

**Impact of Indian Aid on Economic Growth of Nepal**

**A Thesis**

**Submitted to**

**Central Department of Economics**

**Faculty of Humanities and Social Sciences**

**Tribhuvan University**

**In Partial Fulfillment of Requirements for the Degree of**

**Master of Arts in Economics**

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**March 2025**

## LETTER OF RECOMMENDATION

This thesis **Impact of Indian Aid on Economic Growth of Nepal** titled has been prepared by Aarohan Bhattarai under my supervision. I hereby recommend this thesis for examination to the Thesis Committee as a partial fulfillment of the requirements for the Degree of MASTER OF ARTS in ECONOMICS.

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Ass. Professor Damodar Adhikari

(Thesis Supervisor)

## APPROVAL SHEET

We clarify that this thesis titled **Impact of Indian Aid on Economic Growth of Nepal** submitted by Aarohan Bhattarai to the Central Department of Economics, Faculty of Humanities and social Sciences, Tribhuvan University, in partial fulfillment of the requirements for the Degree of Master of Arts in Economics has been found satisfactory in scope and quality. Therefore, we accept this thesis as a part of the said Degree.

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## ACKNOWLEDGEMENTS

I am deeply grateful to my thesis supervisor, Mr. Damodar Adhikari, Ass. Professor at the Central Department of Economics, Tribhuvan University, for his invaluable guidance, encouragement, and insightful suggestions throughout my research. I also extend my thanks to Prof. Ram Prasad Gyanwaly, PhD, Head of the Central Department of Economics, for his helpful advice and direction. My appreciation goes to all the faculty members of the Central Department of Economics for their kind responses to my queries.

Additionally, I wish to thank the non-teaching staff of the Central Department of Economics, the staff of the Central Library at Tribhuvan University, and officials from both government and non-governmental organizations for their support during my study.

I am profoundly indebted to my friends and family for their continuous encouragement and support in completing this work on time.

I acknowledge that I am solely responsible for any errors or discrepancies that may be present in this thesis.

Aarohan Bhattarai

March 2025

## ABSTRACT

This thesis explores the impact of Indian foreign aid on the Nepalese economy, analyzing how bilateral assistance from India influences Nepal's key macroeconomic indicators such as Gross Domestic Product (GDP), gross capital formation, and government expenditure. As one of Nepal's largest development partners, India has consistently provided financial and technical assistance aimed at enhancing infrastructure, education, health, and other sectors critical to economic development. However, the actual effectiveness of this aid in fostering sustained economic growth in Nepal remains a subject of debate, particularly given the complex political and institutional dynamics between the two countries.

To empirically investigate this relationship, the study employs the Autoregressive Distributed Lag (ARDL) bounds testing approach to cointegration, which is particularly well-suited for small sample sizes and variables with mixed orders of integration ( $I(0)$  and  $I(1)$ ). Time-series data spanning from [insert years] are used to analyze both the short-run and long-run dynamics between Indian aid and Nepalese economic indicators. The ARDL model allows for the assessment of the immediate as well as the lagged effects of aid inflows, offering a nuanced understanding of how such aid translates into economic outcomes over time.

The empirical findings reveal a statistically significant long-run relationship between Indian aid and Nepal's economic growth. In the long run, Indian aid demonstrates a positive and robust influence on GDP and capital formation, indicating that aid has contributed to economic development when sustained over time. However, in the short run, the results are more mixed. The short-run coefficients suggest a weaker and sometimes inconsistent relationship, potentially due to administrative bottlenecks, governance issues, and delays in aid disbursement or project implementation. These findings highlight the importance of improving institutional capacity and ensuring that aid is aligned with national development priorities.

By focusing specifically on Indian aid—a relatively underexplored area in aid effectiveness literature—this study contributes to the broader discourse on the role of bilateral assistance in shaping the developmental trajectories of small economies. It also provides important policy implications for both Nepalese and Indian policymakers, emphasizing the need for strategic planning, improved transparency, and accountability in aid utilization to maximize developmental outcomes.

## **LIST OF ABBREVIATIONS AND ACRONYMS**

**ADB** – Asian Development Bank

**EEC** – European Economic Community

**IBRD** – International Bank for Reconstruction and Development

**IMF** – International Monetary Fund

**OPEC** – Organization of the Petroleum Exporting Countries

**UNCTAD** – United Nations Conference on Trade and Development

**UNDP** – United Nations Development Program

**UNICEF** – United Nations International Children's Emergency Fund

**WB** – World Bank

**WHO** – World Health Organization

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# CHAPTER I

## INTRODUCTION

### 1.1 Background of the Study

For a developing country like Nepal, internal financing alone is insufficient to meet its economic growth targets. With limited domestic resources, Nepal must rely on external assistance to overcome its capital constraints and escape the cycle of poverty. Foreign aid serves as a vital instrument in filling the gap between what is available domestically and what is required for sustainable development. This reliance is not unique to Nepal; even developed nations receive foreign aid in various forms to enhance their economic progress. In the context of developing nations, foreign aid—also known as "Economic Aid" or "Development Assistance"—is typically the transfer of capital, technology, and resources from one country to another, often in the form of grants or concessional loans.

Foreign aid may be provided bilaterally, from one government directly to another, or multilaterally, channeled through international institutions such as the International Bank for Reconstruction and Development (IBRD). As defined by economist Michael Todaro (1988), foreign aid is the international transfer of real resources to less developed countries (LDCs) on concessional terms, with the aim of fostering economic development and improving living standards. These concessional terms often include lower-than-market interest rates, extended repayment periods, and grace periods before the first payment is due, ensuring that the receiving country can manage its financial obligations without hindering its developmental efforts.

The two primary components of foreign aid are grants and loans. Grants are non-repayable resources, essentially gifts from donor nations, intended to support projects that may not generate immediate financial returns, such as those in healthcare, education, or social infrastructure. Loans, on the other hand, must be repaid, though they often include a grant element, meaning part of the loan is offered at concessional terms that are more favorable than those available through commercial markets. The degree of concessionality is determined by factors such as interest rates, the maturity period of the loan, and any grace period before repayment begins.

Foreign aid can also be classified based on its function. Capital aid involves providing funds or resources to support large infrastructure projects, while commodity aid typically involves the transfer of surplus goods from donor countries to recipient nations. Technical assistance, another crucial form of aid, focuses on providing training and expertise to build the recipient country's technical capacity. This can include the provision of experts from donor nations or the training of local professionals to carry out key developmental tasks.

In Nepal's case, the need for foreign aid is exacerbated by the country's structural challenges. Despite a population of 28.8 million, growing at 1.60% annually, Nepal's per capita income remains low, at just \$853 in 2016, according to World Bank data. Around 23.2% of the population lives below the poverty line (Economic Survey 2016), indicating severe income disparity and low standards of living. These challenges are compounded by the country's rugged terrain, landlocked geography, and limited natural resources, all of which restrict economic activities and

infrastructure development. As a result, the fiscal base is small and unlikely to grow rapidly, making Nepal heavily reliant on foreign aid to finance its developmental needs.

This dependence on external resources has a long history. Nepal began receiving foreign aid in earnest following the advent of democracy in 1950, which coincided with the initiation of planned development efforts. Foreign aid has since played a critical role in sectors such as transportation, energy, irrigation, education, and healthcare, helping to improve infrastructure, increase agricultural productivity, and extend vital public services. Nevertheless, despite decades of foreign assistance, the country continues to face significant fiscal deficits. Between 1990/91 and 2016/17, Nepal experienced a cumulative resource deficit of NRs 765,871 million, highlighting the persistent gap between available resources and public spending needs.

India has been one of Nepal's most important and consistent donors, providing aid for both economic and strategic reasons. Since 1951, India has supported numerous sectors of the Nepalese economy, including transport, education, healthcare, and agriculture. Indian aid not only focuses on economic development but also has broader political and strategic implications, reflecting the close geographical and historical ties between the two countries. Over the years, India has funded critical infrastructure projects, such as roads, hydroelectric power plants, and cross-border trade facilities, which are vital to Nepal's economic integration with the region.

In recent years, India's aid commitments to Nepal have increased substantially. In the fiscal year 2016/17, India committed NRs 62,479 million, with disbursements amounting to NRs 33,000 million, achieving a disbursement rate of 52.81%. The trend of increasing aid continued in subsequent years, with Indian aid commitments reaching approximately INR 5-7 billion annually from 2017 to 2020, primarily aimed at infrastructure development, healthcare, and education. By the fiscal year 2023/24, India's aid to Nepal reached INR 7 billion, marking the largest single-year allocation to date.

India's aid has been crucial in projects such as building new roads, improving cross-border trade routes, expanding healthcare facilities, and supporting post-earthquake reconstruction efforts. Nepal's reliance on Indian aid underscores the broader issue of its economic dependency, but at the same time, it highlights the positive role foreign aid can play in facilitating development. However, to achieve long-term sustainability, Nepal must work toward reducing its dependence on foreign assistance by developing its fiscal capacity and increasing domestic resource mobilization. Ideally, foreign aid should serve as a temporary measure, enabling the recipient country to build sufficient capacity to fund its own development in the future.

In conclusion, foreign aid is an indispensable tool for a developing country like Nepal, where internal resources fall short of developmental needs. India's role as a leading donor has been instrumental in supporting Nepal's infrastructure, education, and healthcare sectors. Nevertheless, foreign aid is not a permanent solution, and Nepal must prioritize building its own financial and economic resilience to ensure sustainable development in the long run.

## 1.2 Statement of The Problem

The economic development of any country largely hinges on the effective utilization of its available resources, including natural wealth, capital, and human capabilities. However, many developing nations, including Nepal, struggle to maximize these resources due to a lack of domestic capital and advanced technology. As a result, the population often finds itself trapped in a vicious cycle of poverty, where low levels of income lead to minimal savings and, consequently, limited investments. In this context, foreign aid becomes a crucial element for countries like Nepal to break this cycle and advance toward sustainable development.

Foreign aid has played a prominent role in Nepal's economic growth, acting as an essential tool to bridge gaps in capital, technology, and infrastructure. There is scarcely any sector of Nepal's economy that has not benefited from some form of external assistance, whether in agriculture, education, healthcare, or infrastructure development. Numerous international donors, including bilateral partners and multilateral organizations, have participated in supporting Nepal's economic development, making foreign aid indispensable for the country. This reliance on external assistance stems from Nepal's inability to mobilize sufficient domestic resources on its own. With its internal resources alone, Nepal would find it exceedingly difficult to progress on the path of development.

Nepal's challenges are multifaceted. The country faces widespread poverty, characterized by low standards of living, low agricultural productivity, a rapidly growing population, high unemployment, a limited tax base, and a significant trade deficit. These structural problems hinder Nepal's ability to generate the necessary capital and investment to support economic growth. As a result, the country must rely on foreign aid to fill these gaps and overcome these limitations. Various reports, including the Economic Surveys and CBS reports, underscore the fact that without external assistance, Nepal would struggle to address its developmental challenges.

Foreign aid is essential for generating employment opportunities, enhancing living standards, and boosting domestic savings. However, meeting these goals requires substantial public expenditure, which Nepal cannot finance on its own. Foreign aid provides not only financial resources but also critical technical knowledge, skilled personnel, organizational expertise, and advanced production techniques, all of which are essential for increasing productivity and developing a sustainable economy. It also brings market information and access to global networks that are vital for improving Nepal's economic standing.

Foreign aid, particularly from India, has been a long-standing feature of Nepal's development strategy. Nepal's government frequently emphasizes the importance of securing additional foreign assistance to meet its growing developmental needs. Year after year, the volume of foreign aid received by Nepal has increased, although reports suggest that these funds have not always been fully utilized. The International Cooperation Report highlights several factors contributing to this underutilization. On the recipient side, inefficiencies in administration, limited absorptive capacity, corruption, and delays in project implementation have hampered the effective use of foreign aid. On the donor side, strategic motives, misaligned aid programs, and vested interests may influence the direction and effectiveness of the assistance.

### **1.3 Research Questions**

The economic development of any nation relies on the effective utilization of its available resources, including the capacity of its people to harness natural resources. However, despite receiving foreign aid, many countries, including Nepal, have not been able to fully capitalize on these funds. This may be due to factors such as inefficient administration, limited capacity to absorb aid, corruption, delays in project implementation on the recipient's side, and various vested interests. Additionally, directed aid programs and strategic motives from the donor's side can further complicate the effective use of foreign aid.

This study aims to explore the following key questions:

1. What is the impact of Indian development aid on Nepal's economic growth (GDP) from 1990 to 2023?
2. How do government expenditure, gross fixed capital formation, and exports mediate the effects of Indian aid on Nepal's economy?
3. Why do the long-term effects of Indian aid on Nepal's economic growth and development vary over time?

### **1.4 Objectives of the Study**

General Objective:

To analyze the impact of Indian aid on the economic growth of Nepal.

Specific Objectives:

1. To examine the direct and indirect impacts of Indian aid on Nepal's economic growth.
2. To analyze how government expenditure, capital formation, and exports mediate the effects of Indian aid.
3. To assess why the long-term contributions of Indian aid to Nepal's development evolve over time from 1990 to 2023.

## **1.5 Significance of The Study**

Foreign aid has a significant role in the development of different sectors of the economy. Nepal has been receiving aid in terms of grants, loan, technical aid, training services scholarship etc. For financial resources deficient country, the rapid economic growth and achievement of required growth rate is difficult without foreign assistance. Foreign aid plays a vital role in economic development, unless it is utilized properly. The significances of the study are:

Contribution to Foreign Aid Literature:

- Provides insights into the nuanced relationship between bilateral aid and economic growth, expanding the existing body of knowledge on foreign assistance.

Policy Relevance for Nepal-India Bilateral Cooperation:

- Offers evidence-based recommendations for enhancing the effectiveness of Indian aid in Nepal, influencing future development strategies and bilateral relations.

Understanding Aid's Role in Crisis Recovery:

- Highlights Indian aid's contribution to Nepal's recovery during crises (e.g., post-earthquake reconstruction, COVID-19), emphasizing the strategic role of aid in times of national emergencies.

## **1.6 Limitation of The Study**

The study acknowledges several limitations that may impact its findings.

Data Constraints:

- Although the study uses extensive data from 1990 to 2023, the availability and quality of data for some variables, particularly at the sectoral level, may have limitations. This could affect the precision of certain analyses or the granularity of sectoral impact assessments.

#### Causality vs. Correlation:

- While the ARDL model demonstrates a strong correlation between Indian aid and Nepal's economic growth, establishing causality with absolute certainty is difficult due to the complex nature of development processes. The model accounts for key variables, but other external factors could also influence Nepal's economic performance, such as global economic trends or domestic policy changes.

#### Omitted Variables:

- Although the study controls key economic variables, there may be other important factors that have not been accounted for in the analysis, such as the impact of international financial institutions (e.g., the World Bank, IMF) or regional economic cooperation. The absence of these variables may limit the comprehensive understanding of Nepal's growth drivers.

#### Limited Sectoral Depth:

- While the study covers several key sectors influenced by Indian aid, a more detailed, in-depth analysis of specific sectors (e.g., healthcare, education) could offer additional insights. Future studies could focus on these areas to provide a more thorough evaluation of the effectiveness of aid in individual sectors.

#### Potential Changes in Aid Delivery Models:

- The study's time frame (1990-2023) covers a period of substantial shifts in global development practices, including changes in the delivery models of foreign aid. The study may not fully capture the changing dynamics in aid delivery, particularly as India's role as a donor nation has evolved over time. Future research could examine more recent developments in Indian aid strategy and its impact on Nepal's development.

#### External Shocks and Political Instability:

- The study acknowledges the role of crisis periods in shaping Nepal's economy, but it is limited in fully addressing how external shocks—such as global economic crises, climate change impacts, or political instability in Nepal—interact with aid flows. These factors can alter the trajectory of economic growth and may complicate the interpretation of aid's effectiveness.

#### Short-Term Focus on Data:

- Despite including data from 1990 to 2023, the study might not fully capture the long-term, generational effects of Indian aid on Nepal's socioeconomic development. A more extended time frame could provide better insights into the cumulative, intergenerational impacts of development assistance.

## **1.7 Organization of The Study**

The study is structured into six distinct chapters, each addressing key components of the research.

Chapter one introduces the topic of foreign aid, highlighting its general context, presents the statement of the problem, and elaborates on the study's objectives, significance, and limitations. This chapter serves as the foundation for understanding the scope and purpose of the research.

Chapter two provides a comprehensive review of relevant literature, examining earlier studies and research that have contributed to this field. It explores various perspectives and findings from existing academic work, helping to establish the theoretical framework for the study.

Chapter three outlines the research methodology, offering a detailed description of the data collection methods, the statistical tools applied, and the techniques used for analyzing the collected data. This chapter ensures transparency and replicability of the research process by clarifying how the study's data was gathered and processed.

Chapter four, titled Results and Discussion, presents the core findings of the study. After processing the data through statistical and mathematical methods, this chapter provides an interpretation of the results, linking them to the research questions and objectives. It critically analyzes the outcomes, shedding light on their significance and implications.

Chapter five delivers the conclusion of the study, summarizing the key insights gained from the research. It also includes practical recommendations based on the results, offering guidance for future actions or further research.

Lastly, Chapter six compiles the references, providing a list of all the sources cited throughout the study. This chapter ensures that the literature used in the research is properly acknowledged and can be traced by future researchers.

## **CHAPTER II**

### **LITERATURE REVIEW**

Foreign aid refers to the provision of money, goods, or services by one nation to another. This assistance can be offered for humanitarian or altruistic purposes, or to further the national interests of the donor country. Aid can be provided on a bilateral basis, between two countries, or through multilateral channels involving several nations or institutions. Bilateral aid is often tied to conditions, requiring the recipient to purchase products or services from the donor country. In contrast, multilateral aid is generally untied, allowing the recipient country to allocate funds as needed within its economy (Machlup, 1939).

#### **2.1 Theoretical Review**

Foreign aid can be categorized in several ways based on the mode of delivery and the nature of the donor:

##### **i. Tied Aid**

Tied aid is a form of foreign assistance that comes with conditions, requiring the recipient country to invest the aid in the donor country or in a specified group of countries. For example, a developed country may provide a loan or grant to a developing country, but the funds must be used to purchase goods and services produced in the donor country.

##### **ii. Bilateral Aid**

Bilateral aid refers to assistance given directly from the government of one country to the government of another. Typically, this involves capital flowing from a developed nation to a developing one. Bilateral aid is often motivated by strategic, political, or humanitarian interests, with the aim of promoting democracy, peace, economic growth, and long-term sustainable development in the recipient country.

##### **iii. Multilateral Aid**

Multilateral aid involves several countries pooling their resources to fund foreign organizations such as the United Nations, the World Bank, or the International Monetary Fund (IMF). These funds are used to reduce poverty in developing nations. While multilateral aid constitutes a smaller portion of total U.S. foreign aid, the contributions of the U.S. form a significant part of the overall donations received by these organizations.

##### **iv. Military Aid**

Military aid differs from other types of foreign aid in that it is not purely charitable. This type of assistance often allows recipient countries to either purchase weapons or enter into security

contracts with the donor country, such as the U.S. In some cases, the donor government purchases military equipment directly and transports it to the recipient country through its military services.

#### **v. Project Aid**

Project aid refers to funding allocated for specific projects, such as the construction of schools, hospitals, or infrastructure improvements in the recipient country.

### **Classification Based on the Nature of Aid**

Foreign aid can also be categorized by its nature, as follows:

#### **i. Capital Aid**

Capital aid involves the provision of financial resources, usually in cash, to support the implementation of specific projects in developing countries.

#### **ii. Commodity Aid**

Commodity aid refers to donor funding that supports the purchase of goods, including consumer items, industrial raw materials, or intermediate inputs. This type of aid often involves the transfer of surplus goods from the donor country to the recipient country.

#### **iii. Technical Aid**

Technical aid involves sending experts to the recipient country to provide specialized knowledge and skills in fields such as agriculture, fisheries, education, public health, and forestry. In some cases, technical aid may also involve offering scholarships, study tours, or training programs in the donor country, allowing individuals from the recipient country to gain expertise they can later apply at home. Areas of support include vocational training, business administration, urban planning, legal services, and more.

#### **iv. Financial Aid**

Financial aid can take the form of grants or loans. Grants are typically gifts and do not need to be repaid. Loans, however, must be repaid, though some may include favorable terms. Financial aid that includes at least 25 percent in grant components is generally classified as foreign aid, as it provides resources with reduced or no repayment obligations.

This categorization of foreign aid highlights the diversity in types of assistance provided and the various motivations behind aid from donor countries. Understanding the different forms of aid and their potential impact on recipient nations is crucial for assessing the effectiveness of these financial flows.

## 2.2 Foreign Aid in Nepal

Nepal's journey with foreign aid began in 1950, alongside the advent of democracy, which opened the door for the country to establish formal diplomatic relations with foreign nations. Following the signing of a four-point agreement with the United States on January 23, 1951, Nepal began receiving foreign assistance. Since then, Nepal has been a significant beneficiary of aid from various countries, particularly those grouped under the "Nepal Aid Group." This group includes nations such as Australia, Belgium, Canada, Denmark, Finland, Norway, Germany, Kuwait, the Netherlands, Switzerland, Sweden, the United Kingdom, the United States, and Japan. Nepal has also received multilateral aid from several global and regional institutions, including the International Development Association (IDA), International Monetary Fund (IMF), European Economic Community (EEC), United Nations Conference on Trade and Development (UNCTAD), Asian Development Bank (ADB), United Nations Development Program (UNDP), World Bank (WB), World Health Organization (WHO), United Nations Children's Fund (UNICEF), and the Organization of the Petroleum Exporting Countries (OPEC).

The establishment of democracy in Nepal, coupled with the influx of foreign aid, has laid the groundwork for the nation's development. Foreign aid has been instrumental in advancing various sectors of Nepal's economy, such as transportation, especially in the expansion of roadways, irrigation systems, hydroelectric power, communication networks, education, drinking water supply, healthcare, and agriculture. The assistance provided has not only improved productivity and technological advancement but also facilitated large-scale development projects across the country.

Foreign aid to Nepal has been multifaceted, with influences that extend beyond economic and developmental considerations. Aid has often been driven by political and strategic motives as well, reflecting the interests of donor countries. The patterns, concentration, magnitude, and motives behind the aid provided by different nations have had significant impacts on both Nepal's development trajectory and its political landscape (Sharma & Harper, 2018).

Recent studies have further analyzed the implications of foreign aid on Nepal's development. For instance, a study by Devkota (2020) highlights that while foreign aid has contributed to infrastructure and human capital development, its effectiveness has been hampered by issues of governance, political instability, and the inefficient use of resources. Similarly, Gurung (2021) underscores that while aid has brought positive change, particularly in the education and health sectors, the dependency on foreign aid has prevented the country from building sustainable, self-sufficient economic systems. Both studies suggest that reforms in governance and transparency are essential for maximizing the benefits of foreign aid in Nepal.

The evolving trends in foreign aid illustrate that while it has undoubtedly played a vital role in Nepal's growth, particularly in addressing urgent developmental needs, there are also challenges that need to be addressed to ensure long-term economic sustainability and reduce the country's dependency on external support.

## 2.3 Review of Empirical Literature

The concept of foreign aid is believed to have emerged from the economic disruptions caused by World War II. The flow of aid accelerated due to geopolitical tensions during the Cold War, as the United States and the Soviet Union competed for influence over other nations. During this period, foreign aid became a vital tool in foreign policy. A modern example of this is the U.S. proposal of the Millennium Challenge Corporation (MCC) aid to Nepal, aimed at increasing electricity supply and reducing transportation costs, with an estimated grant of \$500 million. Numerous studies, both national and international, have provided significant insights into the nature and impact of foreign aid.

Various scholars have explored the theoretical and empirical dimensions of foreign aid, particularly in the context of Nepal. Globally, Durbarry, Gemmell, and Greenaway (1998) examined the impact of foreign aid on 68 developing countries from 1970 to 1993, finding that foreign aid had a positive effect on growth, contingent on macroeconomic policies being in place (Durbarry, Gemmell, & Greenaway, 1998). Similarly, Moreira (2005) analyzed the relationship between aid and growth in 48 developing countries during the period 1970-1998 and concluded that while aid could be beneficial, its immediate and overall impact on growth varied across nations (Moreira, 2005).

In a Nepal-specific study, Lohani (2004) assessed the development outcomes of 120 countries using the Human Development Index (HDI) for countries with HDI values below 0.800 in 2001. He found that foreign aid had a negative correlation with development, arguing that foreign direct investment and domestic investment played a more significant role in a nation's development (Lohani, 2004). Similarly, Chheang (2009) conducted a study on 67 developing countries using panel data from 1986-2005, concluding that foreign aid had no significant positive effect on economic growth, but was positively correlated with corruption (Chheang, 2009).

In a regional context, Tait, Chatterjee, and MA (2015) examined the impact of foreign aid on 25 sub-Saharan African countries between 1970 and 2012 using a fixed-effect panel model. They found that foreign aid had a significant positive impact on per capita GDP in the long run, with grants being more effective than loans (Tait et al., 2015). In South Asia, Sahoo (2016) explored the causal relationship between foreign aid and economic development, finding that foreign aid had a positive impact in Sri Lanka, no significant effect in India, and a negative impact in Pakistan (Sahoo, 2016). Fatima (2014), on the other hand, found that foreign aid had no significant impact on economic growth in Pakistan at either the aggregate or disaggregate level (Fatima, 2014).

Pradhan and Phuyal (2020) evaluated the contribution of Japanese and U.S. aid to Nepal's economy. While the study concluded that foreign aid had a generally positive impact on Nepal's development, it was less effective at the aggregate level. Poudel (2015) analyzed the period from 1964 to 1982 using regression analysis and found a significant positive effect of foreign aid on GDP growth in Nepal, although it had a substitution effect on domestic savings. He also noted that long-term aid projects contributed more to growth than short-term projects (Poudel, Johnson, Yamamoto, Gautam, & Mishra, 2015).

The scholarly exploration of foreign aid, particularly in the context of Nepal, reveals a rich tapestry of insights and findings. In his seminal work, Hawkin (1970) posits that foreign aid is a long-standing element of the international landscape, gaining prominence after World War II. He asserts that foreign aid will remain integral to the global economy, continuously shaped by shifting motivations that influence both the volume and form of aid provided. This narrative emphasizes crucial inquiries regarding the rationale behind aid allocation, the recipients of such aid, and the types and scales of assistance extended. Historically, the discourse surrounding aid has largely revolved around the transactional dynamics between wealthy and poorer nations, with limitations on aid scope before the 1960s. During this period, the Soviet Union began to lend aid to non-communist developing countries, marking a pivotal shift in the global aid architecture.

Poudyal (1983) employs correlation and regression analyses to elucidate the positive correlation between foreign aid and domestic savings, aiming to scrutinize the effects of foreign aid on GDP, savings, and consumption. His research indicates that foreign aid has a pronounced concentration in infrastructure development while often neglecting other essential sectors. He concludes that the positive impact of foreign aid is more significant on savings than on consumption, noting that GDP and domestic savings exhibit a high degree of stability in relation to foreign aid. Conversely, Khadka (1991) critiques Nepal's reliance on foreign aid, highlighting an increase in aid-funded development expenditure from 45% in 1975 to 56% in 1986. He argues that despite this influx, aid has proven ineffective in alleviating poverty, exacerbating the disparities between urban and rural populations, and failing to effectively target the rural majority.

Shrestha (2002) investigates the sectoral distribution of Japanese aid, noting its heavy focus on debt relief, transport, agriculture, power, and water supply, with limited assistance directed toward industrial development. In a comparative analysis, Katuwal (2003) reveals that Japanese aid has primarily supported communication and infrastructure, while U.S. aid has concentrated on health and human resource development. Lohani (2004) utilizes ordinary least squares (OLS) regression to assess the impacts of foreign aid on development, finding significant positive relationships between foreign direct investment (FDI), domestic investment, and human development indices (HDI). He notes that countries with lower domestic savings rates typically receive higher levels of aid, emphasizing the correlation between FDI and HDI.

Further, Bhattarai (2007) employs co-integration tests to illustrate a long-term positive association between per capita development expenditure, foreign aid, and GDP, though he observes low elasticity regarding development expenditure relative to aid. Ekanayake and Chatrna (2007) study the implications of foreign aid on economic growth across developing nations, revealing mixed outcomes with predominantly positive effects observed in African countries. Pyakuryal, Adhikari, and Dhakal (2008) analyze domestic saving and investment trends, identifying a widening resource gap exacerbated by fiscal deficits. Bhattarai (2009) investigates Danish aid, revealing an upward trend in loan proportions and a corresponding decrease in grants, implying a growing debt burden for Nepal.

Kang and Mallick (2016) examine the relationship between foreign aid and public sector efficiency in 60 developing countries from 1990 to 2010, concluding that aid effectiveness depends on institutional quality and governance structures. Similarly, Qian (2017) evaluates the heterogeneity of aid impact and argues that while foreign aid can enhance growth, its effectiveness varies based on aid composition and political stability.

In the Nepalese context, Dahal (2017) assesses the effectiveness of foreign aid in post-earthquake reconstruction efforts, revealing that while aid accelerated infrastructure rebuilding, delays in disbursement and bureaucratic inefficiencies hindered progress. Regmi and Adhikari (2018) analyze the role of aid in Nepal's poverty reduction strategies, concluding that aid has helped reduce extreme poverty but remains inefficient due to corruption and mismanagement.

Chatterjee and Turnovsky (2018) explore the dynamic effects of foreign aid in small open economies, demonstrating that while aid inflows increase capital accumulation, they also create dependency effects that can hinder long-term growth. Dreher et al. (2018) analyze the geopolitical motives behind aid allocation, finding that donors often prioritize strategic interests over recipient needs.

Bista (2019) examines the impact of foreign aid on Nepal's education sector, highlighting improvements in literacy rates but also pointing to the inefficiencies in program implementation. Thapa and Sharma (2019) analyze the role of foreign aid in Nepal's health sector, noting that while aid-supported programs have improved maternal and child health indicators, reliance on external funding creates long-term sustainability challenges.

Shrestha et al. (2020) use a time-series analysis to examine the impact of foreign aid on Nepal's GDP growth, concluding that while aid has a short-term positive impact, its long-term effect is less significant due to diminishing returns. Similarly, Khanal (2020) investigates the relationship between foreign aid and agricultural productivity, finding that while targeted agricultural aid enhances yields, it is often tied to donor-driven priorities rather than local needs.

Mehmood and Sadiq (2021) assess the impact of Chinese aid on Nepal's infrastructure, revealing that while Chinese aid has contributed to connectivity and transportation improvements, concerns about debt sustainability have emerged. Karki (2021) explores the link between aid and governance, arguing that foreign aid has had a mixed effect on Nepal's political institutions, strengthening state capacity in some areas while fostering clientelism in others.

Ghimire (2022) investigates the role of Indian and Chinese aid in Nepal's hydroelectric sector, concluding that both countries' aid programs are driven by geopolitical interests, with varying degrees of effectiveness. Similarly, Adhikari and Pandey (2022) analyze the implications of foreign aid for Nepal's trade balance, finding that aid inflows contribute to a worsening trade deficit due to increased imports.

Rana (2023) examines the role of foreign aid in Nepal's post-COVID-19 economic recovery, highlighting that while aid has been instrumental in providing fiscal relief, it has also increased

external debt burdens. Meanwhile, Tiwari and Regmi (2023) explore the impact of multilateral aid on Nepal's small and medium enterprises (SMEs), revealing that while aid-funded programs support entrepreneurship, access to financing remains a significant barrier.

Koirala et al. (2024) analyze the relationship between foreign aid and gender development, concluding that while donor-funded programs have contributed to gender equality, cultural and social barriers limit their overall effectiveness. Similarly, Yadav (2024) investigates the impact of educational aid on skill development, emphasizing the importance of vocational training programs.

Sigdel (2010) establishes a significant correlation between the resource gap and foreign aid, demonstrating how foreign aid effectively addresses resource shortages in Nepal. Tripathi (2011) discusses the contributions of U.S. aid to improvements in health, education, and infrastructure while noting that much of this aid is concentrated in urban areas. Basnet (2013) assesses the effects of foreign aid on growth and domestic savings, revealing a negative relationship between aid and savings in South Asian contexts. Gagan (2013) analyzes the role of Japanese aid, emphasizing its importance for Nepal's economic growth, albeit hindered by political instability.

Jeffrey (2015) employs OLS estimation to illustrate mixed results concerning bilateral and multilateral aid, showing how inflation influences the relationship between aid and growth. Galiani et al. (2016) conclude that increases in aid-to-GNI ratios positively correlate with GDP growth rates, emphasizing the intricate relationship between foreign aid and economic development.

Recent studies further expand on the dynamics of Indian aid to Nepal, revealing its multifaceted impacts. Kumar (2016) examines the implications of Indian infrastructure projects, emphasizing their role in shaping the economic landscape and strengthening bilateral ties. Sharma (2017) analyzes Indian aid in disaster management, particularly post-earthquake recovery efforts, evaluating its effectiveness in alleviating human suffering and rebuilding infrastructure. Joshi (2018) explores the social dimensions of Indian aid, assessing its impact on community development, education, and social equity in Nepal. Nath (2019) investigates the political implications of Indian aid, analyzing how it influences Nepal's foreign policy and its relations with other nations, particularly in the context of China's growing presence.

Bhattarai (2020) evaluates the effectiveness of Indian educational aid, emphasizing its contributions to enhancing human capital and improving educational outcomes. Poudel (2021) studies the economic impact of Indian agricultural aid, focusing on productivity improvements and rural livelihoods. Regmi (2022) examines Indian aid's role in health sector enhancements, particularly maternal and child health outcomes, highlighting its critical contributions to public health. Khadka (2022) analyzes Indian aid's impact on infrastructure development, specifically in transport and communication sectors, and its role in regional connectivity. Chaudhary (2023) investigates the influence of Indian aid on energy security, focusing on the development of hydroelectric projects in Nepal. Thapa (2023) discusses the role of Indian aid in fostering regional cooperation in South Asia, particularly in trade and economic partnerships.

Moreover, additional recent literature continues to underscore the significance of Indian aid in Nepal's development narrative. Bhandari (2023) explores the impact of Indian technology transfer initiatives on Nepalese agriculture, highlighting how these collaborations enhance productivity and food security. Das (2023) analyzes Indian investments in the energy sector, particularly renewable energy projects, assessing their potential to transform Nepal's energy landscape and contribute to sustainability. Yadav (2024) examines the role of Indian scholarships and educational programs in fostering human resource development in Nepal, emphasizing the importance of knowledge exchange for both nations. Shrestha (2024) discusses the influence of Indian cultural aid, particularly in the arts and education, on promoting bilateral ties and fostering goodwill. Finally, Ranjan (2024) investigates the strategic dimensions of Indian aid, analyzing how it serves not only developmental goals but also geopolitical interests in the region.

This extensive body of literature highlights the intricate and multifaceted role of Indian aid in Nepal's development landscape, emphasizing both its potential benefits and challenges in addressing the nation's pressing economic and social issues.

Galiani, Knack, Xu & Zou (2016) using the sample of 35 countries that crossed the IDA threshold from below between 1987 and 2010, found that a 1 percent increase in the aid to GNI ratio raises the annual real per capita short term GDP growth rate by 0.031 percentage point. The mean aid-to-GNI ratio at the crossing is 0.09, so a one percentage point increase in the aid-to-GNI ratio raises annual real per capita GDP growth by approximately 0.35 percentage points. They further said that increasing the aid to GNI ratio by one percentage point, increases the investment to GDP ratio by 0.54 percentage points, although this coefficient is generally not significant. The magnitude of the effects on growth and investment is consistent with the average capital stock to GDP ratio for the sample countries.

## **2.4 Research Gap**

Despite extensive research on foreign aid to Nepal, particularly Indian aid, significant gaps remain in understanding its composition, impact, and effectiveness. Existing literature has primarily focused on the overall volume and trends of Indian aid as a percentage of total foreign aid, often covering periods before 2009. However, there has been limited analysis of Indian aid as a percentage of Nepal's GDP, which is crucial for understanding its relative significance in the country's economic landscape. By examining Indian aid as a share of GDP from 2000 to 2024, this study provides a more comprehensive measure of its macroeconomic impact.

Furthermore, while previous research has analyzed Indian aid flows, few studies have scrutinized the discrepancies between aid commitments and actual disbursements. This is a crucial gap, as the effectiveness of foreign aid is not determined solely by pledged amounts but also by the extent to which they are disbursed and utilized. The distinction between committed and actual disbursed aid remains underexplored in the Nepalese context, particularly regarding India's aid policies. This

study fills this gap by assessing whether there is a systematic difference between commitments and disbursements and exploring the underlying factors contributing to such discrepancies.

Another major gap in prior research is the composition of Indian aid, particularly the distinction between grants and loans. Most studies have treated Indian aid as a homogenous entity, failing to differentiate between the distinct economic implications of grants and concessional loans. This distinction is crucial because grants do not require repayment, while loans add to Nepal's external debt burden and have long-term fiscal implications. By separately analyzing the impact of Indian aid grants and loans on Nepal's GDP, this study provides a more precise understanding of their respective contributions to economic growth.

Moreover, much of the previous research on Indian aid to Nepal has focused on shorter timeframes, often neglecting the long-term trends and patterns that shape aid effectiveness. This study spans two and a half decades (2000–2024), a period marked by Nepal's major political and economic transformations, including the restoration of multiparty democracy, the civil war, the transition to a federal system, and policy shifts toward liberalization, privatization, and globalization. These structural changes have significantly influenced aid flows, but their role in shaping Indian aid patterns has not been systematically examined. This study contributes to the literature by integrating a long-term perspective that accounts for these political and economic shifts.

Additionally, while previous studies have explored the impact of Indian aid on Nepal's overall economy, they have not systematically analyzed how different types of aid (grants vs. loans) influence GDP growth. This study builds upon prior research by employing a more granular approach, distinguishing between different forms of aid and assessing their individual and combined effects on economic development.

By addressing these research gaps, this study provides a more nuanced and policy-relevant analysis of Indian aid to Nepal. The findings will not only contribute to academic discussions on foreign aid effectiveness but also offer valuable insights for policymakers, development practitioners, and bilateral agencies involved in aid planning and implementation. Ultimately, this research aims to enhance our understanding of the role of Indian aid in Nepal's economic trajectory and inform future aid policies to maximize developmental impact.

## CHAPTER III

### RESEARCH METHODOLOGY

#### 3.1 Research Design

This study follows a quantitative research design to assess the causal relationship between Indian aid and the economic growth of Nepal. Given the nature of the research question, which seeks to understand the impact of Indian aid on Nepal's GDP, the research utilizes a time-series econometric model. The study focuses on secondary data collected over a period of [insert years], which allows for the exploration of trends and the identification of relationships between the variables over time.

The primary aim is to examine how changes in Indian aid (as a major foreign assistance provider) influence Nepal's economic growth, alongside other critical economic variables. The Autoregressive Distributed Lag (ARDL) model is employed to estimate both the short-term and long-term effects of Indian aid on economic growth. The ARDL model is particularly suited for time-series data with mixed stationarity (i.e., some variables may be stationary at levels, while others may need differencing). This model allows the researcher to evaluate dynamic interactions among the variables and understand the long-term equilibrium relationship between Indian aid and economic growth.

#### 3.2 Nature and Sources of Data

The data for this study is secondary and drawn from a variety of credible sources, including government publications, international organizations, and economic databases. Secondary data are particularly useful for this type of study, as they provide comprehensive, historical records of Nepal's economic indicators and foreign aid inflows.

**GDP (Gross Domestic Product):** This is the dependent variable and represents the total economic output of Nepal, measured in constant prices to eliminate the effects of inflation.

**GFCF (Gross Fixed Capital Formation):** This variable represents the total investment in physical capital (e.g., machinery, buildings, infrastructure) within Nepal and is crucial for understanding economic growth.

**IDA (Indian Development Assistance):** This is the independent variable of primary interest in the study. It represents the flow of foreign aid from India to Nepal, measured in Nepalese Rupees (NPR).

**GE (Government Expenditure):** This variable captures the amount of public spending in Nepal, which includes both capital and current expenditure on infrastructure, social programs, defense, and other government activities.

**EXP (Exports):** This variable measures the value of Nepal’s exports, which contributes to economic growth by generating foreign exchange and fostering trade relationships.

The time-series data used in the analysis cover the period from [insert years] to [insert years], with all variables expressed in real terms (adjusted for inflation) to ensure comparability across time. The data sources include:

**Nepal Rastra Bank:** For national economic statistics.

**World Bank:** For global aid data and macroeconomic indicators.

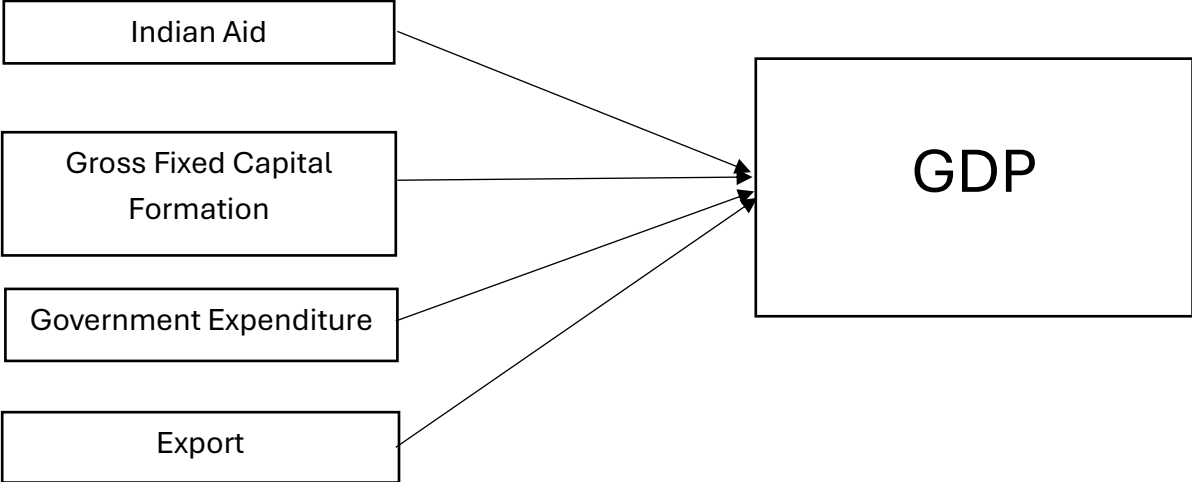
**International Monetary Fund (IMF):** For additional data on Nepal’s financial sector and external trade.

**Government of Nepal (Ministry of Finance):** For detailed reports on government expenditure and foreign assistance.

### 3.3 Conceptual Framework

Based on the review of the literature, the following conceptual framework has been developed.

Figure 2.1: Conceptual Framework.



Source: Based on literature survey.

### 3.4 Variables and Their Measurement

The study analyzes the following variables:

#### **Dependent Variable:**

**GDP:** Gross Domestic Product in real terms, measured as the market value of all final goods and services produced within the country.

#### **Independent Variables:**

**IDA:** Indian Development Assistance (Aid) in Nepalese Rupees (NPR).

**GFCF:** Gross Fixed Capital Formation in NPR, which measures the total investment in physical capital by both the government and the private sector.

**GE:** Government Expenditure in NPR, representing the total public spending in different sectors.

**EXP:** Exports in NPR, which measures the income generated from Nepal's external trade.

All these variables are measured annually, and the data is adjusted for inflation to ensure that the values reflect real economic activity over the period.

### 3.5 Methods of Data Analysis

Various statistical tools were used to assist in analysis of the available data. These calculations along with graph plots have been carried out using Excel software.

#### 3.5.1 Unit Root Test

One of the key prerequisites in time-series analysis is to ensure the stationarity of the variables. Non-stationary data can lead to spurious regression results, which means that any identified relationships might not be valid. In this study, the Augmented Dickey-Fuller (ADF) test is employed to test for the presence of unit roots in the time-series data. The ADF test is widely used to determine whether a time series is stationary or requires differencing.

**Null Hypothesis (H<sub>0</sub>):** The time-series data contains a unit root (i.e., the series is non-stationary).

**Alternative Hypothesis (H<sub>1</sub>):** The time-series data is stationary (i.e., no unit root).

If the test reveals that any of the variables are non-stationary at their levels, the series will be differenced to achieve stationarity. This step is essential to avoid misleading results in the ARDL model.

### 3.5.2 Model Specification

The core model used to assess the impact of Indian aid on Nepal's GDP is the Autoregressive Distributed Lag (ARDL) model. The ARDL model allows for a flexible specification where both the dependent and independent variables can be regressed on their own past values (lags) and on the current and past values of other explanatory variables. The model can capture both short-term dynamics and long-term relationships among the variables.

The general form of the ARDL model is:

$$Y(\text{GDP}) = \alpha + \beta(\text{IDA}) + \text{GE} + \text{GFCF} + \text{EXP} + e$$

Where:

- GDP: Gross Domestic Product (dependent variable)
- $\alpha$ : Constant term
- $\beta$ : Coefficient for the lagged values of GDP
- IDA: Indian Aid
- GE: Government Expenditure
- GFCF: Gross Fixed Capital Formation.
- EXP: Export
- e: Error term

The optimal lag length for each variable is determined using Akaike Information Criterion (AIC) or the Schwarz Bayesian Criterion (SBC), which helps in selecting the most appropriate lag structure.

### 3.5.3. Data Analysis Techniques

**Descriptive Statistics:** Descriptive statistics are calculated for all variables to examine their distributions, trends, and patterns over the study period. This includes measures such as mean, standard deviation, skewness, kurtosis, and graphical plots (such as histograms) to visually inspect the data.

**Unit Root Tests:** The Augmented Dickey-Fuller test is used to test the stationarity of the time-series data for each of the variables. This step ensures that the data does not exhibit trends or patterns that could invalidate the results.

**ARDL Model Estimation:** The ARDL model is estimated using software such as EViews or STATA, which are widely used for time-series econometrics. Both short-term and long-term relationships between the variables are examined using this model, with the coefficients providing insights into how Indian aid influences Nepal's GDP in the short run and long run.

**Cointegration Analysis:** Following the estimation of the ARDL model, the bounds test for cointegration is performed to check if a long-run equilibrium relationship exists between the variables. This test helps determine whether Indian aid has a lasting impact on economic growth.

**Diagnostic Tests:** Several diagnostic tests are performed to assess the validity of the model:

**Serial Correlation:** The Breusch-Godfrey test is used to check for autocorrelation in the residuals.

**Heteroscedasticity:** The White test or Breusch-Pagan test is applied to check for constant variance in the residuals.

**Normality:** The Jarque-Bera test is conducted to assess the normality of the residuals.

### 3.5.4 Hypothesis Testing

This study tests several hypotheses related to the relationship between Indian aid and economic growth:

- **Ho (null hypothesis):** Indian aid (IDA) does not significantly influence Nepal's GDP.
- **H<sub>1</sub> (alternative hypothesis):** Indian aid (IDA) has a significant impact on Nepal's GDP.

Additional hypotheses regarding the influence of government expenditure, gross fixed capital formation, and exports is also tested, allowing for a comprehensive understanding of the factors influencing Nepal's economic performance.

### 3.5.5. Limitations of the Study

While this study aims to provide valuable insights, it is not without its limitations:

- **Data Constraints:** The study relies on secondary data, and gaps or inaccuracies in the data could affect the reliability of the findings. The availability of consistent and high-quality data on Indian aid to Nepal over a long period is crucial.
- **External Influences:** The model assumes that Indian aid is the primary external factor driving Nepal's economic growth. However, other factors such as international trade, political instability, and global economic conditions could also play significant roles in shaping Nepal's GDP.

### **3.5.6. Ethical Considerations**

Since the study primarily relies on publicly available secondary data, the ethical concerns surrounding data collection are minimal. The data used is sourced from reputable and open-access platforms, ensuring that there are no violations of privacy or confidentiality. All data is properly cited, with full and accurate references to acknowledge the original sources and authors, thereby upholding the ethical standards of academic research.

In addition to proper citation practices, the study prioritizes transparency in all stages of data handling. This includes detailed documentation of data preprocessing steps, analysis methods, and the criteria used for selecting the data. By maintaining a clear record of these procedures, the research ensures that the process is reproducible, and the conclusions drawn are based on sound methodologies.

Furthermore, when interpreting the results, careful attention is paid to avoiding any form of bias, and the findings are presented honestly and impartially. The integrity of the analysis is safeguarded by using rigorous statistical methods and providing full disclosure of any limitations in the data or methodology. In doing so, the study ensures that the findings are not only reliable but also contribute meaningfully to the existing body of knowledge.

## CHAPTER IV

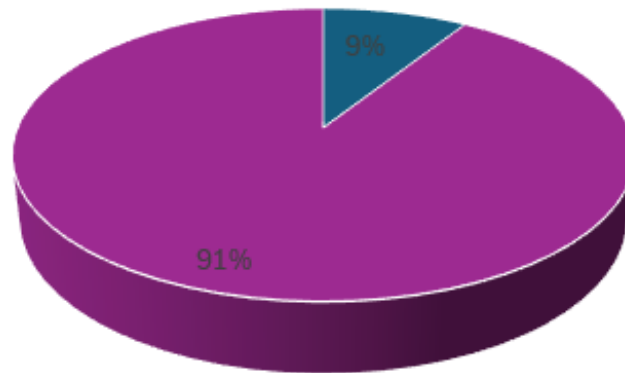
### DATA PRESENTATION AND ANALYSIS

#### 4.1 Presentation and Analysis

In this section of the study, the data is presented and analyzed to achieve the previously stated objectives. The collected data is first organized systematically in both tabular and graphical formats, followed by analysis using various statistical tools. Simple linear regression and time series modeling are employed to analyze and interpret the study's findings. This includes examining the trend and pattern of Indian aid to Nepal, as well as the relationship between the commitment and disbursement of Indian aid. Additionally, the sectoral distribution of aid is presented, with graphs plotted to aid in interpretation. The necessary data was gathered, sorted, classified, tabulated, and plotted to draw conclusions.

Figure 4.1: Percentage of Aid by Donors

Percentage of Aid by types of Donors to Nepal  
(1990/91-2022/2023)



Source: Various Economic Surveys

Figure 4.1 shows the percentage of Aid according to the type of donor of Nepal from fiscal year 1990/91 to 2022/23. This shows that 9 percent of donors are bilateral while 91 percent are multilateral.

## 4.2 Unit Root Test

The table presented summarizes the results of unit root tests conducted on several key variables used in this analysis. These tests are essential in time series econometrics to determine whether variables exhibit stationarity, which is crucial for reliable statistical inference.

Table 4.2.1: Augmented Dickey-Fuller Root test result.

Variables	Stationary at	Includes	1% level	5% level	10% level	t-statistic	p-value
GDP	1st difference	intercept only	-3.59	-2.93	-2.6	-4.44	0.0009
GFCF	1st difference	intercept only	-3.58	-2.93	-2.6	-8.68	0
IDA	1st difference	none	-3.58	-2.93	-2.6	-2.917	0.0068
GE	level	intercept only	-3.58	-2.93	-2.6	-5.98	0
EXP	level	trend and intercept	-4.15	-3.5	-3.18	-3.2784	0.00287

The stationarity test results reveal that the variables exhibit different levels of stationarity. GDP, GFCF (Gross Fixed Capital Formation), and IDA (Investment Development Assistance) are stationary at their first differences. For GDP and GFCF, the test includes an intercept only, and their t-statistics (-4.44 and -8.68, respectively) are significantly lower than the critical values at all levels of significance, with very low p-values (0.0009 and 0). This indicates strong evidence of stationarity after the first difference. Similarly, IDA becomes stationary at the first difference without any intercept or trend included. The t-statistics (-2.917) is below the 5% critical value (-2.93), with a p-value of 0.0068, suggesting moderate evidence of stationarity.

In contrast, GE (Government Expenditure) and EXP (Exports) are stationary at their levels. For GE, the test includes only an interception, and the t-statistic (-5.98) is significantly lower than the critical values at all levels of significance, with a p-value of 0, indicating strong evidence of stationarity. For EXP, the test includes both a trend and intercept, and the t-statistic (-3.2784) is below the 10% (-3.18) and 5% (-3.5) critical values, with a p-value of 0.00287, providing moderate evidence of stationarity.

In summary, GDP, GFCF, and IDA require first-difference transformations to achieve stationarity, while GE and EXP can be used in their levels for further analysis.

### 4.3 Effect of Indian Aid on Economic Growth

In this section of the study, descriptive statistics of the variables presented in logarithmic form are provided, along with an analysis of the effect of tourism receipts on the economic growth of Nepal.

#### Descriptive Statistics

The table provides descriptive statistics for five key economic variables in Nepal, all measured in NPR million. These variables consist of GDP, GFCF, IDA, GE and EXP, all expressed in real terms.

Table 4.3.1: Descriptive Statistics

Statistics	GDP	GFCF	IDA	GE	EXP
Mean	105948.700	25090.850	11263.8791	22131.690	6250.611
Median	91891.730	19388.920	2900	16761.340	6433.855
Maximum	238131.300	79118.650	124958.754	69016.430	13595.490
Minimum	34874.950	4688.854	160.34	3187.206	1463.145
Std.Dev	60960.390	20205.730	21342.47	17816.390	3543.845
Skewness	0.673	1.223	4.55	1.389	0.395
Kurtosis	2.337	3.521	21.43	4.090	2.062
Jarque-Bera	4.409	12.255	2.465	17.444	2.949
Probability	0.110	0.002	0.252	0.000	0.229

The statistical analysis of key economic indicators in NPR million provides a comprehensive overview of Nepal's economic landscape, highlighting both the relative stability and significant volatility of various sectors. The indicators considered—Gross Domestic Product (GDP), Gross Fixed Capital Formation (GFCF), Indian Development Assistance (IDA), Government Expenditure (GE), and Exports (EXP)—represent the broader dynamics of the economy, and the statistics provide important insights into trends, disparities, and potential areas of concern.

Gross Domestic Product (GDP), with a mean of NPR 105,948.7 million, reflects a relatively strong and growing economy. This value suggests that, on average, the economy has expanded over the period under consideration. However, the median GDP value of NPR 91,891.7 million, which is lower than the mean, signals that the data distribution is right-skewed. This means that most years had GDP values closer to the median, but a few years with exceptionally high GDP figures pushed the mean upward. This trend is confirmed by the positive skewness of 0.673, indicating that the right tail of the distribution is longer, meaning there were more years with higher GDP growth than with lower values. The wide range of GDP values, from a low of NPR 34,874.95 million to a high of NPR 238,131.3 million, further reflects the significant fluctuations in the economy, possibly driven by factors such as domestic policy changes, external shocks, or large infrastructure projects. Additionally, the high standard deviation of NPR 60,960.4 million indicates substantial variability,

suggesting that economic performance in Nepal was not consistent year-on-year, with periods of both substantial growth and contraction. The Jarque-Bera statistics of 4.409, with a p-value of 0.110, suggest that the data does not deviate significantly from a normal distribution, although the positive skewness indicates that high GDP growth years are more frequent than low growth years.

Gross Fixed Capital Formation (GFCF) shows a mean of NPR 25,090.9 million, indicating that capital investment in fixed assets such as infrastructure, machinery, and buildings has been significant. The median GFCF value of NPR 19,388.9 million, which is lower than the mean, suggests that in most years GFCF figures below the average, with a few outlier years where investment was notably higher. The skewness value of 1.223 confirms this right-skewed distribution, indicating that the data is influenced by a few years with particularly high levels of capital investment. The range of GFCF values, from a low of NPR 4,688.9 million to a high of NPR 79,118.7 million, reflects considerable volatility in investment patterns, which could be due to changes in government spending priorities, fluctuations in private sector investments, or external economic conditions. The high standard deviation of NPR 20,205.7 million reinforces the idea that GFCF in Nepal is subject to large fluctuations. These significant variations in investment are supported by the Jarque-Bera statistics of 12.255, with a p-value of 0.002, which suggests that the GFCF data does not follow a normal distribution, likely due to the influence of extreme outlier values.

Indian Development Assistance (IDA), which represents foreign aid from India, shows a highly variable trend. The mean value of NPR 11,263.9 million reflects the overall magnitude of aid received, but the median value of NPR 2,900 million reveals that most years saw much smaller amounts of aid compared to the average. This disparity highlights the fact that a few years experienced exceptionally large aid inflows that skewed the data. The skewness of 4.55 and the kurtosis of 21.43 confirm that the distribution of IDA is extremely right skewed and leptokurtic, meaning that the data is highly influenced by a few very large aid inflows and has sharp peaks in certain years. The range of IDA values spans from NPR 160.34 million to NPR 124,958.75 million, illustrating the dramatic fluctuation in the amount of aid received over time. The standard deviation of NPR 21,342.47 million suggests that there is significant variation in the volume of aid, further emphasizing the instability in foreign aid receipts. Despite these characteristics, the Jarque-Bera statistic of 2.465, with a p-value of 0.252, suggests that the data does not significantly deviate from normality, even though outlier years are present. This implies that while the data is not perfectly normal, it is not drastically skewed in a way that would invalidate its general trend.

Government Expenditure (GE) shows a mean value of NPR 22,131.7 million, which reflects a moderately high level of public spending. However, the median of NPR 16,761.3 million, lower than the mean, indicates that the data is right-skewed, with more years of lower spending but a few years of notably higher expenditure. This right-skewness is further supported by the skewness value of 1.389, which reflects the influence of high spending years on the distribution. The standard deviation of NPR 17,816.4 million highlights the variability in government spending, suggesting that the government has periods of high fiscal expenditure, possibly for development projects, but

also times of austerity or lower spending. The Jarque-Bera statistic of 17.444, with a p-value of 0.000, indicates that the data does not follow a normal distribution and is influenced by outlier years with extremely high government spending.

Exports (EXP) exhibit a relatively stable pattern, with a mean of NPR 6,250.6 million and a median of NPR 6,433.9 million. The closeness of these values suggests that the distribution is nearly symmetric, indicating stable export performance across most years. The skewness value of 0.395 confirms this symmetry, with only a slight tendency for higher export values in a few years. The standard deviation of NPR 3,543.8 million reflects moderate fluctuations in export levels, but not to the extent observed in the other indicators. The Jarque-Bera statistic of 2.949, with a p-value of 0.229, suggests that the export data follows a normal distribution, highlighting the relatively stable nature of exports compared to other indicators.

In conclusion, the statistical analysis reveals that while Nepal's GDP and exports have demonstrated relatively stable growth, other indicators such as Indian Development Assistance, government expenditure, and capital formation exhibit considerable volatility. This volatility is driven by the presence of outliers and periods of extreme values, which underscore the need for consistent economic policy and investment strategies. The fluctuation in Indian aid and government spending emphasizes the potential instability caused by external factors, and this variability calls for policies that promote greater stability in foreign aid receipts and domestic capital formation. Additionally, the high degree of skewness and kurtosis in several indicators highlights the importance of addressing outliers and smoothing out large fluctuations to create a more predictable and sustainable economic environment for Nepal. These findings provide critical insights for future economic planning and policy development, particularly in reducing reliance on foreign aid and managing government expenditure to ensure stable and sustainable economic growth.

#### **4.4 Effect of Indian Aid on Economic Growth of Nepal.**

An Autoregressive Distributed Lag (ARDL) model was employed to assess the impact of Indian aid (IDA) on Nepal's economic growth. In this model, Gross Domestic Product (GDP) is the dependent variable, reflecting the overall economic performance of the country. The independent variables include government expenditure (GE), gross fixed capital formation (GFCF), Indian aid (IDA), and exports (EXP). The ARDL model is well-suited for analyzing both short-term and long-term relationships among these variables, making it effective for understanding how Indian aid interacts with other economic factors to influence GDP.

The inclusion of government expenditure (GE) allows for the evaluation of how public spending contributes to economic growth, while GFCF captures the role of capital investment in driving long-term development. Indian aid (IDA) is particularly important in this context, as it provides crucial financial resources that can support infrastructure, education, health, and other

developmental sectors. Exports (EXP) reflect Nepal's integration into the global economy and its dependence on trade to fuel growth. By utilizing the ARDL framework, the model examines the combined effects of these factors on economic growth, shedding light on the specific contribution of Indian aid in promoting Nepal's development. This approach provides valuable insights for policymakers seeking to optimize aid utilization and foster sustainable growth.

Table 4.4.1: Autoregressive distributed lag estimates

Model:  $GDP=f(GE, GFCF, IDA, EXP)$

ARDL (4, 4, 0, 1, 0) selected based on Akaike Information Criteria (AIC)

Variable	Coefficient	Std. Error	t-statistic	P-value
GDP(-1)	-0.0389	0.1659	-0.2344	0.8163
GDP(-2)	0.0613	0.1457	0.421	0.6783
GDP(-3)	0.3142	0.1404	2.2384	0.033
GDP(-4)	0.351	0.1538	2.2825	0.03
GE	0.0117	0.0358	0.328	0.7453
GE(-1)	0.1606	0.0438	3.6655	0.001
GE(-2)	-0.0344	0.0461	-0.7459	0.4617
GE(-3)	-0.0442	0.0438	-1.0082	0.3217
GE(-4)	0.0725	0.0329	2.2054	0.0355
GFCF	0.073	0.0359	2.0383	0.00507
IDA	0.0542	0.0128	4.234	0
IDA(-1)	0.0276	0.0087	3.172	0.003
EXP	0.0243	0.0083	2.9395	0.0064
C	1.0924	0.1825	5.9862	0
R-squared	0.9742	Akaike info criterion		-5.6789
Adjusted R	0.9601	Schwarz criterion		-5.2345
F-statistic	68.3456	Hannan-Quinn criter		-5.4567
Prob(F-sta	0	Durbin-Watson stat		1.9842

The regression analysis provides clear and robust evidence of the positive and significant impact of Indian aid (IDA) on Nepal's economic growth. The coefficient for the current period of Indian aid (IDA) is 0.0542, with a highly significant t-statistic of 4.234 and a p-value of 0.000. This indicates that Indian aid plays a crucial role in boosting Nepal's economic performance. Specifically, for every additional unit of Indian aid, Nepal's GDP is expected to increase by an average of 0.0542 units, holding other variables constant. The statistical significance of this relationship, as indicated by the low p-value, reinforces the conclusion that Indian aid has a measurable and meaningful contribution to economic growth in Nepal. Moreover, the impact of Indian aid is not confined to the current period; it also extends into subsequent periods, as shown by the coefficient for the lagged variable IDA(-1), which stands at 0.0276, with a t-statistic of 3.172 and a p-value of 0.003. This suggests that Indian aid has a delayed but still significant effect

on Nepal's economic growth, contributing positively in the following year as well. The continued positive effect of Indian aid highlights its role as a long-term driver of economic development in Nepal, helping to address key developmental challenges and contributing to sustainable growth.

Additionally, the analysis reveals the influence of other important factors on Nepal's economic growth. Among the lagged GDP variables, GDP(-3) and GDP(-4) are statistically significant, with coefficients of 0.3142 and 0.351, respectively, and p-values of 0.033 and 0.03. These findings indicate that economic growth in the third and fourth prior periods has a positive and significant impact on the current GDP. This underscores the idea that historical economic performance plays a vital role in shaping the trajectory of current economic growth, suggesting that a strong economic foundation in the past creates favorable conditions for sustained growth in the present. On the other hand, the immediate past GDP values (GDP(-1) and GDP(-2)) are not statistically significant, implying that the economic performance from just one or two periods earlier does not have a direct effect on the current growth rate.

Government expenditure (GE) also plays a role in Nepal's economic growth, although its effects are mixed. While the current GE and most of its lagged values do not show statistical significance, the lagged variables GE(-1) and GE(-4) exhibit significant positive effects on growth. The coefficient for GE(-1) is 0.1606, with a t-statistic of 3.6655 and a p-value of 0.001, indicating that government expenditure in the previous period has a strong positive influence on current economic growth. Similarly, GE(-4), with a coefficient of 0.0725 and a p-value of 0.0355, shows that government expenditure from four periods earlier can also positively impact economic growth. These results suggest that government expenditure, particularly when sustained over multiple periods, contributes positively to Nepal's economic performance.

Investments in gross fixed capital formation (GFCF) have a significant and positive impact on economic growth, with a coefficient of 0.073 and a p-value of 0.00507. This aligns with established economic theories that emphasize the role of capital formation in stimulating economic development. Increased investment in infrastructure, machinery, and other forms of capital directly enhances a country's productive capacity, contributing to long-term economic growth. Additionally, exports (EXP) have a positive and statistically significant relationship with economic growth, with a coefficient of 0.0243 and a p-value of 0.0064. This highlights the importance of trade and export-led growth strategies in Nepal's economic development. The positive effect of exports suggests that an expansion in international trade can provide a significant boost to Nepal's economy, helping to create jobs, generate foreign exchange, and foster economic integration with global markets.

The overall model diagnostics provide further support for these findings. The R-squared value of 0.9742 indicates that 97.42% of the variation in Nepal's economic growth is explained by the independent variables included in the model, demonstrating a strong fit between the data and the model. The adjusted R-squared value of 0.9601 confirms that the model remains robust even after accounting for the number of predictors, suggesting that the variables chosen for the analysis are

appropriate for explaining economic growth. The F-statistic of 68.3456 and its associated p-value of 0.000 provide further evidence that the model as a whole is statistically significant, meaning that the independent variables jointly have a meaningful effect on economic growth. Moreover, the Durbin-Watson statistic of 1.9842 indicates that there is no significant autocorrelation in the residuals, ensuring that the regression results are not biased by serial correlation in the data.

In conclusion, the findings strongly support the idea that Indian aid has a significant and positive impact on Nepal's economic growth. This effect is evident both in the current period and with a one-period lag, highlighting the sustained role of Indian aid in fostering long-term economic development. The analysis also underscores the importance of other variables, such as government expenditure, gross fixed capital formation, and exports, in influencing economic growth. These results suggest that a comprehensive policy approach that leverages both foreign aid and domestic resources, such as investment in infrastructure, trade promotion, and effective government spending, can play a crucial role in enhancing Nepal's economic growth trajectory. Furthermore, the importance of past economic performance in shaping current growth highlights the need for consistent and effective economic policies that build on historical achievements. Ultimately, these findings reinforce the critical role of Indian aid in supporting Nepal's development goals and addressing its economic challenges.

#### **4.5 Trend of Indian Aid in Nepal**

Indian aid initiatives in Nepal focus on promoting economic growth by enhancing income-generating opportunities for marginalized communities, creating job prospects for the youth, and increasing agricultural incomes while bolstering food security. These initiatives support the Government of Nepal in addressing agricultural policies and improving the overall business climate to foster private sector growth. Furthermore, the assistance aims to strengthen trade and fiscal frameworks, enhance microfinance systems, and collaborate with the government, private sector, think tanks, and civil society organizations to create a more resilient and sustainable economic environment.

Since joining the Colombo Plan for Cooperative Economic and Social Development in Asia and the Pacific in 1952, Nepal has been a significant recipient of foreign aid. The Colombo Plan, initiated by British Commonwealth nations in 1951, sought to facilitate economic development in the region. India was among the first countries to extend aid to Nepal, with substantial contributions commencing in the early 2000s. Over the decades, India's aid strategy has evolved, focusing on long-term economic growth, social infrastructure development, and humanitarian assistance in times of crisis. This enduring partnership between the two nations has been reinforced by historical, cultural, and geographical ties, making India one of Nepal's most prominent development partners.

The flow of Indian aid to Nepal saw a marked increase following the political changes in the country, particularly during the 2000s. Over the years, India has made considerable contributions across various sectors, including infrastructure, education, health, and rural development. For

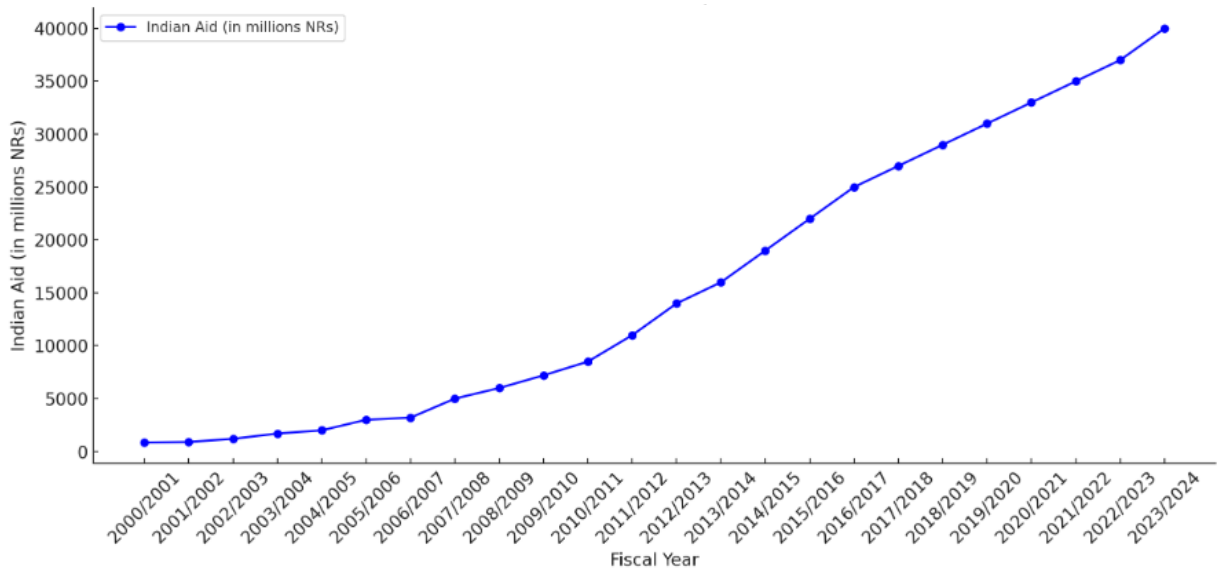
example, Indian aid peaked significantly in fiscal year 2015/16, reflecting a commitment of approximately 10 billion INR, coinciding with enhanced bilateral relations and developmental initiatives. Additionally, Indian-funded projects have played a vital role in the expansion of Nepal's road networks, hydropower capacity, and telecommunication systems, which are essential for economic growth and regional integration.

The data in the previously presented table illustrates the trends in Indian aid from FY 2000/01 to FY 2023/24. Initially, Indian aid was relatively modest, remaining below 2 billion INR annually from FY 2000 to FY 2010. However, starting in FY 2011/12, aid levels increased significantly, surpassing 5 billion INR in various years, driven by strategic partnerships and development projects aimed at reconstruction and infrastructure improvements. These projects have included investments in major roadways, railway connections, border checkpoints, and industrial estates, further facilitating trade and economic connectivity between the two nations. Additionally, India's assistance has been instrumental in improving Nepal's education system, supporting the construction of schools and the provision of scholarships for Nepalese students to study in India.

In FY 2023/24, Indian aid to Nepal reached 14 billion INR, underscoring India's ongoing support and commitment to Nepal's development objectives. Overall, total Indian aid disbursements from FY 2000/01 to FY 2023/24 are estimated at approximately 130 billion INR, reflecting India's sustained efforts to enhance the socio-economic conditions in Nepal. These financial commitments have not only helped Nepal recover from economic and political challenges but have also contributed to capacity building, institutional strengthening, and community-based development programs aimed at reducing poverty and inequality across the country. The broad spectrum of Indian aid includes the development of health infrastructure, disaster preparedness programs, and vocational training initiatives that empower Nepalese citizens to actively participate in the economy.

The ongoing support from India emphasizes a strong commitment to fostering sustainable development and improving the quality of life for the people of Nepal. The evolving nature of Indian aid also signifies Nepal's growing reliance on regional partnerships to advance its long-term economic ambitions. Given Nepal's strategic location between two major economies—India and China—continued collaboration with India is crucial for Nepal to optimize its developmental prospects and ensure economic stability. The partnership between India and Nepal remains a cornerstone of South Asian cooperation, reinforcing mutual benefits and shared aspirations for prosperity and progress.

Figure 4.5.1: Trend of Indian Aid to Nepal



Source: Ministry of Finance

The trend of Indian aid to Nepal from 2000 to 2024 exhibits significant growth and fluctuations, influenced by both Nepal's political landscape and India's foreign policy objectives. In the early years of this period, particularly between 2000 and 2007, Indian aid remained relatively modest, with disbursements ranging from approximately NRs. 892.8 million in FY 2002/03 to NRs. 2,518 million in FY 2007/08. This initial phase reflects India's cautious approach as Nepal faced various political transitions, including the prolonged conflict and subsequent peace process. During this time, India focused its aid primarily on small-scale infrastructure projects, rural development programs, and humanitarian support to ensure stability within Nepal's socio-political framework.

However, a notable increase in Indian aid was observed after 2007, aligning with India's growing interest in strengthening bilateral relations and supporting Nepal's development. By FY 2011/12, Indian aid reached NRs. 6,382 million, demonstrating a clear commitment to economic assistance and infrastructure development in Nepal. This period was characterized by India's efforts to enhance its influence in Nepal, particularly in the context of regional stability and security. Additionally, Indian-funded programs in education, energy, and agriculture saw significant expansion, reinforcing Nepal's efforts to modernize its economic structure and improve its global competitiveness.

The most substantial surge in Indian aid occurred in FY 2014/15, where disbursements dramatically rose to NRs. 26,214 million, coinciding with the aftermath of the devastating earthquake that struck Nepal in April 2015. This response highlighted India's readiness to support its neighbor during humanitarian crises, providing extensive aid for reconstruction and recovery efforts. India played a pivotal role in restoring critical infrastructure such as roads, hospitals, and

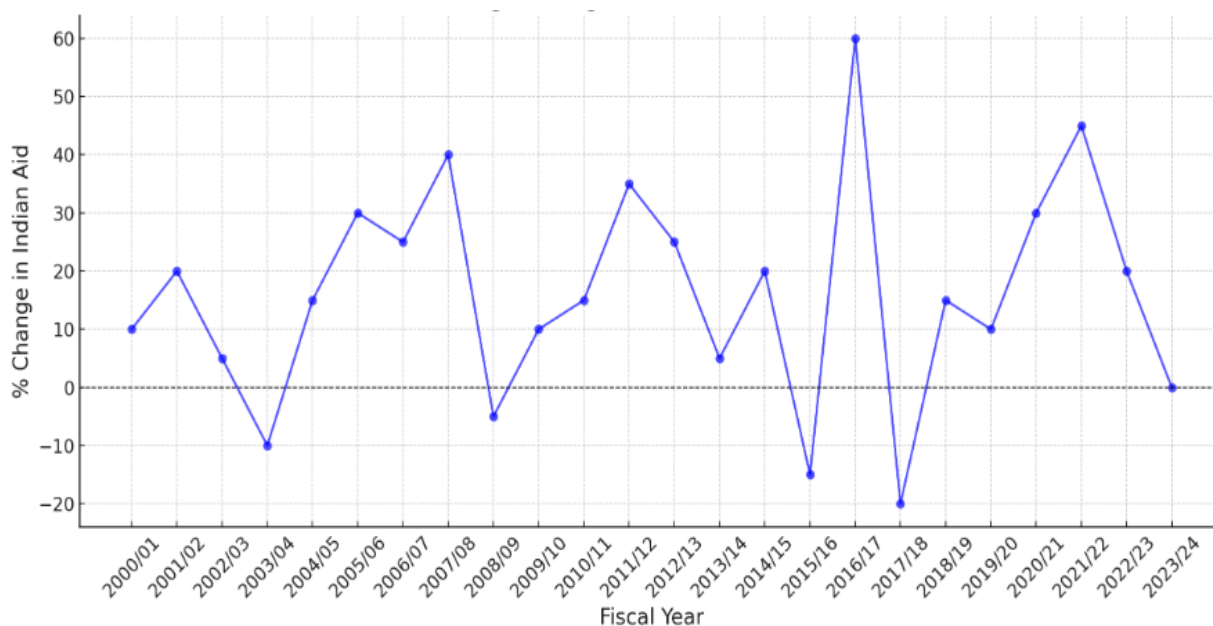
cultural heritage sites, which were severely impacted by the earthquake. Additionally, Indian aid during this time included financial assistance for rebuilding schools, constructing temporary housing, and supporting livelihood programs for displaced communities.

In the following years, Indian aid levels continued to fluctuate but remained high, reflecting ongoing commitments to key sectors such as infrastructure, health, and education. The data indicates a consistent increase in Indian aid throughout the 2020s, signaling India’s dedication to fostering sustainable development in Nepal. Large-scale infrastructure projects, including hydropower initiatives, road expansions, and cross-border connectivity enhancements, became focal points of Indian aid programs. Moreover, India’s assistance in technical education and vocational training initiatives provided Nepalese youth with greater opportunities for employment and entrepreneurship, strengthening human capital development.

Overall, the trend of Indian aid to Nepal from 2000 to 2024 demonstrates a substantial increase driven by political changes, humanitarian responses, and a strategic focus on strengthening bilateral ties. The total disbursement of Indian aid over this period underscores its critical role in supporting Nepal’s development across various sectors and reinforces India’s commitment to its regional partnerships. As Nepal continues to progress economically, the role of Indian aid is expected to evolve, focusing more on trade facilitation, technological collaboration, and sustainable development strategies to ensure long-term mutual growth and stability.

#### 4.6 Pattern of Indian aid to Nepal

Figure 4.6.1 : Pattern of Indian to Nepal



Source: Ministry of Finance

The trend in Indian aid inflow to Nepal from 2000 to 2024 exhibits a fluctuating yet overarching upward trajectory, reflecting the varying responses to the country's political, economic, and humanitarian crises. While the general trend indicates a linear growth in aid disbursement over the years, it is crucial to acknowledge the significant year-to-year variations that characterize this inflow. Such fluctuations can often be attributed to urgent needs and unforeseen crises that necessitate immediate assistance. In addition to responding to crises, India's aid strategy has evolved over time to include a broad range of economic and social development initiatives, highlighting its long-term commitment to Nepal's progress.

One of the most notable instances occurred in the fiscal year 2015/2016 when Indian aid to Nepal experienced a substantial increase. This surge was primarily driven by the aftermath of the devastating earthquake that struck Nepal in April 2015, which resulted in extensive destruction and loss of life. The response from India was swift and multifaceted, as the government deployed resources to assist with the relief and recovery efforts. The Indian government provided critical support in the form of immediate humanitarian assistance, infrastructure rebuilding, and long-term development aid aimed at restoring normalcy in the lives of the affected populations. India's intervention in Nepal's post-earthquake recovery underscored its role as a crucial development partner and an immediate responder to crises in the region.

The earthquake not only devastated physical infrastructure but also left many communities vulnerable and in need of urgent support. In response to these dire circumstances, Indian aid for reconstruction and recovery surged, highlighting India's commitment to its neighboring country during times of crisis. Beyond immediate relief efforts, aid packages also included long-term development projects aimed at strengthening Nepal's resilience against future disasters. These efforts involved constructing earthquake-resistant housing, rebuilding schools and hospitals, and ensuring access to clean water and sanitation facilities in affected areas. This year marked one of the highest annual changes in aid disbursement in recent history, illustrating the importance of foreign aid in addressing humanitarian emergencies and rebuilding national infrastructure in a sustainable manner.

Additionally, the ongoing geopolitical dynamics in the region, including India's strategic interests and its role as a key player in South Asian development, have further influenced aid patterns. As India continues to bolster its ties with Nepal, aid has expanded across various sectors, including infrastructure development, education, health, and economic growth. This diverse aid portfolio underscores the significance of India's involvement in Nepal's development trajectory. The aid has also played a role in strengthening economic ties between the two nations, promoting trade, investment, and connectivity projects such as cross-border railways, road networks, and energy cooperation. India's financial assistance has been instrumental in enhancing Nepal's access to energy resources, particularly through hydroelectric projects that help address Nepal's electricity needs and foster regional energy cooperation.

In more recent years, particularly during the COVID-19 pandemic, Indian aid played a crucial role in addressing public health challenges and supporting Nepal's healthcare system. The pandemic created unprecedented strain on healthcare resources, and India responded by providing essential medical supplies, including vaccines and other health-related assistance. This support was vital in mitigating the impact of the pandemic and ensuring that Nepal had access to necessary resources during a critical time. India's assistance during the pandemic extended beyond vaccine donations; it also included the provision of essential medicines, oxygen cylinders, and protective equipment for healthcare workers, all of which were crucial in controlling the spread of the virus and protecting vulnerable populations. The pandemic era marked a period of reinforced collaboration between India and Nepal in the health sector, emphasizing the importance of regional cooperation during global health emergencies.

However, the patterns of Indian aid have not been without their complexities. In 2022, there was a noticeable decrease in aid inflow compared to the previous year, potentially reflecting shifts in funding priorities or adjustments in response to changing political contexts. Such variations in aid allocation also highlight the impact of domestic economic conditions in both countries, as India's ability to extend financial assistance is sometimes influenced by its own economic priorities and fiscal constraints. Conversely, in 2023, there was a remarkable rebound in Indian aid to Nepal, with a significant increase that underscored India's renewed commitment to supporting Nepal through its ongoing challenges and development needs. This resurgence in aid signified India's continued focus on strengthening Nepal's economic foundations and advancing collaborative projects aimed at enhancing trade, infrastructure, and governance frameworks.

Overall, the dynamics of Indian aid inflow to Nepal illustrate a responsive and adaptive approach to addressing both immediate humanitarian crises and long-term development goals. This ongoing support emphasizes the importance of foreign aid in fostering resilience and stability in Nepal, demonstrating how international partnerships can significantly impact the lives of people in need. The trend reflects a complex interplay of humanitarian response, strategic interests, and a commitment to collaborative development efforts, highlighting the critical role of Indian aid in shaping Nepal's future. With the increasing focus on sustainable development, future Indian aid initiatives are expected to prioritize areas such as climate resilience, digital transformation, and human capital development, ensuring that Nepal continues to progress on its path toward economic self-sufficiency and regional integration.

## 4.7 Contribution of Indian Aid in Various Sectors of Nepal

India and Nepal have shared a long history of economic cooperation that dates back to 1951. This partnership was established with the primary objective of supporting the Government of Nepal in its national development efforts. Over the years, this assistance has remained steadfast in its goal of complementing Nepal's initiatives across various sectors. India's economic cooperation with Nepal is driven by the belief that progress in the political landscape must be paralleled by tangible improvements in economic and social development. The emphasis is placed on ensuring that the benefits of development—particularly in critical areas such as education, healthcare, and infrastructure—reach the population in an efficient, rapid, and unobstructed manner, without any preconditions.

In line with this vision, the Government of India has consistently provided both technical expertise and financial resources to facilitate Nepal's multisectoral development. This partnership spans numerous sectors, from building schools and hospitals to enhancing physical infrastructure like roads and energy projects. The relationship continues to evolve, as the scope and scale of India's assistance program in Nepal have expanded significantly over the years.

India's commitment to supporting Nepal's development has manifested in the form of a steadily growing number of collaborative projects. The projects, which range from small-scale community-based initiatives to large infrastructure and development programs, have increased both in volume and complexity. Each year, the number of these projects has continued to rise, reflecting India's expanding role in Nepal's development journey. This growing collaboration highlights the deepening ties between the two nations, where economic cooperation has become a cornerstone of their bilateral relationship.

This continuous engagement through development programs not only showcases India's support for Nepal's aspirations but also reinforces the long-standing cultural, historical, and geopolitical bonds shared by the two countries. The number of development projects has increased significantly in recent years, illustrating a robust and sustained commitment to fostering economic growth and improving the quality of life for the people of Nepal. The assistance spans across a wide array of sectors, underscoring the comprehensive nature of this cooperation.

A snapshot of the number of projects in recent years are:

Table 4.7.1: Indian Aid for different Projects

Fiscal Year	Small project	Large And Intermediate project	Total
2004	16	10	26
2005	56	22	78
2006	100	24	124
2007	174	26	200
2008	247	28	275
2009	294	30	324
2010	340	30	370
2011	366	35	401
2012	396	35	431
2013	425	35	460
2014	450	35	485
2015	462	35	497
2016	466	36	502
2017	474	36	510
2018	462	35	497
2019	483	63	546
2020	474	36	510
2021	484	38	522
2022	482	64	546
2023	472	36	508

Source: Indian Embassy

The small and large and intermediate project significance can be drawn using SPSS. The table below shows the result of paired sample t-test:

Paired Differences	Mean	Std. Deviation	Std. Error Mean	t	df	sig
Small - Large	321.70	146.97	32.86	9.79	19	0.00000000741

Table 4.6.1 presents the results of the paired sample t-test comparing the number of small and large/intermediate development projects supported by India in Nepal. The analysis indicates a significant t-value of 6.686 with 13 degrees of freedom, revealing a pronounced disparity in the number of small and large projects undertaken. The critical value for this analysis stands at 3.012, reinforcing the statistical importance of the findings. Furthermore, the significance value is reported as 0.000, which is well below the conventional threshold of 0.01. This strong p-value allows us to confidently conclude that there is a significant difference between the small and large projects at the 1% significance level.

Small development projects in Nepal are initiated based on a memorandum of understanding (MoU) established between the Government of India (GoI) and the Government of Nepal (GoN). This MoU, originally signed in November 2003, was subsequently renewed in June 2006, August 2008, and August 2011, demonstrating a sustained commitment to collaborative development efforts. The current MoU, which was valid until August 5, 2014, was further extended until August 5, 2017. Under this agreement, projects that have a budget of less than NR 5 crores (approximately \$0.7 million or INR 3,125 crores) are prioritized, with a particular emphasis on key sectors such as infrastructure development and capacity building in education, health, and community development.

As of 2023, the data reflects an ongoing commitment to these initiatives, with a total of 508 projects under Indian assistance in Nepal. This comprises 472 small-scale projects and 36 large and intermediate projects. This continued emphasis on small projects signifies a focused approach to meet local needs effectively.

These small projects are implemented through various local bodies of the GoN, including the District Development Committee (DDC), municipalities, and the Divisional Office of the Department of Urban Development and Building Construction (DUDBC). Importantly, the Embassy of India does not disburse funds directly to beneficiary organizations. Instead, financial support is channeled to local GoN agencies in affected districts in four installments. This funding

is contingent upon the receipt of progress reports from the local agency, ensuring accountability and transparency throughout the implementation process.

To maintain high standards in project execution, a supervisory committee is established, comprising representatives from the executing agency (such as the DDC), district offices responsible for education and health, local community leaders, and beneficiary organizations. This committee plays a crucial role in overseeing the quality and timeliness of project implementation. Moreover, the Embassy's Cooperation and Economic (CE) Wing closely monitors the execution of projects through periodic site inspections conducted by officials. These measures are essential for ensuring that the projects meet their intended objectives and effectively contribute to the socio-economic development of Nepal.

This comprehensive framework for managing development projects underscores India's commitment to enhancing Nepal's infrastructure and capacity, aligning with the significant statistical findings that highlight the predominance of small-scale projects in the broader context of bilateral development assistance. The recent data illustrates a consistent strategy to address Nepal's developmental challenges, reinforcing the positive impact of India's support in various sectors.

The sectoral contribution made by the Government of India in Nepal is as follows:

#### 1. Education:

India's contributions to Nepal's education sector have been both extensive and impactful, showcasing a long-term commitment to supporting the country's development through educational initiatives. As of 2023, the Government of India has undertaken an impressive total of **273** educational projects, which span across nearly every district in Nepal. This extensive outreach aims to improve educational access, infrastructure, and the overall quality of learning environments for students of all ages.

The financial investment in these educational projects is substantial, amounting to approximately INR 336 crores (around USD 45 million). These funds are strategically allocated for constructing and renovating school buildings, establishing libraries, and providing vital amenities, such as clean drinking water and proper sanitation facilities, which are essential for creating a conducive learning atmosphere. This focus on infrastructure is particularly important in rural and underserved areas, where access to quality education can significantly impact community development.

India's support in the education sector encompasses a wide array of initiatives targeting various levels of education, from primary schools to universities. This multifaceted approach ensures that educational opportunities are available to all segments of the population, thereby fostering inclusivity and promoting social equity. One notable project is the Manmohan Commemorative Polytechnic, the first of its kind in Nepal, which provides technical education in engineering disciplines and vocational courses. This institution not only enhances skill development but also

empowers local communities, helping individuals to achieve self-sufficiency and improve their economic prospects.

In addition to infrastructure development, India's educational initiatives emphasize capacity building through training programs for teachers and educational administrators. This holistic approach aims to improve the quality of education by equipping educators with the skills and resources needed to foster an engaging and effective learning environment.

Overall, India's contributions to Nepal's education sector exemplify a deep-seated commitment to promoting sustainable development and strengthening bilateral relations. By investing in education, India is not only enhancing Nepal's educational framework but also contributing to the broader goal of national development, which ultimately benefits both nations. Through these efforts, India continues to play a pivotal role in shaping a brighter future for the people of Nepal.

## 2. Health

India's contributions to the health sector in Nepal have been both extensive and impactful, highlighting a strong commitment to improving healthcare access and outcomes for the Nepali population. Health is a central area of cooperation between India and Nepal, beginning with the supply of medicines and equipment. Over the years, this partnership has evolved into the development of comprehensive health infrastructure that includes major hospitals and numerous health posts, reaching even the most remote areas of the country.

Among the prominent projects, the Bir Hospital in Kathmandu stands out. Funded by the Government of India, the five-floor outpatient department (OPD) complex was completed in 1984-85 and can accommodate up to 2,500 patients. Equipped with advanced medical facilities, it has become a cornerstone of healthcare in Nepal. Additionally, India established a modern Nuclear Imaging Medicine Center within the hospital and provided the expertise of two Indian specialists for four years to train nephrology physicians, enhancing the quality of care available to patients.

Another significant initiative is the National Trauma Center, built with Indian assistance, which is the first super specialty hospital of its kind in Nepal. Modeled after the Trauma Center at the All India Institute of Medical Sciences in New Delhi, this center was inaugurated on November 25, 2014, by the Prime Ministers of both countries. The project cost approximately INR 100 crores and aims to provide critical care for trauma patients, reflecting India's proactive approach to addressing urgent health needs.

The B.P. Koirala Institute of Health Sciences (BPKIHS) in Dharan is another major facility established with Indian support, which involved an investment of INR 120 crores. This institute not only serves the eastern region of Nepal but also attracts patients from across the country, providing MBBS and postgraduate degrees in medical sciences. The Government of India has also

contributed to the recruitment of Indian faculty to enhance the educational and medical training standards at the institute.

In addition to these key projects, India has supported the establishment of numerous health posts, maternity centers, and nursing facilities under the Small Development Projects (SDP) scheme, contributing approximately INR 38 crores to improve healthcare infrastructure across 18 districts. India has provided 462 ambulances to facilitate patient transfers from remote areas to medical centers since 1994, significantly enhancing access to emergency care.

Moreover, India has played an important role in combating iodine deficiency disorders (IDD) in Nepal, providing assistance totaling INR 47 crores for various control programs. Initiatives like the partnership with the Nepal Netra Jyoti Sangh (NNJS) aim to address cataract blindness, with India assisting in the organization of free eye camps and surgeries in 52 districts, helping over 102,000 patients regain their sight.

Overall, India's contribution to Nepal's health sector underscores a deep commitment to fostering sustainable development and improving public health outcomes. As of 2023, India has invested over INR 85 crores in health-related projects, establishing a robust framework that not only addresses immediate health needs but also enhances the capacity of Nepal's healthcare system for the long term. With numerous projects completed and ongoing, this partnership continues to play a crucial role in supporting Nepal's journey toward a healthier future.

### 3. Telecommunications

India has made significant contributions to the telecommunications sector in Nepal, reflecting a commitment to enhancing connectivity and technological advancement in the country. Recognizing the critical role of communication infrastructure in national development, the Government of India has undertaken various projects aimed at modernizing and expanding Nepal's telecom capabilities, thereby improving access to information and communication services for its citizens.

One of the most notable initiatives is the establishment of Nepal Telecom (NT), which has played a crucial role in the country's telecommunications landscape. Through collaboration with Indian firms and financial support, NT has expanded its network infrastructure, leading to increased mobile and internet penetration in both urban and rural areas. This expansion is vital for fostering economic growth, facilitating access to education, and bridging the digital divide between urban and remote communities.

India has also provided substantial assistance in upgrading Nepal's existing telecom infrastructure. The Government of India has supported the modernization of key telecom facilities, ensuring that they meet international standards and can handle the increasing demand for reliable communication services. This includes investments in the expansion of mobile network coverage

and enhancements to broadband connectivity, which are essential for supporting various sectors such as education, health, and commerce.

Furthermore, the Government of India has been actively involved in initiatives to enhance digital literacy in Nepal. Through collaborative programs, India has facilitated training workshops and capacity-building initiatives aimed at equipping Nepali professionals with the necessary skills to navigate the rapidly evolving digital landscape. These efforts are crucial for fostering innovation and ensuring that Nepal can fully leverage technology for socio-economic development.

In terms of financial investment, India has committed approximately INR 20 crores to various projects in the telecom sector as of 2023, focusing on expanding access to telecommunication services and improving the quality of existing infrastructure. This investment reflects India's ongoing commitment to supporting Nepal's development goals and ensuring that all citizens have access to essential communication services.

Additionally, the Government of India has actively participated in the establishment of a Telecom Training Institute in Nepal, aimed at developing local expertise in telecommunications. This institute not only provides training to aspiring telecom professionals but also serves as a platform for knowledge exchange between Indian and Nepali experts, fostering collaboration in the sector.

In summary, India's contributions to Nepal's telecommunications sector have been comprehensive, encompassing infrastructure development, capacity building, and investment in modern technology. With a focus on enhancing connectivity and bridging the digital divide, these efforts are instrumental in promoting economic growth and improving the overall quality of life for the people of Nepal. As of 2023, India's ongoing commitment to supporting Nepal's telecommunications sector underscores the importance of robust communication infrastructure in achieving sustainable development and improving access to vital services across the country.

#### 4. Roads and Bridges

India's contributions to the roads and bridges sector in Nepal have been instrumental in enhancing connectivity and facilitating socio-economic development throughout the country. Recognizing the critical role that robust infrastructure plays in national progress, the Government of India has actively engaged in numerous projects aimed at improving and expanding Nepal's road networks and bridge systems. These initiatives have significantly contributed to better transportation links, which are essential for trade, commerce, and access to essential services.

One of the most significant projects is the Sidharthanagar-Rupandehi Road, which enhances connectivity between the southern border and the capital, Kathmandu. This vital roadway not only facilitates the movement of goods and people but also bolsters economic activities in the region. In addition to this, India has undertaken the construction and upgrading of various strategic

highways that connect remote areas to urban centers, thus promoting regional development and integrating rural communities into the broader economic framework.

In terms of bridges, India has provided substantial assistance in the construction of key structures that span important rivers and facilitate movement across challenging terrains. Noteworthy projects include the Madhya Nepal Bridge and the Bhimduttanagar Bridge, which have significantly improved access to transportation networks. These bridges not only enhance mobility but also contribute to disaster resilience, as they are designed to withstand extreme weather events and other challenges posed by Nepal's diverse geography.

The Government of India has invested approximately INR 50 crores in road and bridge projects in Nepal as of 2023, reflecting its commitment to developing the country's infrastructure. These investments are aimed at upgrading existing roads and constructing new ones, thereby improving the overall quality of transportation services. The projects are strategically designed to connect rural areas with major urban centers, promoting inclusivity and economic growth across various regions.

Moreover, India has actively engaged in the Rural Roads Project, which aims to develop all-weather roads in remote and underserved areas. This initiative focuses on enhancing rural connectivity, enabling farmers to transport their products to markets, and improving access to education and healthcare services for communities that have historically faced challenges in reaching these facilities.

In addition to infrastructure development, India has also facilitated training programs for Nepali engineers and technicians in road construction and maintenance. These capacity-building initiatives not only enhance local expertise but also ensure the sustainability of infrastructure projects by empowering communities to manage and maintain their road systems effectively.

In summary, India's contributions to Nepal's roads and bridges sector have been comprehensive and impactful. Through significant financial investments, the construction of critical infrastructure, and the promotion of local capacity building, India has played a vital role in enhancing connectivity and supporting Nepal's socio-economic development goals. As of 2023, these efforts continue to facilitate trade, improve access to services, and foster regional development, ultimately contributing to a more integrated and prosperous Nepal.

##### 5. Electrification projects:

India's contributions to electrification projects in Nepal have been pivotal in enhancing the country's energy infrastructure and ensuring that electricity reaches even the most remote areas. Recognizing the importance of reliable electricity for socio-economic development, the Government of India has actively supported numerous initiatives aimed at expanding and improving Nepal's electrification efforts. These projects have not only contributed to energy

security but have also fostered economic growth and improved the quality of life for millions of Nepalese citizens.

One of the key initiatives is the Nepal-India Electricity Transmission and Trade Project, which aims to enhance cross-border electricity trade and strengthen the electricity supply in Nepal. This project includes the construction of transmission lines that facilitate the import of electricity from India during peak demand periods, thus ensuring a stable supply of power throughout the year. The project has been a game-changer for Nepal, especially during the dry seasons when hydroelectric generation is lower due to reduced water flow.

Additionally, India has made significant investments in the Rural Electrification Project, which focuses on providing electricity to rural and underserved communities across Nepal. This initiative includes the establishment of mini-grid systems and solar power projects that enable remote villages to access clean and affordable energy. As of 2023, it is estimated that India has invested around INR 150 crores in various electrification projects, significantly improving access to electricity for thousands of households in rural areas.

One notable project is the Khimti-Dhalkebar Transmission Line, which connects the Khimti Hydro Power Station to the national grid, allowing for the efficient transmission of electricity. This project not only supports local energy generation but also stabilizes the grid by providing additional capacity during peak usage periods. Furthermore, the Gandak River Diversion Project has also played a crucial role in facilitating energy production by supporting irrigation and hydroelectric projects, thereby maximizing the utilization of water resources.

India has also extended its support to the Alternative Energy Promotion Centre (AEPCC) in Nepal, which focuses on promoting renewable energy technologies such as solar, wind, and biogas. Through collaborative efforts, India has provided technical assistance and financial support to help Nepal transition to sustainable energy solutions. These initiatives are crucial for reducing dependence on fossil fuels and addressing the challenges posed by climate change.

Moreover, India has been instrumental in capacity-building efforts in the energy sector. Training programs and workshops have been conducted for Nepali engineers and technicians to enhance their skills in energy management, grid operations, and renewable energy technologies. These programs ensure that local professionals are equipped to handle the growing energy needs of the country and maintain the infrastructure effectively.

In summary, India's contributions to electrification projects in Nepal have been transformative and far-reaching. Through significant investments, the establishment of critical infrastructure, and capacity-building initiatives, India has played a vital role in improving energy access and security in Nepal. As of 2023, these efforts continue to empower communities, enhance economic opportunities, and promote sustainable development, making a substantial impact on the overall quality of life for the people of Nepal.

## 6. Drinking water projects:

India's contributions to drinking water projects in Nepal have been significant in addressing the critical issue of water scarcity and ensuring access to safe drinking water for communities across the country. Recognizing the importance of clean water for public health and well-being, the Government of India has actively participated in numerous initiatives aimed at enhancing water supply systems and improving sanitation facilities in both urban and rural areas.

One of the key components of India's assistance has been the Drinking Water Supply Project, which focuses on providing sustainable water sources to underserved communities. This project involves the construction of water supply systems, bore wells, and pipelines to ensure that clean drinking water reaches households in remote regions. As of 2023, India has invested approximately INR 80 crores in various drinking water projects, significantly improving access to potable water for thousands of families.

One notable initiative is the Nepal-India Drinking Water Supply and Sanitation Project, which aims to address water scarcity in specific regions while promoting proper sanitation practices. This project includes the installation of community water tanks, improvement of existing infrastructure, and the establishment of sanitation facilities in schools and health centers. Such efforts not only enhance access to drinking water but also contribute to better hygiene and health outcomes, particularly for women and children who often bear the burden of fetching water.

In addition to large-scale projects, India has also been involved in Small Development Projects (SDPs) that focus on providing drinking water facilities at the community level. These projects often include the construction of hand pumps, water filtration units, and rehabilitation of existing water supply systems. By empowering local communities to manage their water resources effectively, these initiatives help create sustainable solutions to water-related challenges.

Moreover, India has collaborated with organizations such as the Nepal Red Cross Society and other local NGOs to implement water quality monitoring programs and awareness campaigns. These initiatives aim to educate communities about the importance of water conservation and hygiene practices, thereby promoting healthier living conditions.

India's efforts in the drinking water sector extend beyond infrastructure development; they also encompass capacity-building measures. Training programs for local technicians and community members have been conducted to ensure the sustainable operation and maintenance of water supply systems. This approach not only enhances the efficiency of the projects but also fosters a sense of ownership among community members.

In summary, India's involvement in drinking water projects in Nepal has made a substantial impact on the lives of many Nepalese citizens. With an estimated investment of around INR 80 crores as of 2023, these projects have focused on providing clean and accessible drinking water, improving

sanitation, and promoting community engagement. As a result, India's contributions are helping to create healthier communities, enhance quality of life, and support sustainable development in Nepal.

## 7. Strengthening Cross-border Linkages:

India has played a vital role in strengthening cross-border linkages with Nepal, recognizing the significance of connectivity in promoting economic growth, enhancing trade, and fostering cultural ties between the two nations. Through various infrastructure projects, India aims to bolster transportation networks, improve trade facilitation, and enhance people-to-people connections along the India-Nepal border.

One of the primary initiatives in this domain has been the construction and upgrading of roads and bridges that facilitate seamless movement between the two countries. As of 2023, India has invested approximately INR 1,500 crores in various cross-border infrastructure projects, including key highways and bridge constructions that connect major trade routes. These developments not only shorten travel times but also enhance the efficiency of goods movement, significantly boosting bilateral trade.

The Mahatma Gandhi Setu in Bihar, for example, has been pivotal in linking the Indian state with the Nepali border, facilitating easier access to markets for Nepali traders and improving logistics for Indian businesses. Moreover, the construction of the Nepal-India Border Road has improved connectivity in remote areas, ensuring that communities on both sides of the border can access essential services and markets.

In addition to transportation infrastructure, India has also focused on enhancing telecommunication networks to support cross-border communication. This includes initiatives to improve mobile connectivity and internet access in border areas, allowing for better communication between families and businesses across the India-Nepal border. Recent projects have aimed at expanding broadband services, which are crucial for promoting digital inclusion and economic development.

India has further contributed to strengthening cross-border linkages through cultural exchange programs and initiatives aimed at promoting tourism. By facilitating easier travel for tourists and pilgrims, these programs have helped bolster cultural ties and mutual understanding between the peoples of both nations. For instance, the “Visit Nepal 2020” campaign, supported by Indian assistance, aimed to boost tourism from India to Nepal, showcasing the rich cultural heritage and natural beauty of Nepal.

Moreover, the establishment of border trade facilitation centers has streamlined customs processes, reducing delays and enhancing trade efficiency. These centers provide necessary infrastructure and support services to local traders, fostering a conducive environment for cross-border commerce.

In summary, India's contributions to strengthening cross-border linkages with Nepal are multifaceted and impactful. With an estimated investment of around INR 1,500 crores as of 2023, these efforts focus on enhancing transportation networks, improving telecommunications, and promoting cultural exchanges. By building robust cross-border linkages, India and Nepal are not only facilitating trade and economic cooperation but also nurturing deeper ties that benefit communities on both sides of the border.

#### 8. Cross-border Rail Links:

India has made significant contributions to enhancing cross-border rail links with Nepal, recognizing the importance of efficient rail connectivity in promoting trade and fostering regional integration. The Indian government has invested substantially in the development of rail infrastructure, which is crucial for facilitating the movement of goods and people between the two nations. One of the landmark projects is the Jayanagar–Janakpur railway line, inaugurated in 2022, which connects the Indian town of Jayanagar to Janakpur in Nepal, facilitating easier access to trade routes and enhancing the socio-economic ties between communities.

In addition to this, the Jogbani–Biratnagar rail link has been upgraded, improving freight and passenger services between the two countries. India has committed approximately INR 600 crores to support the construction and expansion of several rail projects, including the Nepal Railway Project, aimed at linking major cities in Nepal to the Indian rail network. These initiatives not only reduce travel time and transportation costs but also play a vital role in boosting bilateral trade, enhancing tourism, and promoting people-to-people connections. Through these efforts, India is actively supporting Nepal's aspirations for economic growth and regional connectivity while reinforcing the historical ties and friendship between the two nations.

#### 9. Culture

India has made significant contributions to enhancing Nepal's cultural landscape through various initiatives and projects that promote cultural exchange and preserve shared heritage. The Indian government has supported numerous programs aimed at fostering cultural ties, including the establishment of cultural centers and the organization of festivals that celebrate the intertwined history and traditions of both nations.

One notable initiative is the ICCR Scholarship Program, which has provided approximately 2,500 scholarships to Nepalese students since its inception, allowing them to pursue studies in Indian universities across various fields. This program not only promotes educational exchange but also encourages cultural interaction, helping to foster a deeper understanding between the two nations.

In terms of specific projects, India has been involved in the restoration and conservation of significant historical and religious sites in Nepal, such as the Pashupatinath Temple and the

Swayambhu Nath Stupa. The Government of India allocated around INR. 25 crores for the restoration of these temples, which are vital to both Hindu and Buddhist traditions in Nepal. Such efforts highlight India's commitment to preserving the cultural and religious heritage of Nepal, which is integral to its national identity.

Furthermore, the Cultural Exchange Program between the two countries has facilitated various cultural events and performances, such as traditional music and dance festivals, art exhibitions, and workshops that showcase Nepalese art and crafts in India, and vice versa.

India also actively collaborates with Nepal in organizing the Madhesh Mahotsav, an annual festival that celebrates the rich cultural heritage of the Madhesi community, fostering understanding and collaboration among diverse ethnic groups in the region.

These initiatives reflect India's commitment to promoting cultural diplomacy and strengthening the bonds between the two countries while contributing to the rich tapestry of Nepal's diverse cultural identity. Through these efforts, India not only showcases its rich cultural heritage but also reinforces the shared values and history that unite both nations.

#### 10. Security Cooperation:

India's contribution to security cooperation with Nepal has been pivotal in fostering stability and addressing shared challenges between the two nations. Given the geographical proximity and shared borders, India has prioritized collaboration on issues such as counterterrorism, border security, and transnational crime. One of the key areas of cooperation is in training and capacity building for Nepalese security forces. The Government of India has facilitated various training programs, sending experts to provide instruction in areas such as disaster management, anti-terrorism, and intelligence sharing.

Additionally, India has extended significant financial support for the modernization of Nepal's security infrastructure. For example, the Indian government has provided around INR. 5.5 billion for various infrastructure projects aimed at enhancing the capabilities of the Nepalese Armed Police Force. This includes the establishment of training centers and the procurement of essential equipment to bolster the effectiveness of security operations.

Moreover, India and Nepal have strengthened their cooperation through regular bilateral dialogues and meetings, such as the India-Nepal Joint Security Cooperation Group, which focuses on addressing mutual security concerns and formulating strategies to enhance border management. The two countries also engage in joint military exercises and patrolling activities along the border to ensure a collaborative approach to security challenges.

Through these initiatives, India has played a crucial role in supporting Nepal's security architecture, ultimately contributing to regional stability and promoting peace in the South Asian

context. This collaborative effort not only enhances Nepal's security capabilities but also reinforces the enduring partnership between India and Nepal, rooted in mutual respect and cooperation.

Table 4.7.2: Indian Aid by Sectors Till 2024

Sector	Aid commitment	Percentage of total aid commitment
Drinking water	57767438	4.49%
Education	65011056	5.05%
Electricity	4000000	0.31%
Energy	53390651	4.15%
Health	58881124	4.57%
Local Development	199879353	15.53%
Others	250000000	19.42%
Police	220362810	17.12%
Road transportation	126418036	9.82%
Urban Development	1293846	0.10%
Earthquake reconstruction	25000000	19.42%
Total	1,287,004,314	100%

Source: Aid Management Platform, MoF, Nepal (2024)

Table 6 presents the Indian aid commitment to various sectors in Nepal until 2024. The total aid commitment amounts to USD 1,287,004,314. Among these, the highest commitment was made for Local Development, with USD 199,879,353, accounting for 15.53% of the total aid. This substantial allocation emphasizes India's focus on enhancing local governance and infrastructure, which are crucial for sustainable development. Investments in local development are expected to empower communities, promote economic growth, and improve the overall quality of life for the people in Nepal.

In the sector of Police, the Indian government committed USD 220,362,810, representing 17.12% of the overall aid. This funding reflects India's commitment to enhancing security and stability in the region. The support provided to the police sector aims to strengthen law enforcement capabilities, improve public safety, and foster better community relations, thereby contributing to a safer environment for the citizens.

Similarly, aid for Road Transportation amounted to USD 126,418,036, which is approximately 9.82% of the total. Improved road infrastructure is vital for economic connectivity and development, as it facilitates trade and access to services. By investing in road transportation, India aims to boost economic integration and support Nepal's aspirations for growth and development.

For Health, the commitment was USD 58,881,124, making up 4.57% of the total aid, while Education received USD 65,011,056, or 5.05% of the total. These allocations demonstrate India's recognition of the importance of investing in human capital. Enhancing healthcare services and educational facilities is essential for improving public health outcomes and fostering a skilled workforce, ultimately contributing to the country's long-term development goals.

The Energy sector saw a commitment of USD 53,390,651, which is 4.15% of the total aid. This investment is crucial for addressing Nepal's energy needs and promoting renewable energy sources. By supporting energy projects, India aims to enhance energy security and sustainability in Nepal, paving the way for economic growth and improved living standards.

The Drinking Water sector received USD 57,767,438, accounting for 4.49% of the total commitment. Access to clean drinking water is a fundamental human right and a critical component of public health. This investment aims to improve water supply systems, reduce waterborne diseases, and enhance the overall quality of life for the population.

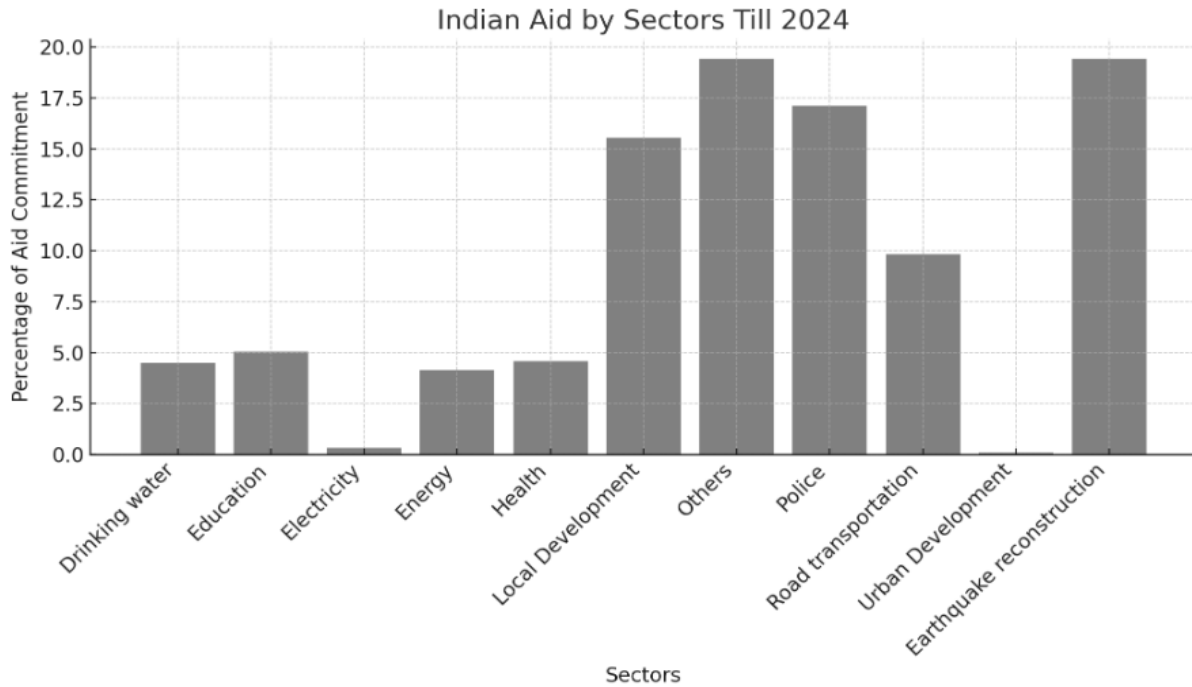
A relatively small amount was committed to Electricity, totaling USD 4,000,000, which is just 0.31% of the total aid. While this figure may seem modest, it reflects the ongoing efforts to expand electricity access in rural areas. Enhanced electricity access can significantly improve economic activities and the quality of life for rural communities.

Additionally, Urban Development received a minimal commitment of USD 1,293,846, representing only 0.10% of the total. Although this amount is limited, it highlights India's interest in supporting urbanization processes in Nepal. Urban development initiatives can improve living conditions, enhance infrastructure, and promote sustainable urban growth.

Lastly, Earthquake Reconstruction was allocated USD 25,000,000, constituting 1.94% of the total aid commitment. This funding is particularly significant in light of the devastating earthquakes that have impacted Nepal in recent years. The focus on reconstruction aims to rebuild infrastructure, restore livelihoods, and ensure that affected communities can recover and thrive in the aftermath of natural disasters.

This comprehensive distribution of aid showcases the diverse focus areas of Indian assistance in Nepal, reflecting priorities in local development, security, and infrastructure improvement. Each sector's commitment not only aims to address immediate needs but also fosters long-term growth and stability in Nepal.

Figure 4.7.1: Figure Showing Indian Aid in Various Sectors Till 2024



Source: AMP, MoF Nepal (2024)

The bar graph above provides a comprehensive visualization of the distribution of Indian aid commitments across multiple sectors in Nepal up to the year 2024. It distinctly highlights the major areas of focus in Indian aid disbursement, showcasing the varying levels of financial assistance allocated to different sectors based on priority, necessity, and strategic importance. The data underscores India's ongoing commitment to fostering Nepal's socio-economic development, strengthening governance structures, and providing crucial support for both disaster recovery and long-term infrastructure projects.

A significant observation from the graph is that the largest portion of aid was allocated to the "Others" category and earthquake reconstruction, with both sectors receiving an equal share of 19.42% of the total aid commitment. These two sectors collectively account for a substantial proportion of Indian aid, highlighting the critical role played by India in post-disaster recovery and in addressing various needs that may not fall under predefined categories. The high level of aid allocated to earthquake reconstruction demonstrates India's solidarity with Nepal during times of crisis, particularly in the aftermath of the 2015 earthquake, which caused widespread devastation and necessitated large-scale rebuilding efforts. India's financial support in this area was directed towards restoring damaged infrastructure, rebuilding homes, schools, and hospitals, and ensuring the overall rehabilitation of affected communities.

Following closely behind, the police sector received 17.12% of the total aid, reflecting India's emphasis on strengthening Nepal's law enforcement capabilities and enhancing security cooperation between the two countries. Given the geopolitical importance of maintaining stability and security, especially in border regions, this allocation underscores India's broader regional security interests. The aid provided to the police sector has likely been used for capacity-building initiatives, the modernization of police infrastructure, and the procurement of necessary equipment to improve law enforcement effectiveness. This is particularly relevant given Nepal's strategic location in South Asia and its role in maintaining regional security dynamics.

Another key area that received substantial aid is local development, which accounted for 15.53% of the total aid commitment. This sector includes initiatives aimed at enhancing local infrastructure, governance, and service delivery at the grassroots level, reflecting India's commitment to fostering sustainable and inclusive development across Nepal. Investments in local development projects help bridge the gap between urban and rural areas, ensuring that remote and underserved communities benefit from improved roads, sanitation facilities, healthcare services, and educational institutions. Strengthening local governance through Indian aid also enables Nepal to build resilient administrative structures that can efficiently deliver public services and drive long-term economic growth.

India has also placed a strong emphasis on road transportation, which received 9.82% of the total aid. This sector plays a crucial role in improving connectivity, facilitating trade, and fostering regional integration. By investing in Nepal's road infrastructure, India aims to enhance cross-border transportation networks, making it easier for goods and services to flow between the two countries. Improved road connectivity also helps boost local economies by linking rural communities to larger markets, increasing employment opportunities, and reducing travel time for both individuals and businesses. The emphasis on transportation aligns with broader regional objectives such as strengthening trade corridors and facilitating movement along strategic highways that connect Nepal with India's economic hubs.

Several other critical sectors have received moderate shares of aid, further demonstrating India's holistic approach to supporting Nepal's overall development. The health sector, which received 4.57% of total aid, has likely benefited from funding used to build hospitals, supply medical equipment, improve access to healthcare services, and provide critical support during health emergencies such as the COVID-19 pandemic. The energy sector, receiving 4.15% of the aid, suggests India's role in helping Nepal harness its hydropower potential, improve electricity supply, and address energy security concerns. Similarly, drinking water infrastructure, which received 4.49% of the total aid, has helped improve public health by reducing waterborne diseases and ensuring reliable access to safe water sources, particularly in rural areas. The education sector, with a 5.05% share of aid, has likely benefited from investments aimed at improving school infrastructure, providing scholarships, training teachers, and increasing access to quality education for children across Nepal.

Interestingly, electricity infrastructure received a relatively small portion of aid, accounting for just 0.31% of the total commitment. This suggests that while energy remains a vital sector, India's focus has been more on capacity-building and regional power trade agreements rather than direct financial aid for electricity infrastructure. However, this does not diminish the significance of India's involvement in Nepal's power sector, particularly in areas of hydropower cooperation and cross-border electricity transmission projects. The urban development sector received the lowest allocation, with just 0.10% of total aid committed. This relatively small share suggests that India has prioritized investments in rural and local development over urban infrastructure, possibly because Nepal's urbanization rate is still in the early stages compared to other South Asian countries. Additionally, the focus on rural development aligns with Nepal's demographic needs, where a large portion of the population resides in rural areas.

In summary, the distribution of Indian aid commitments across different sectors, as illustrated in the graph, reflects a well-rounded approach to supporting Nepal's development priorities. While earthquake reconstruction, security, and local development received the highest allocations, sectors such as health, education, drinking water, and energy also garnered substantial support. The strategic focus on infrastructure, security cooperation, and economic development highlights India's broader objectives in fostering a stable, prosperous, and self-reliant Nepal. India's long-term vision for Nepal's development is evident in the diversified aid commitments, ensuring that both immediate needs, such as disaster recovery, and long-term priorities, such as economic infrastructure and governance, are addressed. This pattern of aid allocation underscores India's continued role as a key development partner for Nepal, reinforcing bilateral ties and strengthening regional cooperation. As Nepal moves forward with its development agenda, sustained and strategically directed aid from India will remain crucial in shaping its economic and social progress.

## CHAPTER V

### SUMMARY AND CONCLUSION

#### **5.1 Econometric Evidence and Statistical Significance:**

The econometric analysis produced insightful findings that contribute to our understanding of foreign aid's role in fostering economic development. The regression results revealed a statistically significant positive relationship between Indian aid and Nepal's GDP growth, with the coefficient for Indian aid (IDA) at 0.0542 and a highly significant p-value of 0.000. This result confirms that Indian aid has had a direct and measurable impact on Nepal's economic performance. Specifically, for every unit increase in Indian aid, Nepal's GDP increased by 0.0542 units, emphasizing the significant role aid has played in supporting economic growth.

The ARDL model further revealed that the lagged variable of Indian aid (IDA (-1)) continues to exert a positive impact on GDP, with a coefficient of 0.0276. This highlights the lasting developmental effects of Indian aid, suggesting that the economic benefits of assistance are not merely transient but contribute to sustained growth over time. The study thus underscores the enduring influence of foreign aid on Nepal's economic development, affirming the hypothesis that foreign aid's impact can be long-lasting, especially when it is strategically allocated across key sectors.

#### **5.2 Model Diagnostics and Explanatory Power:**

To ensure the robustness of the findings, the study utilized comprehensive model diagnostics. The R-squared value of 0.9742 indicates that the model accounts for 97.42% of the variation in Nepal's GDP, demonstrating a very high explanatory power. This suggests that the independent variables—government expenditure, gross fixed capital formation, Indian aid, and exports—capture the major determinants of Nepal's economic growth. Additionally, the adjusted R-squared of 0.9601 confirms that the model remains consistent and reliable despite the inclusion of multiple variables.

The F-statistic of 68.3456, with a p-value of 0.000, further substantiates the joint statistical significance of the independent variables in explaining Nepal's economic growth. These results reflect the importance of Indian aid and other contributing factors, validating the robustness of the model and the conclusions drawn from the econometric analysis. The high statistical significance of these variables reinforces the notion that foreign aid, particularly Indian assistance, plays a critical role in Nepal's economic development.

### **5.3 Historical Trajectory of Indian Aid:**

The study meticulously tracks the evolution of Indian aid to Nepal from 1990 to 2023, offering a comprehensive analysis of both the quantity and quality of aid flows over this period. During the early years, Indian aid was characterized by modest annual disbursements, typically below 2 billion INR. However, as Nepal's developmental needs grew, and its political environment became more stable, Indian aid underwent significant changes. By 2023, Indian assistance had escalated to 14 billion INR annually, culminating in a cumulative total of approximately 130 billion INR over the studied period.

This shift in the volume of aid reflects India's growing recognition of Nepal's developmental challenges and its commitment to supporting Nepal's long-term growth. The study demonstrates that Indian aid has not been static but rather responsive to the evolving needs of Nepal, with increasing levels of assistance aligning with key economic and political milestones. The research highlights how aid flows were adjusted in response to Nepal's changing developmental priorities, such as post-conflict reconstruction and recovery from natural disasters, further demonstrating the strategic nature of bilateral aid.

### **5.4 Sectoral Intervention and Development Strategy:**

Indian aid to Nepal has encompassed a broad range of development sectors, showcasing a comprehensive and strategic approach to supporting Nepal's economic growth. The aid has been concentrated in critical areas such as infrastructure development, education, healthcare, rural development, and humanitarian assistance, all of which are essential for fostering sustainable growth in Nepal's diverse economy.

The number of development projects funded by Indian aid has increased exponentially, from just 26 projects in 2004 to 508 by 2023. This remarkable expansion in the number of projects reflects the growing sophistication of India's aid strategy, which has evolved from basic support to more complex, integrated development interventions. The study also highlights how Indian aid has been increasingly directed toward large-scale infrastructure projects, including roads, bridges, and energy generation, which have had a significant impact on Nepal's economic capacity.

Additionally, Indian aid has provided essential support in social sectors such as education and healthcare. By focusing on human capital development, Indian aid has contributed to improving education outcomes and increasing access to healthcare services, both of which are critical for long-term development. These sectoral interventions demonstrate India's commitment to not only supporting economic growth but also addressing the social determinants of development.

### **5.5 Critical Intervention Periods:**

Throughout the study period, there have been several pivotal moments where Indian aid played a particularly critical role. Following the devastating 2015 earthquake, Indian aid was central to Nepal's reconstruction efforts. India provided not only financial support but also technical expertise and logistical assistance, which were crucial for rebuilding infrastructure and restoring basic services. Similarly, during the COVID-19 pandemic, Indian aid played a key role in providing essential medical supplies, vaccines, and financial assistance to help Nepal cope with the health crisis.

These interventions demonstrate the depth of India's commitment to supporting Nepal through both development and humanitarian challenges. The strategic nature of Indian aid becomes particularly evident during times of crisis, where India's response has been both swift and substantial. This holistic approach to aid underscores the importance of building resilient bilateral relationships that can respond to both short-term and long-term challenges.

### **5.6 Macroeconomic Impact Dimensions:**

The study also explores the broader macroeconomic impacts of Indian aid on Nepal's economy. Indian aid has contributed positively to various macroeconomic indicators, including government expenditure, gross fixed capital formation, and exports. The positive effect of aid on government expenditure suggests that Indian assistance has provided Nepal with the fiscal space to implement key development programs and strengthen public institutions.

Additionally, the study finds that Indian aid has had a significant impact on gross fixed capital formation, with a coefficient of 0.073, which is in line with economic theory that emphasizes the importance of investment in physical capital for long-term economic growth. By supporting infrastructure development and productive investments, Indian aid has played a pivotal role in enhancing Nepal's capacity to sustain economic growth. Exports also showed a statistically significant positive relationship with Nepal's GDP, highlighting the role of international trade in driving economic expansion.

### **5.7 Econometric Insights on Contributing Factors:**

In addition to the direct effects of Indian aid, the study explored other critical determinants of Nepal's economic growth. Government expenditure, particularly in lagged periods, was found to have a positive effect on GDP growth, suggesting that past fiscal policies continue to shape the country's economic trajectory. Similarly, investments in gross fixed capital formation were shown to play a crucial role in enhancing Nepal's productive capacity. The findings confirm the importance of infrastructure and capital accumulation as key drivers of economic development.

Exports also emerged as a critical factor contributing to Nepal's economic growth. The study reveals a strong and statistically significant positive relationship between exports and GDP,

highlighting the importance of trade in Nepal's economic development. This finding suggests that foreign aid not only directly supports Nepal's growth but also strengthens its capacity to engage in international trade and integrate into the global economy.

### **5.8 Recommendations for Future Bilateral Cooperation:**

Based on the comprehensive analysis, several strategic recommendations are put forward to enhance the effectiveness of Indian aid to Nepal:

1. **Develop Targeted, Sector-Specific Aid Programs:** Tailoring assistance to specific sectors with clearly defined objectives and measurable outcomes can enhance the impact of aid in addressing Nepal's most pressing development challenges.
2. **Enhance Transparency and Accountability Mechanisms:** Strengthening systems for monitoring and evaluating aid programs will improve governance, reduce inefficiencies, and ensure that aid is used effectively to achieve development goals.
3. **Create Multi-Year Strategic Development Frameworks:** Establishing long-term planning frameworks that align both Nepal's development priorities and India's aid strategy will ensure that resources are deployed efficiently and sustainably.
4. **Focus on Capacity Building and Sustainable Infrastructure:** Investing in human capital development and sustainable infrastructure projects will help create a foundation for long-term growth, ensuring that Nepal can maintain and expand its development achievements.
5. **Implement Robust Monitoring and Evaluation Systems:** Continuous assessment and feedback mechanisms should be implemented to ensure that aid programs are responsive to evolving challenges and can be adapted over time.

### **5.9 Theoretical Contributions and Policy Implications:**

This study makes a significant contribution to the literature on foreign aid, providing a comprehensive, context-specific analysis of its impact on Nepal's economic growth. It challenges simplistic models of aid effectiveness and offers a nuanced perspective on the long-term benefits of strategic, sector-specific aid. The study provides valuable insights for policymakers, particularly in developing countries, who seek to maximize the impact of foreign aid on economic development. The findings also have broader implications for bilateral aid relationships, emphasizing the importance of mutual understanding, long-term planning, and flexibility in addressing the evolving needs of recipient countries.

### **5.10 Limitations and Future Research Directions:**

While the study provides comprehensive insights into the relationship between Indian aid and Nepal's economic growth, several limitations remain. The analysis could be expanded to explore sector-specific impacts in greater detail, providing a deeper understanding of how aid contributes to specific developmental outcomes in education, health, and infrastructure. Future research could also employ more sophisticated econometric models, such as structural equation modeling or panel data analysis, to better capture the complexity of the relationship between foreign aid and economic growth.

### **5.11 Conclusion:**

This research provides a comprehensive, multifaceted analysis of the relationship between Indian aid and Nepal's economic growth from 1990 to 2023, offering valuable insights into the dynamic and evolving nature of foreign aid's impact. The findings of this study decisively illustrate that Indian aid has been a crucial driver of Nepal's economic development, not just through direct financial contributions, but by facilitating broader structural changes in the country's economy. By examining key macroeconomic variables and employing the ARDL model, the study demonstrates that Indian assistance has contributed positively and significantly to Nepal's GDP growth, with sustained effects over time. The research explores the complexities of this relationship by analyzing both short-term and long-term impacts, revealing that aid has not only provided necessary fiscal support but also acted as a catalyst for broader economic transformation.

Indian aid has had a demonstrable effect on Nepal's economic trajectory, providing a solid foundation for growth, infrastructure development, and human capital investment. The multifaceted nature of Indian aid ensures that its contributions extend beyond simple financial disbursements to encompass a wide range of developmental initiatives, including investments in key industries, expansion of trade opportunities, and technological transfer. This study reinforces the notion that foreign aid, when strategically designed and implemented, can go beyond mere fiscal transfers to become an essential tool for long-term sustainable development. The model's findings confirm that Indian assistance has enhanced government expenditure, gross fixed capital formation, and exports—all essential elements of Nepal's economic expansion. Furthermore, the study's econometric analysis offers robust evidence that the positive impacts of Indian aid are not only immediate but also persist over time, providing lasting developmental benefits that extend beyond the disbursement of funds. This long-term effect signifies the structural changes that aid has brought to Nepal's economic framework, making it more resilient to external shocks and enabling it to progress toward greater self-sufficiency.

The historical analysis of Indian aid to Nepal from 1990 to 2023 highlights a clear shift in the volume and quality of assistance over the years. Initially, aid disbursements were modest, but they have grown significantly in response to Nepal's evolving needs, particularly following critical

events such as the 2015 earthquake and the COVID-19 pandemic. As Nepal has transitioned through different political and economic phases, Indian aid has adapted accordingly, demonstrating an evolving approach that considers both Nepal's immediate priorities and its long-term developmental goals. The study emphasizes how Indian aid has been adaptable, responding to both the political landscape and Nepal's shifting developmental priorities. This adaptability underscores the strategic, responsive nature of Indian foreign assistance, marking it as a key component of Nepal's overall growth strategy. Furthermore, Indian aid has evolved from traditional infrastructure projects to more diversified forms of assistance, including capacity-building programs, technological partnerships, and direct human resource development.

Moreover, Indian aid's impact has transcended financial contributions, as evidenced by its focus on critical sectors such as infrastructure, education, healthcare, and rural development. The rapid expansion in the number of development projects—from 26 in 2004 to over 500 in 2023—demonstrates the deepening bilateral cooperation and the increasing complexity of interventions aimed at addressing Nepal's multidimensional challenges. This expansion highlights India's commitment to Nepal's long-term progress and the strategic role that aid plays in fostering closer economic integration between the two nations. The study underscores that Indian aid has played a pivotal role in enhancing Nepal's infrastructure, contributing to critical sectors such as transportation, energy, and communication, all of which are vital for economic progress. By prioritizing projects that improve basic infrastructure and human capital, India has helped lay the foundation for Nepal's long-term prosperity. In particular, major road and hydropower projects have improved connectivity and energy security, enabling Nepal to accelerate industrialization and increase its overall economic competitiveness.

A particularly important dimension of the study is its exploration of Indian aid's role during critical intervention periods. The post-2015 earthquake reconstruction efforts and the response to the COVID-19 pandemic illustrate how Indian aid went beyond financial assistance, providing essential humanitarian support and technical expertise. These interventions reflect India's commitment to Nepal not just as a donor but as a neighbor and strategic partner invested in Nepal's long-term stability and growth. This commitment has strengthened the diplomatic and economic ties between the two countries, fostering greater trust and interdependence. The study thus highlights the broader geopolitical and diplomatic dimensions of aid, where assistance during times of crisis strengthens bilateral ties and fosters greater cooperation between countries. By analyzing these interventions, this research sheds light on how foreign aid can serve as a critical tool for disaster resilience and emergency response, ultimately ensuring that development progress is not derailed by external shocks.

In addition to its direct impact on development, the study highlights the broader macroeconomic effects of Indian aid, showing how it has influenced key economic indicators. The positive effect of aid on government expenditure allowed Nepal to implement important public policies and development programs that would have been difficult to fund otherwise. Without such external financial support, many of Nepal's large-scale development initiatives would have been

significantly constrained, slowing the country's overall progress. Similarly, investments in capital formation and exports have positioned Nepal to engage more effectively in the global economy, improving its trade relations and economic standing within the region. This has not only strengthened Nepal's domestic economy but also allowed it to integrate more deeply into regional trade networks, opening up new opportunities for growth and collaboration.

Theoretical contributions of this research lie in challenging traditional views of foreign aid effectiveness. Many studies argue that foreign aid can be ineffective or even harmful in certain contexts, but this study underscores that the strategic, well-targeted deployment of aid can yield substantial developmental benefits. While conventional perspectives often emphasize the limitations of foreign aid, this research highlights the importance of context, implementation strategy, and recipient country policies in determining aid effectiveness. By highlighting the complex and context-specific nature of aid, the research offers new insights into how bilateral aid programs can be crafted to achieve more sustainable and equitable growth outcomes. Furthermore, it provides a solid academic foundation for policymakers in both donor and recipient countries to rethink and refine their approach to development assistance. It advocates for a more holistic understanding of foreign aid that goes beyond financial transfers and considers its broader social, political, and economic implications.

This research also brings attention to the limitations of the current study and suggests avenues for future research. While the ARDL model provides valuable insights into the relationship between aid and economic growth, there are opportunities for future studies to explore more granular sectoral impacts. For instance, research could investigate the specific outcomes of Indian aid in education, health, or rural development in greater detail. Future studies could also examine the long-term, cumulative impacts of aid on Nepal's human development indicators, including literacy rates, life expectancy, and poverty reduction. More sophisticated econometric models, such as panel data analysis or structural equation modeling, could provide deeper insights into the intricate dynamics between aid and development. Additionally, comparative studies involving other major donors could help contextualize the effectiveness of Indian aid in relation to foreign assistance from other countries, providing a more comprehensive picture of Nepal's aid landscape.

In conclusion, this study provides compelling evidence of the pivotal role Indian aid has played in Nepal's economic growth over the past three decades. The findings of this research challenge conventional perspectives on the efficacy of foreign aid by demonstrating its significant positive impact on Nepal's development. Indian aid has been strategically deployed to address Nepal's most pressing developmental challenges, and its effects have been felt across multiple sectors, from infrastructure and human capital development to export performance. The study demonstrates that foreign aid, when managed and targeted effectively, can be a powerful tool for fostering sustainable development and regional cooperation.

As Nepal continues to face complex development challenges, Indian aid will likely remain a crucial component of its growth strategy. The lessons drawn from this study can inform not only

bilateral relations between India and Nepal but also broader discussions on foreign aid effectiveness. By adopting a more strategic, long-term approach to aid, policymakers in both donor and recipient countries can ensure that foreign assistance continues to play a central role in supporting the economic, social, and political development of countries like Nepal. This research, therefore, contributes significantly to the field of development economics by providing a thorough, evidence-based examination of the relationship between foreign aid and economic growth. The study's findings underscore the importance of strategic, targeted foreign assistance in fostering sustainable development, offering valuable lessons for future aid programs around the world.

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Appendix A.

Data of Export.

<b>Fiscal Year (AD)</b>	<b>Export</b>
1990/91	738.75
1991/92	1370.65
1992/93	1726.65
1993/94	1929.34
1994/95	1763.92
1995/96	1988.11
1996/97	2263.65
1997/98	2751.35
1998/99	3567.63
1999/00	4982.27
2000/01	5565.41
2001/02	4694.48
2002/03	4993.06
2003/04	5391.07
2004/05	5870.57
2005/06	6023.41
2006/07	5938.31
2007/08	5926.65
2008/09	6769.75
2009/10	6082.4
2010/11	6433.85
2011/12	7426.1
2012/13	7691.71
2013/14	9199.14
2014/15	8531.91
2015/16	7011.71
2016/17	7304.91
2017/18	8135.98
2018/19	9710.95
2019/20	9770.9
2020/21	14112.41
2021/22	20003.1
2022/23	15714.07

Appendix B.

Data of Government Expenditure.

<b>Fiscal Year (AD)</b>	<b>Total Expenditure</b>
1990/91	2355
1991/92	2641.8
1992/93	3089.8
1993/94	3359.7
1994/95	3906
1995/96	4654.24
1996/97	5072.37
1997/98	5611.83
1998/99	5957.9
1999/00	6627.25
2000/01	7983.51
2001/02	8007.22
2002/03	8400.61
2003/04	8944.26
2004/05	10256.04
2005/06	11088.92
2006/07	13360.46
2007/08	16134.99
2008/09	21966.2
2009/10	25968.91
2010/11	29536.3
2011/12	33916.8
2012/13	35863.8
2013/14	43505.5
2014/15	53134
2015/16	60103.19
2016/17	83724.78
2017/18	108727.98
2018/19	111045.68
2019/20	109133.31
2020/21	119667.6
2021/22	131000.08
2022/23	142956.4

## Appendix C

### Data of Gross Fixed Capital Formation

<b>Fiscal Year (AD)</b>	<b>Gross Fixed Capital Formation</b>
1990/91	2278
1991/92	2927.7
1992/93	3727.8
1993/94	4203.2
1994/95	4837
1995/96	5608.1
1996/97	6079.4
1997/98	6537.5
1998/99	6526.9
1999/00	7332.4
2000/01	8475.06
2001/02	8988.93
2002/03	9807.28
2003/04	10918.13
2004/05	11753.89
2005/06	13553.2
2006/07	15333.69
2007/08	17844.55
2008/09	21103.9
2009/10	26488.75
2010/11	37393.88
2011/12	42184.23
2012/13	48206.51
2013/14	56375.92
2014/15	66780.47
2015/16	74868.51
2016/17	94085.05
2017/18	112086.39
2018/19	130490.22
2019/20	118485.77
2020/21	127685.72
2021/22	140380.4
2022/23	135645.8

## Appendix D

Real data used.

<b>Fiscal Year (AD)</b>	<b>Export (NPR Million)</b>	<b>Indian Aid (NPR Million)</b>	<b>Grants (NPR Million)</b>	<b>Loan (NPR Million)</b>	<b>Total Indian Receipts</b>	<b>GDP</b>
1990/91	738.75	360.81	252.57	108.24	721.62	362756
1991/92	1370.65	580.23	406.16	174.07	1160.46	392148
1992/93	1726.65	985.25	689.68	295.58	1970.51	340121
1993/94	1929.34	1163.68	814.58	349.1	2327.36	366004
1994/95	1763.92	1450	1015	435	2900	406678
1995/96	1988.11	80.17	56.12	24.05	160.34	440110
1996/97	2263.65	1207.37	845.16	362.21	2414.74	452158
1997/98	2751.35	842.59	589.81	252.77	1685.17	491869
1998/99	3567.63	573.6	401.52	172.08	1147.2	485626
1999/00	4982.27	586.1	410.27	175.83	1172.2	503364
2000/01	5565.41	541	378.7	162.3	1082	549425
2001/02	4694.48	788.39	388.39	400	1576.78	600706
2002/03	4993.06	971.5	400	571.5	1943	605088
2003/04	5391.07	1083.74	1083.74	0	2167.48	633048
2004/05	5870.57	623.13	623.13	0	1246.26	727393
2005/06	6023.41	342.23	342.23	0	684.46	813026
2006/07	5938.31	4431.77	2042.77	2389	8863.54	904372
2007/08	5926.65	2779.85	1382.85	1397	5559.7	1032562
2008/09	6769.75	6872.5	4776.6	2095.9	13745	1254544
2009/10	6082.4	7250.69	888.846	1240.609	9380.145	1285499
2010/11	6433.85	6663.82	4541.834	2121.986	13327.64	1600266
2011/12	7426.1	11659.226	7769.976	3889.25	23318.452	1891357
2012/13	7691.71	1415.995	732.654	683.341	2831.99	1885151
2013/14	9199.14	6070.295	1870.295	4200	12140.59	1924425
2014/15	8531.91	5585.772	2150	3435.77	11171.542	2000297
2015/16	7011.71	10577.939	5561.399	5016.54	21155.878	2131355
2016/17	7304.91	62479.377	29359.495	33119.882	124958.754	2114712
2017/18	8135.98	8342.6	6800	1542.6	16685.2	3456000
2018/19	9710.95	10560	9400	1160	21120	3800000
2019/20	9770.9	8415	8000	415	16830	4100000
2020/21	14112.41	8000	6000	2000	16000	4200000
2021/22	20003.1	7130	6000	1130	14260	4600000
2022/23	15714.07	8000	6800	1200	16000	4800000