Contribution of Foreign Aid to GDP in Nepal

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Abstract

The objective of this study is to examine how foreign aid has influenced Nepal's Gross Domestic. It employs a causal-comparative research design to analyze the effect of foreign aid on Nepal's GDP based on panel data covering from 2000/2001 to 2020/2023. By applying the Ordinary Least Square (OLS) regression and correlation coefficient to estimate the relationships between GDP and foreign aid empirically. The study reveals that the p-value associated with this analysis is less than 0.05 indicating that the relationship between foreign aid-encompassing both grants and loans and GDP is statistically significant. Foreign aid to GDP ratio fluctuates between 3.2% to 9.32%. Despite its significant impact, the study also highlights fluctuations in GDP foreign aid, indicating economic challenges. The results suggest that although foreign aid is vital for economic stability and growth, the findings also indicate that while foreign aid is crucial for Nepal's economic well-being, the country needs to focus on long-term self-sufficiency and sustainable development strategies to reduce reliance on foreign aid. The study emphasizes the complex improvement of governance and strategic planning to maximize the benefits of foreign aid.

Keywords: economic growth, sustainable development, international support

Introduction

Foreign aid involves the allocation of resources from economically advanced countries to developing, with the intent of fostering economic advancement, mitigating poverty, and responding to humanitarian. It sustains international relations and promotes global development.

Foreign aid has played a vital role in Nepal's economic progress and has been the cornerstone of the country's development efforts since the mid-20th century. Before the mid-1960s, most developmental undertakings in Nepal were funded through external aid (Bhattarai, 2005). The influence of foreign aid on economically disadvantaged people in developing countries (White, 2009). Nepal is one of the first countries in South Asia to receive US aid. U.S. aid has not achieved its objectives successfully in Nepal (Khadka, 2000).

The findings show that foreign aid has not effectively reduced poverty and inequality in Nepal (Sharma, 2011). The research indicated that when integrated with efficient and thoroughly executed economic strategies foreign aid positively impacts economic growth and development (Sharma & Bhattarai, 2013).

Foreign aid is essential for nations identified as least developed, such as Nepal, due to the acute deficiency of financial resources necessary to fulfill domestic investment requirements aimed at fostering economic growth, as well as to support the acquisition of vital capital goods indispensable for developmental progress (Pandey, 2018). The study reveals that while foreign aid has contributed to economic growth in Nepal, its overall impact is constrained by policy inefficiencies and inadequate governance. The effectiveness of aid is frequently reduced by corruption and the need for strategic planning, which hinders sustainable long-term growth (Bista, 2018). The study reveals that foreign aid has a mixed impact on economic growth. initially, it negatively impacts and over periods it positively affects the economy (Yiew & Lau, 2018).

The study shows an overview of the complex relationship between foreign aid and development outcomes, highlighting that while aid can be effective in certain contexts, its impact is often inconsistent due to varying political, economic, and social factors (Gisselquist & Thapa, 2019). The study reveals that foreign aid may inadvertently favor certain groups over others, leading to social and economic inequalities (Dhakal et al., 2019)

Foreign aid by itself does not drive economic growth. However, when paired with capital, technology, and human capital can have positive long-term impacts. A favorable policy environment enhances the effectiveness of aid but the existing trade policy, characterized by a high deficit, obstructs this potential. In the short term, foreign aid negatively affects growth (Karki & Pappas, 2020). The study revealed that while foreign aid has a statistically significant impact on reducing income inequality in developing countries, its effectiveness remains modest in Africa, South Asia, and South America (Kabir, 2020). The study concludes that foreign aid has played a significant role in the development of Nepal, particularly in the infrastructure, health, and education sectors. However, the effectiveness of foreign aid is often compromised by corruption, political instability, and misallocation of resources, which limit its potential implant on sustainable development (Mishra & Aithal, 2021)

The findings indicate that foreign aid reduces economic complexity, particularly in countries with lower complexity levels, but it positively affects those with higher complexity (Kamguia et al., 2022). Foreign aid is essential in enhancing living standards in Nepal by effectively alleviating poverty without imposing fiscal pressure (Brazys & Elkink, 2021).

Foreign aid positively influences Nepal's GDP growth and plays an important role in the country's economic growth. However, it demonstrates an inverse correlation with private-sector investment within the context of Nepal (Ray, 2023). The findings show that foreign aid positively impacts GDP (Badri & Bhattarai, 2008; Pradhan & Phuyal, 2020; Saud, 2023).

Foreign aid and foreign direct investment play important but different roles in economic development in Southeast Asia and South Asia. The study suggests that foreign direct investment tends to be more effective in boosting economic growth than foreign aid, However, the impact of both foreign direct investment varies depending on the specific financial conditions and policy settings of individual countries (Rao et al., 2023). The study shows a positive correlation between foreign direct investment (FDI) and Nepal's gross domestic product (Gautam, 2023).

The study reveals that foreign aid can advance poverty alleviation and economic progress in developing countries. Specifically, it was instrumental in funding vital social development programs, including poverty reduction, education, and healthcare effects. Furthermore, it demonstrated a positive impact on economic development, income distribution, and job creation in developing countries (Wudil et. al., 2023). The study shows that foreign aid enhances the economic complexity of recipient countries, although the impact varies depending on the sectors, types of aid, and the income levels of the receipt

The study shows that foreign aid enhances the economic complexity of recipient countries, although the impact varies depending on the sectors, types of aid, and income levels of the recipients. Additionally, trade openness and foreign direct investment also play a role in influencing economic complexity (Arpaci-Ayhan, 2023). The study shows a positive correlation between foreign aid and agricultural development in Nepal, While foreign aid negatively affected rice imports during the study periods (Bhandari, 2024).

Nepal faces significant challenges in effectively utilizing foreign aid due to a lack of absorptive capacity and high aid volatility. Additionally, a substantial amount of foreign aid has been spent on administrative activities rather than capacity formation. This misallocation of resources underscores the need to improve foreign aid management and utilization (Auditor General, 2024, August 2). The findings indicate a substantial affirmative impact of foreign aid and foreign debt on economic development, underscoring the critical necessity for efficient resource allocation aimed at saving and investment (Gurung et al., 2024).

The Nepalese government has been expanding its expenditures significantly in the national budget. To deal with this rise in spending, greater emphasis has been placed on foreign aid. This raises the question: Is there a relationship between foreign aid and GDP in Nepal? The main aim of this study was to assess the impact of foreign aid on GDP growth and economic mobilization in Nepal by exploring the following research question: What are the impacts of foreign aid on GDP in Nepal? How does foreign aid the economic growth of the GDP?

Materials and Method

This comprehensive investigation employs a causal-comparative research design to analyze the contribution of foreign aid to GDP in Nepal based on panel data covering the periods from 2000/2001 to 2022/2023. Such quantitative data were sourced from the economy survey of the Ministry of Finance in Nepal. The study applies the Ordinary Least Square (OLS) regression and correlation coefficient to estimate the relationships between GDP and foreign aid empirically. The data are analyzed using the SPSS statistical package version 23. Therefore, descriptive statistics was employed to present the data through percentages and ratios. The independent t-test and F-test were also employed to validate the research hypotheses and interpret the OLS analysis results.

Model Specification

This paper explores the correlations between GDP and foreign to ascertain contributions of foreign aid to Nepal's GDP from 2000/2001 to 2022/2023. In pursuit of this objective, it was imperative to construct a statistical model that delineates relationships among the variables under the study. The examination of various empirical literature on the scope of foreign aid and GDP across different countries shows that the analysis of selected variables has a linear functional form. Thus, guided by the perceived functional relationship between the matrix of GDP and foreign aid, a connection is established between these two variables. From both sub-macro and micro-economic perspectives, the model proposed in this study posits that GDP is contingent on the funds collected from foreign aid. Accordingly, the purposeful relationships and resulting models are specified as follows:

$$GDP = f\,(\text{foreign}) \qquad \ldots(1)$$

From the above functional relationships, the working model of the paper is specified below

$$GDP = \beta_0 + \beta_1\,(\text{foreign aid}) + \mu \qquad \ldots(2)$$

Where GDP = gross domestic product, β_0 = autonomous (intercept), β_1= coefficient of foreign aid, μ = error term. As the GDP is expected even when no funds are collected from foreign, the 'priori' expectation is that the model parameter will be positively signed.

Research Hypothesis

The review of different empirical previous research on this subject area shows positive relationships between foreign aid and GDP for the economies of different countries. To that extent, the present study evaluates statistically by developing the following hypothesis:

H_0: foreign plays no significant role in Nepal's GDP.

H_1: foreign plays a crucial role in Nepal's GDP.

Results and Discussion

Descriptive Analysis

In the study periods, the GDP ranges from Rs. 44, 151.90 to Rs. 534,853 with an average of Rs. 207,434.75 and a standard deviation of 157,851.38, showing significant variability and fluctuation in economic performance. The grant ranges from Rs. 895.70 to Rs. 9767.58 with an average of Rs. 5,924.74 and a standard deviation of 2755.61, showing inconsistent funding levels. Likewise, loans range from Rs. 265.99 to Rs. 19,798.41 with an average of Rs. 7, 276.63 and a standard deviation of 6,741.49, showing diverse borrowing patterns. Similarly, the approved foreign aid ranges from Rs. 2,92.42 to Rs 25,024.46 with an average of Rs. 12,201.37 and a standard deviation of 8309.21, indicating fluctuating support. Furthermore, the total foreign aid to GDP ratio ranges from 3.2 percent to 9.32 percent, with a mean of 6.23 and a standard deviation of 1.66 percent, this reflects the importance of foreign aid in economic stability (Table 1).

Table 1

Descriptive Statistics

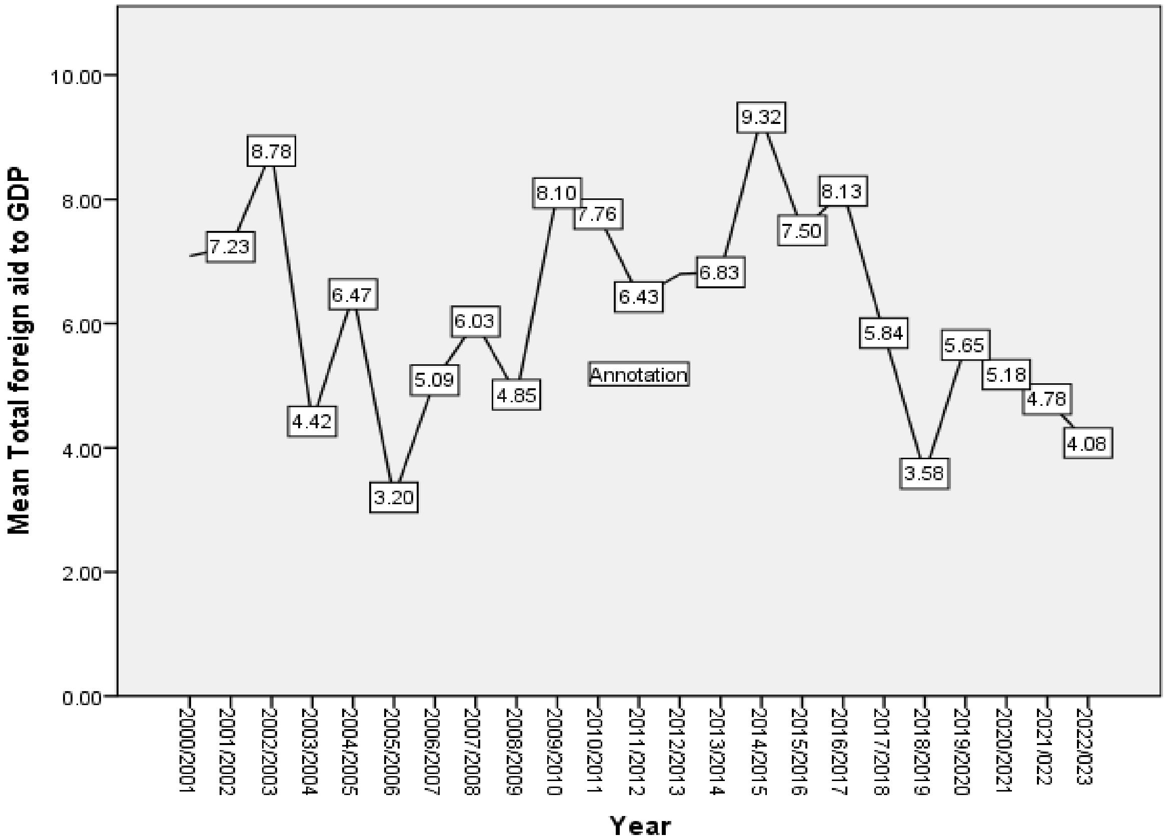
Year	GDP (expenditure method) at the current price (Rs.)	Grant (Rs.)	Loan (Rs.)	Approved foreign aid amount (Rs.)	Total foreign aid to GDP
Minimum	44151.9	895.7	265.99	2092.42	3.2
Maximum	534853	9767.58	19798.41	25024.46	9.32
Mean	207434.75	4924.74	7276.63	12201.37	6.23
Standard deviation	157851.38	2755.61	6741.49	8309.21	1.66

Note. SPSS version 23 outputs

The trend in total foreign aid to GDP ratio shows fluctuations from 3.20 to 9.32 percent (Figure 1).

Figure 1

Contribution of foreign aid to GDP in Nepal



Results of Regression Analysis

The R-value of 0.931, the R-square value of 0.86, and the adjusted R-squire value of 0.853 indicate a strong positive correlation between foreign and Gross Domestic Product (GDP). The results reveal that 86.5 percent of the variability in foreign aid can be explained by fluctuations changes in GDP. Additionally, the p-value associated with this analysis is less than 0.05 indicating that the relationship between foreign aid- encompassing both grants and loans and GDP is statistically significant. The study consistency with the previous research (Bhattarai, 2005; Sharma & Bhattarai, 2013; Pandey, 2018; Bista, 2018; Yiew & Lau, 2018; Gisselquist & Thapa, 201; Dhakal et al., 2019; Kabir, 2020; Mishra & Aithal, 2021; Kamguia et al., 2022; Brazys & Elkink, 2021; Ray, 2023; Badri & Bhattarai, 2008; Pradhan & Phuyal, 2020; Saud, 2023; Rao et al., 2023; Gautam, 2023; Wudil et. al., 2023; Arpaci-Ayhan, 2023; Gurung et al., 2024) but it is not consistency with several studies (White, 2009; Khadka, 2000; Sharma, 2011; Yiew & Lau, 2018; Karki & Pappas, 2020; Bhandari, 2024). Therefore, we reject the null hypothesis, confirming that the model provides a better fit than one with no predictors and affirming the robustness of GDP as a predictor of foreign aid in the context of Nepal (Table 2).

Table 2

Regression Analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	0.931	0.866	0.853	60518.91877	0.866	64.835	2	20	0.00

Note. Predictors: (Constant), Loan, Grant

Conclusion

The study shows that the foreign aid to GDP ratio, alongside the fluctuations in GDP, grants, loans, and total foreign aid amounts, reveals a complex interplay between economic growth and foreign aid. The significant variability in GDP and inconsistent funding levels for grants and loans indicate that the economy is experiencing growth and challenges. The strong positive correlation between foreign aid and GDP is evidenced by an R-value and a statistically significant p-value, underscoring the critical role that foreign aid plays in supporting economic stability and economic growth. As foreign aid averages more than five percent of GDP, it highlights the importance of foreign aid in mitigating economic fluctuations and growth. overall, the findings suggest that while foreign aid is vital for economic support, there is a need for strategies that promote self-sufficiency and sustainable development to reduce dependency on foreign aid in the long term.

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Appendix

Data Used in the Study

Year	GDP (Expenditure method) at current price	Grant	Loan	Approved Foreign Aid Amount	Total foreign aid to GDP
2000/2001	44,151.90	1428.91	1699.79	3128.7	7.09
2001/2002	45,944.23	2334.02	988.75	3322.77	7.23
2002/2003	49,223.13	2735.76	1584.51	4320.27	8.78
2003/2004	53,674.90	895.7	1478.1	2373.8	4.42
2004/2005	58,941.20	2539.27	1275.96	3815.23	6.47
2005/2006	65,408.40	1826.43	265.99	2092.42	3.20
2006/2007	72,782.70	3086.02	616.27	3702.29	5.09
2007/2008	81,566.30	4106.57	812.2	4918.77	6.03
2008/2009	98,827.20	4309.57	487.95	4797.52	4.85
2009/2010	119,277.40	7025.78	2635.12	9660.9	8.10
2010/2011	136,695.40	6473.38	4136.29	10609.67	7.76
2011/2012	152,734.40	5833.68	3984.19	9817.87	6.43
2012/2013	169,501.10	5390.1	6125.58	11515.68	6.79
2013/2014	223,253.00	7291.8	7950.5	15242.3	6.83
2014/2015	242,364.00	9160.31	13421.62	22581.93	9.32
2015/2016	260,818.00	7920.37	11639.5	19559.87	7.50
2016/2017	307,714.00	9767.58	15256.88	25024.46	8.13
2017/2018	345,595.00	8490.4	11709.4	20199.8	5.84
2018/2019	385,893.00	3342.9	10482.71	13825.61	3.58
2019/2020	388,870.00	3010.54	18977.78	21988.32	5.65
2020/2021	435,255.00	2738.66	19798.41	22537.07	5.18
2021/022	497656	9330.7	14461	23791.7	4.78
2022/023	534853	4230.6	17574	21804.6	4.08

Note. Ministry of Finance, Economic survey 2005/ 2006, 2010/1011, 2016/2017 and 2022/2023