

Impact of Foreign Direct Investment on the Economic Growth of Nepal.

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Abstract

The study investigates the factors influencing foreign direct investment (FDI) and its sectoral distribution in the Nepalese economy, specifically examining the relationship and impact of FDI on sectors such as minerals, manufacturing, construction, energy, and services over a ten-year period from 2011/12 to 2020/21. Descriptive and correlational research design was employed in the annual time series data. The major findings reveal a positive correlation (correlation coefficient of 0.668) between FDI and Gross Domestic Product (GDP), signifying a significant relationship. The study concludes that FDI has a substantial impact on Nepal's GDP. Additionally, sectoral FDI investments, including minerals, construction, energy, manufacturing, and services, also positively influence the country's GDP. The study suggests that despite Nepal's untapped FDI potential, implementation challenges, lengthy approval processes, and a service sector bias among investors hinder optimal exploitation of investment opportunities in other sectors with higher productivity.

Keywords: Foreign Direct Investment (FDI), Nepalese Economy, Sectoral Distribution, GDP Impact, Investment Opportunities

Introduction

Foreign Direct Investment (FDI) occurs when a company possesses another company in a different country, distinguishing itself from situations where companies merely invest their funds in assets in another country, known as portfolio investment. Unlike portfolio investment, FDI involves foreign companies actively participating in day-to-day operations in the host country. Nepal is currently grappling with political instability, and the challenges of addressing this political uncertainty remain unresolved. Consequently, establishing a business-friendly environment to attract foreign investors continues to be a topic of discussion. Horizontal direct investment involves the investor establishing the same type of business operation in a foreign country as it operates in its home country, while vertical investment entails the establishment or acquisition of different but related business activities in a foreign country. Foreign Direct Investment (FDI), defined as the acquisition of assets in a host country with the intention of ac-

tive management, holds significant promise for developing nations' economic growth (UNCTAD, 1999). The theoretical underpinnings of FDI suggest that competitive market conditions, allowing both national and foreign private enterprises to operate, present optimal prospects for accelerated economic growth by infusing new resources such as capital, technology, management, and marketing into the host economy (Pradhan, 2017). In mid-March of the fiscal year 2020/21, there was a 34.8 percent contraction in net foreign direct investment to Rs. 10.18 billion, compared to Rs. 15.61 billion in the corresponding period of the fiscal year 2019/20, with foreign investment liabilities remaining at Rs. 202.40 billion in mid-July 2020 and dividend payment approvals against foreign investment reaching Rs. 24.88 billion, contrasting with Rs. 9.58 billion in the corresponding period of the fiscal year 2019/20 (Economy Survey, 2021). Li and Liu (2022) provided insights into the role of FDI in technological progress and economic growth, accentuating that FDI promotes economic growth by facilitating technology transfer and innovation. The research accentuated the vital role of FDI in augmenting the technological capabilities of host countries. Approaching the topic from a different perspective, Javorcik and Poelhekke (2017) delved into the impact of FDI on income inequality within host countries. Their research indicated that, while FDI generally contributes to economic growth, its effects on income distribution are intricate and multifaceted. This study yielded valuable insights into the societal repercussions of FDI.

Recent empirical investigations have probed the intricate association between Foreign Direct Investment (FDI) and economic growth, providing illumination on the dynamic and multifaceted nature of this correlation. Alfaro et al. (2020) conducted a study that underscored the significance of institutional quality in determining the influence of FDI on economic growth. Their findings emphasized that the positive outcomes of FDI depend on the quality of the host country's institutions, emphasizing the crucial role of

effective governance structures. Expanding on this, Blomström et al. (2000) delved into the spatial distribution of FDI and its repercussions for economic growth, unveiling spatial spillover effects and elucidating how FDI patterns substantially contribute to regional economic growth. This study enhances our comprehension of how FDI affects diverse geographic areas within a nation.

Recent research with a focus on FDI aligning with environmental, social, and governance considerations provides a comprehensive outlook on the impact of FDI on economic growth (Destek et al., 2023). Studies revealed the understanding of the relationship between FDI and economic growth. Researchers have increasingly focused on contextual factors such as institutions, technological spillovers, regional disparities, and social implications, enriching the ongoing discourse on the role of FDI in shaping economic outcomes.

Nepal, facing structural constraints and political turmoil over the past decade, grapples with challenges like a landlocked position, rugged topography, limited cropland, and high poverty rates. In a resource-constrained economy heavily reliant on foreign aid, FDI emerges as a crucial element not only for sustaining development activities but also for poverty alleviation (Adhikari & Kharel, 2011, Pradhan & Dhungel, 2023). Despite being rich in natural resources, Nepal has struggled to achieve desired economic growth, relying heavily on imports due to a substantial migration of its population to foreign countries, resulting in a decline in production activities.

Recent studies highlight Nepal's immense potential for economic development through industrialization and increased domestic production (Adhikari & Kharel, 2011). However, challenges persist, ranging from policy inconsistencies to a lack of clear government strategies to promote private sector investment. The government's emphasis on large investments while neglecting smaller ones raises concerns, as small and medium-sized enterprises could play a piv-

otal role in expediting development. Cho (2021) emphasizes that an integral aspect of this process involves the liberalization of foreign investment regions. This recognition stems from the understanding that FDI can play a pivotal role in enhancing the host country's capacity to respond to the opportunities presented by global economic integration—a goal increasingly acknowledged as one of the fundamental objectives of any development strategy. Issues such as bureaucratic hurdles, unclear government regulations, and procedural delays create a less-than-welcoming environment for foreign investors in Nepal (Adhikari & Kharel, 2011). Recent regulatory measures introduced by the government, particularly in private equity and venture capital, aim to govern foreign investment but are not easily accessible to foreigners due to language barriers.

This study examines critiques on the impact of Foreign Direct Investment (FDI) in the host economy, drawing on perspectives such as those of Firebaugh (1992) and Bornschier and Chase-Dunn (1985) who argue that FDI can be detrimental to less developed countries (LDCs). Focusing on Nepal as an LDC facing a significant savings-investment gap and limited foreign aid, the study explores how FDI contributes to trade, employment, technology transfer, and overall GDP growth. It underscores the changing trend of attracting FDI for large infrastructure projects, an area traditionally associated with risks. Despite Nepal's welcoming stance towards FDI in all sectors, the study highlights its imperative role in the infrastructure sector due to a scarcity of resources. It emphasizes that FDI serves not only as a means of development financing but also facilitates the transfer of technology and spillover effects such as leadership and managerial skill development and the expansion of local knowledge and skill base (Adhikari, 2013; Pradhan et al., 2023). The UN (2020) underscores that the potential for domestic diffusion of best practices relies on the absorption capacity of the host economy. To fully capitalize on Foreign Direct Investment (FDI) and compete in the domestic market, it is essen-

tial for the host economy to possess sufficient levels of education and infrastructure.

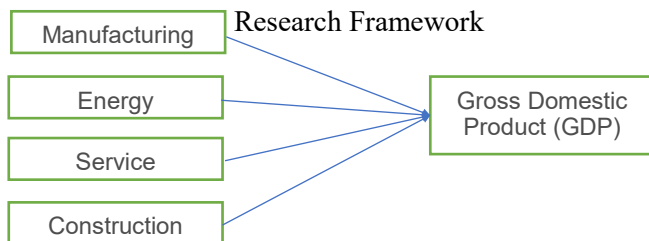
The existing literature primarily focuses on defining FDI, outlining its structure, and emphasizing its importance in the context of Nepal's overall economic situation. While previous research acknowledges the crucial role of FDI in overcoming economic challenges and boosting the economy, there is a notable research gap concerning the specific impact of FDI on employment generation. Recognizing the significance of foreign investment in Nepal's development, this study aims to explore the relationship between FDI and various economic variables, including GDP, FDI in minerals, construction, energy, and manufacturing. By considering a comprehensive set of economic indicators, this research aims to provide insights valuable to academics, policymakers, scholars, students, and business professionals. Additionally, the study addresses gaps identified in previous works by incorporating variables like GDP growth rate, inflation, and exchange rates. Furthermore, this research distinguishes itself by analyzing a 10-year time series data from 2011/12 to 2020/21 using a fixed-effect model for regression analysis, offering a nuanced perspective compared to earlier studies conducted over different time frames (Bayar, 2014; Iqbal et al., 2014).

Despite the potential benefits of FDI in generating employment opportunities and boosting economic growth, Nepal faces significant challenges in creating an investor-friendly climate. The research aims to address these challenges comprehensively, offering insights into potential solutions for fostering a conducive environment for foreign investment in Nepal to address the following objectives.

Methodology

The research employs a descriptive research design for fact-finding and gathering information about variables, while also incorporating a causal-comparative research design to discern cause-and-effect relationships. The study covers all economic sectors, focus-

ing on energy, construction, manufacturing, service, and minerals, using Foreign Direct Investment (FDI) as the basis, and employs a convenience sampling technique to analyze the impact of FDI on economic growth in Nepal through secondary data from the fiscal year 2011/12 to 2020/21. The study utilizes the Ministry of Finance's secondary database covering fiscal years 2011/12 to 2020/21 to examine the influence of Foreign Direct Investment (FDI) on Nepal's economic growth, incorporating time-series data on FDI in minerals, construction, energy, and manufacturing as independent variables relative to GDP, and systematically processes and tabulates all secondary data to fulfill research objectives. In this study, a range of statistical tools, including regression analysis, has been utilized to analyze data patterns and establish relationships between various variables relevant to the research topic. The results derived from these statistical tools, encompassing mean, standard deviation, covariance, correlation, and regression analysis, are tabulated and compared across distinct categories to interpret the findings comprehensively.



Model Specification

$$GDP = \alpha + \beta_1 ENG + \beta_2 CONS + \beta_3 MFG + \beta_4 SER + \beta_5 MIN + \mu$$

Where,

GDP stands for Gross Domestic Product, FDI represents Foreign Direct Investment, $\beta_1, \beta_2, \beta_3, \beta_4$ and β_5 denote the regression coefficients of independent variables, ENG corresponds to FDI based on Energy, CONS represents FDI based on Construction, MFG indicates FDI based on Manufacturing, SER refers to FDI based on Service, and α represents the constant term.

Results

The analysis focuses on the trends of foreign direct investment (FDI) in specific sectors, namely manufacturing, energy, construction, and service. Additionally, it aims to investigate the direct relationship between FDI, foreign investment dependency (FID) in various sectors, and the Gross Domestic Product (GDP). The study further explores structural changes or breaks in the patterns of FDI and GDP over the specified period. Moreover, it delves into the significance of these economic indicators on the dynamics of FDI and GDP in Nepal.

Table 2 illustrates the trend of Foreign Direct Investment (FDI) in the construction sector and its contribution to the gross domestic product (GDP) of Nepal. Over the ten-year period from 2011/12 to 2020/21, the average FDI flow in construction is 24.40%, with a standard deviation of 4.48%. The coefficient of variation for this period is 18.37%. The total FDI flow in construction over the ten years averages Rs. 45,460.30, while the average GDP flow over the same period is Rs. 182,540.80.

Table 1. Correlation between Sectorwise FID and GDP

	MFG	ENG	SER	CONS
MFG	1			
ENG	835**	1		
SER	921**	874**	1	
CONS	885**	976**	900**	1
GDP	878**	805**	877**	899**

The correlation coefficient between Foreign Direct Investment (FDI) and Gross Domestic Product (GDP) is 0.751, indicating a positive correlation. The corresponding p-value is 0.039, which is below the significance level (α) of 0.05 at a 95 percent confidence level, signifying a significant relationship between FDI and GDP. Therefore, FDI and GDP exhibit a consistent positive direction of movement.

The correlation coefficient between the manufactur-

Table 2. GDP and Contribution to GDP

Fiscal Year	GDP	Manufacturing Sector		Energy Sector		Service Sector		Construction Sector	
		FDI	Ct GDP	FDI	Ct GDP	FDI	Ct GDP	FDI	Ct GDP
2011/12	150717	41629	27.62	3612	2.40	2144	1.42	27625	18.33
2012/13	155350	45717	29.43	4471	2.88	2378	1.53	29587	19.05
2013/14	164271	51508	31.36	4936	3.00	3245	1.98	33373	20.32
2014/15	170041	54000	31.76	5154	3.03	3596	2.11	36237	21.31
2015/16	170045	53503	31.46	5388	3.17	3975	2.34	39887	23.46
2016/17	184651	63634	34.46	7665	4.15	4267	2.31	48071	26.03
2017/18	198265	72588	36.61	9004	4.54	4492	2.27	56944	28.72
2018/19	210926	82201	38.97	10603	5.03	4590	2.18	64979	30.81
2019/20	206460	75745	36.69	12107	5.86	4702	2.28	58009	28.10
2020/21	214682	82081	38.23	12712	5.92	4748	2.21	59891	27.90
Mean	182540.80	62260.6	33.66	7565.20	4.00	3813.70	2.06	45460.30	24.40
SD	23713.28	15058.2	3.88	3351.52	1.29	953.13	0.33	13814.96	4.48
CV	12.99	24.19	11.54	44.30	32.27	24.99	16.02	30.39	18.37

ing sector and GDP is 0.878, indicating a positive correlation, but with an insignificant relationship between the manufacturing sector and GDP. Similarly, the correlation coefficient between the service sector and GDP is 0.877, showing a positive correlation. For the construction sector and GDP, the correlation coefficient is 0.899, suggesting a positive correlation. Additionally, the correlation coefficient between the energy sector and GDP is 0.805, indicating a positive correlation.

Regression Model and Coefficients

The multiple regression model indicates a high explanatory power, with an adjusted R-square of 0.997, signifying that 99.7% of the variation in GDP is explained by independent variables such as energy, constructions, manufacturing, service, and minerals sectors. The standard error of the estimate for the multiple regression model is 0.00762. The model's fitness, as indicated by an F-value of 524.271, is significant,

suggesting that the research model effectively explains the sectoral FDI impact on GDP in Nepal. Examining individual sectors, the positive regression coefficient for the manufacturing sector (0.247) implies a direct relationship with GDP. The corresponding p-value (0.016) is less than 0.05, confirming a statistically significant relationship.

Table 3. Regression Model on GDP

Model	Regression Coefficients	t	Sig.
(Constant)	10.171	17.946	.000
MFG	.247	2.165	.016
MIN	.223	1.808	.045
SER	.002	.081	.939
CONS	.051	.651	.551
ENG	.045	1.305	.026
Adjusted R2 = 0.997 Std Error = 0.00762			
F-Value = 524.271 p-value <0.001			

Similar analyses are conducted for the minerals sector, service sector, construction sector, and energy sector, each revealing their respective coefficients, p-values, and significance levels.

Despite Nepal prioritizing foreign direct investment (FDI) in policies, the actual impact and benefits of these investments, particularly in sectors like energy, need further exploration. FDI is recognized as a crucial source of economic growth, introducing resources, technology, and skills, leading to job creation and increased GDP. While the number of projects and investments in Nepal is increasing, there is a need for a more conducive environment for investment. The highest number of projects and investments come from China, particularly in energy, manufacturing, service, and tourism sectors, aligning with the government's focus. However, challenges in implementation include issues with access to seaports, transportation difficulties, unclear labor relations, and political risks. The potential of Nepal's FDI remains underexploited due to weak implementation, lengthy approval processes, and a focus on the service sector over other productive sectors. Despite offering opportunities for market-seeking and resource-seeking investors, the country faces hindrances in creating an investment-friendly environment.

Conclusion

In summary, the positive correlation coefficient reveals a significant positive relationship between foreign direct investment (FDI) and gross domestic product (GDP). Additionally, a positive correlation coefficient is observed between the manufacturing sector and GDP, indicating an identical directional movement. The minerals sector also exhibits a positive correlation with GDP. Similarly, there is a positive correlation between the construction sector and GDP. The energy sector shows a positive correlation with GDP as well. The positive regression coefficient for FDI signifies a positive effect on GDP, and the positive regression coefficient for the manufacturing sector indicates a positive impact on GDP, with a sig-

nificant relationship. Similarly, the positive regression coefficient for the minerals sector implies a positive impact on GDP, albeit not statistically significant. The positive regression coefficient for the service sector suggests a positive impact on GDP, also not statistically significant. Likewise, the positive regression coefficient for the construction sector indicates a positive impact on GDP, but it is not statistically significant. Lastly, the positive regression coefficient for the energy sector implies a positive impact on GDP, with a significant relationship.

Implications of the present study and its findings suggest that future research should investigate the consistency of the impact of Foreign Direct Investment (FDI) on the Nepalese economy. This would dispel myths surrounding the size and trends of FDI, providing valuable insights for policymakers, planners, the business community, and scholars. Additionally, the study offers constructive feedback for improvement in areas necessary to attract significant FDI for the growth of the Nepalese economy. Furthermore, the development of human capital is identified as a crucial factor for economic growth, emphasizing the need for the country to focus on import substitution and the establishment and advancement of export-oriented industries. This can be achieved by creating an investment-friendly and secure environment. The positive correlation between FDI and the economic development of the nation underscores the importance of maintaining a favorable economic policy. Prioritizing the attraction of FDI is deemed necessary not only for increasing investment but also for sustaining external stability.

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