	3.29	-0.86	2.73	2.90
RGEIM	382.56	366.80	925.73	14.09	292.29	0.24	1.85	1.49
NEPSE	602.56	389.70	1718.20	163.40	447.92	1.16	3.37	5.31
RMGDP	38252.02	37909.63	44290.19	31686.88	3195.25	-0.12	2.58	0.22

Note: Calculation based on data of Appendix A

The average employment in manufacturing sector of Nepal accounts for 221,562 with standard deviation 88260.88. The maximum value of employment is 510,523 and minimum value is 169,891. The employment level is positively skewed with kurtosis 3.95; similarly, the mean values of *RFDI*, *CT*, *RGEIM*, NEPSE, and *RMGDP* stand at 1424.71, 23.10, 382.56, 602.56, and 38252.02 with standard deviation 1,584.99, 3.29, 292.29, 447.92, and 3195.25, respectively. The corresponding Jarque - Bera values as given in Table 7.4 exhibit that variables are normally distributed. *RMGDP* and *CT* are negatively skewed, and *RGEIM*, *RFDI*, and *NEPSE* are positively skewed.

7.2.2.2 Instrumental Variable Estimation

The instrumental variable method is used to the estimation of causal relations between employment and other explanatory variables; a dependent variable (ln*MEM*) and independent variables (ln*RFDISTAR*, ln*CT,* ln*RGEIM*, ln*NEPSE,* and *MI*) are carried out in Model 7.3.The instrumental variable estimation model has been developed to avoid the problems of joint dependency. RMGDP(-1) has been used as an instrumental variable.

Model 7.3

Estimated Impact of FDI on Manufacturing Employment

$$\ln MEM = -4.12 + 0.11^{**}\ln RFDISTAR - 0.56^{**}\ln CT + 0.09^{***}\ln RGEIM +$$
$$T \quad (-3.30) \quad (2.02) \quad (-2.36) \quad (2.98)$$
$$0.46^{***}\ln NEPSE + 0.02^{*}MI^{*}RMGDP(-1)$$
$$T \quad (6.23) \quad (1.90)$$

$$\bar{R}^2 = 0.85, \quad F = 25.60, \quad DW = 1.66, \; N = 22$$

Note. Author's estimate of instrumental variable method through monotonically transformed FDI (by change of origin) using the data from Appendix A.
* significant at 10%; ** significant at 5%; *** significant at 1%.

Model 7.3 reports the impact of FDI on employment generation in manufacturing sector of Nepal. The coefficient of ln*RFDISTAR* (0.11) indicates that a 1% increase in real FDI inflows in Nepal has led to a 0.11% increase in employment level in manufacturing sectors. The coefficient is positive and statistically significant; *RFDISTAR* inflows and employment generation in manufacturing sectors displays a direct positive relationship. Therefore, FDI flows are observed to play a crucial role in generating employment opportunities in the manufacturing sector. In the same way, an inverse and statistically significant relationship between corporate tax rate and employment opportunities suggests that a 1% increase in corporate tax rate seems to bring about a 0.56% of rise in unemployment in Nepal. Furthermore, the coefficient of ln*RGEIM* (0.09) is positive and statistically significant, indicating that a 1% increase in real government expenditure in manufacturing sector leads to a 0.09% rise in employment opportunities within the country. Thus, the government needs to

make more investment in the manufacturing sector to raise employment opportunities.

The coefficient of *NEPSE* index (0.46) is positive and statistically significant. The stability in capital market has prompted investors towards raising their investment in the manufacturing sector and generating the employment opportunities.

This finding of the positive relationship between FDI flows and employment generation is consistent with the prior results of the positive impact of FDI on employment (Ajaga & Nunnenkamp, 2008; Buffie, 1993; Desai, 2011).

Furthermore, the positive and statistically significant coefficient of *MI*RMGDP(-1)* implies a positive relationship between *MI*RMGDP(-1)* and employment.

The coefficient of determination ($\bar{R}^2$ = 0.85) implies that 85% of variation in employment opportunity in Nepal is explained by *RFDI*, *CT*, *RGEIM*, *MI*RMGDP*, and *NEPSE*; the *F* statistics value (25.60) also shows the joint significant impact on *MEM* of *RFDI*, *CT*, *RGEIM*, *NEPSE*, and *MI*RMGDP*. *DW* statistic (1.66) shows the no autocorrelation problem in the Model 7.3.

7.2.2.3 Diagnostic Test Result of the Variables

Table 7.5

Breusch-Godfrey Serial Correlation LM Test

F-statistic	0.06	Prob. *F* (1,15)	0.79
Obs*R^2	0.09	Prob. χ^2 (1)	0.75
Heteroscedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	0.74	Prob. *F* (5,16)	0.60
Obs*R^2	4.15	Prob. χ^2 (5)	0.52
Scaled explained SS	1.50	Prob. χ^2 (5)	0.91

Note: Calculation based on Model 7.3

Table 7.5 presents the results of serial correlation and heteroscedasticity test. Table 7.5 reveal that Model 7.3 seems well specified, indicating that the model fits well. There is no problem of serial correlation and heteroscedasticity in the model because both *F*-statistic and obs* R^2 values are greater than 0.05,

rejecting the hypothesis that the model has serial correlation as well as heteroscedasticity.

Similarly, the residual terms included in Model 7.3 have normally distributed; the normality of residual terms has tested in Figure 7.3.

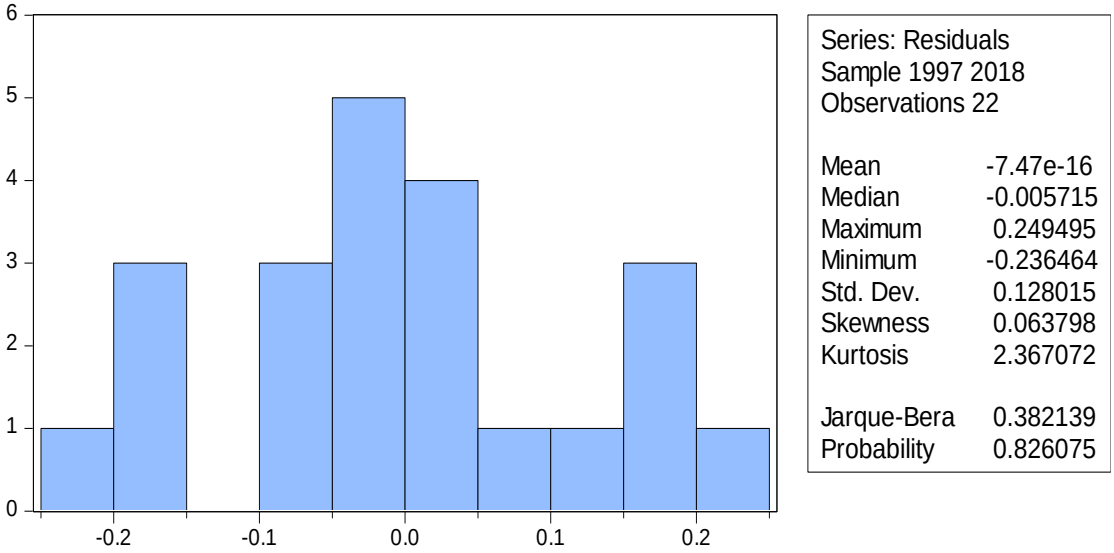

Figure 7.3. Plot of residual terms (normality test).

The Jarque-Bera test statistics (0.38) accepts the hypotheses of residual normality; the residual terms are normally distributed in the regression model. The model satisfies all assumptions of ordinary least-squares regression. Therefore, the finding seems appropriate for policy implication. Impact of FDI inflows on employment generation in manufacturing sector also demonstrated in Model 7.4 through 2SLS method.

7.2.2.4 Two-Stage Least Squares Regression Analysis

Model 7.4 reports 2SLS estimation result between a dependent variable (ln*MEM*) and five independent variables (ln*RFDISTAR*, ln*RGEIM*, ln*NEPSE*, ln*RMGDP*,and *MI*RMGDP(-1)*).

Model 7.4 shows the impact of FDI on manufacturing employment. The employment data are real data; all explanatory variables are converted into real data. The coefficients of all explanatory variables take appropriate signs and are statistically significant, except ln*RMGDP*. However, the coefficient of ln*RMGDP* (0.94) implies that a 1% increase in manufacturing *RMGDP* leads to a 0.94% increase in employment in manufacturing sector. But the coefficient of ln*RMGDP* is statistically insignificant. The interacting variable *MI*RMGDP(-1)*

is also statistically significant. During Maoist period lagged *RMGDP* was affecting the employment positively but at low rate i.e. 0.04.

Model 7.4

Estimated Relation between MEM and FDI, Dependent variable is MEM.

$$\ln MEM = -16.26 + 0.17^{**}\ln RFDISTAR + 0.09^{**}\ln RGEIM +$$
$$T \quad (-1.71) \qquad (2.98) \qquad (2.72)$$
$$0.44^{***}\ln NEPSE + 0.04^{***}MI{*}RMGDP(-1) + 0.94\ln RMGDP$$
$$T \quad (4.60) \qquad (3.38) \qquad (1.02)$$
$$\bar{R}^2 = 0.84, \quad F = 22.58, \quad N = 22$$

Note. Author's estimate of 2SLS through monotonically transformed FDI (by change of origin) using the data from Appendix A.
* significant at 10%; ** significant at 5%; *** significant at 1%.

The coefficient of determination ($\bar{R}^2$ = 0.84) suggest that a 84% variation in employment opportunity is caused by *RFDI, RGEIM, NEPSE, RMGDP*, and *MI*RMGDP(-1)*. The *F* statistics (22.58) also shows the significant impact on *MEM* of *RFDI, RGEIM, NEPSE, RMGDP,* and *MI*RMGDP(-1)*. The residual diagnostic tests—Breusch-Godfrey serial correlation (corresponding p value = 0.47), Pagan-Godfrey of heteroscedasticity test (corresponding p value = 0.34), and normality (corresponding p value = 0.84)—reports the Model 7.4 has no problems of serial correlation, heteroscedasticity, and normality; therefore, the finding appears to be relevant for policy implications.

7.3 Summary of Contribution of FDI to Manufacturing Sector

It has been observed from the above analysis that FDI seems to have made the positive impact on manufacturing GDP and the generation of employment opportunities in Nepalese manufacturing sector. As a result, the FDI has become an engine for expediting manufacturing growth and development. The coefficient of ln*FDISTAR* (0.02) implies that a 1% rise in inflows of *RFDISTAR* leads to a 0.02% rise in ln*RMGDP* in Nepal through instrumental method of estimation in *RMGDP* equation. Furthermore, coefficient of ln*AL* (0.12) indicates that a 1% increase in adult literacy rate results in a 0.12% increase in *RMGDP* in Nepal. This result suggests that that the increase in

human capital within the country raises the production and productivity in the manufacturing sector. Likewise, the negative and statistically significant coefficient of ln*MI* (-0.09) indicates that Maoist insurgency (political instability) had put the negative impact on production and productivity in the manufacturing sector.

Moreover, the coefficient of real export (0.25) implies that a 1% increase in real export leads to a 0.25% increase in real manufacturing GDP. The increase in real export, therefore, appears to have raised the aggregate demand and the production in manufacturing sector. Similarly, the coefficient of ln*MEM*(-1) (0.18) indicates that a 1% increase in employment rate in manufacturing sector leads to a 0.18% rise in *RMGDP*.

Furthermore, FDI has been a key finance for Nepalese economy in helping to reduce the unemployment problem within the country. The result (from employment equation) shows that the increase in FDI inflows into Nepal seems to have contributed 11% to the employment generation in manufacturing sector. Therefore, FDI appears to have made the positive impact on manufacturing sectors to create employment opportunities; thus, the government of Nepal needs to make a favorable policy for foreign investors to raise the inflows of FDI into Nepalese economy for accelerating growth and development in manufacturing sector.

Similarly, corporate tax rate seems to have a negative impact—and government expenditure a positive impact—on generating employment in the manufacturing sector. For this reason, there is the need for the government to reduce tax rates, and to increase its expenditure, in manufacturing sector. Besides, there is a positive relationship between NEPSE index and level of employment. The stability in capital market is likely to induce investors to investing in manufacturing sectors and creating the employment opportunities in the manufacturing sector.

To sum up, FDI flows seems to play a vital role in generating employment opportunities and in accelerating GDP growth in the manufacturing sector.

CHAPTER VIII

SUMMARY, CONCLUSIONS AND POLICY SUGGESTIONS

8.1 Summary of the Study

Foreign direct investment (FDI), a long-term commitment for investment in a developing host country like Nepal, is a vehicle for major sources of capital for investment, transfer of advance technology, and knowledgeable management. However, Nepal has received a meagre amount of the FDI during the study period, compared with other developing countries. Thus, this study explores the major determinants of FDI inflows and its contribution to manufacturing sector. The main objective of this study has been to analyze the determinants of FDI and its impact on manufacturing sector of Nepalese economy. In this regard, this study has collected the primary data to explore the causes of discrepancy between committed FDI and its actual inflows into Nepal. The secondary data have been collected to explore the key location determinants of FDI flows into Nepal and its contribution to manufacturing sector.

Factor analysis is used to explore the major factors for making the huge difference between proposed and actual inflows of FDI. From the survey method, this study finds that high inflation rate, high volume of debt, high volume of trade deficit, and corporate tax rate seem the main factors for why the foreign investors do not return to Nepal to make investment even after commitments. Similarly, low performances of bureaucrats in their respective fields, corrupt attitudes of bureaucrats, red tapism for foreign investors, and policy complications to approve the FDI turn out to be major factors causing the gap between actual flows and committed FDI.

Regression analysis has been carried out to identify the major location determinants of FDI into Nepal. For the macro-level analysis, the key determinants of FDI inflows into Nepalese economy are observed to be financial variables (broad money supply, total transaction in financial market, and NEPSE index), economic variables (blacked topped road, gross domestic product, gross consumption expenditure, NEPSE index, openness, Maoist insurgency, and percentage of tertiary education enrollment), and country risk factors (openness,

NEPSE index, Maoist insurgency, and corporate tax rate). These variables could be leading determinants for foreign investors to select the location for investment.

FDI flows contribute to macroeconomic variables associated with manufacturing sector: gross domestic product and employment generation in manufacturing sector. The impact of FDI flows on manufacturing GDP and employment generation in manufacturing sector have been hypothesized and tested in the analysis. As has been hypothesized in the analysis, the instrumental variables and 2SLS estimation results have found the significant impact of FDI on manufacturing GDP and employment level.

8.2 Major Findings of the Study

The major findings of this study have been divided into four categories.

a. Nature, Trend, and Composition of Foreign Direct Investment

This study has attempted to explore different dimensions of proposed FDI in Nepal after liberalization 1990 and its actual flows into Nepal from the Fiscal year 1995/96. In the three decades of Nepalese history of liberalization, from 1960 to 1990, marks the supremacy of public sectors. Economic activities were protected by license system, the protection was given to public entities, foreign investment was restricted, and government shouldered the responsibility of providing goods and services—such as cement, drinking water, electricity, roads, medical care, and so on—to its citizens. In that period, there were insufficient inflows of FDI into Nepal. However, the FDI flows into Nepal started from 1951/52 with Indian investors as a joint venture with 67% equity.

Nepal is undergoing the process of economic development; therefore, it needs higher amount of investment to meet the goal of economic development. Although Nepal faces the problems of scarcity of resources to properly invest in different sectors, government alone unable to fulfill the required investment in different sectors to create employment opportunities and to improve the real GDP growth. These facts justify that the ultimate solution of resource gap can be bridged with foreign direct investment. FDI is not only an instrument of obtaining investment capital to create employment opportunities and to raise the real GDP; it is also a medium of eliminating undesirable effects and bringing in desirable effects on the economy.

During the study period, total FDI accounts for Rs 269,943.83 million, the total number of industries constitutes 4,505 with foreign capital in Nepal, total project cost is estimated to be Rs 438,618.42million, total fixed cost is projected to be Rs 378,045.47 million, the contribution of FDI seems as high as Rs 67,455.04 million in FY2014/15, and the annual average inflow of FDI in Nepal during the study period stands at Rs 9,308.408 million.

The trend of actual inflows of FDI has been negative during the period of 2000/01, 2001/02 and 2005/06. The size of FDI has remained marginal (Rs 136 million) in 2004/05 due to the regulatory policy framework and it increased to Rs 5275 million in 2017/18. The actual inflows of FDI are as high as Rs 13504 million in 2016/17. Thus, the actual flows of FDI into Nepal are inconsistent and highly fluctuated during the study period.

Nepalese Government has created a healthy atmosphere for FDI inflow by introducing structural adjustment and stabilization policy in Nepal. It has also tried to improve the economic policy to raise the inflows of foreign capital in Nepal. The present government is now moving at the same direction as the previous one did: It has welcomed foreign capital in the sectors of national interest, such as infrastructure, core industries, hydro projects, services, and some consumer goods industries.

b. Gap Between Approved and Actual Flows of Foreign Direct Investment

The second objective of this study has been to explore the factors causing the high discrepancy between proposed FDI and actual flows of FDI into Nepal. Using the survey method, this study has found high inflation rate, high volume of debt, high volume of trade deficit, and high corporate tax rate to be the major factors for dissuading foreign investors from returning to Nepal and making investment here even after their commitments. Similarly, low performances of bureaucrats in their respective fields, their corrupt attitudes, red tape created in bureaucracy for foreign investors, and policy complications to approve the FDI have remained other factors causing the gap between actual flows of FDI and committed FDI in Nepal. Moreover, low level of per capita income, low level of GDP growth rate, lack of competitiveness of domestic products in international market, inadequate supply of energy, insufficient availability of factor inputs, availability of road and communication facilities, and

poor research and development facilities have been the major factors for causing a huge gap between actual flows and proposed FDI in Nepal.

c. Determinants of Foreign Direct Investment Flows into Nepal

The objective of the study in the determinant analysis has to explore the major determinants of FDI flows into Nepal on the basis of location theory of FDI. From a macro-level analysis, the key determinants of FDI flows into Nepalese economy are financial variables, economic variables, and country risk factors; these variables are appropriate for foreign investors to select the location for the investment. Broad money supply, total transection in financial market, GDP openness, availability of infrastructure, availability of human capital, and tax rate are the significant determinants of FDI flows into Nepal.

Furthermore, the elasticity coefficient of NEPSE has also been negative. The negative elasticity coefficient of NEPSE indicates that the instability of financial market makes the negative impact on FDI flows into Nepal.

Likewise, the elasticity coefficient of MI has been negative and statistically significant. Maoist insurgency is observed to be a big significant disturbance to attract the FDI into Nepal. The elasticity coefficient of CPI (8.41) implies that a 1% increase in general price level leads to an 8.41% increase in FDI flows into Nepal, indicating that the higher consumer price index of the Nepalese economy has been able to attract a large chunk of FDI into Nepal. This is because a higher price leads to higher profits to the foreign investors.

d. Contribution of FDI to Manufacturing Sector

The contribution of FDI to the Nepalese manufacturing sector has been hypothesized and tested for macroeconomic variables—such as gross domestic product in manufacturing sector (MGDP) and employment generation in manufacturing sector—included in the analysis. An instrumental variable and 2SLS analysis is used to assess the relationship between these variables and FDI at the macro level; the result for which are summarized as follows:

I. The FDI makes the positive and statistically significant impact on the manufacturing GDP of Nepal.

II. Adult literacy rate is another factor to make the positive and significant impact on manufacturing GDP.
III. The Maoist insurgency (political instability) is a negative and statistically significant factor to make a negative contribution to manufacturing GDP.
IV. Labour force indicates that a 1% increase in employment in manufacture sector has led to a 0.18% rise in manufacturing GDP; hence, there has been a direct but statistically insignificant relationship between the labour force and manufacturing GDP within the country.

The relationship between FDI flows into Nepal and its contribution to employment generation are summarized as below:

I. The employment in manufacturing sector depends upon the inflows of FDI in manufacturing sector.
II. Corporate tax negatively affects the employment generation in manufacturing sector.
III. A positive relationship between the government expenditure in manufacturing sectors and employment generation within the country indicates that raising employment needs increasing the government expenditure in manufacturing sector.
IV. Furthermore, the positive and statistically significant coefficient of NEPSE index refers to direct relationship between stability of capital market and generation of employment opportunity in manufacture sector.

8.3 Conclusion of the Study

The major findings of this study at the macro level suggest that FDI seems to have raised gross capital formation in Nepal and played a vital role in making the economic growth of the country and in plugging the gap between the demand for and supply of capital. Because of a very low share of global capital flows into Nepal, the government policies towards FDI appear to have changed over time in tune with the changing developmental needs in different phases. The changing policy frameworks have affected the trend and patterns of FDI inflows that the country is receiving. At the same time, the composition and type of FDI seems to have changed considerably. Even though manufacturing industries have attracted FDI in a rising amount, the

service sector seems to account for a steeply rising share of FDI stocks in Nepal only since the 1990s. The magnitude of FDI inflows appears to have increased; in the absence of healthy policy direction for the investors, however, a bulk of FDI flows seem to have gone into manufacturing and service sectors. As regards the investing countries, India and China alone seem to account for more than 50% of the FDI flows into Nepal.

As far as the conclusion of the second objective is concerned, opening up the Nepalese economy for the outside world—and the resulting FDI inflows—seems to have really created new opportunities for Nepal's development and boosted the performances of domestic firms, as well as the globalization of our businesses. However, the trends of actual flows and proposed FDI flows into Nepal tend to be highly fluctuating, and the discrepancy between them to be rising. Foreign investors seem to have chosen their locations, based on the economic situations, rule of law, political conditions, bureaucratic performances and bureaucrats' attitudes. Reducing the discrepancy between proposed and actual flows of FDI, therefore, requires the Nepalese government to improve the qualities and performances of bureaucrats, economic indicators, and political conditions of the Nepal.

Regarding the conclusion of the third objective, the major determinants FDI flows into Nepal are likely to be blacked-topped road, corporate tax rate, gross consumption expenditure, openness, consumer price index, gross domestic product, NEPSE index, broad money supply, tertiary education enrolment, and Maoist insurgency, total transection in financial market were. However, this study's finding of a negative relationship between NEPSE index and FDI flows into Nepal contradicts those of the previous literatures. Blacked topped road, gross consumption expenditure, corporate tax rate, Maoist insurgency, total transection in financial market, openness have produced a predicted impact on FDI flows into Nepal. Maoist insurgency and corporate tax rate seem to be the country-risk factors to make the negative impact on the flows of FDI into Nepal: The negative coefficient of country-risk factors depicts an inverse relationship between country risk factors and FDI flows into Nepal. Therefore, policy makers need to make sincere efforts in reducing the adverse effects of country-risk factors to raise the FDI flows into Nepal.

As regards the conclusion of fourth objective, FDI turns out to be a key factors for the globally integrated the economy and it is a main improver of employment opportunities, innovation of new technology, improvement of production and productivity, and ultimately economic growth. As this study shows the evidences, FDI is bound to play a critical role in fulfilling the development needs. It seems therefore that there has been a significant, positive relationship between FDI inflows and employment generation in Nepal. Free trade has been recognized to be advantageous in terms of an enlarged progress in GDP and employment in manufacturing sectors. Similarly, FDI tends to play a key role in raising the manufacturing GDP in Nepal. The increase in GDP in manufacturing sectors in turn seems to make a favorable environment for foreign trade. From this study, it seems therefore that FDI is crucial for a developing country like Nepal to raise employment and manufacturing GDP.

8.4 Policy Recommendations

Based on the finding of the study, the following policy suggestions have been recommended for an effective utilization of foreign capital and for scaling up the volume of FDI flows into Nepal so that the concerned authorities may fulfill the gap between demand for capital investment and supply of capital in Nepal:

a. This study's finding—that a Nepal still has a minimum share in the global FDI—for current and potential investors, more liberalization of investment regulations is needed. It also emphasizes the importance of efficient and appropriate infrastructure, as well as the availability of both skilled and unskilled labour, business-friendly government, and low corporation tax rates.
b. This study has found a large discrepancy between commitment and actual FDI flows into Nepal. To reduce this gap, therefore, it is necessary to improve the country-risk factors, such as low performances of bureaucrats in their respective fields, their corrupt attitude, red tape created by bureaucrats for foreign investors, and policy complications to approve the FDI. Similarly, it is crucial to improve infrastructures like road transportation, energy supply, and financial institutions.
c. In order to encourage exports through FDI inflows, the government must lower tariff rates and make tariff rates—on imported capital goods utilized

for export and imported inputs for exporting production—duty-free: It has the potential to increase FDI flows into Nepal in a variety of areas.

d. This study has found that infrastructure, human capital, and stability of capital markets are key factors to affect the FDI inflows. Thus, policy makers should focus on developing these sectors to raise the FDI inflows within the country.
e. The investment policies and procedures should be clear and simple for all foreign investors so as to raise the FDI inflows in Nepal.
f. Based on the findings from this study, it is recommended that FDI should be directed more towards Nepal's manufacturing sector—especially in the area of employment generation and GDP growth—because of its strategic relevance to the nation's economy. In addition, the government, stakeholders, and NGOs should make concerted efforts to make Nepalese business environments attractive to foreign investors, to encourage production, and to generate employment especially in the manufacturing sector—and on the whole to enhance the FDI growth.

8.5 Agenda of Future Research

One of the major caveats is that this study has covered the only macroeconomic variables responsible for affecting the FDI inflows in Nepal and that it has not covered a micro-level, or firm-based, study. This study, therefore, has left these questions—on FDI-based and firm-based studies—unresolved for the future researchers. If the future researchers conduct a micro-level study, they can explore sectoral and firm wise stocks of FDI, and identify the real problems behind a small chunk of FDI inflows into Nepal. Another interesting avenue for further research would be to examine the impact of FDI on the service sector of the Nepalese economy. Furthermore, another possible area of future research would be to undertake a study about the impact of FDI on economic growth of the Nepalese economy.

APPENDIX A

(Rs. in million)

Year	FDI	M_2	TTFM	CT (in %)	NEPSE	X	M	OP
1995/96	388.00	92652.2	1054.00	23.00	176.3	19881.10	74454.50	0.38
1996/97	1621.00	103720.6	209.00	23.00	163.4	22636.50	93553.40	0.41
1997/98	685.00	126462.6	416.00	20.00	216.9	27513.50	89002.00	0.39
1998/99	578.00	152800.2	203.00	22.00	360.7	35676.30	87525.30	0.36
1999/00	233.00	186120.8	74.00	22.00	348.4	49822.70	108504.90	0.42
2000/01	-33.00	214454.2	284.00	21.91	227.5	55654.10	115687.20	0.39
2001/02	-282.00	223988.3	128.00	21.91	204.9	46944.80	107389.00	0.34
2002/03	961.40	245911.2	81.00	20.51	222	49930.60	124352.10	0.35
2003/04	0.00	277310.1	65.00	16.15	286.7	53910.70	136277.10	0.35
2004/05	136.00	300440.0	255.00	26.50	386.8	58705.70	149473.60	0.35
2005/06	-470.00	346824.1	198.00	26.50	683.9	60234.10	173780.30	0.36
2006/07	362.30	395518.2	328.00	26.80	963.4	59383.20	194694.60	0.35
2007/08	293.90	495377.1	1432.00	26.10	749.1	59266.50	221937.70	0.34
2008/09	1829.20	630521.2	2648.00	24.00	609.6	67697.50	284469.60	0.36
2009/10	2852.00	719599.1	1475.00	24.70	477.7	60824.00	374335.20	0.36
2010/11	6437.10	921320.1	586.00	24.50	362.9	64338.50	396175.50	0.34
2011/12	9195.40	1130302.3	913.00	24.50	389.7	74261.00	461667.70	0.35
2012/13	9081.90	1315376.3	1258.00	26.00	518.3	76917.10	556740.30	0.37
2013/14	3194.60	1565967.2	1786.00	26.00	1036.1	91991.40	714365.80	0.41
2014/15	4382.60	1877801.5	7729.00	26.00	961.3	85319.10	774684.20	0.40
2015/16	5920.90	2244578.6	5845.00	26.00	1718.2	70117.20	773599.10	0.37
2016/17	13503.90	2591702.0	31656.00	16.25	1582.7	73049.10	990113.20	0.40
2017/18	17512.80	3094466.6	12331.00	17.14	1212.4	81633.30	1242826.80	0.44

Source: Economic Survey, (2009, 2019) and Nepal Rastra Bank (2019)

Where, FDI = Foreign Direct Investment, M_2 = Broad Money Supply, TTFM = Total Transection in Financial Market, CT = Corporate Tax Rate, NEPSE = NEPSE Index, X = Export, M = Import, and OP = Openness

Year	TE (in %)	LE (in %)	AL (in %)	BTR (in Rs. million)	GDP (in Rs. million)	GCF (in Rs. million)
1995/96	4.78	58.52	32.98	3609.00	248913.0	680170.00
1996/97	4.78	59.34	32.98	3655.00	280513.0	710840.00
1997/98	4.36	60.13	32.98	4080.00	300845.0	747280.00
1998/99	4.80	61.66	32.98	4148.00	342036.0	700610.00
1999/00	4.60	62.40	32.98	4522.00	379488.0	922720.00
2000/01	4.12	63.10	32.98	4566.00	441519.0	986490.00
2001/02	4.22	63.70	48.61	4781.00	459443.0	930190.00
2002/03	4.53	64.40	48.61	4811.00	492231.0	1053830.00
2003/04	5.23	65.00	48.61	4871.00	536749.0	1316710.00
2004/05	5.28	65.50	48.61	4911.00	589412.0	1559070.00
2005/06	5.28	66.10	48.61	5048.00	654084.0	1756330.00
2006/07	6.20	66.60	48.61	5402.00	727827.0	2087790.00
2007/08	7.82	67.00	48.61	5845.00	815658.0	2472720.00
2008/09	8.32	67.50	48.61	6094.00	988272.0	3130290.00
2009/10	10.22	67.90	48.61	6669.00	1192774.0	4564890.00
2010/11	11.19	68.30	48.61	9902.00	1366954.0	5192680.00
2011/12	11.15	68.70	59.63	10192.00	1527344.0	5268890.00
2012/13	14.28	69.10	59.63	10659.00	1695011.0	6326010.00
2013/14	14.35	69.50	59.63	11197.00	1964540.0	8087580.00
2014/15	17.89	69.90	59.63	11798.00	2130150.0	8319830.00
2015/16	15.82	70.25	59.63	12173.00	2253163.0	7634160.00
2016/17	14.94	71.00	59.63	12803.00	2674493.0	12521330.00
2017/18	11.79	71.60	59.63	13707.00	3031034.0	16724210.00

Source: Economic Survey, (2009, 2019) and Nepal Rastra Bank (2019)

TE = Tertiary Education Enrollment, LE = Life Expectancy at Birth, EP = Economically Active Population, BTR = Total Length of Black Topped Road, GDP = Gross Domestic Product, and GCF = Gross Capital Formation

Year	MGDP (in Rs. million)	Geim (in Rs. million)	CPI	GCE (in Rs. million)	MEM	GDPdef
1995/96	22466	306	24.9	214487.00	197366.6	70.9
1996/97	24816	263.5	26.9	241351.00	192275.5	76.06
1997/98	26987	477.1	29.1	259407.00	187316	79.18
1998/99	30337	289.4	31.5	295473.00	186228.8	86.22
1999/00	33550	833.9	35.1	321911.00	185147.9	90.08
2000/01	38409	366.8	36.3	390017.00	184073.3	100.0
2001/02	37736	582.5	37.2	415843.00	183005	103.9
2002/03	38826	425.1	38.3	450090.00	181943	107.1
2003/04	41673	40.5	40.1	465687.00	179466	111.6
2004/05	44885	23.5	41.7	521301.00	177022.8	118.4
2005/06	47840	31	43.6	595327.00	174612.8	127.1
2006/07	52172	91.2	47.1	656374.00	172235.6	136.8
2007/08	57185	96	49.8	735470.00	169891	144.5
2008/09	65447	348.3	53.2	895042.00	174637.8	167.5
2009/10	70924	356.6	59.9	1056185.00	179517.3	192.80
2010/11	80531	30.1	56.6	1176030.00	184533.1	213.6
2011/12	91164	221.5	71.9	1359539.00	189689	227.8
2012/13	100312	1480.2	77.8	1516129.00	194989	242.8
2013/14	112995	1365.8	85.5	1730312.00	236380.2	265.5
2014/15	118980	1804.8	93.3	1934046.00	286557.8	278.6
2015/16	120967	2318.4	100	2161519.00	347386.7	293.0
2016/17	133862	2782.6	109.9	2315287.00	421128.2	321.4
2017/18	151251	2343.1	114.8	2491115.00	510523	341.5

Source: Economic Survey, (2009, 2019) and Nepal Rastra Bank (2019), C.B.S.Nepal

MGDP = Manufacturing Gross Domestic Product, EM = Proposed Employment in Foreign Direct Investment Industry, CPI = Consumer Price Index, GE = Government Expenditure, GCE = Gross Consumption Expenditure, MEM = Employment in Manufacturing FDI Based Industry, and GDPdef = GDP deflator.

APPENDIX B

QUESTIONNAIRE

Dear Sir/Madam,

I would like to inform you that I am undertaking a PhD research work entitled **A Critical Analysis of Factors Affecting Foreign Direct Investment Inflows in Nepal and Its Contribution in Manufacturing Sector** to fulfill the requirement of PhD Research in Economics under the Faculty of Humanities and Social Science, Tribhuvan University. You are kindly requested to fill up the following questionnaire. The information provided will be kept confidential.

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A. Respondent Profile

Name (optional): …….

Designation: .....

Profession/ institution: .....

Gender: Male [ ] Female [ ]

Age (in years): 30 and below [ ] 31-40 [ ] 41-50 [ ] 51-60 [ ] 61 and above [ ]

Qualification: PCL (+2) and below [ ] Bachelors [ ] Masters [ ] M. Phi. and PhD [ ]

B. Political Factors:

1. Please specify your level of agreement or disagreement associated with following observations on discrepancy between proposed foreign direct investment (FDI) and actual inflows of foreign direct investment (FDI) due to political factors. (Please make a tick mark at appropriate number. 1= Strongly disagree, 2 = Disagree, 3 = No idea, 4= Agree, 5 = Strongly agree)

S. N.	Statements	1	2	3	4	5
a.	Frequent change in government in the country					
b.	Frequently strike by political parties					
c.	Big size of government has adversely affected the committed FDI in flows					
d.	Force donation from political parties with foreign investors.					
e.	Lack of civil liberties.					

C. Rule of Law

2. Please specify your level of agreement or disagreement associated with following observations on difference between proposed FDI and actual inflows of FDI causes of factors related to rule of law. (Please make a tick mark at appropriate number. 1= Strongly disagree,2 = Disagree, 3 = No idea, 4= Agree, 5 = Strongly agree)

S. N.	Statements	1	2	3	4	5
a.	Ineffective existing law about property rights					
b.	Policy complication to approve the foreign direct investment					
c.	Poor transparency in government activities regarding the FDI					
d.	Insufficient existing government institution to promote and regulate FDI					
e.	Low level of judicial independency					

D. Market Size:

3. Please specify your level of agreement or disagreement associated with following observations on gap between proposed FDI and actual inflows of FDI due to existing market size in Nepal. (Please make a tick mark at appropriate number. 1= strongly disagree, 2 = Disagree, 3 = No idea, 4= Agree, 5 = strongly agree)

S. N.	Statements	1	2	3	4	5
a.	Low level of per capita income of the Nepalese people					
b.	Low level of existing GDP growth rate of Nepal					
c.	Lack of competitiveness of domestic products in international market due to high production costs					
d.	Difficulty of accession in international market					
e.	Insufficient availability of factor inputs					

E. Financial Factors

4. Please specify your level of agreement or disagreement associated with following observations on difference between proposed FDI and actual inflows of FDI causes of existing financial factors. (Please make a tick mark at appropriate number. 1= Strongly disagree,2 = Disagree, 3 = No idea, 4= Agree, 5 = Strongly agree)

S. N.	Statements	1	2	3	4	5
a.	Depreciating exchange rate of Nepalese currency in relation to US dollar					
b.	Inconsistent trends of Nepalese capital market					
c.	Insufficient availability of financial institution in Nepal					
d.	Provision of low tax incentive for foreign investors					
e.	Excessive legal protection for workers in foreign financing sectors					

F. Availability of Infrastructure

5. Please specify your level of agreement or disagreement associated with following observations on gap between proposed FDI and actual inflows of FDI as present development of infrastructure. (Please make a tick mark at appropriate number. 1= strongly disagree, 2 = Disagree, 3 = No idea, 4= Agree, 5 = strongly agree)

S. N.	Statements	1	2	3	4	5
a.	Insufficient availability of road transportation					
b.	Insufficient availability of communication facilities					
c.	Inadequate supply of energy in appropriate investment area					
d.	Poor research and development facilities in the country					
e.	Insufficient availability of commercial/ industrial buildings					

G. Country Risk Factors

6. Please specify your level of agreement or disagreement associated with following observations on discrepancy between proposed FDI and actual inflows of FDI due to existing country risk. (Please make a tick mark at appropriate number. 1= Strongly disagree,2 = Disagree, 3 = No idea, 4= Agree, 5 = Strongly agree)

S. N.	Statements	1	2	3	4	5
a.	Prevailing high inflation rate					
b.	High volume of debt					
c.	High volume of trade deficit					
d.	High rate of corporate tax					
e.	Lack of proper security for foreign investment					

H. Bureaucratic quality

7. Please specify your level of agreement or disagreement associated with following observations on discrepancy between proposed FDI and actual inflows of FDI due to quality of Bureaucracy. (Please make a tick mark at appropriate number. 1= Strongly disagree,2 = Disagree, 3 = No idea, 4= Agree, 5 = Strongly agree)

S. N.	Statements	1	2	3	4	5
a.	Low performance of bureaucrats in their respective place					
b.	Corruptive attitude of bureaucrats					
c.	Negative attitude of bureaucrats to foreign investors					
d.	Rudeness of bureaucrats with foreign investors					
e.	Unnecessary complex process created by bureaucrats for foreign investors					

8. Any other reasons on gap between committed FDI and actual FDI inflows in Nepal? Please specify.

a. ……

b. .....

c. .....

d. .....

e. .....

Thanking you.
Bashu Dev Dhungel
PhD Scholars in Economics

APPENDIX C

List of FDI based Industry

Up to 50 Crores

New Hope Agro Business Nepal PVt. Ltd.	Bharatpur-15, Chitwan
Butwal Power Company Ltd	Kathmandu
Madi Power Pvt Ltd	Baluwatar, Kathmandu
American Life Insurance Company	Pulchowk, Lalitpur
Life Insurance Corporation (Nepal) Limited	Naxal, Kathmandu
Hongshi Shivam Cement Pvt Ltd	Naxal, Kathmandu
Nepal Water and Energy Development Company Ltd	Naxal, Kathmandu
Dish Media Network Pvt Ltd	Tinkune, Kathmandu
Taragaon Regency Hotels pvt ltd	Bouddha Kathmandu
Himal Power Limited	Jhamshikhel, Lalitpur
United Telecom	Putalisadak, Ktm
Bottler's Nepal Pvt Ltd	BID, Balaju Ktm
SinoHydro Sagarmatha Power Company Pvt Ltd	Dhumbarahi-4
Manipal Education	Phulbari-11, Pokhara
Unilever Nepal Limited	Makawanpur
Maruti Cements Ltd	Siraha
SJVN Arun-3 Power Dev Co Pvt Ltd	Lokanthali, Bhaktapur
Aarti Strips Pvt Ltd	Tankisinwari, Morang
Surya Nepal Pvt ltd	Kantipath, Bal sadan
Ncell Pvt Ltd	Ekantakuna, Lalitpur
Nepal Jalvidyut Prabardhan tatha bikash ltd	Jawalakhel steel tower
Asian Paints (Nepal) Pvt Ltd	Balkumari, Lalitpur
Tundi Power company pvt ltd	Shanti basti, sanepa
Nabil bank Ltd	0
Standard chartered	0
Nepal SBI Bank Ltd	0
Himalayan Bank Ltd	0
NB Bank Ltd	0
Everest Bank Ltd	0

10 to 50 Crores

Himalaya Spring Water Pvt. Ltd.	Dhunche-8, Rasuwa
Berger Jenson and Nincholson (Nepal) Pvt. Ltd.	Bhaktapur
Kansai Paints Nepal Pvt. Ltd.	Birgunj-13,
Mandu Hydropower Ltd	Kamaladi, Kathmandu
Gorkha Brewery Pvt. Ltd.	Hattisar, Kathmandu
Surikhola Hydropower Pvt Ltd.	Kathmandu-4
Solu HydroPower Pvt Ltd	Naxal-1 Kathmandu
Gurans Energy Limited	Narayan Chaur, Naxal
Bhote Koshi Power Company Pvt Ltd	Red Cross Marg, Ktm
Gorkha Lahari	Hetauda Ind. Estate

C.G Cements Industries Pvt Ltd	Sanepa-2 Lalitpur
Hotel Annapurna View Sarangkot Pvt ltd	Kupondole, Lalitpur
Upperdaki Hdropower Company Pvt Ltd	Baluwatar
Silver Heritage Investment Pvt Ltd	Tindhara, Kathmandu
Himalaya Airlines Pvt Ltd	Garidhara-1, Ktm
Dabar Nepal Pvt Ltd	Tinkune, Kathmandu
Sarbottam cement pvt ltd	Tinkune, Ktm
Nepal Hydro and Electric Ltd	Butwal
Brij Cement Industries Pvt Ltd	Gonaha-07, Rupandehi
Nepal Hokke Pvt Ltd	Lumbini Sacred Garden
Hulas steel Industries Pvt ltd	Jitpur, Simra Bara
Antartic Biscuits Pvt Ltd	Hetauda Ind estate
NMB Bank Ltd	0
Lumbini Hotel Kasai Pvt Ltd	Lumbini Rupandehi
Casino Imperial Pvt.Ltd	S-H&R
Hotel Everest International Ltd	S-H&R
L.M.Suvir Brothers(Nepal) Pvt. Ltd.	S-O
M/S Betrawati Hydro Electric Company	I-EG&W
M/s Moonlight Hydropower Compsnt Pvt. Ltd	I-EG&W
M/s Silver Phoenix Publication Pvt Ltd	S-E
Mega Infra Service Pvt. Ldt.	S-TSC
Nepal Issuisha Pvt. Ldt.	I-C
New Hope agro Business Nepal Pvt.Ltd.	Agri
Pride entertainment and recreation pvt.ltd	S-O
R.M. Chemical Nepal Pvt. Ltd	I-M&Q
Recharge Labs Pvt Ltd	I-EG&W
Shakti Investment Company Pvt.Ldt.	S-F
Sun Farmer Nepal Pvt.Ltd.	Agri
Sunrise Int'l Group Hotel P. Ltd.	S-H&R
World Claim Nepal Pvt Ltd	S-O

Upto 10 Crores

Soaltee Hotel Limited	Tahachal, Kathmandu
Nissaku Company (Nepal) Pvt Ltd	New Baneshwor, Ktm
Storm Communication Nepal Pvt Ltd	Naxal Ktm
Royal Penguine Bouique Hotel Pvt ltd	JP Road Thamel
Thompson Nepal Pvt Ltd	Kathmandu
GTL Nepal Pvt Ltd	Koteshwor-35
Smart Assemble Pvt Ltd	Gairidhara, Lazimpat
Sagarmatha Insurance Co.	Naxal, Kathamandu
Probiotech Industries	Kathmandu-9
R.K. Plastic Pvt Ltd	BID, Balaju
Everest Biotech Pvt Ltd	Khumaltar, Lalitpur
Freight System (Nepal) Pvt Ltd	Kathmandu
Chenhui Minerals Energy co ltd	Dillibazar-33 Ktm

Trava Luxury Hotel P Ltd	Chhetrapati, Thamel
Pavilions Himalaya Pvt Ltd	Pokhara
Sita World Travel Pvt ltd	Jwagal-10, Lalitpur
The Last Resort adventure Pvt ltd	Chaksibari Marg, Ktm
Summit Nepal Treeking Pvt Ltd	Sanepa, Lalitpur
Annapurna Cable car Pvt ltd	Kupondole, Lalitpur
Closure Systems International Nepal Pvt ltd	Hetauda Ind estate
Sanima Hydro and Engineering pvt ltd	Dhumbarahi-Kathmandu
Chera Khola Hydro Power Pvt Ltd	Juwagal Lalitpur
Tiger Mountain Pvt Ltd	Pokhara Lekhnath -26
One to watch Nepal Pvt Ltd	Lalitpur Nepal
GMR Upper Karnali Hydropower Limited	Chakupat, Lalitpur
Red Mud coffee Pvt Ltd	Jhamshikhel Lalitpur
Trava Bricks Pvt Ltd	NawalParashi
Mum's Garden Resort	Pokhara-Kaski
Avia Club Nepal Pvt Ltd	Pokhara
Fronteirs Paragliding	Lakeside, Pokhara
Blue Sky Paragliding	Lakeside-6, Pokhara
Marvel Technoplast Pvt Ltd	Hattimuda-8, Morang
Yamashoo Pvt Ltd	Sitapaila
Arghakhanchi cement pvt ltd	Thapathali-11, Ktm
Business Oxygen Pvt Limited	Jhamshikhel, Lalitpur
Steadfast Nepal Pvt Ltd	Kusunti, Thashikhel-14
Himalayan Encounters Pvt Ltd	Thamel
Nepal Metal Company Ltd	Lainchaour
Paypoint Nepal pvt ltd	Nagpokhari Naxal
Shambling Hotel Pvt Ltd	Boudha, Kathmandu
Vayodha Hospitals Pvt Ltd	Balkhu, Kathmandu
Ace Institute of Management Pvt Ltd	Sinamangal
CG safari and Tours pvt ltd	Sanepa-2 Lalitpur
Huawei Technologies Nepal Co Pvt Ltd	Sanepa-3, Lalitpur
ZTE Nepal Pvt Ltd	Sanepa-2, Lalitpur
Ceragem Nepal Pvt ltd	Naryanchour-1 Naxal
Altai Himalaya workshop Pvt Ltd	Kathmandu-15, Chhauni
Olive Media Pvt Ltd	Kathmandu-7 Chabahil
Daraz Kyamu Pvt ltd	Naxal-1, Kathmandu
Nahata International pvt ltd	Kichapokhari
Hilltake industries Pvt ltd	Tankisinwari Morang
Hilltake Health Homes Pvt ltd	Surya binayak, Bhaktapur
Hilltake Electrical and Refregerator	Tankisinwari, Morang
Kilroy Restaurant Pvt Ltd	Ktm-30
Tripura Industries Nepal Pvt ltd	Hetauda, Makawanpur
Prestige Loopmats Industries	Murli, Birgunj
Himalayan Terminals Pvt Ltd	ICD, Birgunj

Devdaha Medical college	Devdaha-09, Rupandehi
Smart Telecom Pvt Ltd	Kumaripati, Lalitpur
Noryang Hotel	Bouddha-6, Kathmandu
Mangalam Industries Pvt Ltd	Teku-11, Kathamandu
Jagadamba Enterprises Pvt Ltd	Chorni-8, Parsa
Nepal Yuncheng Plate Making company Pvt ltd	HID, Hetauda
Eastern Plastic Industries Pvt ltd	Chatapipra, Bara
Rural Microfinance Dev Centre Ltd (RMDC)	0
Varun Beverages Nepal Pvt ltd	Koteshwor, Ktm
Maccaferri (Nepal) Pvt Ltd	Kathmandu-6, Nepal
Bondii Pvt Ltd	Pokhara, Bhakunde-26
CCS Nepal Pvt Ltd	Naxal Kathmandu
National Life Insurance Company Pvt Ltd	Lazimpat
Himtal Hydropower Company Pvt Ltd	Chakupat, Lalitpur
K-To Restaurant & Bar Pvt Ltd	Ktm-29
Nirdhan Uthan Bank Limited	0
Hotel Vajra guest House Pvt Ltd	Balakhu - 10, Bhaktapur
Bodhi Garden Vegetarian Resturant	Narayan Gopal Chowk,
Khusi Khusi Hotel P. Ltd	Chandragiri
Weathernews Nepal Pvt Ltd	
Deerwalk Services Pvt.Ltd.	Kathmandu
Seva Development Pvt.Ltd.	Nagpokhari, Ktm
Waste Concern Pvt Ltd	Pulchowk Lalitpur
ICRA Nepal Ltd, Kathmandu	Kathmandu, Charkhal
Jia Cheng Motorbike Assemmbling Company Pvt Ltd	Lagankhel
Super Eco Brick Innovations Pvt Ltd	Jhamsikhel, Pulchowk
Purna Bikram Cozy Stay Pvt Ltd	Kathmandu,Sinamangal
Verisk Nepal Pvt Ltd	Hattisar, Kathmandu
Purna Enterprises Pvt Ltd	Bhaisepati
Reliable Diagnostic Laboratory Nepal Pvt Ltd	Near Lok sewa aayog
Tao Guest House Pvt Ltd	Shiva Bhakta Marga, Ktm
Lavee Residence Pvt Ltd	
VA Group Pvt.Ltd,Lalitpur	Jhamsikhel Chowk,
Puresoftware Pvt.Ltd.	Gyaneshwor, Ktm
Trans Nepal Freight Services Pvt.Ltd	Biratnagar
Eco Home Nagarkot, Pvt Ltd	Nagarkot
Anna Paul House Pvt Ltd	Pokhara
Hotel Mount Carmel Pvt Ltd	Pokhara
A.M. Nepal Pvt Ltd	S-TSC
Alan International Language Institute	S-E
Alpine Coffee Estate Pvt Ltd	Agri
Anahata Place Pvt.Ltd	S-H&R
Arrirang Hotel Pvt. Ltd.	S-H&R
ASDCS Asia Pvt.Ltd.	S-O

Avatar Resort & Spa Pvt.Ltd.	S-H&R
Bajra Energy Ventures	I-EG&W
Barah Multipower Pvt.Ltd.	I-EG&W
Boicomp Nepal	S-O
By Proxy Nepal.Com	S-TSC
Center For Strategic Knowledge Pvt Ltd	S-E
Charikot Modern Language Institute, Bhimeshwor Dolakha	S-E
Chenhui Mining Co. Ltd.	I-M&Q
Coco Waffle Restaurant Pvt. Ltd.	S-H&R
Coffee for you pvt.ltd	Agri
D.W. CLOTHING NEPAL PVT	S-O
Delta Telecom Nepal Pvt Ltd	S-TSC
Dinadi Private Limited	I-M&Q
EA Outsource Nepal Pvt Ltd	S-O
EMOOR Nepal Pvt. Ltd	I-M&Q
EVEREST PCI PEST MANAGEMENT PVT . LTD,	Agri
Fred's Bakery P. Ltd.	I-M&Q
Gandiania Eco Village Resort P. Ltd.	S-H&R
Garrets Language Training Centre Pvt. Ltd.	S-E
GHN Pvt Ltd.,	I-C
Grand Hotel Pvt. Ltd.	S-H&R
H Plant Pvt.Ltd.	I-M&Q
Hearts & Tours Travels & Tours Pvt Ltd	S-H&R
Herb Nepal P. Ltd.	Agri
Hi Art(Nepal) Pvt. Ltd	I-M&Q
Himadri Food Pvt. Ltd.	S-H&R
Himalaya Plantation Pvt. Ltd.	Agri
Himalayan Century Resort Pvt.Ltd	S-H&R
Hotel Arts Kathmandu Pvt. Ltd.	S-H&R
Hotel Bajra Guest	S-H&R
Hotel Kaze Darbar Pvt Ltd	S-H&R
Hotel Mount Caramel P. Ltd.	S-H&R
Hotel Samsara Pvt Ltd	S-H&R
Idex Nepal Pvt. Ltd.	S-HSO
IDP Education Nepal Pvt Ltd	S-E
Japan Nepal Clean Energy Pvt.Ltd.Anamnagar	S_O
Jeaons Industries(Nepal) Pvt. Ltd.	S-O
John raj P.Ltd	S-O
Kailas Nath Mahadev Cable Car Pvt.Ltd	S-TSC
Kairosh Café Private Ltd.	S-H&R
Kathmandu Story tellers Pvt. Ltd. Lalitpur Tell-	S-E
Konic Asia Pvt. Ltd	S-E
Korea Grace Farm P. Ltd	Agri
Korean Peace Family Reasturant Pvt.Ldt.	S-H&R

Laraib Fabrik Industries Pvt. Ltd	I-M&Q
Laseter Language Training Centre P.Ltd	S-E
Leap Frog Technology Nepal Pvt.Ltd.	S-TSC
Lee Language & Computer Institiue	S-E
Les Terrasses Private Limited	I-M
Line System Engineering Nepal Pvt/Ltd.	I-C
Maharshi Vedik Institute Pvt. Ltd.	S-E
Mednet Nepal Company Pvt Ltd	I-M
Mentor Korean Institute P..Ltd.	S-E
Miyamoto International	S-O
Modern Logistics Pvt Ltd	S-TSC
Mr. Edwin Kenneth Marzec(PP No. 048361101)	S-TSC
Naya Bato Gil Pvt. Ltd.	S-E
Nepal Donghua construction engineering co. ltd	I-C
Nepal Eco- Venture Tyre Recycling(P) Ltd.,	S-TSC
Nepal Ekarat Engineering Co. Pvt. Ltd	I-M&Q
Nepal Green High tech Pvt.Ltd	S-TSC
Nepal Wellhope Agri-tech (p) Ltd	I-M&Q
Nilo Studio P. Ltd	S-TSC
Omstone Asia Capital Nepal P.Ltd	S-H&R
Omstone Asia Capital Nepal Pvt.Ltd	S-H&R
Orenet Mineral and metals Nepal Pvt.Ltd,	I-M&Q
Organic mountain flavour pvt.ltd	Agri
Orient Digital Media Pvt Ltd	S-TSC
Prakash And Himalaya Training Center Pvt. Ltd	S-E
Purna Enterprises,	S-O
Pyro Networks P.Ltd. Dhapasi Kathamandu	S-TSC
R.M. Group Pvt.	Agri
Rajdhani Craft Nepal P.Ltd	I-M&Q
Resonence Nepal Pvt. Ltd	S-TSC
Rijal Tashi Industries	I-M&Q
Shanti Restaurent P. Ltd.	S-H&R
Shree Balaji Fashion Pvt Ltd	S-O
Sir Fragrances Pvt,Ltd	I-M&Q
Sir Fragrances Pvt,Ltd	I-M&Q
Skylark agro Pvt Ltd	Agri
Solukhumbu Snow land Hotel & Lodge	S-H&R
South Chine Mining Energy Co.Pvt. Ltd.	I-M&Q
Sprout Technology	S-TSC
Sunflag Cement Industries P. Ltd.	I-M&Q
Surya Prakash construction Pvt. Ltd	I-C
T. Everest Pvt Ltd,	S-O
Tech one Global Nepal Pvt Ltd	S-TSC
Temple plaza resort pvt. Ltd	S-H&R

The Life Story Resort P,.Ltd.	S-H&R
Top Language Training and Computer Training Institute Pvt.	S-E
Top of the World Coffee pvt.ltd	S-H&R
Tractor Nepal P.Ltd.Soltee Mode	S-O
Ullens Education Pvt Ltd ,Jawlakhel Lalitpur	S-E
Uttam Coffee udhog P. Ltd.	Agri
Vishuddi Private Limited	S-O
X Factor Nepal Pvt.Ltd.	S-O
Zamil Nepal Pvt Ltd	S-TSC
Zimris Technologies Nepal Pvt.Ltd.	S-TSC
CIWEC Hospital Pvt. Ltd.	S-HSO
Menlha Nurshing Home & Med. Center	S-HSO
Surya Chandrama Organics	Agri
Ying Yang Restaurant & Bar	S-H&R
Tharu Village Resort Pvt. Ltd	S-H&R

Source: Nepal Rastra Bank 2018

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