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**Aid Composition, Institutional Quality, and Economic Growth: A Multi-Faceted Examination for Developing Countries**

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| **Abstract**  Foreign aid and institutional quality are crucial aspects of the development process of developing nations. The current study scrutinizes the influence of foreign assistance and institutional quality on the economic growth of 49 developing countries from 1990 to 2020. The Generalized Method of Moment (GMM) technique has been applied for statistical investigation. Two types of aid, namely project-based aid and total aid, have been used in the analysis. The overall institutional quality and quality of economic, political and legal institutions have been used in the analysis. The study found that project aid significantly impacts economic growth without institutional quality. In contrast, total aid without better institutional quality does not significantly impact growth. However, total aid, when interacted with institutional quality, has a significant impact on economic growth. It shows that if institutional quality improves in a country, aid will significantly impact its economic growth. |

**Keywords:** Foreign Aid, Institutional quality, Developing Countries, Generalized Method of Moment

# Introduction

Foreign resource dependency is a crucial aspect of the development process for many countries, especially those classified as developing nations. The inflow of international assistance, in the form of aid, grants, loans, and other financial resources, significantly influences economic growth, social progress, and overall development. However, the effectiveness and sustainability of this assistance are heavily influenced by the domestic institutional framework within the recipient country. In various forms, foreign aid has been a crucial instrument for development assistance in the global arena. One significant category of foreign aid is project-based aid, which focuses on funding specific projects or programs in recipient countries. Understanding the nexus between project-based aid and total aid is vital for assessing aid effectiveness, efficiency, and impact on development outcomes. This research article delves into the complex relationship between project-based aid and total aid, utilizing case studies of developing states to shed light on the dynamics and implications of this relationship. This research paper's objective is to provide a comprehensive analysis of the role of institutions as drivers of international assistance in developing countries, focusing on understanding how institutional factors affect the mobilization, allocation, and consumption of extraneous assets for development. Development economists and policymakers have extensively considered the role of International Assistance (IA) in determining the economic growth of developing states. Most developing nations grapple with issues such as high levels of corruption, inadequate rule of law, substandard institutional quality, political instability, poor governance, and a lack of capital stock (Bräutigam & Knack, [2004](#Bräutigam)). To address these challenges, these countries heavily depend on external resources like foreign assistance to mitigate capital stock deficiencies and associated problems. Development economists emphasize the pivotal role that capital formation plays in the growth and development of both developed and developing nations (Solow, [1956](#Solow)). International assistance and foreign direct investment can potentially assist developing countries in meeting their internal capital resource scarcity needs (Djankov et al., [2008](#Djankov)). Moreover, development economists contend that a universal democratic revolution may struggle to be sustained without the aid of international assistance and foreign direct investment (Diamond, [1992](#Diamond); Faras & Ghali, [2009](#Faras); Wright et al., [2015](#Wright)). Various researchers have delved into the connection among IA and development (Burnside & Dollar, [2000](#Burnside); Easterly, [2005](#Easterly); Svensson, [2000](#Svensson)). Employing diverse econometric techniques and datasets, these studies have consistently revealed a positive and statistically significant association between IA and long-term economic performance (Arndt et al., [2015](#Arndt); Juselius et al., [2014](#Juselius)). Foreign assistance can prove instrumental for developing nations in managing their budgets and supporting the establishment of governmental programs such as technical training institutes. Despite its benefits, international assistance may entail certain internal costs, particularly for developing nations, in the form of international dependency. Different types of foreign assistance can have economic, social, and political consequences for these countries. Scholars have examined the hypothesis that foreign assistance can erode the quality of political institutions (Rajan & Subramanian, [2008](#Rajan)). While international assistance can positively impact economic performance and developmental levels through spillover effects, it may concurrently have adverse implications for institutional quality (Bräutigam & Knack, [2004](#Bräutigam); Wright et al., [2015](#Wright)). Some researchers suggest that the influence of foreign assistance on the development process may vary based on the specific context (Contextual references).

## Objectives of the Study

The following Objectives of this study have been set:

1. The first objective of current study is to inspect the influence of foreign assistance (project based aid and total aid) on economic growth in the absence of institutional quality.

2. The second goal of present study is to inspect the influence of foreign assistance (project based aid and total aid) on economic growth in the presence of institutional quality.

3. The third aim of this research is to inspect the interacted effect of foreign assistance and institutional quality on economic growth.

4. current study also purposes to see the impact of various types of institutional quality on segregated forms of foreign aid.

5. To suggest some policy options on the basis of empirical findings.

## Novelty of the Study

Current study will be a novel in a sense that it will see the effect of international assistance at segregate and aggregate level (project based and total) in the presence of various forms of institutional quality on economic growth. There is hardly any study which has investigated the effect of various types of institutions like economic, political and legal institutions on international assistance in developing countries. Econometric results of the study will help to enrich our understanding that, to what extent international assistance can have effect on economic growth in the presence of institutional quality.

# Literature Review

Lee and Kim, ([2019](#Lee)) examine the relationship between institutions and economic growth. For empirical analyses they used the data covering the period 1965 to 2002. By applying different econometric techniques, they concluded that institutions were positively associated with economic growth but its effect is contextual specific. The study investigated that technology and institutions were the core factors of economic development in long run. Empirics also postulate that secondary education was supportive for development in low income states and higher education and better technology was suitable for economic development in middle and higher income nations. The econometric results also proved bidirectional causal relationship between institutional quality and economic growth. Zhang and Wei ([2010](#Zhang)) pointed out the impact of institutions and governance in augmenting economic progress. For empirical analyses, the study had used the cross-sectional data covering the period 1998 to 2008. Econometric results of their study found the existence of bidirectional relation between institutional quality and economic development in long run. Sijabat ([2022](#Sijabat)) analyzed the link among foreign aid, FDI, capital formation and GDP for time span of 1970-2019 in Indonesia. The research demonstrated cointegration and a persistent equilibrium linkage among GDP, foreign aid, FDI, and capital accumulation by ADF unit root tests using the augmented Toda-Yamamoto technique and Granger causality test. Notably, it was discovered that there was positive one-way causation between foreign aid and GDP as well as between FDI and GDP, proving that foreign aid boosted economic growth. Nonetheless, no causal association between aid and capital formation was found, underlining the need for better management of foreign aid to draw in FDI and possibly strengthen Indonesia's economic growth. Appiah-Otoo et al. ([2022](#Appiah)) evaluated the interplay between financial development and economic growth in the existence of different forms of foreign aid including education aid, agricultural aid, health aid, and services for 37 African nations.

The study applied GMM approach for the dataset covering time span of 2002-2018. The outcomes specified that while foreign aid could hinder economic growth in Africa, financial development played a pivotal role in promoting it. Moreover, the research highlighted that financial development conditioned foreign aid to have a positive effect on economic growth. Country-specific analysis further showed that nations with robust financial systems, such as Tunisia, South Africa, Mauritius, Gabon, and Botswana, experienced higher growth elasticity from aid, while nations with weaker financial structures, like Guinea Bissau, Malawi, Sierra Leone, and the Democratic Republic of Congo, demonstrated lower growth elasticity. The influence of foreign assistance on economic growth was investigated by Abate ([2022](#Abate)) study covering the time span of 2002 to 2019 across 44 developing nations, looking at whether excessive aid is helpful or harmful. The study also evaluated how much economic freedom and institutional quality matter in this relationship. The study used dynamic panel threshold regression and the system GMM with panel data. The association between foreign aid and economic growth was found to be inverted U-shaped, with an ideal aid level at 9.7% of GNI. Notably, help had a negative effect when institutional quality and economic freedom went below particular thresholds, highlighting their crucial roles in the aid-growth dynamic.

Das and Sethi ([2020](#Das)) investigated how official development assistance, remittances, and FDI affect economic growth in Sri Lanka and India. The study identifies significant effects using Granger causality tests and a vector error correction model (VECM) by using data for time span 1980-2016. While official development assistance and remittances are important propellers of increased economic growth in Sri Lanka, FDI and remittances have a favorable effect on economic growth of India. Additionally, to forecast future variances and assess the effects of shocks in independent variables on the dependent variable, vector decomposition and impulse response studies were used. Saibu et al. ([2022](#Saibu)) examined into the critical dynamics of capital inflows, trade openness, and economic growth, recognizing their pivotal roles as economic factors. Focusing on 14 West African nations for time span of 1980-2018, the study employs panel ARDL and mean group (MG) estimation techniques to examine the individual, interactive, and threshold effects of aid, FDI, and trade openness on economic growth. Long-term linkages are established, with aid, FDI, and trade openness positively influencing output growth. Interestingly, the interactive effect of these factors is negative but reinforces individual effects in the long run. Furthermore, the research identifies a threshold of 8.3 percent in financial flows required to stimulate output growth equilibrium.

The effect of foreign aid and FDI on economic growth is examined across 20 of the global top beneficiaries of foreign aid among developing nations by (Özyilmaz, [2022](#Özyilmaz)). The analysis looked at this link using a variety of techniques, such as random effects, fixed effects, and pooling least squares. The results showed that, across all models, foreign aid has a statistically significant negative effect on economic growth. The study also takes into account control variables including inflation, population, and FDI. While the impact of population has a generally negative effect on growth, the impact of inflation on growth frequently lacks statistical significance. On the other hand, FDI have a favorable effect on economic expansion. Rao et al. ([2023](#Rao)) analyzed the complex interactions between FDI, foreign aid, and GDP growth in South Asia and South-East Asia for time duration of 1980-2016. Estimations showed that FDI has a favorable effect on economic growth, while foreign aid showed an inverse correlation with both of these variables. The government's foreign aid to the private division for internal investment, which is constructively correlated with both FDI inflows and economic growth, stands out as a key component in all estimations. The study advocated to improve financial development for getting favorable outcomes from FDI, particularly among low-income nations of Asia.

Hayaloğlu and Tümay ([2023](#Hayaloğlu)) conducted cross nation analysis to measure the associations between the effectiveness of governance, foreign aid, and economic growth among 78 foreign aid receiving global nations for time span 2000-2019. According to the empirical outcomes, there was a negative linkage between foreign aid and GDP growth. The quality of governance, on the other hand, is found to positively correlate with GDP growth. These findings highlight the crucial importance of good governance in encouraging sustainable economic growth and suggest that improvements in governance quality might greatly uplift the growth. Mohamed Aslam and Samsudeen ([2023](#Aslam)) conducted an extensive examination of the affiliation between external assistance and economic growth in Sri Lanka spanning 1960 to 2018 by applying inferential data analysis and exploratory methods. The outcomes significant relationship between external assistance and economic growth. Co-integration tests showed a long-term linkage, while unit root tests verified the variables' stationarity at the first difference. The calculated coefficients showed a long-term and short-term favorable correlation. The error correction estimations also showed incremental changes leading to long-term equilibrium. Notably, the Granger causality test confirmed both a long-term Granger causal connection and a short-term one, highlighting the importance of external assistance in spurring economic growth in Sri Lanka.

Bird and Choi ([2020](#Bird)) examined that how FDI, remittances, and development aid affected economic growth for time period 1976-2015 among 51 low and middle income developing nations. Using fixed effects and dynamic panel methods, the study revealed that FDI has a sizable beneficial effect on economic growth. Remittances, on the other hand, showed a large negative influence, although the effect of foreign aid was frequently unclear. These findings, which were supported by thorough research and robustness tests, revealed the complex effects of various financial sources on economic growth. The long run effects of the institutional quality on GDP growth in post-Soviet nations during 1996-2021 were examined by (Gasimov et al., [2023](#Gasimov)). The study revealed a U-shaped connection between institutional quality and GDP growth through applying the ARDL Model, extending to factors including political stability, rule of law, and governance. The study also shed light on the influence of control factors, showing a positive linkage between openness and GDP growth and a negative link between inflation and population growth rate. These outcomes offered retroactive insights into the complex forces influencing economic development in post-Soviet nations. In their study, Warsame et al. ([2023](#Warsame)) explained the relationship of institutional quality with environment change on GDP growth in Somalia during 1985-2017. Utilizing the ARDL, Johansen and Juselius Cointegration, and DOLS, the research uncovered that cointegration relationship exist between institutional quality and GDP growth in the long run. Notably, average rainfall, institutional quality, and capital were found to stimulate economic growth over the long term, while average temperature had a detrimental effect. These findings held robust across various econometric methods, underscoring the significance of climate adaptability, mitigation strategies, and enhancements in institutional quality—particularly in law and order, government effectiveness, and bureaucratic quality—for confirming sustainable GDP growth in the long term.

In their examination spanning from 2002 to 2017, Lau and Yip ([2023](#Lau)) scrutinized the effect of country-specific Official Development Aid (ODA) and institutional quality on GDP growth in Laos, Cambodia, Vietnam, and Myanmar. The outcomes depicted significant linkages. Firstly, ODA from Japan, Germany, and France had a conditional effect on GDP growth, with an inverse effect in the existence of low institutional quality and a positive impact beyond a certain threshold. The robustness of these findings was maintained after accounting for endogeneity and outliers. Furthermore, the study highlighted that the mitigating effect of institutional quality operated through both labor productivity and human capital growth channels. Based on these insights, the study advocated crucial policy implications for both donor countries and ODA recipients. In their investigation, covering data duration of 1995 to 2019 across 86 BRI countries, Ashraf et al. ([2022](#Ashraf)) utilized a spatial econometric approach to highlight the spillover impact of institutional quality and openness on economic growth. The findings unveiled the existence of spatial dependence in EG across nations, indicating indirect institutional and economic openness spillovers. The study highlighted that a country's institutions and economic openness contribute not only to its own growth but also positively spill over to benefit the economic development of its neighbors. Notably, the BRI policy demonstrated positive spillover consequences on economic growth in allied nations, creating further positive impacts on the economic development of neighboring nations. The study concludes with policy recommendations for BRI economics, emphasizing the impacts of economic openness, institutions, and spillovers on growth.

The investigation carried out by Corradini ([2021](#Corradini)) looks closely at the connection between institutional quality and economic growth across Italian NUTS-3 areas. The study demonstrates strong evidence for a causal relationship between institutional quality and growth through panel VAR method, which is particularly important in areas with low levels of economic development. However, there is no evidence for reverse dynamics, proving that institutional quality is not causally affected by economic growth. These findings cast doubt on the claim that policies that just prioritize economic expansion produce stable institutional environments. Instead, the study contends that improvements to formal institutions are crucial preconditions for long-term regional growth. The influence of institutional quality with economic growth is examined in the study of Asante et al. ([2023](#Asante)), with an emphasis on the mediating function of institutional quality. The study uses the system-GMM approach to examine data for time span of 2000 to 2019 from 29 different nations. Notably, the study finds that when the political stability, rule of law, and regulatory quality are extremely effective, the beneficial influence of financial development on economic growth is boosted. The results show that financial development has a favorable and considerable effect on economic growth. This demonstrates how strong institutional frameworks and financial development are intertwined in promoting economic growth.

Using dataset for time period of 1996-2021, Ali ([2022](#Ali)) examined the dynamics of institutional quality, financial liberalization, and GDP growth in Africa. As per study's outcomes, government effectiveness, political stability, and the presence of physical capital all have a progressive and considerable influence on economic growth in the selected nations. The physical capital, total labor force participation rate, and economic growth are all found to be causally linked in both directions. Notably, financial liberalization has been found to have smaller influence on the economic development of African countries. The study urges African governments to use a multidimensional approach in order to manage physical capital, increase skilled labor force participation, and improve institutional quality for long-term economic success. Islam and Mustafa Shindaini ([2022](#Islam)) examined the influence of institutional quality and human capital on economic growth in Bangladesh. Constructing an institutional quality index based on international country risk guide (ICRG) data and assessing human capital through public education and health expenditure as parts of real GDP, the study discovers a long-run link among the variables. Government spending on education has a negative long-term impact but a positive short-term effect on the EG rate, while institutional quality has a positive long-run impact on EG. Health expenditures stimulate long-run economic growth but have no short-term effect. Toda–Yamamoto causality checks assert a feedback association between institutional quality and EG, unidirectional causation from health expenditure to EG rate, and education outlay to EG rate, validating ARDL estimations.

Tran et al. ([2021](#Tran)) analyzed the effect of institutional quality on economic growth across 48 Asian nations during 2005-2018. Utilizing quantile regression methods with panel data, the research underscored the significance of institutional quality as a key factor in economic development. Interestingly, the findings showed that in lower-income Asian nations, superior-quality institutions played a more effective role in promoting growth than in their higher-income counterparts. The study further uncovered a non-linear relationship between institutions and economic growth, highlighting an institutional threshold beyond which a reverse effect on growth is observed. Additionally, the research acknowledged the influence of inflation, labor force, trade openness, and infrastructure on the economic growth of Asian countries. Consequently, the study proposed policy implications for Asian nations, specifically Vietnam, aiming to enhance institutions for sustained economic growth. Utile et al. ([2021](#Utile)) apply yearly data from 2001 to 2019 to explore how institutional quality affected the growth of the Nigerian economy. In order to evaluate unit root issues, ADF unit root tests was performed, which revealed that all variables were either integrated of I (1) or I (0). The bounds test then confirmed that there is a long-term link between the research variables. The study, which used the ARDL model, showed that Institutional Quality has a considerable detrimental effect on economic growth. In the face of any disequilibrium, the negative and statistically significant error correction term predicted a gradual return of economic growth to the long-run equilibrium path. The study advocates enhancing the quality of the nation's institutions through a robust campaign against corruption, heightened accountability and freedom of expression, enhanced regulatory authority, and bolstered government effectiveness achieved through improved leadership selection processes.

# Data and Methodology

To measure the effect of foreign aid and institutional qualities on economic growth, various studies have used diverse proxies of institution quality but in recent study, we apply Kuncic (2014) dataset. This data set has been updated till 2020 by the author. Study has used economic growth as a dependent variable whereas, FDI, institutional quality and foreign aid have been used as independent variables. Various control variables are also used by this study. The data on GDP per Capita, FDI and other variables have been acquired from World Development Indicators (WDI). The analysis has been done for 49 developing countries. Study used two types of foreign assistance for econometric analysis named as total aid as proxy of total assistance and UNDP aid as proxy of project-based assistance. Afterwards the study has also used various types of institutional quality like economic, political and legal institutions along with overall institutional quality. Finally, various interactive terms of institutional quality with foreign aid have been used in the model. As per existing literature, the institutional quality, foreign aid, GDP per capita and FDI are assumed to be endogenous because causality may run in both directions. Keeping in view this issue, Generalize Method of Moments (GMM) technique has been used in the analysis. Under the possible issue of endogeneity, GMM perform better as compared to 2SLS and 3SLS.

The simple forms of the various specifications of the model used in the analysis are given below.

GDPPC = F (K, L, FDI, TIA, INF) ………………………... (1)

GDPPC = F (K, L, FDI, TIA, INF, IQ) ………………….… (2)

GDPPC = F (K, L, FDI, DIA, INF, IQ) ....…………………. (3)

GDPPC = F (K, L, FDI, TIA, INF, IQ\*TIA) …….…………. (4)

GDPPC = F (K, L, FDI, TIA, INF, IQ\*DIA) …….…………. (5)

Where, GDPPC= GDP per capita, K= Gross fixed capital formation, L= Labor force, FDI= Foreign direct investment, TIA= Total aid, INF= Inflation, IQ= Institutional quality, DIA= Project aid.

# Empirical Results

This section reports the empirical results of current study. The Table 1 explained the summary statistics of the variables incorporated in the study, which explained evidence relating to mean value, minimum value, maximum value and standard deviation for the given variables.

**Table 1: Summary of Statistics of All Variables**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Variable** | **Obs** | **Mean** | **Std. Dev.** | **Min** | **Max** |
| IQ | 1,519 | 0.486851 | 0.10775 | 0.134634 | 0.781303 |
| EIQ | 1,519 | 0.496794 | 0.137679 | 0.09818 | 0.834952 |
| PIQ | 1,519 | 4.73E-01 | 0.124619 | 0.0425 | 0.783442 |
| LIQ | 1,519 | 0.490916 | 0.115416 | 0.135874 | 0.959766 |
| FDI | 1,519 | 2.850792 | 3.674731 | -6.89761 | 39.45622 |
| LGDPPC | 1,519 | 3.208431 | 0.501538 | 1.985513 | 4.279349 |
| TIA | 1,519 | 8.643479 | 0.572225 | 5.778151 | 12.04139 |
| DIA | 1,519 | 6.308819 | 0.592016 | 4.01258 | 7.60021 |
| L | 1,519 | 6.972629 | 0.677891 | 5.43767 | 8.89249 |
| K | 1,519 | 6.074527 | 25.24449 | -164.509 | 507.9529 |
| INF | 1,519 | 20.28078 | 220.521 | -8.48425 | 7481.664 |

Table 2 Reported results show in equation1, the presence of positive and significance relationship between FDI and economic development of developing nations. Tabulated value postulates that 1 unit change in FDI resulted 0.009 percent upsurge the economy growth. Further results also found positive and insignificant impact of international assistance and economic growth of developing stated. Econometric results also confirmed presence the positive and significance impact of labor and capital on economic growth. In equation 2 and 3 shows that institutional quality, total aid, FDI have significant impact. Similarly, in equation 4 and 5 also same impact of interacted terms of institutional quality with total Aid.

**Table 2: Effect of International Assistance and Institutional Quality on Economic Growth of Developing Economies: Panel GMM Approach**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Variables | IA without IQ | IA Presence of IQ | | IA Interactions with IQ | |
| Lgdppc(-1) | 0.9546\*\*\*  (185.16) | 0.9356\*\*\*  (157.18) | 0.9483\*\*\*  (194.98) | 0.9425\*\*\*  (121.61) | 0.9527\*\*\*  (254.7) |
| IQ | - | 0.3108\*\*\*  (13.37) | 0.3420\*\*\*  (13.81) | - | - |
| IQ\*DIA | - | - | - | - | 0.0405\*\*\*  (13.49) |
| DIA | - | - | 0.0166\*\*\*  (6.97) | - | - |
| FDI | 0.0097\*\*\*  (4.19) | 0.0013\*\*\*  (7.82) | 0.0013\*\*\*  (11.61) | 0.0017  (1.03) | 0.0015  (0.74) |
| IQ\*TIA | - | - | - | 0.0285\*\*\*  (8.49) | - |
| TIA | 0.0031  (1.18) | 0.0051\*\*  (2.1) | - | - | - |
| L | 0.0854\*\*\*  (8.23) | 0.0973\*\*\*  (10.97) | 0.0916\*\*\*  (6.68) | 0.0870\*\*\*  (5.38) | 0.0917\*\*\*  (7.73) |
| K | 0.0041\*\*\*  (11.66) | 0.0036\*\*\*  (9.16) | 0.0035\*\*\*  (13.11) | 0.0036\*\*\*  (10.8) | 0.004\*\*\*  (11.53) |
| INF | -0.0015\*\*\*  (-5.62) | -0.005\*\*\*  (-6.08)) | -0.003\*\*\*  (3.54) | -0.001\*\*\*  (-5.98) | -0.007\*\*\*  (-8.36) |
| Constant | -0.4669\*\*\*  (-6.39) | -0.656\*\*\*  (11.63) | -0.735\*\*\*  (-8.15) | -0.527\*\*\*  (-5.66) | -0.596\*\*\*  (-8.36) |
| Countries | 49 | 49 | 49 | 49 | 49 |
| Observations | 1465 | 1465 | 1434 | 1434 | 1434 |
| No. of  Instruments | 470 | 470 | 470 | 470 | 470 |
| Sargan  (P-value) | 0.99 | 0.98 | 0.99 | 0.99 | 0.98 |
| AR1  (P-value) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| AR2  (P-value) | 0.35 | 0.49 | 0.26 | 0.61 | 0.19 |

Note: \*\*\*, \*\*, \* denote significance at 0.01, 0.05 and 0.10 level respectively and Z values are in parenthesis.

In the table 3, study used economic institutions and found their impact on economic growth of developing states. Reported results in table below communicate the association of economic institutional quality, FDI and international assistance with economic growth of developing states combined with some control variables like labor, capital and inflation. Described outcomes show that institutional quality not only directly associated with economic growth, it also proves helpful to fasten the impact of foreign aid on economic growth. Tabulated value also reveals that total institutional quality become positive and significant when economic institutions augmented in the model. Table also show that coefficient value also improves when we see the joint impact of total aid with economic institutional quality. The coefficient vale of joint effect of economic institution with foreign aid is 0.0232 which is positive and significant which was insignificant previously in the absence of institutions. The P value of Sargan reported in the table is 1 which show that there is no identification problem in the said model. “P” value of AR1 shows the existence of autocorrelation problem at first step which is insignificant at AR2. So, there is no problem of autocorrelation in the model.

**Table 3: Effect of International Assistance and Economic Institutional Quality on Economic Growth of Developing Economies: Panel GMM Approach**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variables | IA Presence of EIQ | | IA Interactions with EIQ | |
| Lgdppc(-1) | 0.9432\*\*\*  (221.96) | 0.9560\*\*\*  (139.97) | 0.9441\*\*\*  (111.66) | 0.9591\*\*\*  (211.61) |
| EIQ | 0.1231\*\*\*  (7.47) | 0.1359\*\*\*  (9.24) | - | - |
| EIQ\*DIA | - | - | - | 0.0232\*\*\*  (14.29) |
| DIA | - | 0.0105\*\*\*  (3.07) | - | - |
| FDI | 0.0057\*\*\*  (2.88) | 0.0036\*  (1.91) | 0.0029  (1.03) | 0.0024  (1.14) |
| EIQ\*TIA | - | - | 0.01512\*\*\*  (7.84) | - |
| TIA | 0.0060\*\*\*  (2.67) | - | - | - |
| L | 0.0762\*\*\*  (6.08) | 0.0750\*\*\*  (3.08) | 0.0879\*\*\*  (6.19) | 0.0648\*\*\*  (4.66) |
| K | 0.0037\*\*\*  (8.75) | 0.0038\*\*\*  (9.97) | 0.0034\*\*\*  (12.06) | 0.0039\*\*\*  (9.82) |
| INF | -0.001\*\*\*  (-5.14) | -0.006\*\*\*  (6.07) | -0.001\*\*\*  (-7.34) | -0.006\*\*\*  (-4.98) |
| Constant | -0.450\*\*\*  (-5.99) | -0.504\*\*\*  (-3.14) | -0.484\*\*\*  (-6.22) | -0.381\*\*\*  (-4.75) |
| Countries | 49 | 49 | 49 | 49 |
| Observations | 1465 | 1434 | 1434 | 1434 |
| No. of  Instruments | 471 | 471 | 471 | 471 |
| Sargan  (P-value) | 0.99 | 0.99 | 0.99 | 0.99 |
| AR1  (P-value) | 0.00 | 0.00 | 0.00 | 0.00 |
| AR2  (P-value) | 0.56 | 0.32 | 0.66 | 0.34 |

Note: \*\*\*, \*\*, \* denote significance at 0.01, 0.05 and 0.10 level respectively and Z values are in parenthesis.

Reported results in table 4. found the impact of political institutional quality, FDI and international assistance with economic growth of developing states combined with some control variables like labor, capital and inflation. Reported results postulates that in the presence of political institutions, insignificant impact of total aid become significant which was insignificant before in the absence of institutions. Reported results also found that the effect of project-based assistance also become greater when interaction between project-based aid and political institutional quality has been applied. Defined results show the presence of positive and significance relationship of labor, capital, political institution and FDI with economic growth of developing nations.

**Table 4: Effect of International Assistance and Political Institutional Quality on Economic Growth of Developing Economies: Panel GMM Approach**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variables | IA Presence of PIQ | | IA Interactions with PIQ | |
| Lgdppc (-1) | 0.9271\*\*\*  (106.42) | 0.9385\*\*\*  (184.38) | 0.9371\*\*\*  (101.26) | 0.9460\*\*\*  (120.56) |
| PIQ | 0.2731\*\*\*  (15.05) | 0.2840\*\*\*  (11.0) | - | - |
| PIQ\*DIA | - | - | - | 0.0411\*\*\*  (16.02) |
| DIA | - | 0.01195\*\*\*  (4.03) | - | - |
| FDI | 0.0058\*\*\*  (2.69) | 0.0061\*\*\*  (2.43) | 0.0045\*\*\*  (2.43) | 0.0053\*\*\*  (2.73) |
| PIQ\*TIA | - | - | 0.02696\*\*\*  (17.46) | - |
| TIA | 0.0040  (1.21) | - | - | - |
| L | 0.0982\*\*\*  (4.93) | 0.1025\*\*\*  (5.2) | 0.09460\*\*\*  (4.42) | 0.0947\*\*\*  (4.19) |
| K | 0.0037\*\*\*  (10.66) | 0.0036\*\*\*  (7.26) | 0.0035\*\*\*  (8.34) | 0.0036\*\*\*  (11.96) |
| INF | -0.001\*\*\*  (-5.38) | -0.008\*\*\*  (3.47) | -0.0013\*\*\*  (-5.63) | -0.0093\*\*\*  (-4.44) |
| Constant | -0.602\*\*\*  (-4.62) | -0.715\*\*\*  (-5.18) | -0.5525\*\*\*  (-4.3) | -0.596\*\*\*  (-4.23) |
| Countries | 49 | 49 | 49 | 49 |
| Observations | 1465 | 1465 | 1465 | 1465 |
| No. of  Instruments | 471 | 471 | 471 | 471 |
| Sargan  (P-value) | 0.99 | 0.98 | 0.98 | 0.98 |
| AR1  (P-value) | 0.00 | 0.00 | 0.00 | 0.00 |
| AR2  (P-value) | 0.21 | 0.10 | 0.28 | 0.79 |

Note: \*\*\*, \*\*, \* denote significance at 0.01, 0.05 and 0.10 level respectively and Z values are in parenthesis.

Table 5 show the joint impact of legal institutional quality and project based assistance with economic growth of developing nations. Econometric model also used FDI, capital, labor force and inflation as independent variables to see their impact on economic growth of developing states. Regression results of panel GMM method postulates that all independent variables play positive and significant role to determine the economic development of 49 developing nations under our study. Reported results in the table 5 reveals two significances of presence of legal institutions on the economy. Firstly, its impact on economic growth may become positive and significant which was insignificant earlier in the absence of institutions. Secondly, the coefficient value 0.0053 also improve and become 0.0116 greater than earlier when interaction term has been used between total assistance and legal institutions. Study also examined that the joint impact of project based aid interaction with legal institutions on economic growth is 0.0132 which was 0.009 earlier without interaction term. The empirics show that the association between project-based aid and economic development become stronger when legal institutions jointly work with project based aid.

**Table 5: Effect of International Assistance and Legal Institutional Quality on Economic Growth of Developing Economies: Panel GMM Approach**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variables | IA Presence of LIQ | | IA Interactions with LIQ | |
| Lgdppc(-1) | 0.9488\*\*\*  (209.69) | 0.9582\*\*\*  (231.47) | 0.9598\*\*\*  (131.59) | 0.9606\*\*\*  (266.5) |
| LIQ | 0.1025\*\*\*  (7.38) | 0.0886\*\*\*  (5.05) | - | - |
| LIQ\*DIA | - | - | - | 0.0132\*\*\*  (6.86) |
| DIA | - | 0.009334\*\*\*  (3.84) | - | - |
| FDI | 0.0088\*\*\*  (3.57) | 0.0098\*\*\*  (3.76) | 0.0047\*\*\*  (2.68) | 0.0082\*\*\*  (3.85) |
| LIQ\*TIA | - | - | 0.0116\*\*\*  (6.53) | - |
| TIA | 0.0053\*  (1.67) | - | - | - |
| L | 0.0974\*\*\*  (10.89) | 0.1120\*\*\*  (8.42) | 0.0965\*\*\*  (5.36) | 0.100\*\*\*  (9.33) |
| K | 0.0044\*\*\*  (8.82) | 0.0043\*\*\*  (9.47) | 0.0038\*\*\*  (11.18) | 0.0040\*\*\*  (10.12) |
| INF | -0.0017\*\*\*  (-6.05) | -0.0010\*\*\*  (4.07) | -0.0016\*\*\*  (-6.64) | -0.0092\*\*\*  (-5.22) |
| Constant | -0.598\*\*\*  (-8.53) | -0.7384\*\*\*  (-7.44) | -0.5781\*\*\*  (-5.45) | -0.600\*\*\*  (-8.63) |
| Countries | 49 | 49 | 49 | 49 |
| Observations | 1465 | 1465 | 1465 | 1465 |
| No. of  Instruments | 471 | 470 | 471 | 471 |
| Sargan  (P-value) | 0.98 | 0.98 | 0.98 | 0.98 |
| AR1  (P-value) | 0.00 | 0.00 | 0.00 | 0.00 |
| AR2  (P-value) | 0.54 | 0.24 | 0.63 | 0.31 |

Note: \*\*\*, \*\*, \* denote significance at 0.01, 0.05 and 0.10 level respectively and Z values are in parenthesis.

# Conclusion and Policy Suggestions

Institutions are pivotal drivers of international assistance in developing countries, influencing the mobilization, allocation, and utilization of foreign resources. Addressing institutional challenges and implementing reforms to enhance institutional effectiveness will lead to more efficient use of international assistance and contribute to sustainable development in developing nations. The study used economic growth as dependent variable where as foreign aid, institutional quality, foreign direct investment as independent variables. Study also used labor force, capital and inflation as set of control variables. This study firstly used institutional quality as aggregate level than segregate forms like economic institution, political institutions and legal institution. When study used institutional quality as aggregate level, econometric results reveals the positive and significant impact of institutional quality on economic growth of developing nations. Econometric results show that institutional quality not only itself boost the economic development but it also proves helpful for international assistance to play positive and significant role to determine the economic growth of developing nations which was insignificant before. Foreign direct investment also plays positive and significant impact on economic growth. Same model has been applied with a minor change later on. The study used segregate forms of institutional quality instead of aggregate form. Econometric results reveals that all types of institutions e.g. economic, political and legal institutions play significant and positive role to determine the economic development. Results of panel GMM show that the impact of political institution is more than economic and legal institution to determine the economic development of developing states. Study further apply UNDP assistance as proxy of project based assistance and use the same above mentioned model. Econometric results of this proxy are almost same. A minor change in the coefficient of foreign assistance show that the impact of project based is more significant as compare to low impact of total assistance. Further research and collaboration between policymakers, academics, and practitioners are essential to achieve these goals and maximize the positive impact of foreign resource dependency on development.

To enhance the role of institutions in managing foreign resource dependency, policy recommendations include improving governance, strengthening legal frameworks, promoting transparency and accountability, and fostering political stability. Additionally, enhancing institutional capacity and building human capital are vital for effectively utilizing foreign assistance for sustainable development.

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