Exploring the Impact of Foreign Loans, and Foreign Aid on Economic Performance: Evidence from Nepal

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Abstract
This study provides a comprehensive analysis of the impact of foreign loans, foreign aid, and globalization on economic performance in Nepal over the period from 1990 to 2022. Using the ARDL model and diagnostic tests, the study examines various aspects including the influence of foreign aid, foreign loans, economic globalization, social globalization, and political globalization on economic performance. The results reveal significant positive effects of foreign aid and foreign loans on economic performance, emphasizing the importance of effective resource utilization for investment and savings. Policy recommendations include optimizing aid allocation and responsible borrowing practices to maximize their contribution to economic growth. Furthermore, the study underscores the favorable effect of economic, political, and social globalization on economic performance, highlighting the need for policies fostering international trade, cooperation, and investment. Additionally, prioritizing investments in capital and labor, guided by evidence-based policies, is crucial for driving economic growth and productivity. Continuous monitoring and adjustment of economic policies are essential for maintaining long-term stability and sustaining economic progress.
Keywords: Economic Performance, Foreign Loans, Foreign Aid, Globalization, ARDL Model

1. Introduction

A foreign loan is an instrument of finance commonly used in any economy to secure funding. Developing nations rely on external loans to fund their initiatives due to their limited savings and meagre income. Foreign loans in a developing country can constitute a burden on the economy due to the accumulation of debt servicing requirements, leading to constraints, and increased financial obligations (Ayadi & Ayadi, 2008). Foreign loans can have a dual effect on economic performance, with the potential to be either positive or negative. Utilizing it for investment reasons in infrastructure, such as railway stations, proves to be beneficial. It is harmful when utilized for non-governmental consumption purposes that do not contribute to the country's finances and add to its debts. According to Shahzad et al. (2016), foreign loans should account for 35-40% of the GDP and 160-170% of the total value of exports.

Foreign aid provided to developing countries has served as a crucial means of financing development for over fifty years. Assistance comes in various forms, such as grants, Loans with concessions for development initiatives, and support for humanitarian crises and emergencies (Murshed & Khanaum, 2014; Elayah, 2016; Dornan & Pryke, 2017). In the past six decades, donors have contributed foreign aid about $2.3 trillion to impoverished nations for their development projects (Van, 2007; Fengler & Kharas, 2010). Additionally, 840 million individuals suffer from hunger, Every year, a staggering ten million kids die to diseases that could have been prevented, while a staggering one billion adults still lack the ability to read and write (Easterly, 2006; Sahoo, 2016). Nepal has been a receiver of foreign aid for over 60 years from various sources such as foreign governments, multilateral organizations, and international non-governmental organizations, generally known as external developmental partners. Economic development practitioners have actively participated in Nepal's policymaking, program design, and implementation across several sectors (Giri et al., 2013).

Among the nations of South Asia, Nepal, one of the world's developing countries, is heavily reliant on foreign aid. Over a period of sixty years, the government has used foreign aid as budgetary and non-budgetary assistance. However, the proportion of external aid to the overall budget of the government has decreased due to more significant mobilization of local resources, indicating that the country is transitioning to a self-sufficient economy. Similarly, the average of development aid provided under the out of budget option has been dropping over time (Ministry of Finance, 2018). Policymakers feel that the underdevelopment and poverty of the nation are essential motivators for international assistance providers. Furthermore, rivalry among donor nations is a factor in Nepal obtaining more significant help. Donors will continue to help with development initiatives through loans or grants if Nepal demonstrates its desire and commitment to comply with the aid requirements (Khadka, 1997; Premaratne & Deshal, 2009).

The study investigated the effects of foreign aid and loans on Nepal's economic performance. Several previous studies have examined how energy use, remittances, renewable resources based energy use, and carbon emissions impact economic growth in Nepal. For example, Raihan and Tuspekova (2022) explored the association between agricultural productivity and energy use. The effects of remittances on economic growth were examined by Singh Pradhan (2023), while the effects of public debt were examined by Khatri Paija (2022). This study is unique because no study has explored the effect of foreign loans and foreign aid on economic performance in Nepal.

The present study paper is ordered as follows: The next section presents a literature review of relevant past studies. In the third section, the research methods used in this study are explained in detail. Section four of the research study presents a comprehensive examination of the results and subsequent discussion. In the final section, the findings of the study are summarized, along with recommendations for policymakers.

2. Literature Review

Most of the researchers studied the influence of aid, remittances, on economic performance. Remittances primarily contribute to economic growth by being channeled through a country's financial institutions and invested, rather than being treated solely as

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payment agents. This investment of remittance deposits helps stimulate economic growth. The provision of aid is influenced by various factors such as the fiscal reforms implemented by a country, the recital of the exchange rate, and the extent of financial development. These considerations play a role in determining the trajectory of economic growth that can be achieved through aid (Addison & Baliamoune-Lutz, 2017; Mascagni & Timmis, 2017; Ashiq & Akhlaque, 2019; Safdar & Malik, 2020; Krishna & Singh, 2020). Scholars employed diverse regression methodologies, such as non-linear and basic linear regression, to investigate the correlations among distinct variables. For instance, in their investigations on the helpfulness of aid, Hansen and Tarp (2001) and Asiedu et al. (2009) employed Ordinary Least Squares (OLS) regression. Hansen and Tarp (2001) utilized a non-linear aid-growth model to analyze the connection between foreign assistance and growth, as well as to examine the consistency of aid impact across nations. Their findings indicated that foreign aid positively affects growth rates and that this impact remains consistent across sampled countries. To further The connections between investment and assistance growth should be investigated. they incorporated investment into their growth regression, suggesting that investment influences the affect of aid on growth, although further theoretical explanations are necessary (Hansen & Tarp, 2001). Nowak-Lehmann et al. (2012) analyzed to assess whether or if There exists a association among the amount of foreign aid and the income per person in heavily aid-dependent nations. Their findings suggested that aid had a minor or inconsequential unfavorable effect on income per capita. Similarly, they integrated investment into their model, as done by Hansen and Tarp (2001), and observed a slight assistance has a beneficial impression on investment, but it has a unfavorable effect on savings within the country. To address disturbance autocorrelation in their extensive panel dataset, they utilized the DFGLS estimation technique. Furthermore, Mohapatra et al. (2016) investigated the impact of external aid on economic performance in the Indian economy using the ARDL model for cointegration pioneered by Pesaran et al. (2001). Their findings indicated that Each economy has a different level of foreign aid efficacy. In contrast, Hamid (2013) explored the impact of foreign assistance on Egypt's economic progress. Interestingly, these two studies yielded opposing results. Mohapatra et al. (2016) revealed that foreign aid had a large and favorable impact on India's economic growth. Hamid (2013) discovered that foreign help had an unwanted and considerable negative impact on Egypt's economic growth in both time frames.

Recent research has tested the inspiration of foreign aid on economic performance. Ali (2022) conducted a longitudinal study spanning from 1985 to 2020 to consider the effect of foreign debt on the nations in South Asia are seeing economic growth. It appears from the outcomes of the investigation that the economic growth of South Asian economies is absolutely correlated with aspects such as exchange rates and physical capital, while being adversely compressed by foreign loans. However, Jokolelono (2023) directed a longitudinal study from 2008 to 2018 to examine the factors influencing the economic performance rate in Indonesia. Outcomes of the study indicate that foreign debt, exports and foreign investment have a substantial influence on the enlargement of Indonesia. In addition, Haque et al. (2023) investigated the impact of foreign loans on the pace of economic growth in low-income economies. The investigation employed the Gaussian Mixture Model (GMM) approach. The results of the investigation indicate that countries with lower middle incomes are more likely to experience negative effects on economic growth as a result of using foreign loans. This study attempts to quantify the effect that loans from other countries have had on the expansion of Pakistan's economy. For the purpose of estimation, the study makes use of time series data spanning the years 1972 through 2022. This longer time period is not investigated by any other study that has been conducted. An investigation into the effectiveness of international assistance in Vietnam is carried out by Sakurai (2020) using two separate methods. The purpose of this study is to consider the impact that foreign aid has had on the expansion of Vietnam's economy. Furthermore, it examines the effects of the yen loan, which is a type of government aid loan from Japan, on 34 out of 63 provinces by utilizing data from the years 2001 to 2016. The impact of foreign aid remains ambiguous, and the objective is to elucidate it. There are two points. The impact of foreign aid on Vietnam remains inconclusive based on the time series data encompassing the entire nation. Furthermore, there has been no estimation made regarding the rise in productivity resulting from the yen loan. While the exact estimation of foreign aid's impact on economic growth is not available, it is possible that there are specific factors unique to Vietnam that could contribute to its effects. Given that the majority of foreign aid to Vietnam was received after 1994, it can be observed that the development of infrastructure facilities has progressed at a relatively rapid pace. The current finding is expected to undergo modifications as the recently established infrastructure, facilitated by the loan, will persistently contribute to the economic expansion of Vietnam. In their study, Sakurai and Sakurai (2021) analyze the effectiveness of government aid loans, which constitute a noteworthy effect of foreign assistance in Thailand. For the purpose of analyzing data from the entire nation, they make use of an economic growth model. The impact of foreign aid continues to be a subject of debate, and our aim is to provide clarity on this matter. Thailand serves as a prime illustration of a nation effectively utilizing governmental aid loans to cultivate social capital and stimulate the growth of manufacturing industries. There are three main outcomes. Initially, we analyse the influence of government loans on the economic growth of Thailand by utilizing comprehensive data encompassing the entire country. Furthermore, the impact of governmental loans on marginal production has recently decreased, although it is not completely eliminated. Furthermore, the influence of foreign aid in Thailand was comparatively less significant than that of public capital during the corresponding timeframe. Subregional data can be used to ascertain the quantitative influence of the Japanese government on yen loans. Foreign aid, in general, has an impact on economic growth, albeit less significant than public capital. Furthermore, the impact is significant during the early stages of development but diminishes in terms of economic growth.

There have been a great number of academic investigations reviewed to inspect the effects of globalization on economic performance. Santiago et al. (2020), for instance, examined the economic development of twenty-four developing nations in Latin America and the Caribbean between 1995 and 2015, focusing on the consequences of economic freedom and globalization. Two models were developed, with one model centering on the overall value of globalization. Th on overall aspects. findings revealed that globalization has had a positive and enduring effect on all aspects of economic development, with the exception of the political dimension. Long-term economic growth, nevertheless, was adversely affected by economic freedom. Short-term results indicated that social globalization and electric power consumption stimulated economic expansion. Moreover, empirical support was found for cointegration and long-memory associations among the variables. From 1985 to 2018, Wen et al. (2021) examined the effects of economic growth, non-renewable energy use, and globalization on CO2 emissions in South Asian economies. The authors found

that globalization and CO2 emissions were positively correlated. Environmental degradation increased as a result of nonrenewable energy consumption, which confirmed the EKC hypothesis. It was suggested that policies encouraging the use of renewable energy sources be implemented in an effort to combat environmental degradation. From 1995 to 2018, Hye et al. (2023) observed the effects of globalization, economic risk, eco-innovation, and renewable resources based energy use on carbon emissions. They identified an inverted N-shaped correlation between the two variables. For effective carbon emission reduction, they recommended that policies concerning renewable energy and eco-innovation be prioritized. In their study, Chang et al. (2013) assessed the impact of globalization, energy exports, and economic development in South Caucasus economies. The researchers discovered that there were positive correlations among these variables, especially during times of heightened integration. The impact of natural wealth and globalization on Pakistan's economic growth was examined by Hassan et al. (2019). The authors propose policy measures that would bolster the country's security, exports, technology, and intellectual capacity. In their 2014 analysis of the effect of globalization on the economic development of ASEAN countries from 1970 to 2008, Ying et al. identified economic globalization as advantageous while advising against the negative consequences of political and social globalization. Lastly, Zahonogo (2018) investigated the effect of globalization on the economic growth in Sub-Saharan African countries. The study unveiled a positive albeit non-linear correlation, underscoring the criticality of policy reforms, specifically in the areas of investment promotion and trade regulation, to optimize the advantages of globalization.

3. Methodology

This study devoted the Augmented Dickey-Fuller and Phillips Perron test to check the unit root problem and whether the variables are integrated at the level or at first difference. Following the examination of the unit root, the investigation proceeded to assess the long run association among the variables. To this end, the analysis employed the Autoregressive Distributed Lag (ARDL) model alongside other diagnostic examinations to analyze both long and short run effects. The study delved into the influence of foreign aid, foreign loans, economic globalization, social globalization, political globalization, labor, and capital on economic performance, spanning the time frame from 1990 to 2022. Globalization is taken as different aspects used by Gasimli et al. (2023) which are Economic, social, and political globalization were quantified using index numbers sourced from the KOF Swiss Economic Institute (2024), while foreign aid and loans were obtained from the World Bank and expressed in constant 2020 USD. Data pertaining to labor and capital were sourced from the World Bank as well (World Bank, 2024).

Stationarity holds significant importance in analyzing time series data since several statistical techniques rely on the assumption of data stationarity. Time series stationarity refers to the fact that, over time, the statistical characteristics of the series do not change. The Augmented Dickey-Fuller (ADF) and Phillips perron (PP) presented by Dickey and Fuller (1979) and Phillips Perron (1998) tests are widely employed statistical techniques to assess the stationarity of a taken variable. The ADF and PP tests are primarily concerned with identifying the existence of a unit root within a given time series. A unit root suggests that the data series does not exhibit mean-reverting properties and instead follows a random walk model. In alternative terms, it implies that the variable shows non-stationarity and tends to deviate from a constant value as time progresses. The ADF test regresses the variable of interest against its lagged values and additional possibly significant variables. The results are generated by a statistical measure called the test statistic. When the value of the T statistic is greater than the critical value, we reject the alternative hypothesis and conclude that the variable is stationary. ADF test shows us whether the variable is stationary at level or at first difference, which serves as an essential precondition for the accurate model in time series analysis (Azra et al., 2023; Khalid et al., 2022).

The ARDL model, introduced by Pesaran et al. (2001), investigates the enduring relationships among variables. This method, known for its reliability even with small sample sizes, provides a robust means to analyze both short and long term dynamics. By disregarding the integration direction, the ARDL model, as discussed by Khalid et al. (2022), and Meo et al. (2018), is utilized to explore the associations between variables. The model's structural form is as follows:

$$EP = f(FL, FA, EGBL, SGBL, PGBL, L, K) \dots (3.1)$$

Where EP, FL, FA, EGBL, SGBL, PGBL, L, and K show the Economic performance, Foreign Loans, foreign aid, Economic globalization, social globalization, political globalization, labor, and Capital respectively.

$$\Delta EP_t = \alpha_0 + \sum_{i=1}^{m} \alpha_1 \Delta FL_{t-i} + \sum_{i=1}^{m} \alpha_2 \Delta FA_{t-i} + \sum_{i=1}^{m} \alpha_3 \Delta EGBL_{t-i} + \sum_{i=1}^{m} \alpha_4 \Delta SGBL_{t-i} + \sum_{i=1}^{m} \alpha_5 \Delta PGBL_{t-i} + \sum_{i=1}^{m} \alpha_6 \Delta L_{t-i}$$
$$+ \sum_{i=1}^{m} \alpha_7 \Delta K_{t-i} + \beta_1 FL_{t-1} + \beta_2 FA_{t-1} + \beta_3 EGBL_{t-1} + \beta_4 SGBL_{t-1} + \beta_5 PGBL_{t-1} + \beta_6 L_{t-1} + \beta_7 K_{t-1}$$
$$+ \beta_8 ECT + \varepsilon_t \dots (3.2)$$

Equation 3.2 serves as an error correction mechanism utilized for gauging both short and long-term correlations. Within this equation, α signifies the slope of variables in the short run, while β represents the coefficients for the long term. Constant term is depicted as α_0 and the error term is denoted as ε_t.

4. Results and Discussion

Table 1 signifies the descriptive statistics of the data. Economic performance, measured as annual growth percentage, has a mean value of 2.99 percent, with a maximum of 7.73 percent and a minimum of -4.09 percent. Foreign aid, in USD, has a mean of $732 million, ranging from a minimum of $392 million to a maximum of $1.76 billion. Foreign loans, also in USD, have a mean of $8.88 million, with a minimum of $43.55 million and a maximum of $201 million. Economic, social, and political globalization are indexed, with mean values of 25.91, 56.71, and 29.89 units respectively. The maximum values for economic, political, and social globalization are 30.70, 64.32, and 47.91 units, while the minimum values are 19.59, 42.82, and 12.79, respectively. Capital, expressed in gross capital formation, is measured in USD, with a mean of $4.7 billion, ranging from $658 million to $15.3 billion.

The labour force, measured in total persons, has a mean of 6,579,900 individuals, with a maximum of 8,700,518 and a minimum of 4,746,795. The standard error reflects minimal variations in economic performance but substantial variations in foreign aid.

Table 1: Descriptive statistics

	Mean	Minimum	Maximum	Std. Dev.
EP	2.99	-4.09	7.73	2.35
FA	732,000	392,000,000	1,760,000,000	391,000,000
FL	8,878,223	34,552,640	201,000,000	41,402,212
EGBL	25.91	19.59	30.70	3.21
PGBL	56.71	42.82	64.32	6.91
SGBL	29.89	12.79	47.91	13.10
K	4,700,000,000	658,000,000	15,300,000,000	4,490,000,000
LF	6,579,900	4,746,795	8,700,518	1,053,754

Author's calculations

Table 2 in the study displays the findings of unit root tests, which play a crucial role in evaluating the stationarity of variables. These tests are fundamental in econometric analysis, especially when working with time series data, as they help identify the presence of unit roots, which can significantly impact the reliability and validity of results. The existence of unit roots, as indicated by the ADF and PP test, suggests violating the least squares assumption in classical linear regression models, where variables should ideally not exhibit unit root problems. Results from both tests confirm that economic performance, economic globalization, and political globalization are stationary at the same level. In contrast, foreign aid, loans, social globalization, capital, and labour are integrated at the first difference. Consequently, the study appropriately recommends conducting a cointegration test considering these findings. Additionally, based on the unit root results, the study employs the ARDL bound test to explore the long-term relationships among the variables under investigation.

Table 2: outcomes of ADF and PP

	ADF		PP		
	At level	1st Difference	At level	1st Difference	Integration
lnEP	-4.342**	--	-4.329**	--	I(0)
lnFA	1.144	-8.160 *	0.373	-7.878*	I(1)
lnFL	-2.148	-5.806 *	-2.105	-6.168 *	I(1)
lnEGBL	-3.200**	--	-2.637***	--	I(0)
lnPGBL	-3.882 *	--	-5.104*	--	I(0)
lnSGBL	-1.625	-6.965*	-1.285	-5.064*	I(1)
lnK	-0.112	-6.190*	-0.269	-6.395*	I(1)
lnLF	-1.190	-3.369**	-0.742	-3.672*	I(1)

Note: * and ** show significance level at 1% and 5% respectively.

The ARDL bound test results reveal significant insights into the long run relationships among the studied variables. The F-statistic surpassing the upper limit bound indicates a robust long-run relationship. The statistical significance at the 1% level further strengthens this conclusion, emphasizing its reliability. This finding has profound implications for interpreting the study's empirical results. It serves as a basis for further exploration and decision-making processes, contributing significantly to knowledge advancement in the field. The results indicated a long-run impact of foreign loans, foreign aid, economic globalization, political globalization, social globalization, capital and labor on economic performance.

Table 3: Co-integration test Results

F Statistics		11.38*
	Critical Value	
Significance Level	Lower value	Upper value
10%	2.26	3.35
5%	2.62	3.79
1%	3.41	4.68

*Indicates co-integration vector at one and five percent level of significance

The ARDL bound test results reveal significant insights into the long run association among the studied variables. The F-statistic surpassing the upper limit bound indicates a robust long-run association. The statistical significance at the 1% level further strengthens this conclusion, emphasizing its reliability. This finding has profound implications for interpreting the study's empirical results. It serves as a basis for further exploration and decision-making processes, contributing significantly to knowledge advancement in the field. The results indicated a long run. Table 4 shows the results of the ARDL model, which shows the positive

and significant impact of foreign aid on economic performance. The results are similar with (Golder et al., 2021; Irandoust & Hatemi, 2005). Golder et al. (2021) and Irandoust and Hatemi (2005) found a significant and robust influence of foreign assistance on economic growth, while the latter also highlighted the role of foreign capital inflows in supplementing domestic savings. Foreign loans have a positive and significant impact on economic performance. Foreign loans positively impact economic performance, aiding fiscal deficits and investment facilitated by foreign banks; however, foreign currency loans may hinder monetary policy, potentially harming welfare (Brzoza-Brzezina et al., 2017; Omodero & Alpheaus, 2019). The results show that economic globalization positively and significantly impacts economic performance. Various studies, including those by Zhuang and Koo (2007), Ying et al. (2014), Samimi and Jenatabadi (2014), and Verter and Osakwe (2015), consistently show a positive correlation between economic globalization and performance, particularly in nations with educated workforces and robust financial systems. While the specific drivers of this correlation, such as FDI and migrant remittances, may vary, there is a consensus on the overall beneficial impact of economic globalization on expansion and performance. The results concluded that political globalization has a favorable impact on economic performance. Tekbaş (2021), Suci et al. (2016), and Majidi (2017) all affirm the positive impact of political globalization on economic performance, with Tekbaş also noting a bidirectional causal association among political globalization and economic growth. The study results concluded that social globalization positively and significantly impacts economic performance. The results align with (Tekbaş, 2021; Ying et al., 2014; Suci et al., 2016; Majidi, 2017). Suci et al. (2016) investigated social globalization's favorable and significant impact on economic performance in ASEAN countries. Despite this, social globalization can indirectly enhance economic growth by promoting international tourism (Haini et al., 2023).

The study confirms a significant positive impact of capital on economic performance, as supported by Edame and Okoro (2013), Aymen (2013), Roth and Thum (2010), and Nourzad (2000), who highlight the contributions of various forms of capital, such as market capitalization, bank equity, and government capital, to economic growth and productivity. Additionally, the study aligns with findings by Tipayalai (2020), Henrekson (2020), and Barr & Roy (2008), emphasizing the positive influence of labor on economic performance, mainly when supported by growth-favoring labor market institutions. However, challenges such as labor market monopsony may impede growth, although worker-protective labor laws can mitigate such effects and promote economic development (Deakin, 2016).

The Error Correction Term (ECT) plays a crucial role in our model, representing cointegration and adjusting the model when deviations from equilibrium occur. With a coefficient of -2.57, the ECT holds significant statistical importance, indicating the model's dynamic stability over the long term. This suggests the model's ability to correct deviations and restore equilibrium, enhancing its reliability and robustness in capturing the phenomenon under study. Impact of foreign loans, foreign aid, economic globalization, political globalization, social globalization, capital and labour on economic performance.

Table 4: ARDL Results

		Long Run		
Variables	Parameters	t-Values	Std. error	Prob.
lnFA	2.04	6.43	0.32	0.01**
lnFL	0.99	2.29	0.43	0.04**
lnEGBL	0.44	2.84	0.15	0.01**
lnPGBL	6.13	4.68	1.31	0.02**
lnSGBL	3.05	6.28	0.49	0.01**
lnK	3.49	8.55	0.41	0.00*
lnLF	19.37	2.80	6.92	0.07***
		Short Run		
D(lnFA)	2.62	53.31	0.05	0.01**
D(lnFL)	-0.48	-41.05	0.01	0.02**
D(lnPGBL)	40.13	103.14	0.39	0.01**
D(lnSGBL)	0.54	3.22	0.17	0.19
D(lnEGBL)	0.77	10.64	0.07	0.06***
D(lnLF)	296.33	71.69	4.13	0.01**
D(lnK)	4.98	89.65	0.06	0.01**
C	991.76	43.90	22.59	0.01**
ECT	-2.57	-8.29	0.31	0.00*

*, ** and *** indicate significance at one, five and ten percent level respectively

Table 5: Results of Diagnostic Tests

	Breusch Godfrey Serial Correlation LM Test		
F Stat.	0.60	Prob.	0.44
Obs*R Squared	0.77	Prob. Chi-Square	0.37
	Breusch Pagan Godfrey Heteroscedasticity Test		
F Stat.	1.89	Prob.	0.14
Obs*R Squared	8.42	Prob. Chi-Square	0.13

Table 5 shows the Model's sustainability and reliability undergo thorough evaluation via diagnostic tests to ensure the validity of its estimates and conclusions. Autocorrelation, which indicates systematic patterns in model residuals over time, is examined using the

Breusch-Godfrey Serial Correlation LM Test. A probability value exceeding 5% indicates no significant autocorrelation, validating Model's estimated parameters. Heteroscedasticity, reflecting unequal variance in residuals across independent variables, is assessed with the Breusch-Pagan Godfrey Heteroscedasticity Test. A probability value above 0.05 suggests no significant heteroscedasticity, further affirming Model's reliability. These tests reaffirm the robustness of Model's estimates, enhancing confidence in its empirical findings. This meticulous diagnostic approach enhances the research's methodological integrity and credibility.

The previously mentioned models are composed of a single equation, Notably, the presented models might be susceptible to endogeneity, which could lead to estimated coefficients that are skewed. For determining whether variables have an endogenous relationship, the Durbin-Wu-Hausman test (also known as the augmented regression test, or DWH) is utilized. Davidson and MacKinnon (1993) propose the DWH test, which can be conveniently implemented by incorporating the residuals of every exogenous variable into a regression of the original system as a function of the residuals on the endogenous right-hand side. Table 6 shows the results of endogeneity test which indicated that there are insignificant values of Durbin Wu Husman test which concluded that the acceptance of null hypothesis and concluded that there is no endogeneity in the data.

Table 6: Results of Endogeneity Test

Durbin-Wu-Hausman Test			
Durbin (Score) Chi2	0.142	Probability	0.791
Wu-Hausman F statistics	0.173	Probability	0.724

This study undergoes rigorous long-term stability assessments using CUSUM and CUSUMSQ tests, alongside diagnostic tests. These ensure its consistency and reliability over time, crucial for drawing valid conclusions. Graphical representations confirm Model's stability without crossing the significance level. This confirms its reliability, supporting informed decision-making and contributing to field knowledge.
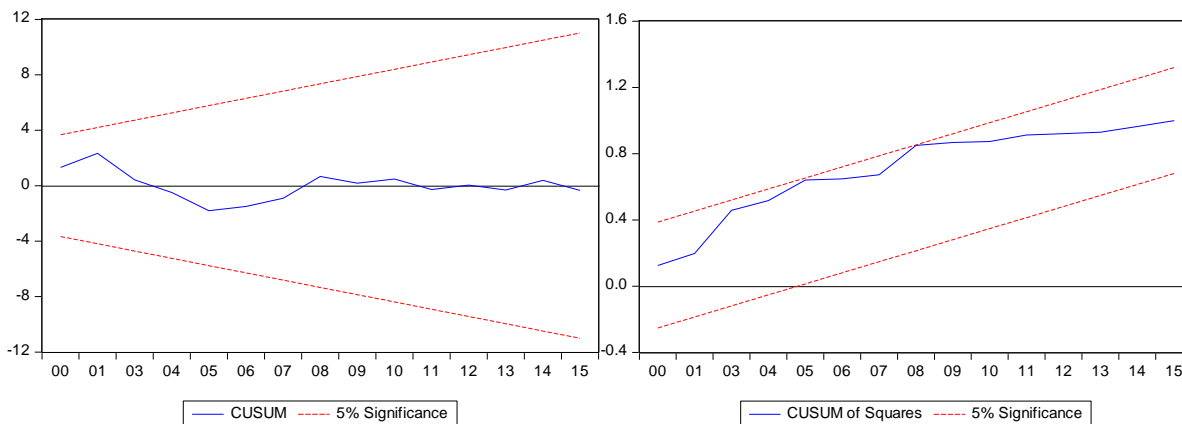

Figure 1: CUSUM and CUSUM SQUARE

5. Conclusion and Recommendations

This study provides thorough insights into how globalization, foreign aid, and loans affect Nepal's economic performance. Using the ARDL model and a variety of diagnostic tests, thorough empirical investigation has produced several important conclusions. Investigating the effects of foreign loans, foreign aid, social globalization, economic globalization, and political globalization on Nepal's economic performance are the main goals of the study. Additionally, the study seeks to determine the influence of political globalization on Nepal's economic performance. The ADF and PP tests were employed in this investigation to verify the unit root problem and determine whether the variable is integrated at the first difference level. Subsequent to examining the unit root, the investigation must assess the long-term correlation between the variables. In order to investigate the long- and short-term effects, the study used the ARDL model along with other diagnostic tests. The variables include labor, capital, economic performance, social and political globalization, economic globalization, foreign aid, and foreign loans. The years 1990 through 2022 are included in the study. This study uses the ADF and PP Tests for unit root testing in order to solve the issue of a unit root in the data. The findings showed that at the level of foreign loans, foreign aid, and social globalization—all of which are stable at first difference—economic performance, political globalization, and economic globalization are stationary. According to the results of the ARDL bound test, the variables that were taken have a long-term connection.

The results highlight the significant positive impact of foreign aid and foreign loans on economic performance, underscoring the importance of utilizing these resources effectively to finance investments and bolster domestic savings. Policy recommendations could involve optimizing aid allocation strategies and ensuring responsible borrowing practices to maximize their contribution to economic growth. Moreover, the favorable influence of economic globalization on economic performance suggests the need for policies that foster international trade, investment, and integration to promote sustained economic expansion and prosperity. Similarly, policies promoting political and social globalization could further enhance economic performance by facilitating global cooperation and cultural exchange. Additionally, prioritizing capital and labor investments guided by evidence-based policies can further drive economic growth and productivity. Ensuring the dynamic stability of the model through continued monitoring and adjustment of economic policies is crucial for maintaining long-term equilibrium and sustaining economic progress.

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