The Effect of Foreign Aid on Economic Development in Developing Countries

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PLSC 421
April 30, 2024

I. Introduction

The primary purpose of this paper is to investigate if foreign aid has a statistically significant, positive economic development in developing countries. The significance of this is to see if assistance is genuinely beneficial in the long-term economic development of a country; this paper argues that foreign aid does not significantly impact economic growth, as per prior research and the data analyzed. The research shows that foreign aid does not influence economic development statistically significantly. This paper will analyze relevant literature, review the leading theory and hypothesis, and analyze the data.

II. Literature Review

The first article reviewed is about the impact of foreign (health aid) on human development. The article suggests that health aid could be more practical in improving human development. The data analyzed shows that health aid does not significantly enhance human welfare. The paper suggests that health aid should not be used as a policy objective for increasing human welfare as it is not more effective than general aid in improving human development indicators or economic development.

The second article reviewed focuses on the effects of official development assistance (ODA) in Tanzania. This study analyzed the impact of ODS on economic growth and poverty reduction. The study showed that ODA significantly contributed to GDP growth but had a limited effect on poverty reduction. It found that other variables, such as FDIs and a stable political and economic environment, played a crucial role in Tanzania’s economic development. Even though ODA positively impacted Tanzania's GDP, the paper suggests that Tanzania should seek other methods to increase economic growth and reduce poverty due to reductions in aid.

The third article reviewed was a case study on Pakistan and foreign aid's role in promoting economic growth in Pakistan. The study suggests that the benefits of foreign aid may be temporary. The study results show that despite heavy reliance on foreign assistance and borrowings to finance economic development, aid in Pakistan has yet to be equitably dispersed, leading to a dependency on external resources.

III. Theory and Hypothesis

All the reviewed papers showed that foreign aid has either no or negative impact on development. The theory is that aid effectiveness depends on corruption, governance quality, policy implementation, and distribution mechanisms. It is also dependent on the presence of conducive factors such as macroeconomic policies and foreign direct investment. Since developing countries tend to have poor policy implementation, low governance policies, and high levels of corruption, foreign aid is ineffective, as it is not distributed and used appropriately. Since foreign aid is not a large part of a country's GDP, it might have a positive but not necessarily statistically significant impact on economic development.

IV. Data Analysis

The data was obtained from the World Bank Data Base, specifically the World Development Indicators database. The variables that were used were the country name, year, central government debt, control of corruption, ease of doing business score, educational attainment at least completed lower secondary, GDP per capita growth, general government consumption expenditure, gini index, infant mortality rate, net official development assistance and aid, political stability and absence of violence, population growth, and poverty gap. The dependent variables were GDP per capita growth, infant mortality rate, and poverty gap. The independent variable is the foreign aid, and the rest of the variables were control variables. The

data had high colinearity, so a fixed effects model could not be used. Instead, three different multivariate regression models were used.

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Residuals:
    Min      1Q  Median      3Q     Max
-3.5972 -0.8642  0.2265  1.2066  3.0235

Coefficients:
                                                                                  Estimate Std. Error t value Pr(>|t|)
(Intercept)                                                                      1.143e+01  5.101e+00   2.240  0.03197 *
`Net official development assistance and official aid received (current US$)`    2.530e-10  6.339e-10   0.399  0.69242
`Central government debt, total (% of GDP)`                                      2.338e-02  2.044e-02   1.144  0.26095
`Control of Corruption: Estimate`                                                1.211e+00  6.939e-01   1.745  0.09023 .
`Ease of doing business score (0 = lowest performance to 100 = best performance)` 1.516e-02  6.793e-02   0.223  0.82474
`Educational attainment, at least completed lower secondary, population 25+, total (%) (cumulative)` -2.050e-02  2.044e-02  -1.003  0.32310
`General government final consumption expenditure (current US$)`                -1.964e-12  3.307e-12  -0.594  0.55663
`Gini index`                                                                    -2.573e-01  6.331e-02  -4.065  0.00028 ***
`Political Stability and Absence of Violence/Terrorism: Estimate`               -1.861e+00  1.052e+00  -1.769  0.08610 .
`Population growth (annual %)`                                                   1.124e-01  4.192e-01   0.268  0.79025
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Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 1.743 on 33 degrees of freedom
  (4377 observations deleted due to missingness)
Multiple R-squared:  0.5654,    Adjusted R-squared:  0.4468
F-statistic: 4.769 on 9 and 33 DF,  p-value: 0.0004156
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The first model used the GDP per capita growth rate as the dependent variable. The results showed that higher income inequality (Gini Index) is correlated with lower GDP growth with a coefficient of -0.2573. Better control of corruption and political stability also correlates with a higher GDP growth rate. However, foreign aid does not have a statistically significant impact on the GDP.

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Residuals:
    Min      1Q  Median      3Q     Max
-9.7332 -1.3770  0.2303  2.1006  7.6114

Coefficients:
                                                                                  Estimate Std. Error t value Pr(>|t|)
(Intercept)                                                                      1.166e+02  1.156e+01  10.091 1.29e-11 ***
`Net official development assistance and official aid received (current US$)`   -6.601e-10  1.436e-09  -0.460 0.648834
`Central government debt, total (% of GDP)`                                      4.386e-02  4.632e-02   0.947 0.350560
`Control of Corruption: Estimate`                                                8.328e+00  1.572e+00   5.297 7.69e-06 ***
`Ease of doing business score (0 = lowest performance to 100 = best performance)` -1.025e+00  1.539e-01  -6.659 1.41e-07 ***
`Educational attainment, at least completed lower secondary, population 25+, total (%) (cumulative)` -2.005e-02  4.631e-02  -0.433 0.667861
`General government final consumption expenditure (current US$)`                -6.275e-12  7.492e-12  -0.838 0.408332
`Gini index`                                                                    -9.362e-01  1.434e-01  -6.527 2.07e-07 ***
`Political Stability and Absence of Violence/Terrorism: Estimate`               -1.305e+01  2.384e+00  -5.474 4.56e-06 ***
`Population growth (annual %)`                                                   3.781e+00  9.498e-01   3.981 0.000355 ***
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Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 3.949 on 33 degrees of freedom
  (4377 observations deleted due to missingness)
Multiple R-squared:  0.8326,    Adjusted R-squared:  0.787
F-statistic: 18.24 on 9 and 33 DF,  p-value: 2.081e-10
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The second model used the infant mortality rate as the dependent variable. The model indicates that educational attainment and income inequality have statistically significant

coefficients. Overall, higher educational attainment is associated with lower infant mortality rates, while higher income inequality is linked with higher infant mortality rates. This model shows a strong negative correlation between aid and infant mortality rate. However, it is not statistically significant.

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Residuals:
    Min      1Q  Median      3Q     Max
-1.4587 -0.2927  0.0212  0.2981  1.8855

Coefficients:
                                                                                                  Estimate Std. Error t value Pr(>|t|)
(Intercept)                                                                                       1.261e+01  1.916e+00   6.578 1.78e-07 ***
`Net official development assistance and official aid received (current US$)`                    -3.106e-10  2.381e-10  -1.304  0.20109
`Central government debt, total (% of GDP)`                                                       1.144e-02  7.680e-03   1.490  0.14567
`Control of Corruption: Estimate`                                                                 1.616e+00  2.607e-01   6.198 5.39e-07 ***
`Ease of doing business score (0 = lowest performance to 100 = best performance)`                -1.767e-01  2.552e-02  -6.923 6.55e-08 ***
`Educational attainment, at least completed lower secondary, population 25+, total (%) (cumulative)`  2.681e-02  7.677e-03   3.492  0.00139 **
`General government final consumption expenditure (current US$)`                                 -3.478e-12  1.242e-12  -2.801  0.00846 **
`Gini index`                                                                                     -6.021e-02  2.378e-02  -2.532  0.01629 *
`Political Stability and Absence of Violence/Terrorism: Estimate`                                -3.023e+00  3.951e-01  -7.650 8.32e-09 ***
`Population growth (annual %)`                                                                    7.513e-01  1.575e-01   4.772 3.61e-05 ***
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Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.6547 on 33 degrees of freedom
  (4377 observations deleted due to missingness)
Multiple R-squared:  0.8307,    Adjusted R-squared:  0.7845
F-statistic: 17.99 on 9 and 33 DF,  p-value: 2.492e-10
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The third model uses the poverty gap at $2.15 a day as the dependent variable. The results show that ease of doing business, educational attainment, government expenditure, income inequality, political stability, and population growth have statistically significant coefficients. The critical point of interest is that the coefficient of ease of doing business score is negative, meaning that better business environments are associated with lower poverty gaps.

Model 1 has an R^2 of 0.5654, model 2 has an R^2 of 0.8326, and model 3 has an R^2 of 0.8307. Overall, this shows that most of the models are generally robust. However, models 2 and 3 have the highest explanatory powers. The data analysis concludes that foreign aid does not significantly impact economic development. As per the predictions, factors such as corruption and education impact indicators of economic development. The data shows that foreign aid has a neutral and potentially negative influence on the indicators of financial assistance.

V. Conclusion

In conclusion, this paper aims to investigate the effects of foreign aid on economic development in developing countries. The results from the research concluded that foreign aid did not have a significant impact on economic development in developing countries. Development was measured through 3 different variables: GDP growth, infant mortality rate, and the poverty rate. The main limitation of the research was that the data had multicollinearity; this means that a fixed effects regression could not be used to interpret the data. As a result, the analysis does not account for the variation in the data across time. The data also needed a lot of observations. Overall, if this research were conducted again, a better dataset would have to be used, and some variables would have to be composited to avoid multicollinearity.

Works Cited

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