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Foreign Aid in Pakistan: Prosperity Partner or Perplexing Predicament?

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ABSTRACT

Aim of the Study: Foreign assistance is considered one of the modes of foreign capital inflows that play a pivotal role in shaping the economy and other important sectors of the host country. This study aims to investigate the relationship between foreign assistance and economic growth in Pakistan, drawing on a comprehensive analysis of time series data spanning from 1990 to 2022.

Methodology: The estimation strategy includes the Augmented Dickey-Fuller (ADF) test for evaluating variable stationarity and the Autoregressive Distributed Lag (ARDL) bound testing technique, along with an error correction model for probing long-run and short-term effects. This study also employs diagnostic tests for data cleaning, such as the LM test for autocorrelation and the White test for Heteroscedasticity, to authenticate the accuracy of findings.

Findings: Accordingly, the results reveal that foreign aid and inflation allow certain harmful effects, notwithstanding the insignificance of foreign aid's long-term correlation with economic development. In contrast, remittances and foreign investment appear to be the dominant factors, considerably shaping Pakistan's long-term economic development.

Conclusion: Using the provided information, it is important to note that this research suggests a modification of the current policies surrounding foreign assistance, which includes the provision of skills and training to the youth, and employing them for the advancement of technology in Pakistan, relaxing the limitations on foreign investment, and tightening the monetary policies to curb inflation.

Keywords: Foreign Aid, Economic Growth, Inflation, Remittances, ARDL, Pakistan.

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1. INTRODUCTION

It is crucial to study the association between foreign assistance and growth in real terms in developing economies like Pakistan. The aid may come in a number of forms, such as general support grants, concessional loans, technical aid, or even humanitarian assistance, with the common goal of promoting economic development and addressing urgent humanitarian concerns in the beneficiary nations. The multifaceted nature of foreign assistance, however, makes it an issue with a multitude of disagreements among academic experts and politicians. While aid is often regarded simply as a means of reducing poverty, fostering economic growth, and improving general prosperity in developing countries, the relationship between foreign assistance and economic development is multifarious and intricate.

International aid is a form of foreign assistance (aid) such as monetary, skilled labor, and material support given by developed countries to those in dire need. Its bilateral forms include aid, which fosters trade and investment through reduced trade barriers (Raza et al., 2021; Ashraf et al., 2023). Coming through non-governmental organizations and international bodies, multilateral aid comes into action. Project Aid is geared toward housing, education, and even health care aimed at promoting development through specific projects. Technical help is also directed towards the provision of skills such as teacher training. In times of Emergency, sustenance, shelter, and medical assistance are provided under humanitarian aid sought to save lives. With lowered interest rates, economic activity is motivated through soft loans facilitated by donor countries, while debt relief helps to improve income and expenditures (Raza et al., 2020; Aziz et al., 2023). Moreover, aid enables developing economies to allocate the acquired resources- through assistance- for the betterment of its people. One of the forms of assistance is tied loans or concessional grants that constitute the foundation of official development assistance (ODA), making the monetary basis for sustainable development initiatives in recipient countries.

Tracking the overall record of foreign assistance globally, it stood at 170.32 trillion US dollars in 2015 (OECD, 2017). Various existing studies attempt to highlight the importance of foreign assistance in the overall state of an economy. Of them, some, like Burnside and Dollar (2000) and Gomanee et al. (2005), contend that foreign aid stimulates economic growth in underprivileged poor economies. However, there exists literature, such as Boone (1996) and Williamson (2008), that have criticized the success of foreign aid, particularly in developing economies, and assert that it fails to substantially develop human conditions such as health and education.

Among the existing literature, various studies claim to have found substantiation that foreign assistance contributes optimistically to human development. That includes enhancing incomes in per capita terms and improving the environment for foreign (and local) investment in host countries (Gomanee et al., 2005; Shirazi et al., 2009; Mohamed & Mzee, 2017). The findings of such studies highlight the role of foreign assistance as it can fast-track economic development, stimulate investment in human capital as well as in physical labor, and can potentially accelerate the mobility of cutting-edge technology to developing economies (Morrissey, 2001; Adamu, 2013). In many developing economies with low per capita incomes- which hamper the influx of Foreign Direct Investment (FDI), foreign assistance can play a vital part in stimulating economic growth and human development (Easterly, 2003).

1.1 Problem Statement

Developing economies worldwide often face anthropogenic and natural disasters, leaving them needing assistance from neighboring and global nations to rebuild devastated infrastructure and support affected populations. However, these circumstances frequently lead to situations where the governments of developing economies rely heavily on easy monetary aid, failing to invest in productive sectors that could help regenerate their economic cycle. It is, therefore, crucial to examine this aid and assistance trap, which is typically aimed at the short-term improvement of a country's residents. However, this aid often unintentionally becomes a barrier, preventing governments and their citizens from revitalizing the productive sectors of the economy.

Therefore, this study aims to critically investigate the impact of foreign assistance on economic growth by taking Pakistan as a case study for the period of 1990-2022. This is the period when Pakistan received a considerable amount of foreign aid, totaling roughly 380 billion USD. This aid is mostly engaged towards the so-called stability of its economy, improvements in healthcare infrastructure, its education sector, agriculture, energy, and military support. Accordingly, this study attempts to uncover any impact that assistance has created on the economic growth of Pakistan.

1.2 Significance of the Study

This study will help the practitioners to know about the good and bad of foreign assistance i.e. how foreign assistance shapes the economic growth of `Pakistan. Similarly, the study will also highlight the impact of control variables inflation, and remittances on the economic growth of Pakistan.

1.3 Study Objectives

The objective of this study is to investigate the relationship between foreign assistance and the economic growth of Pakistan. This study also further investigates the impact of inflation and remittances on the economy of Pakistan.

2. LITERATURE REVIEW

Foreign assistance often deemed a critical catalyst for economic development, has been the focus of extensive existing research, leading to a diverse range of findings, both favorable and unfavorable. This literature review navigates through these varying perspectives to establish a comprehensive understanding of the relationship between foreign assistance and economic growth, particularly in the context of Pakistan.

The debate on the significance of foreign assistance started from Chenery and Strout's seminal work in 1966, employing a two-gap model, which initially suggested a beneficial impact of foreign aid on economic growth. Their research laid the foundation for subsequent studies that explored the significant relationship between foreign assistance and various indicators of economic development. Anwar and Aman (2010), for instance, utilized the Johansen co-integration test and an error correction model to analyze time series data of Pakistan spanning from 1991 to 2007. Their findings offered a mixed representation, indicating that while foreign aid exhibited long-term positive and significant effects on education, there was a significant inverse relationship between educational spending and literacy rates. The intricacies of this relationship were further highlighted as the ratio of students to instructors and literacy rates demonstrated a favorable correlation, while the link between literacy rates and the number of children in the population showed a significantly negative association. Moreover, the presence of children in the population and the student-teacher ratio displayed limited influence on literacy rates, especially in the context of short-term assistance.

Abouraia (2014) employed basic regression OLS techniques on Philippines data spanning from 2009 to 2012 and established that foreign assistance plays a role in elevating a nation's GDP per capita. However, Ngang's (2008) application of the Pearson moment correlation method to examine time series data from 1997 to 2006, indicated foreign assistance might have had a detrimental impact on the economic growth of Cameron. This association of findings underscores the complex interaction between foreign assistance and economic development.

Odokonyero et al. (2015) ventured into health and diseases prevention interventions using survey data from Uganda for the period 2005 to 2006. They find, with a difference-in-difference fixed effect regression approach, that aid plays a positive role in the prevention of diseases and enhancing health; moreover, they suggest that aid should be channeled into community-oriented projects. In the same context, Kemal and Jilani (2016) investigated the link between foreign aid and education in Pakistan between 1990 and 2014 and found some interesting results. Although secondary aid to the education

sector appeared to be of limited significance, higher education support seemed to have also no perceptible impact. However, the primary aid to the sector was found to have no significant association.

Phowani et al. (2019) considered the economic growth of Pakistan in the wake of recent happenings in the economy studied through data between 1991 and 2015. Their findings, once put to analysis using a simple linear regression, inferred that foreign assistance had no significant effect on economic growth, domestic saving, and government expenditure. Tahir et al. (2020) considered several inflow influences with respect to Pakistan's economic growth between 1976 and 2018. Their findings presented a dichotomy in which long-term foreign assistance, FDI, and remittances had a positive effect, while in the short run, foreign aid was negatively correlated to economic growth.

The research by Akhtar et al. (2023) appears to be the most contemporary effort to investigate this relationship in-depth with respect to foreign assistance and economic growth in Pakistan. Advanced econometric techniques were employed, such as ARDL and Johnson Co-Integration; their analysis of data from 1975 to 2018 noted a positive relationship between foreign assistance and economic growth. Other determinants identified by them as contributing to economic growth included government spending and per capita income. Capital formation and taxes were found to be potential deterrents toward such growth.

3. METHODOLOGY

The data used in this study is time series data sourced from the World Development Indicators (WDI, 2023). The data pertains to Pakistan and covers the extensive period from 1990 to 2022. Through analysis of this data set, the primary objective of this research study is to probe the relationship between foreign assistance and economic growth in Pakistan.

This study estimates the growth equation, with a primary focus on foreign assistance as the central determinant, complemented by investment, inflation, and remittances as control variables. The selection of these variables and their proxies is rooted in both theoretical and empirical economic literature. Historically, foreign assistance has emerged as a significant source of external capital, playing a substantial role in fostering economic growth in Pakistan. This notion aligns with Harrod-Domar's foundational work in 1946, which posits that economic growth, within the framework of classical theory, hinges on the availability of capital for investment. However, the link between foreign assistance and economic growth still rests as an inquiry question for researchers. Some studies suggest a negative influence of foreign assistance, contrasted with a positive role ascribed to domestic investment (Zardoub & Sboui, 2023; Drabo, 2021).

Investment, as a mainstay of economic theory, is considered an instrumental growth driver for the economy. The Solow-Swan model of 1956 emphasizes that investment in capital accumulation and enhanced productivity is the main driver due to technological advancement. In addition, investments focused on particular social programs that improve life expectancy and human capital are considered to be crucial drivers of the economic growth of a country Raza et al., (2022). While an integral aspect of economic dynamics, inflation has the capacity to have both positive and negative effects on economic growth. What Mahembe and Odhiambo (2014) have illustrated is the negative impact of inflation on economic growth, especially in relation to purchasing power loss to the consumers and increased economic uncertainty. Frequently, remittances are neglected in conventional growth models as a source of income for developing countries. As studies like Drabo (2021) have suggested, such inflows can positively impact economic growth by adding to household income and consumption, which in turn would fuel domestic economic activity.

3.1 Estimation Strategy

Anchored in the arguments put forth, this study utilizes the following general model to fulfill its primary objective.

$$eg_t = \alpha_0 + \alpha_1 ad_t + \alpha_2 in_t + \alpha_3 rm_t + \alpha_4 if_t + \varepsilon_t \quad (1)$$

Where α_0 is the intercept, and $\alpha_1..\alpha_4$ are the corresponding coefficients of predictors. The $\varepsilon_t$is the random disturbance term.

The present study uses the Autoregressive Distributed Lag (ARDL) bound testing approach developed by Pesaran (1997), Pesaran and Shin (1999), and Pesaran et al., (2000; 2001). This is a novel advancement in cointegration techniques that can examine variables with mixed orders of integration, including both I(0)and I(1) variables. It is robust against endogeneity issues among the independent variables as well (Pesaran et al., 2001). In order to fulfill the stringent criteria of this technique, the research checks the unit-roots of the variables applying the augmented Dickey-Fuller (ADF) test-a very popular approach for testing the stationarity-and it is parameterized with a p-order autoregressive process.

$$\Delta y_t = \alpha + \gamma \Delta y_{t-1} + \sum_{i=1}^{p} \beta_i \Delta y_{t-i} + \varepsilon_t \quad (2)$$

WhereΔy_t is the difference of the corresponding variable under examination.

Based on the comprehensive analysis of the results of the unit root test presented in the next section, this study employs the Auto Regressive Distributed Lag (ARDL) Bound Testing Approach as the preferred methodology to analyze the complex relationship between foreign aid and economic growth in Pakistan. By Equation (1)the tailored iteration of the ARDL model is presented in the ensuing expression.

$$\Delta eg_t = \alpha_0 + \sum_{i=1}^{p} \gamma_i \Delta eg_{t-i} + \sum_{i=1}^{p} \delta_i \Delta ad_{t-i} + \sum_{i=1}^{p} \theta_i \Delta in_{t-i} + \sum_{i=1}^{p} \pi_i \Delta rm_{t-i} + \sum_{i=1}^{p} \varphi_i \Delta if_{t-i} + \beta_1 ad_t + \beta_2 in_t + \beta_3 rm_t + \beta_4 if_t + \varepsilon_t \quad (3)$$

Where α_0 represents the constant term, while $\gamma, \delta, \theta, \pi \; and \; \varphi$ denote the coefficients associated with the lags of their respective variables. Further, all β_s signifies the long run coefficients of the independent variables. Accordingly, the associated equation for the estimation of Error Correction Model (ECM) is expressed as follows.

$$\Delta eg_t = \alpha_0 + \sum_{i=1}^{p} \gamma_i \Delta eg_{t-i} + \sum_{i=1}^{p} \delta_i \Delta ad_{t-i} + \sum_{i=1}^{p} \theta_i \Delta in_{t-i} + \sum_{i=1}^{p} \pi_i \Delta rm_{t-i} + \sum_{i=1}^{p} \varphi_i \Delta if_{t-i} + \lambda ECM_{t-1} + \varepsilon_t \quad (4)$$

Where the long-term coefficients have been substituted with the short-term dynamics represented by the ECM term. A statistically significant and negative sign of ECM is anticipated in this study, which shows short run convergence to the equilibrium route followed the following year. ECM is a short-term technique that essentially provides short run data analysis.

To ensure the accuracy and robustness of results in this estimation process, the relevant diagnostic test is applied further. This study uses the serial correlation LM test for exploring auto-correlation and the White test for heteroscedasticity.

4. RESULTS AND DISCUSSION

Table 1 presents a detailed compilation of the variables of this study, accompanied by a concise summary of their respective descriptive statistics. In results, eg exhibits relatively low variability and a stable trend around an average of 4.317, suggesting a consistent level of economic growth. ad displays moderate diversity, with an average of 3.791, indicating fluctuations in foreign assistance. In shows significant variability, ranging from 0.131 to 4.811, implying potential economic uncertainties. rm appears stable around an average of 16.114, while it demonstrates low variability and a consistent trend around 8.428.

These statistics set the stage for a comprehensive analysis of the relationships between these variables in the forthcoming sections of the study.

Table 1: *Descriptive Statistics Summary*

variable	Obs	Mean	Std dev	Min	Max	Skewness	Kurtosis
eg	33	4.317	0.115	3.821	5.286	0.122	1.243
ad	33	3.791	0.101	2.351	6.391	0.312	1.589
in	33	1.121	0.197	0.131	4.811	1.273	2.523
rm	33	16.114	0.932	14.601	17.235	1.322	2.492
if	33	8.428	0.142	2.186	14.891	0.211	1.984

Source: Author computations

The comprehensive correlation analysis in Table 2 unveils the relationships among the variables. Notably, foreign assistance, foreign investment, remittances, and inflation are found to exhibit negative associations. While remittances and foreign investment share a relatively low correlation, the remaining variables display robust interconnections with each other.

Table 2: *Correlation Matrix Summary*

Variable	eg	ad	in	rm	if
eg	1				
ad	-0.311	1			
in	0.431	-0.441	1		
rm	0.452	-0.285	0.352	1	
if	0.516	0.472	0.864	-0.331	1

Source: Author computations

The conclusion of the Augmented Dickey-Fuller (ADF) tests, as presented in Table 3, reveals crucial insights into the stationarity of the variables under study. In their level form with a constant term, all variables exhibit non-stationarity, manifesting higher p-values. However, upon taking the first differences, a consistent pattern emerges, with all variables demonstrating stationarity, marked by notably lower p-values. Intriguingly, when the constant and trend terms are considered, a similar transformation from non-stationary to stationary is observed for all variables, except for if, which maintains stationarity at the level. This amalgamation of variable behaviors concerning the order of integration underscores the necessity of employing the ARDL technique in the analytical approach to navigate this involved dataset.

Table 3: *Unit Root test*

Variable	Constant		Constant +Trent	
	Level	1st Difference	Level	1st Difference
eg	-0.1328	-3.7712***	-2.5236	-5.4325**
	(0.711)	(0.021)	(0.517)	(0.012)
ad	-0.6657	-3.2726***	-2.9516	-5.8226***
	(0.182)	(0.013)	(0.283)	(0.002)
in	-1.0316	-4.2151**	-3.5415	-4.9788***
	(0.122)	(0.013)	(0.313)	(0.021)
rm	-1.2251	-3.8729***	-2.1741	-5.7261**
	(0.316)	(0.001)	(0.512)	(0.003)
if	-0.5366	-3.7216***	-2.4831*	-5.5294***
	(0.215)	(0.001)	(0.031)	(0.005)

Source: Author computations

The estimation of the ARDL bound technique, as illustrated in Table 4, requires the determination of the lag duration as a prerequisite. A bad lag length selection could produce biased results and result in false

policy conclusions. This study explored several lag length elements to investigate robust outcomes, but eventually chose lag length based on AIC criteria. According to the AIC, FPE, and HQ criteria results, the lag length of two appears most favorable, as it yields the lowest AIC value among the options. In essence, while different criteria present some variations in the preferred lag length, the AIC criterion, which balances model fit and complexity, suggests a lag of two as the most appropriate choice for the more efficient and parsimonious model.

Table 4: *Lag order selection criteria*

lag	log l	lr	fpe	aic	sc	hq
0	-144.2192	na	70.59252	18.9274	16.78712	18.58365
1	-172.2515	127.1672*	0.41903	12.9818	12.80219*	13.56852
2	13.1762	30.9252	0.01839*	12.52345*	13.45217	13.95263*

Source: Author computations

The results of the ARDL bound testing approach, as displayed in Table 5, are presented in two distinct sections. The upper section encompasses the long-run coefficients of explanatory variables, while the lower section comprehensively outlines the short-run coefficients, coupled with the error correction term.

Table 5: *Long and short-run ARDL model results*

Long Run Results				
Variable	Coff	Std Err	T Stat	P value
c	1.2021	0.9891	1.21534	0.192
ad	-0.0182	0.04314	-0.42188	0.112
in	0.0955**	0.0098	9.74488	0.013
rm	0.0463**	0.0053	8.73584	0.011
if	-0.0641	0.0926	-0.69225	0.134
	adj r-square	f-stat (189.689)	dw stat	
r-square (0.72876)	(0.70217)	prob (f-stat) (0.0000)	(1.101)	
Short Run Results				
Variable	Coff	Std Err	T Stat	P value
c	0.4013	0.09921	4.044955	0.017
$d(ad)$	0.0132**	0.00801	-1.64794	0.059
$d(in)$	0.0642**	0.006213	10.49413	0.001
$d(rm)$	0.0629**	0.00861	7.30545	0.011
$d(if)$	0.0428	0.07432	0.57588	0.235
$ecm(-1)$	-0.4861**	0.28431	-1.70975	0.013
	adj r-square	f-stat (3.759)	dw stat	
r-square (0.59214)	(0.5719)	prob (f-stat) (0.006)	(1.124)	

Source: Author computations

The result of this research shows a negative and insignificant coefficient of constant term. Further, Foreign aid is regarded to have little impact on the economic growth of Pakistan because of poor administrative practices that encourage corruption in developing countries (Raza et al., 2024; Khan et al., 2024). The long-term analysis of this study revealed that aid was statistically insignificant and bad. These findings are sustained by the outcomes of Munir and Satti (2023). The study indicated that foreign assistance has a negative correlation with the economic progress of Pakistan. It is believed that foreign assistance causes several issues for developing nations, including the decline of domestic industry, corruption, reliance, and decreased exports. Pakistan is an aid-recipient country that faces the problem of mismanagement and corruption that deters development.

Further, a major factor that either deters or stimulates economic activity in a nation is inflation (Raza et al., 2021; Aziz et al., 2023). There will be greater economic activity if the government can manage

inflation, but there will be less or no economic growth if the government is unable to do so. This analysis reveals that inflation plays a major, though unfavorable, influence on the economic growth of Pakistan (Raza et al., 2021; Rovidad et al., 2024). Furthermore, this analysis showed that, in the long run, remittances and foreign investment play a significant role in Pakistan's economic development, whereas inflation and aid have a detrimental impact. The aid recipient country like Pakistan faces many challenges during the distribution of aid at the gross root level. There are no policies for the distribution of aid at the gross root level as well as at the country level. Therefore, a very contradictive statement is made that foreign assistance helps reduce poverty and increase development (Munir & Satti, 2023).

The short-term results paint a somewhat different picture of how each variable will behave. Remittances and foreign investment are all statistically significant and positive variables, but the latter has a detrimental effect on economic growth (Raza et al., 2024, Raza et al., 2023). Due to a variety of factors, foreign help is viewed as a curse on the economic development of any developing nation. Therefore, this analysis concludes that foreign assistance has a small and detrimental influence on the economic progress of Pakistan.

Table 6: *Diagnostic test results*

Breusch-Godfrey serial correlation lm test	
f-statistic (0.78921)	prob f(6,17)(0.9863)
obs*r-squared(14.8806)	prob chi-square(6) (0.9746)
Heteroscedasticity test: white test	
f-statistic (0.57318)	prob f(17,8)(0.8246)
obs*r-squared (14.6880)	prob chi-square(21) (0.624)
scaled explained ss (8.9821)	prob chi-square(16) (0.1378)

Source: Author computations

As presented in Table 6, the diagnostic analysis reveals the absence of serial correlation, corroborated by the non-significant Breusch-Godfrey serial correlation LM test statistics. Furthermore, the author conducted the White test to evaluate the presence of heteroscedasticity within the estimated model, and the outcome unequivocally supports the absence of such heteroscedasticity. The insignificance of the White test results firmly attests to the homoscedasticity of the model.

5. CONCLUSION

This study embarked on an in-depth exploration of the significant relationship between foreign assistance and the economic growth of Pakistan using time series data spanning from 1990 to 2022. Foreign investment, inflation, and remittances were all included as control variables because they are crucial to the economic development of any developing nation. The rigorous analysis, utilizing the ADF to assess the unit root of the variables, and the ARDL technique to scrutinize both long-run and short-run effects. It became evident that Foreign aid and inflation both have detrimental effects, but the former is insignificantly correlated with economic development in the long run. Similarly, foreign investment and remittances play a significant impact in Pakistan's economic development over the long term. Based on the findings of this research study, various policy suggestions are made. First, the government needs to discourage foreign help because it is often mishandled at both the top management and ground level. Second, the government must first deploy highly skilled workers to industrialized and technologically advanced nations who will help in the process of producing cash. Third, restrictions on foreign investment need to be loosened so that more foreign investors can support Pakistan's economy. Lastly, to contain the nation's rising inflation, a tight monetary policy must finally be implemented.

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Conflict of Interest

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REFERENCES

Abouraia, M. K. (2014). Impact of foreign aid in economic development of developing countries: A case of Philippines. *European Journal of Business and Social Sciences*, *3*(4), 166-180.

Adamu, P. A. (2013). The impact of foreign aid on economic growth in ECOWAS countries: A simultaneous-equation model (No. 2013/143). WIDER Working Paper.

Adedokum, A.J. (2017). Foreign aid, governance and economic growth in Sub-Saharan Africa: does one cap fit all. *African Development Review*, *29*(2), 184-196.

Akbar, S., Akbar, S., Raza, A., & Rovidad, M. (2021). Investigation and Forecast of COVID-19 Wave-II: A Case Study of Pakistan. *International Transaction Journal of Engineering, Management, & Applied Sciences & Technologies*, *12*(5), 1-8.

Akhtar, N., Anjum, S., Abbas, G., & Idrees, M. A. (2023). Effectiveness of Foreign Aid and Tax Revenue on Economic Growth of Pakistan. *VFAST Transactions on Education and Social Sciences*, *11*(2), 120-130. **DOI:** https://doi.org/10.21015/vtess.v11i2.1476

Anwar, M., & Aman, S. (2010). Aid effectiveness in the education sector of Pakistan. *Pakistan Journal of Social Sciences*, *30*(2), 355-371.

Ashraf, S., Raza, A. & Khan, I. T. (2023). Impact of Educational Expenditures on Economic Growth in Asian Countries. *International Journal of Contemporary Issues in Social Sciences, 2*(4), 819-826.

Aziz, T., Raza, A.**,** Tarakai, M., & Hassan (2023). The impact of Greenfield-foreign direct investment on the economic growth of Afghanistan. *Liberal Arts and Social Sciences International Journal, 7*(1), 187-201. https://doi.org/10.47264/idea.lassij/7.1.11

Boone, P. (1996). Politics and the effectiveness of foreign aid. *European Economic Review*, *40*(2), 289-329. DOI: https://doi.org/10.1016/0014-2921(95)00127-1

Burnside, C., & D. Dollar. (2000). Aid, Policies and Growth. *American Economic Review*, *90*(4), 847–868. DOI: 10.1257/aer.90.4.847

Chenery, H.B., Strout, A.M., 1966. Foreign assistance and economic development. The American Economic Review, Vol. LVI. DOI: https://doi.org/10.1007/978-1-349-15238-4_9

De Haas, H. (2005). International migration, remittances, and development: myths and facts. *Third World Quarterly*, *26*(8), 1269-1284.

Domar, E. (1946). Capital expansion, rate of growth, and employment. *Econometrica*, *14*(2), 137-147. DOI: https://doi.org/10.2307/1905364

Easterly, W. (2003). Can foreign aid buy growth? *Journal of Economic Perspectives*, *17*(3), 23-48. DOI: 10.1257/089533003769204344

Gomanee, K., Girma, S., & Morrissey, O. (2005). Aid, public spending and human welfare: evidence from quantile regressions. *Journal of International Development*, *17*(3), 299-309. https://doi.org/10.1002/jid.1163

Harrod, R. F. (1939). An essay in dynamic theory. *The Economic Journal*, *49*(193), 14-33. https://doi.org/10.2307/2225181

Kemal, M. A., & Jilani, A. (2016). 9 Impact of Foreign Aid in Education on Educational Outcomes. *Pakistan Institute of Development Economics*, (139), 1-9.

Khan, F., Zahir, S., Rahman, H. U., Raza, A., & Noor, S. (2024). Exploring the role of ICT and education in reducing environmental degradation among Asian countries. *Natural Resources Forum*, 3(2024) 1-30. https://doi.org/10.1111/1477-8947.12548

Khoso, A., & Rovidad, M. (2023). Pakistan's ethnic parties' religious narratives and practices. *The Review of Faith & International Affairs*, *21*(3), 124-136.

Mohamed, M. R., & Mzee, S. S. (2017). Foreign Aid and Human Development: A Quintile Regression Approach. *International Journal of Economics, Management and Accounting*, *25*(1), 27-33. **DOI:** https://doi.org/10.31436/ijema.v25i1.369

Munir, N., & Satti, Z. W. (2023). Empirical Analysis of the Extended Solow Model and Foreign Aid in Pakistan's Economy. *Pakistan Journal of Humanities and Social Sciences*, *11*(2), 857-866. **DOI:** https://doi.org/10.52131/pjhss.2023.1102.0396

Ngang, J. B. (2008). The impact of foreign aid on economic growth and economic development in Cameroon. Available at http://www.diva-portal.org/smash/record.jsf?pid=diva2%3A2456&dswid=8325

Odokonyero, T., Ijjo, A., Marty, R., Muhumuza, T., & Moses, G. O. (2015). Subnational Perspectives on Aid Effectiveness: Impact of Aid on Health Outcomes in Uganda. *Aid Data Working Paper 18 (December)*.

OECD. Publishing. (2017). *OECD Digital Economy Outlook 2017*. OECD Publishing.

Pesaran, M. H. (1997). The role of economic theory in modeling the long run. *The Economic Journal*, *107*(440), 178-191. https://doi.org/10.1111/1468-0297.00151

Pesaran, M. H., Shin, Y., & Smith, R. J. (2001). Bounds testing approaches to the analysis of level relationships. *Journal of Applied Econometrics*, *16*(3), 289-326. https://doi.org/10.1002/jae.616

Pesaran, M. H., Shin, Y., & Smith, R. P. (1999). Pooled mean group estimation of dynamic heterogeneous panels. *Journal of the American Statistical Association*, *94*(446), 621-634. https://doi.org/10.1080/01621459.1999.10474156

Pohwani, P., Khoso, J. R., & Ahmed, W. (2019). Impact of foreign aid on the economic growth of Pakistan. *Journal of Public Value and Administrative Insight*, *2*(1), 18-25. DOI:10.31580/JPVAI.V2I1.474

Raza, A., Akbar, S. & Raza, Z. (2021). "Does Greenfield-foreign direct investment inflow contribute to socio-economic development? Empirical evidence from developing countries". *Pakistan Journal of Humanities and Social Sciences*, *9*(3), 469-481. DOI: https://doi.org/10.52131/pjhss.2021.0903

Raza, A., Azam, K.., Khan, A., & Badshah, W. (2024). Balancing Growth and Sustainability: The Impact of Greenfield Investment on Trade Adjusted Carbon Emissions. *Sustainable Futures*, 8(2024), 100253. https://doi.org/10.1016/j.sftr.2024.100253

Raza, A., Azam, M. & Bakhtyar, B. (2024). Exploring the Linkage between Energy Consumption and Economic Growth in BRICS Countries through Disaggregated Analysis. *Journal of the Knowledge Economy*, 15*(2), 1-23.* https://doi.org/10.1007/s13132-024-02045-1

Raza, A., Iqbal, M. & Hussain, N. (2021). "Is Greenfield investment greener for the welfare of lower-middle income countries? Market-based empirical analysis with GMM approach". *Journal of Marketing Strategies, 3*(3), 194-206. DOI: https://doi.org/10.52633/jms.v3i3.111

Raza, A., Khoso, I., & Taraki, W. (2024). Role of macroeconomic indicators and strategic management in Afghanistan's economic growth. *Journal of Entrepreneurship, Management, and Innovation, 6*(1), 119-135. https://doi.org/10.52633/jemi.v6i1.368

Raza, A., Nadeem, M. I., Ahmed, K., Hassan, I., Eldin, S. M., & Ghamry, N. A. (2023). Is Greenfield investment improving welfare: A quantitative analysis for Latin American and Caribbean developing countries. *Heliyon*, *9*(10), e20703. https://doi.org/10.1016/j.heliyon.2023.e20703

Rovidad, M. (2020). *Socio-economic Consequences of Microfinance Investment in Pakistan* (Doctoral dissertation, Universität Wien).

Rovidad, M., Atif, M., & Nasir, S. (2024). Analyzing Minority Empowerment: Statistical Modeling of the Plight of Minorities in Peshawar Pakistan. *The Journal of Research Review*, *1*(04), 323-336.

Rovidad, M., Raza, A. & Din, M., U. (2024). Exploring the Dynamics of Remittances and their Socioeconomic Impacts on Pakistan. *Human Nature Journal of Social Sciences, 5*(4), 77-87. https://doi.org/10.71016/hnjss/hz95h014

Rovidad, M., Raza, A., & Akbar, S. (2020). Effects of Microcredit on Crop Productivity in District Charsadda, Khyber Pakhtunkhwa. *International Review of Management and Business Research, 9*(4), 130-137.

Salas, V. B. (2014). International remittances and human capital formation. *World Development*, 59(1), 224-237. https://doi.org/10.1016/j.worlddev.2014.01.035

Shirazi, N. S., Mannap, T. A. A., & Ali, M. (2009). Effectiveness of foreign aid and human development. *The Pakistan Development Review*, *48*(4), 853-862.

Sutradhar, S. R. (2020). The impact of remittances on economic growth in Bangladesh, India, Pakistan, and Sri Lanka. *International Journal of Economic Policy Studies*, *14*(1), 275-295. https://doi.org/10.1007/s42495-020-00034-1

Tabit, S., & Moussir, C. E. (2017). Impact of migrants' remittances on economic growth: the case of Morocco. *International Journal of Innovation and Applied Studies*, *20*(1), 226-233.

Tahir, M., Jan, A. A., Shah, S. Q. A., Alam, M. B., Afridi, M. A., Tariq, Y. B., & Bashir, M. F. (2020). Foreign inflows and economic growth in Pakistan: Some new insights. *Journal of Chinese Economic and Foreign Trade Studies*, *13*(3), 97-113. https://doi.org/10.1108/JCEFTS-01-2020-0005

Tolcha, T. D., & Rao, P. N. (2016). The impact of remittances on economic growth in Ethiopia. *Indian Journal of Commerce and Management Studies*, *7*(2), 01-15. https://ijcms.in/index.php/ijcms/article/view/329

Williamson, C. R. (2008). Foreign aid and human development: The impact of foreign aid to the health sector. *Southern Economic Journal*, *75*(1), 188-207. https://doi.org/10.1002/j.2325-8012.2008.tb00898.x

World Bank. (2014). Migration and remittances: Recent developments and outlook. *Migration and Development Brief, 22*.

World Bank. (2019). Foreign Capital Inflows: Economic review and outlook. *The World Bank Economic Review, 10*.

World Bank. (2023). Western Balkans Regular Economic Report No. 23, Spring 2023: Testing Resilience.