

Article

The Effectiveness of Official Development Assistance on Economic Stability of State: Evidence from Least Developed Countries.

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Abstract

A series of studies has found that official development assistance (ODA) may be “effective,” “ineffective,” or “even harmful” for the economic growth of a nation and, consequently, the impact of ODA depends on the stability of the state. However, queries regarding the the effectiveness of aid in maintaining the stability of recipient economies have not been examined yet. This study mainly intends to investigate the impacts of ODA on the economic stability of the state taking proxies such as inflation and government effectiveness for 40 least developed countries classified by the United Nations. The analysis is carried out using 13 years of unbalanced annual panel data for the period of 2005-2017 and employs several regressions using ordinary least squares, fixed effects, and the generalized moment method (GMM). Moreover, the conditional effect of ODA on country policy and institutional assessment (CPIA) is also evaluated. In all specifications, the coefficients of ODA as a main independent variable of interest have a positive and significant effect on inflation and a negative and significant effect on government effectiveness. Moreover, the result of the interaction term between ODA and policy variable reveals that ODA, with a sound policy and institutional environment, has a higher likelihood of controlling inflation and improving government effectiveness.

Keywords: Official Development Assistance, Economic stability, Inflation, Government effectiveness, Country policy and institutional environment.

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1. Introduction

The instability caused by war and poverty should be addressed under the processes of globalization in the economy. Official development assistance (ODA) plays an especially important role in the development process of many developing countries that are unable to generate enough domestic savings to pursue economic growth; historically, many developing countries have sought financing from other countries (Andersen et al., 2020). A series of studies has found that aid may be “effective,” “ineffective,” or “even harmful” for the nation; consequently, the effect of aid reflects on the stability of the state (Todaro & Smith, 2015). Primarily, motivations for aid have included improving the situation of fragility and improving the socio-economic condition of countries. However, foreign aid has been an instrument of foreign policy, serving to promote political and diplomatic relations with developing countries, and it has enhanced political and economic stability within countries.

Least developed countries (LDCs) have suffered from social and political instability, unstable economic growth, and the poverty trap (United Nations, 2019). Although LDCs have received significant amounts of foreign aid for many decades, their situation is not as improved as expected. To date, most prior studies seem to lack discussions on the effects of official development assistance on the stability of the state. Several factors should be considered as affecting stability. A considerable amount of literature defines stability by correlating it with the degree of democracy in a country. Some articles describe stability as a composite measure of social, political, and economic effectiveness as well as the legitimacy of the state. One of the greatest difficulties in specifying relationship between foreign aid and stability is a definition of stability. An economy with constant output growth and low inflation is likely to be regarded as stable. Likewise, an economy plagued by frequent boom-bust cycles with high inflation is likely to be considered as unstable. Furthermore, Deborah and Stephen (2004) explain that government effectiveness is a major problem for the economic stability of the state, especially in the African context. Over two decades ago, the World Bank argues that underlying the litany of the African development problem is a crisis of governance. Studies conducted by the Asian Development Bank and the International Monetary Fund (IMF) reveal that effective government with benchmark of good governance such as transparency, accountability, rule of law, and consensus-oriented governance, can only drive the economy toward macroeconomic stability. The voluminous literature about the effects of aid on a recipient economy have mainly studied the relation between aid and economic growth, real exchange rates, exports, and imports; overall, it focuses on fiscal, monetary, and trade policies. These studies have had

different outcomes, according to methodology, area, time span, and the nature of donors.

This study explores the effects of official development assistance on the economic stability of a nation, using inflation and government effectiveness as proxies. The choice of proxies is based on Parkin (1975), Naveed (2016), Dindo (2018), Veiga and Aisen (2006), and Stephen and Deborah (2004). Burnside and Dollar (1998) and Bhavan (2013) show that the estimated coefficient of the interaction term of aid with the policy index is statistically significant and positive. Thus, the sound policy of the recipient's economy plays a crucial role in the effectiveness of ODA. To obtain the objective of this study, the following questions are raised.

- (i) Does official development assistance have a significant impact on the economic stability of state ?
- (ii) Does policy help reduce aid-induced economic instability of the state ?

The structure of this paper is as follows. Chapter 2 reviews the literature, followed by methodology in Chapter 3. Chapter 4 discusses the estimated results. Chapter 5 is the conclusion.

2. LITERATURE REVIEW

Voluminous literature on the effects of aid on a recipient economy mainly focuses on the relation between aid and economic growth, real exchange rates, exports, imports; overall, it focuses on fiscal, monetary, and trade policies. Major works have been conducted by, among others, Rajan and Subramanian (2008), Ekanayake and Chatrna, (2010), and Thian and Evan (2018). For instance, Easterly (2003) finds that foreign aid does not have any significant effect on growth, even if good policies are implemented in recipient countries. Similarly, Thian and Evan (2018) investigate the impact of aid on 95 developing countries, using panel data with a non-linearity assumption, and find a U-shaped relationship, that is, initially foreign aid has a negative impact on the countries' growth, and as time goes on, it positively contributes to economic growth. By contrast, Ekanayake and Chatrna (2010) investigate the effect of aid on economic growth and find three cases of negative effects out of four categorized periods.

Regarding the impact on exchange rate, some results show depreciation of the real exchange rate, whereas others show appreciation. For instance, Uddin and Murshed (2017) examine the impact of international transfers on Dutch diseases using South Asian countries' data from 1975-2013, and find that aid is not an important factor to explain the real effective exchange rate. As for the ODA impacts on institutional quality and poverty eradication, Chong et al. (2009) examine the effect of foreign aid on inequality and poverty during the period of 1972-2002. They approached the question using two econometric

techniques: first, with a cross-sectional analysis, and second, with a panel data method to tackle potential endogeneity and persistence issues. In both the cross-sectional approach and panel data analysis, they consecutively regress inequality and various measures of poverty on foreign aid, foreign aid squared, corruption, the interactive term between foreign aid and corruption, schooling, the share of agriculture and industry in the total output, and income per-capita. Besides the previous studies, as mentioned in the previous chapter, this study focuses on the impacts of aid on economic stability in the following sections.

2.1 Aid and Inflation

Although a few studies have investigated relationships between official development assistance and inflation, they have not so in the same orientation.

Ikpesu (2020) examines the effect of foreign aid on inflation using the panel vector error correction mechanism and finds positive co-integration between foreign aid and inflation in the Sub-Saharan African region. Donmez (2005) uses the generalized moment method (GMM) to investigate the effect of aid on inflation, using a data sample of 60 countries over the period 1975–2004, and finds a significant and positive effect on inflation. Moreover, Hokmeng and Moolio (2015) use a co-integration approach and reveal that the inflow of aid may cause inflation in the short run, as well as in the long run. In a single economy case, Bhavan (2013) investigate the effectiveness of aid in Sri-Lanka between 1980 and 2008. The results reveal that inflation is positively linked with the inflow of aid. Awan and Moeen-ud-Din (2015) show that the inflow of aid has a negative relationship with inflation. Their study is based on the economy of Pakistan during 1980–2012, using ordinary least square (OLS). Chance et al. (2013) employ a dynamic stochastic general equilibrium (DSGE) model. The result shows that there is a low impact of positive aid shock on inflation in Malawi. From a theoretical perspective, aid is supposed to reduce the foreign exchange gap, supply foreign capital investment, with time, put the recipient economy on the path toward sustainable growth. Empirical studies also find aid to be inflationary in some economies and deflationary in others.

2.2 Aid and Government Effectiveness

How aid affects the effectiveness of governance is subject to debate. Based on implementation policies of aid, there are two views of the impact on governance. On the positive side, aid channeled to governments with clear development agendas can be used to enhance the quality of civil service, strengthen policy and planning capacity, and establish strong institutions (e.g., South Korea and Taiwan). Based on the assumption of a positive relation between aid and growth, high growth generates high revenue and can be used to fund improvement of government quality. On the negative side, aid may deteriorate the

efficiency of regular government activities in the long run. As many donors prioritize their ODA for less developed regular governments with different conditions, their engagement sometimes imposes a burden on government and lowers the efficiency of economic activities. Furthermore, some articles focus on a negative aid-growth relationship, in which case negative growth hampers revenue and government size. In the academic arena, there have been limited studies conducted. Stephen and Deborah (2004) examine the effectiveness of aid in Sub-Saharan Africa using two stage least square (2SLS) panel regression and find a robust statistical relationship between high aid levels in Africa and deterioration in governance. Similarly, Franco et al. (1998) investigate the relationship between aid and the public sector in Pakistan and find a slightly positive impact on public investment, as well as a negative impact on tax effort. Dijkstra (2018) evaluates the unintended effect of aid, using different dependent variables with qualitative and quantitative approaches, and point out the problem of endogeneity with multifaceted relation. Djankov et al. (2008) investigate the effect of aid on democratic governance using data from 108 countries data for the period 1960–1999, and they find that aid has a negative effect on it. Moreover, Asongu and Nwachukwu (2014) examine the effect of ODA on institutions and find that development assistance deteriorates economic (regulation quality and government effectiveness) and institutional (corruption-control and rule of law) governance, but has an insignificant effect on political (political stability, voice and accountability) governance.

3. METHODOLOGY

3.1 Model

As discussed above, inflation (INF) and government effectiveness (GEFFECT) are treated as the main proxies of economic stability. In addition, conditional effects are discussed to examine the second question. The model specification is based on Donmez (2005) and Burnside and Dollar (1998).

$$INF_{it} = \beta_0 + \beta_1 \frac{Aid_{it}}{GDP_{it}} + \beta_2 Trade_{it} + \beta_3 PCGDP_{it} + \beta_4 Unemp_{it} + \beta_5 (CPIA)_{it} + \epsilon_{it} \quad (1)$$

Where i represents the country and t represents the year.

$\frac{Aid_{it}}{GDP_{it}}$: the ratio of official development assistance to GDP

$Trade_{it}$: exports.

$PCGDP_{it}$: gross domestic product per capita growth rate

$CPIA$: country policy and institutional assessment score from the World Bank, which is calculated based on monetary, exchange rate, and aggregate demand policy

framework

$Unemp_{it}$: unemployment rate

ϵ_{it} : disturbance term.

Equation (2) considers the conditional effect of aid on good policy of the receiving country.

$$\begin{aligned} INF_{it} = & \beta_0 + \beta_1 \frac{Aid_{it}}{GDP_{it}} + \beta_2 Trade_{it} + \beta_3 PCGDP_{it} + \beta_4 Unemp_{it} \\ & + \beta_5 (CPIA)_{it} + \beta_6 Aid_{it} * CPIA_{it} + \epsilon_{it} \end{aligned} \quad (2)$$

Where $Aid_{it} * CPIA_{it}$ is the interaction term between the ratio of aid to GDP and country policy and institutional assessment score.

To address the issue of effect of ODA on government effectiveness (GEFFECT), the following specifications are examined.

$$\begin{aligned} GEFFECT_{it} = & \beta_0 + \beta_1 \frac{Aid_{it}}{GDP_{it}} + \beta_2 Trade_{it} + \beta_3 PCGDP_{it} + \beta_4 Unemp_{it} \\ & + \beta_5 CPIA_{it} + \beta_6 INF_{it} + \epsilon_{it} \end{aligned} \quad (3)$$

The research question is also focused on the policy effect of aid on government effectiveness in the least developed countries. The empirical model should have an interaction effect of aid and policy to government effectiveness. Consideration of the conditional effect of aid on sound policy in equation (3) leads to the following formulas:

$$\begin{aligned} GEFFECT_{it} = & \beta_0 + \beta_1 \frac{Aid_{it}}{GDP_{it}} + \beta_2 Trade_{it} + \beta_3 PCGDP_{it} + \beta_4 Unemp_{it} \\ & + \beta_5 CPIA_{it} + \beta_6 INF_{it} + \beta_7 \frac{Aid_{it}}{GDP_{it}} * CPIA_{it} + \epsilon_{it} \end{aligned} \quad (4)$$

In addition to OLS and fixed effect estimation, GMM specifications are used to overcome the endogeneity problem. For the GMM technique, this study uses single equation system GMM without endogenous regressors.

3.2 Data

The data covers the least developed countries classified by the United Nations (2019) over the period of 2005–2017. Some least developed countries are excluded from the sample because of a significant lack of data. Inflation is the percentage rate of increase in the consumer price index (CPI). As a governance indicator, a government effectiveness score is used. The worldwide governance indicators (WGI) are a research data set that summarizes the views on the quality of governance provided by many enterprises, citizens, and expert survey respondents in industrial and developing countries. The net amount of official development aid is collected from the World Bank Development Indicator (WDI).

Moreover, other variables, such as gross domestic product, inflation, trade, unemployment, and related controlling variables, are also collected from WDI. The policy variable, country policy and institutional assessment (CPIA) score, which is calculated based on monetary, exchange rate, and aggregate demand policy framework is also from WDI. CPIA ranges from 1 to 6, and the larger the number, the better. Table 1 describes the summary of statistics.

Table 1 Summary Statistics for Variables

Variable	Sample Size	Mean	Standard Deviation	Minimum Value	Maximum Value
Inflation	471	0.0710	0.6751	0.0897	0.5281
Ratio of aid to GDP	471	0.1097	0.0918	0.0017	0.7088
CPI	471	3.6231	0.5832	1.5	5
Trade openness	471	21.2629	1.3693	17.872	24.9948
GDP per capita growth	471	.02587	.05444	-.47591	.38709
Government effectiveness	471	-.09019	.04684	-.20785	.06326
Unemployment	471	.05551	.05431	.00285	.31921

Source: Authors' calculation based on WDI and WGI.

4. Estimated results

Section 4.1 examines the impacts of ODA on inflation, and Section 4.2 investigates the impacts of ODA on government effectiveness.

4.1 Findings on the impact of official development aid on inflation

Regression 1, 2, 3 and 4 in Table 2 are based on OLS. The coefficient of ODA in Regression 1 is positive and statistically significant at a 5% level. The result implies that dependence on ODA is harmful to the nation's stability. The inflationary effect of official development aid supports the research findings of Donmez (2005), Bhavan (2013) and Hokmeng and Moolio (2015), concluding that aid flows may cause inflation to rise, but the estimate result is not compatible with Elvis (1998), who finds that aid has a disinflationary impact in the context of Ghana. This result is also consistent with the results from a study by Ikpesu (2020), who performs the latest research conducted in Sub-Saharan Africa using panel vector auto regression (PVAR) approach. His result supports the argument that any additional amount of money in an economy may cause inflation in general.

From Regression 1, a 1% increase in the ratio of aid to GDP leads to a 0.18% inflationary effect in the least developed countries. Regression 1 includes control variables,

Table 2 Estimated results of effect of official development aid on inflation

Dependent variable: Inflation

Variable	OLS				Fixed effects	GMM		
	1	2	3	4	5	6	7	8
Aid/GDP	0.178*** (0.043)	1.105*** (0.170)	0.75** (0.33)	0.218*** (0.045)	1.22*** (0.344)	0.150*** (0.0472)	1.1004*** (0.3008)	0.209*** (0.051)
CPIA	-0.019** (0.006)	—	-0.003 (0.012)	-0.019** (0.006)	0.003 (0.011)	-0.021** (0.006)	—	0.021*** (0.006)
Trade	0.004* (0.004)	0.012*** (0.002)	0.003 (0.004)	0.004 (0.004)	-0.016* (0.006)	0.010*** (0.0020)	0.0120*** (0.0025)	0.010*** (0.0019)
PCGDP	0.03 (0.049)	-0.149** (0.055)	0.025 (0.05)	0.178** (0.076)	0.018* (0.049)	0.0425 (0.057)	-0.1488 (0.122)	0.250 (0.103)
Aid/GDP*CPIA	—	-0.269** (0.047)	-0.16* (0.092)	—	-0.29** (0.096)	—	-0.268*** (0.800)	—
Aid/GDP*PCGDP	—	—	—	-1.207 (0.467)	—	—	—	1.723*** (0.507)
Unemployment	0.105 (0.103)	—	0.108 (0.102)	0.090 (0.101)	0.16 (0.21)	0.086** (0.0423)	—	0.065 (0.0509)
Number of observations	471	471	471	471	471	471	471	471
R-square	0.09	0.1288	0.10	0.09	0.09	0.09	0.1288	0.11

-Score in brackets indicates standard error of corresponding coefficient.

*** means significant at 1%, ** means significant at 5%, * means statistically significant in 10%.

such as policy variable CPIA, trade openness, per-capita growth, and unemployment. Regression 2 examines the conditional effect of aid with sound policy on inflation. The result reveals that good policy and institutional environment are far likelihood to control inflation. This finding is consistent with that of Burnside and Dollar (1998). Regression 2 does not include policy variable CPIA but does the interaction term only. This may cause omitted variable bias, whereas Regression 3 with OLS and Regression 5 with fixed effects investigate CPIA and Aid/GDP independently and the interaction of both. Both regressions show that the interaction term is significant, with a negative sign. The fixed effects model considers omitted variable bias due to unobserved heterogeneity. The result of the fixed effect model is not significantly different from that of OLS, in terms of sign and significance level for the main variables of interest. In addition, Regression 4 examines the conditional effect of aid with per-capita growth. The result reveals that, with increasing GDP per capita growth, aid is likely to control inflation. However, the coefficient of the interaction term between aid and per-capita growth is not significant. Regarding the relationship between inflation and growth, Phillip and Ghosh (1998) assert that the inflation-growth relationship becomes more complicated. Obviously, growth-inflation regressions must include other plausible determinants of growth. Several issues then arise. First, the inflation-growth findings may not be robust once interacted variables are included in a regression analysis. The result of this regression is consistent with that of Phillips and Ghosh (1998).

The results of different specifications are shown in Table 2. Considering endogeneity of aid, a GMM estimator, which optimally exploits all linear moment restrictions that link to the assumption of no serial correlation, in an equation with individual effects, lagged dependent variables, and no strictly exogenous variables. The GMM approach is employed to address the issue of endogeneity. This study uses a single equation system GMM technique without endogenous regressors. Although the GMM approach mainly focuses on endogeneity issues, the coefficient of the interaction term is hard to interpret and it is difficult to separate the endogeneity problem of each individual variable. Regressions 6, 7, and 8 show the GMM estimated results. In Regression 6, the coefficient of aid to GDP is 0.150 with a significant positive effect. This result is also consistent with that of Donmez (2005), who uses the same GMM technique on this issue. The interaction term of aid with effective policy and per-capita GDP has deflationary effects, as shown in Regressions 7 and 8.

Table 2 shows the coefficients of OLS in Regressions 1, 2, and 4, and those of GMM in Regressions 6 and 7 are comparable. Thus, the results of the main variable of interest support our hypotheses. Donors are providing aid to those countries where instability occurs to improve economic stability in the least developed countries. On the other hand, some signs of the estimated coefficients for controlling variables are against prior expectations. The United Nations (2019) has stated that the evidence of some least developed countries is against established economic theory, because of their cultural and societal obstructions.

4.2 Findings on the impact of official development aid on government effectiveness

This section examines determinants of government effectiveness as another aspect of economic stability. Regression models are estimated with OLS and GMM. Regressions 9 and 10 in Table 3 show the OLS results. In Regression 9, a 1% increase in the ratio of aid to GDP leads to a 0.109% deterioration of government effectiveness. As Rajan and Subramanian (2008) stress that aid limits the capacity of governance by shrinking revenue capacity, the reason for the negative coefficient of aid may be the same as they indicate. The regression also includes control variables, such as policy, trade openness, GDP per capita growth, unemployment, and inflation. This result is also consistent with analyses conducted in the context of Nepal, by Sharma (2011) and Bhattarai (2009). Given that Burnside and Dollar (1998) state that aid is beneficial if the recipient government has good economic policies, Regression 10 is conducted with an indicator of policy environment for conditional effect as cross term $Aid/GDP * CPIA$. The result shows that those countries that have a good policy environment receive a positive impact on effectiveness of government. These findings are consistent with those of Burnside and Dollar (1998) and Charron (2010). As Charron (2010) says, total levels of ODA are associated with greater

levels of corruption, and if the quality of policy is better in the receiving country, government effectiveness would be improved significantly. Some previous studies have discussed the endogeneity issue of aid with institutional quality. In addition, Stephen and Deborah (2004) and Rajan and Subramanian (2008) mention that aid levels may be influenced by the quality of governance, rather than the other way around. GMM regression is said to avoid the endogeneity issue. Moreover, Stephen and Deborah (2004) stress that an endogenous effect can be captured by OLS coefficients, and the coefficients of OLS are larger than GMM. The results are not different from OLS, in terms of sign and significance of the coefficients.

Table 3 Estimated results of the effect of official development aid on government effectiveness
Dependent variable: Government Effectiveness

Variables Name	OLS		GMM		Fixed Effects
	9	10	11	12	13
Aid/GDP	-0.109*** (0.025)	-0.889** (0.127)	-0.103*** (0.023)	-0.8887*** (0.249)	0.068 (0.116)
CPIA	0.034*** (0.004)	—	0.034*** (0.004)	—	0.004 (0.0036)
Trade	-0.004** (0.002)	-0.0029 (0.002)	-0.004** (0.002)	-0.0029 (0.019)	0.0006 (0.002)
PCGDP	0.135** (0.043)	0.1491** (0.045)	0.136*** (0.037)	0.1491*** (0.042)	0.013 (0.016)
Aid/GDP*CPIA	—	0.224** (0.083)	—	0.225*** (0.044)	-0.022 (0.032)
Unemployment	-0.012 (0.040)	-0.022 (0.042)	-0.009 (0.042)	-0.0221 (0.045)	0.023 (0.072)
Inflation	0.035 (0.036)	—	—	—	—
Number of observations	458	458	458	458	458
R-square	0.218	0.14	0.216	0.23	0.12

-Score in bracket indicates standard error of corresponding coefficient.

***Significant at 1%, **statistically significant in 5%, *statistically significant in 10%.

Regression 11 does not include any interaction term between aid and policy, but Regression 12 does. Therefore, the coefficients in Regressions 9 and 11, as well as 10 and 12, are directly comparable, as shown in Table 3. In Regression 13 fixed effect approach is used. None of each coefficient of variables is statistically significant. The main variable of interest i.e. aid has a negative sign except in fixed effects. In addition, all negative coefficients of aid are statistically significant at the 1% level. This finding is consistent with previous findings by Djankov et al. (2008), Stephen and Deborah (2004) and Rajan and Subramanian (2008). Though the results on each estimation are the same, in terms of sign and signification, the issue of reverse causation has been addressed by using GMM. This

finding is not in line with previous findings by Asongu and Nwachukwu (2014) and Dijkstra (2018), who discuss insignificance effect, as well as multi dynamic and two-way effects of aid on effectiveness of governance.

To summarize these regression results, ODA alone does not work well for the prosperity of the countries. Most least developed countries are structurally vulnerable, facing post-conflict scenarios, undergoing external trade shocks, negotiating democratic issues, contending with highly populated areas, and so on. Importantly, the study described above utilizes diverse samples. Moreover, Edwards et al. (2014) mention that ODA creates dependency, fosters corruption, and prevents capitalization on opportunities provided by the global economy. The World Bank and the IMF are also under criticism for imposing conditions and increasing the price of commodities only. A significant amount of aid has been invested in sustainable development goals (SDG), but the outcome is not as expected (United Nations, 2019).

Moyo (2009), Niyonkuru (2016), and Rajan (2011) summarize the gap between the donors and recipients as follows:

- Donors and recipients think of the resources as their own (Ownership Issue).
- Donors sometimes work on their own development thinking (Parallel Design)
- Impose Caveats: Condition by multilateral agencies and vested interest by bilateral agencies (donors' perspective).
- Attempt to drive on their own style
- High cost to development process for developing nations.

Aid failure has resulted from international pressures in a globalized world and domestic weakness within least developed countries (United Nations, 2019). Okada et al. (2012), Moyo (2009), and Burnside and Dollar (1998) note the reasons that aid is not working as follows:

- Lack of developed institutions and infrastructure in recipient countries.
- Weakness of pillars of good governance, such as transparency, accountability, rule of law, and responsiveness.
- Lack of counterpart funds in recipient countries; most recipient countries are wholly dependent on foreign funds to fund national development projects.
- No harmonization between aid policy and national policy.
- Procurement laws of the recipient's country.
- Conditional memorandums of understanding for the release of aid.
- Corruption and weak management capacity.

5. CONCLUSIONS AND POLICY IMPLICATION

5.1 Summary of the Major Conclusion and Policy Implication

Among various discussions about the impacts of aid on macroeconomic phenomenon, this study limits only on aid and economic stability of the state, referencing on aid-inflation and aid-government effectiveness relationship. The results support that aid has an inflationary impact on least developed countries. Similarly, aid reduces the effectiveness of governance in the least development countries. In addition, the estimated results support the significant roles of government policy and the institutional environment. In detail, aid becomes less inflationary when the recipient country's policy environment is good enough to absorb or manage inflows of aid. Similarly, as the results show, countries with effective policy are likelier to improve effectiveness of governance in general. In addition, this relationship is robust, using annual panel data with ordinary least squares and the GMM method. The sign and significance of coefficients for the main variables of interest are not different in both estimations. In summary, official development aid can work effectively in least developed countries if recipient countries have good adaptation policies. This finding provides evidence that official development assistance itself is not a sufficient tool to engender economic stability in the least developed countries. Instead, the effectiveness of ODA depends on different factors, scenarios, and conditions of a receiving economy. From the empirical results, the following comments need to be addressed for effective official development aid management.

- Recipient countries should keep in mind that aid is not long lasting. There should be alternative domestic sources to finance the economy and development in the long term. In existing situations of least developed countries, aid does not improve the economic stability of the state. For instance, aid has an inflationary impact and does not improve governance.
- The amount of aid is considered in relation to the recipient country's absorptive capacity, which is its ability to use aid funds wisely and productively. It works only in a good policy environment. Although it is impossible to say whether aid itself brings a favorable impact on the economic stability of the recipient countries a priori, it must be utilized effectively to attain national objectives.
- As most of the literature indicates, the problem lies not only in the government of the recipient country but also in the attitudes of the donor agencies. Reform of donor agencies is important to improve aid effectiveness.
- Mutual accountability, ownership, and participatory approaches through the whole cycle of the project, from design to evaluation, are necessary. In addition, donors must

consider the harmonization of their funds with the recipient's national development policies.

5.2 Remaining Issue for Further Study

This study has started to define economic stability as an indistinct term. Even though the study has addressed one aspect of the economic stability of the state, there are other aspects of economic stability, such as socio-economic behaviors, political systems, etc. This study has not covered all aspects of economic stability. This is a remaining issue for further study. In addition, if more data are available with a long-time span, this study can achieve more robust results. Third, some control variables that previous studies have indicated as lacking constrain this study. These variables have rendered this study unable to use instrument variables for endogenous regressors. Thus, this study is limited to a single equation type GMM approach.

Acknowledgements

This paper is a summary of the Master Thesis by Regmi Arjun Parsad. The authors are grateful to Professor Kang-Kook Lee for his valuable comments and suggestions. Any errors are solely the authors' responsibility.

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Annex 1

List of countries

Afghanistan	Dem. Rep. of Congo	Malawi	South Sudan
Angola	Djibouti	Mali	Sudan
Bangladesh	Ethiopia	Mauritania	Tanzania
Benin	Gambia	Myanmar	Timor Leste
Bhutan	Guinea	Nepal	Togo
Burkina Faso	Guinea-Bissau	Niger	Uganda
Burundi	Haiti	Rwanda	Yemen
Cambodia	Laos	Senegal	Zambia
Central African Republic	Lesotho	Sierra Leone	
Chad	Liberia	Solomon Islands	
Comoros	Madagascar		