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AID INFLOWS AND ECONOMIC GROWTH: GRANTS AND LOANS IN THE CASE OF KENYA*

SANG-CHUL YOON[a] AND JAI S. MAH[b]

[a] *Dankook University, South Korea*
[b] *Ewha Womans University, South Korea*

The present paper compares the impact of grants and concessional loans on economic growth in Kenya and examines whether or not different degrees of political freedom influence this. Autoregressive distributed lags variance bounds tests and error correction models indicate that investment caused economic growth significantly. There is little evidence of globalization-related variables causing economic growth. Grants appear to have affected economic growth negatively, while there is no significant evidence of an effect of concessional loans. This implies that Kenya needs to pursue its own economic development strategy not relying on aid inflows. The impact of grants or loans on economic growth is revealed to be not conditional upon the degree of political freedom in Kenya.

Keywords: Aid, Grants, Loans, Economic Growth, Kenya
JEL Classification: F35, F63, O55

1. INTRODUCTION

Kenya's annual average real GDP growth rate reached 4.0 percent during 1972-2015. Reflecting this economic growth, its GDP per capita rose from US$190 in 1972 to US$1,380 in 2016. Its trade dependence ratio, defined as trade values in goods and services divided by GDP, remained between 40 percent and 70 percent. Net foreign direct investment (FDI) inflows divided by GDP remained lower than 1.0 percent throughout this period. In the meantime, a huge amount of aid flew into Kenya. That is, net Official Development Assistance (ODA) inflows divided by GDP rose from 3.4 percent in 1972 to as high as 14.0 percent in 1990, although it fell to 3.2 percent in 2017. The annual average net ODA inflows/GDP ratio during 1972-2017 reached 6.0 percent (World Bank, 2017). Thus, Kenya has depended heavily on aid inflows for the past half

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century.

There have been various views with respect to the effects of aid on economic growth. Several works have particularly focused on comparing the impact of grants and concessional loans on the economic growth of the recipients and the conclusions have been mixed, depending on the countries concerned (see, for instance, Islam, 1992; Vos, 1998; Feeny, 2005; Gomanee et al., 2005). Since economic development is a very complicated process and difficult for outsiders to help without a thorough understanding of the details of each recipient (Riddell, 2007), it is worthwhile for a researcher to analyze the case of a specific recipient. To draw a conclusion with respect to the impact of grants and loans, this paper analyzes the case of Kenya, which has been one of the most important recipients for the past decades. In addition to comparing the impact of grants and loans on economic growth, this paper also tests whether the degree of political freedom influences this impact.

The structure of this paper is as follows: Section 2 provides a literature review on the effect of aid on economic growth, comparing grants and loans in particular. Section 3 describes the evolution of the economy of Kenya since its independence. Sections 4 and 5 provide the model used in this paper and empirical evidence, respectively. Conclusions are presented in Section 6.

2. REVIEW OF THE LITERATURE ON THE IMPACT OF AID INFLOWS ON ECONOMIC GROWTH

The belief that aid is 'a good thing' can be sustained by the assumption that the resources that aid provides make a difference to the recipients (Riddell, 2007). Meanwhile, such a belief can be tested by academic research. Chenery and Strout's (1966) two gap model provides the basic idea of the contribution of aid to economic growth, which says that aid inflows can relieve the difficulties of developing countries with respect to the savings-investment gap and foreign exchange gap. Extending Chenery and Strout's two gap model, Bacha (1990) suggests a three gap model, according to which aid can relax three specific constraints faced by developing countries: the limit on investment due to limited domestic savings, the limited ability to import capital goods if export earnings are small, and fiscal constraints on investment.

There has been empirical evidence on the effect of aid on economic growth. Employing data for 114 aid recipients, Hodler and Knight (2011) show that aid in general contributes to economic growth in ethnically homogeneous countries. Museru et al. (2014) use the data for 26 sub-Saharan African countries and show that aid has a positive and significant effect.

Unlike the positive role of aid in economic growth explained in Chenery and Strout (1966) or Bacha (1990), certain researchers have criticized it. The critics of the effectiveness of aid argue that aid has not contributed to the economic growth of its recipients. According to them, the way that decisions are made about who to give it to,

and for how long, have been influenced by the interests of the donors rather than being shaped by the needs of the recipients (Riddell, 2007). Moyo (2009) even argues that aid is not a solution, but the problem. Aid inflow destroys the local producers and reduces savings and domestic investment in the sense that aid flows into a selected few hands and they mostly spend on consumption, not savings and investment (Dalgaard and Hansen, 2001; Moyo, 2009).

The critics of the effectiveness of aid also argue that aid inflows may also reduce the rate of economic growth in the context of the Dutch disease. That is, aid inflows may strengthen the value of the local currency through an increase in foreign exchange reserves and hurt manufacturing exports, in turn reducing the rate of economic growth. Due to severe corruption, the effectiveness of aid deteriorates, and aid may even foster corruption. In addition, the prospects of seizing power and gaining access to unlimited aid wealth may be irresistible. Therefore, due to the huge amount of aid inflows and rent seeking behavior, aid inflows may lead to internal conflicts among its recipients (Moyo, 2009). Using panel data, Doucouliagos and Paldam (2009) show that aid is not effective in increasing economic growth, due to the Dutch disease. Edwards (2014) explains that aid was not effective and even toxic to the economic growth of Tanzania until the early 1980s. Nwaogu and Ryan (2015) cover African, Latin American and Caribbean countries (LAC). Their estimation results show that for LAC foreign aid affects economic growth negatively.

Burnside and Dollar (2000) show institutional quality and an aid-policy interaction term to be significant, while aid itself is not significant in explaining economic growth. That is, aid has a positive impact on economic growth only in countries with good macroeconomic policies. Hansen and Tarp (2001) show that when an aid square term is added, the aid-policy interaction term becomes insignificant. Institutional quality is revealed to be significant. Rajan and Subramanian (2011) show that institutional quality, based on the International Country Risk Guide, as a control variable is statistically not significant. Museru et al. (2014) use an institutional quality variable which reflects bureaucratic quality, law and order, and corruption. They also use the degree of democracy as a control variable. For about half of the cases, as a country becomes politically freer, democracy is revealed to have a positive and significant effect on economic growth, but for the remaining cases, such an effect is revealed to be insignificant. Institutional quality is revealed to have a positive and significant effect on economic growth.

There have not been many empirical works testing the impact of aid on the economic growth of a specific recipient. Using time series data for India, Ang (2010) shows that capital stock and financial liberalization have a positive effect on economic growth, while aid is found to have a negative effect on economic growth. That is, resources from foreign aid have been misused. Sharma and Bhattarai's (2013) application of autoregressive distributed lags (ARDL) variance bounds test to Nepal show that aid, excluding humanitarian aid, is in general effective in explaining economic growth. Mah (2017) applies the ARDL test and the error correction model to Vietnam.

If the import variable is dropped from the estimation, aid is shown to cause economic growth.

The impact of grants on economic growth has been compared with that of loans. Some researchers argue that recipient countries regard loans, which carry the burden of future payment, as different from grants. That is, the prospects of repayment mean loans induce governments to use the funds efficiently and to mobilize taxes. Meanwhile, if a large share of foreign loans is provided on highly concessional terms, and loans are frequently forgiven, policymakers in the recipients may regard them as roughly equivalent to grants, and as such the distinction between loans and grants as practically irrelevant. The question becomes how strongly recipient governments perceive loans as being different from grants (Moyo, 2009).

There has been a limited number of empirical evidence comparing grants with loans or focusing on one of those two types of aid. Islam's (1992) OLS estimation results show that, in Bangladesh, loans are revealed to have a positive and significant effect, while grants are statistically not significant. Vos' (1998) simulation studies reveal that a grant is likely to lead to government consumption and a higher inflation rate. Feeny's (2005) ARDL cointegration test results show that neither grants nor loans have a significant effect on economic growth in Papua New Guinea. Using data for 25 sub-Saharan African countries, Gomanee et al. (2005) show that investment has a positive and significant effect on economic growth. When the investment variable is excluded from the regression, the effect of a grant is revealed to be positive and significant. They conclude that the effects of grants and loans on economic growth are almost identical. The present paper is different from these others in the sense that it focuses on Kenya, which has relied heavily on aid inflows, but not been rigorously analyzed so far. In addition, it distinguishes grants from loans and tests for the effect of political freedom when comparing the effects of grants and loans on economic growth.

3. OVERVIEW OF THE ECONOMIC GROWTH OF KENYA

By the late 1950s Kenya had been regarded as the manufacturing center for the whole of East Africa. It achieved national independence in December 1963. Although the government of Kenya declared its intention to pursue African Socialism after independence, actually Kenya was committed not to socialism but to a capitalist mode of production, and the phrase African Socialism was a verbal pretence. The idea of African Socialism was considered as that of softening the impact of the market economy by bringing into play the 'mutual social responsibility' which had operated in a traditional society. In the early stage of economic development after independence, the process of import substitution through the establishment of domestic manufacturing gained speed. It was fostered by policies to attract FDI (Holtham and Hazlewood, 1976). Kenya is known to have out-performed most of the other Sub-Saharan African countries until the late 1970s, but Kenya failed to achieve her potential after the 1980s (Mwega and

Ndung'u, 2008).

The manufacturing sector grew rapidly in the 1960s and 1970s. The policy prescription at that time was import substitution. Helped by import protection, import substitution manufacturing was initially successful. Major controls were introduced during the 1970s. The 1980s were characterized by economic reforms to help markets work better. The market reforms started slowly in the 1980s. Trade liberalization was one of the areas that received greater attention in Kenya's reform program. It included removing quantitative restrictions, reducing tariff rates, and adopting a more flexible exchange rate regime. Import liberalization progressed significantly. Between 1980 and 1985 the share of commodities that could be imported without any restriction rose from 24 to 48 percent of the total value of imports. In 1988, import liberalization was taken a step further and by 1991, import licences were required almost only for health, security, or environmental grounds (Mwega and Ndung'u, 2008). The average tariff rate was reduced by about 8 percent over the same period. Kenya embarked on a series of structural adjustment programs, which resulted in trade liberalization and capital inflows. Full-scale trade liberalization measures were implemented in 1993-1994 (Bigsten and Durevall, 2008).

The trade dependence ratio equaled 55.4 percent in 1972. Although it rose to 71.8 percent in 1995, it fell again to around 40 percent in the mid-2010s (World Bank, 2017). The share of manufactured products in exports remained quite low throughout the period: for instance, 14.8 percent in 1980, 9.2 percent in 1990, and 10.9 percent in 1997. Manufactured exports were also subject to serious supply constraints such as the unavailability and/or high cost of credit, infrastructural deficiencies, an adverse regulatory framework, and increasing transaction costs (Mwega and Ndung'u, 2008).

A huge amount of aid flew into Kenya after the 1960s. Aid inflows, net of loan repayments and interest, amounted to 5.9 percent of Kenya's GDP in 1964, and the proportion has changed little since then till the mid-1970s (Holtham and Hazlewood, 1976). In 1975, although the ratio was recorded as 3.8 percent of GDP, it increased to 14.0 percent in 1990 and 8.1 percent in 1995. Since then, it has decreased somewhat, to 3.9 percent in 2015 (OECD, 2017).

Kenya after independence had been marked by political stability and peace compared with most of the other sub-Saharan African countries. Unlike most of the countries in Sub-Saharan Africa, Kenya had neither been under military dictatorship nor experienced any major internal conflict that could be considered as a civil war. Until the early 1990s, internal conflict virtually did not exist. A multi-party system was introduced into Kenya in 1991. During the 1990s, and coinciding with the introduction of competitive politics, sporadic incidences of violence were observed from time to time that targeted certain ethnic groups (Mwega and Ndung'u, 2008).

4. THE MODEL

This paper focuses on comparing the contributions of grants and loans to the economic growth of Kenya. It also examines the impact of political freedom (as an institution). Kenya appears to be suitable for examining this in the sense that its degree of political freedom changed significantly during the 1970s-2010s and a huge amount of aid flew into it. Of many plausible determinants of economic growth, investment is noteworthy. In addition, globalization, international trade in particular, may also affect economic growth. Huge amounts of both grants and concessional loans have been provided to Kenya. Therefore, aid of these two types may have affected economic growth. In addition to economic variables, non-economic variables representing institutions may have also affected economic growth. This paper considers the impact of political freedom. Therefore, the following equation is considered as the basic model explaining the economic growth of Kenya:

$$Y_t = a_0 + a_1 INVY_t + a_2 TRADEY_t + a_3 AIDY_t + a_4 PFI_t + e_t, \quad (1)$$

where $Y, INVY, TRADEY, AIDY$, and PFI denote the per capita real GDP growth rate, domestic investment measured by gross fixed capital formation divided by GDP, the degree of the economy dependent on international trade, aid inflows divided by GDP, and the degree of political freedom, respectively. In Equation (1), e shows the conventionally assumed error term. Most variables appearing in Equation (1) except for PFI are generally found in many other empirical works examining the effect of aid on the economic growth of its recipients; for instance, Ang (2010), Mah (2017), and many papers surveyed in Doucouliagos and Paldam (2009).

As the measure of $TRADEY$, the present paper employs the trade dependence ratio (TDR) and export dependence ratio (EDR) defined as export values of goods and services divided by GDP. $AIDY$ represents the amount of aid inflows divided by GDP. As its measure, two variables are employed: $GRANTY$ and $LOANY$. They are defined as the amount of total grants less debt relief, divided by GDP, and net loans divided by GDP, respectively. The amount of debt relief during the period analyzed continued to be in general not substantial. Therefore, whether or not debt relief is subtracted from the total grants appears to make little difference in the value of $GRANTY$.

PFI represents the political freedom index. It is calculated by the summation of the political right and civil liberty indexes reported by the Freedom House (2017). Since each of these indexes can take a value between 1 and 7, PFI can take values between 2 and 14. Lower values of each index shows that the concerned country is politically free. Actually, PFI fluctuated between 6 and 13 during the period analyzed. Since the data for all variables appearing in Equation (1) are available starting from 1972, the current paper uses the annually observed data for the above-mentioned variables during the period 1972-2015. The data for grants and loans are drawn from OECD (2017) and that for the other economic variables are taken from the World Bank (2017).

Testing the effect of aid inflows on economic growth of a specific recipient cannot actually use many explanatory variables due to the constraint of the limited number of

observations in case of using the time series data, as the researchers should use the annually observed data. Meanwhile, for the robustness of the estimation and test results, this paper uses trade policy and the consequent trade dependence ratio as well as exports of goods and services of the recipient as one of the determinants of economic growth in the empirical analysis.

The present paper extends Equation (1) in the sense of examining the role of political freedom in the impact of aid on economic growth. Thus, the following Equation (2) modifies the basic Equation (1):

$$Y_t = b_0 + b_1 INVY_t + b_2 TRADEY_t + b_3 AIDY_t + b_4 (AIDY \times PFI)_t + e_t. \quad (2)$$

If the coefficient of $AIDY \times PFI$ is estimated to be statistically significant, it can be interpreted to mean that the impact of $AIDY$ on Y would be affected by PFI. Such an interpretation follows previous work, such as Burnside and Dollar (2000), Hansen and Tarp (2001), and Museru et al. (2014). For instance, assuming that $AIDY$ has a positive effect on Y, if democratization affects it positively, then the estimated coefficient of $AIDY \times PFI$ would be negative and significant.

5. EMPIRICAL EVIDENCE

Since the current paper uses annually observed time series data, the empirical work starts with the unit root tests examining the stationarity of the variables. The augmented Dickey-Fuller (ADF) test shows that all variables under consideration are integrated of order zero or one at the 1 or 5 percent level of significance. The details are not reported here to save space. Since all variables under consideration appear to be integrated of order zero or one, the present paper employs Pesaran et al.'s (2001) ARDL variance bounds test as the cointegration test, since it is a cointegration test for when there is a limited number of observations and all variables under consideration are integrated of order zero or one. If cointegration holds, one can say that there is a long run equilibrium relationship between the concerned variables. According to the ARDL variance bounds test, if the computed F statistics is higher than the upper bound of the critical values, then the null hypothesis of no cointegration is rejected. Considering the limited number of observations, this paper examines up to two lags. As the optimal lag selection method, the Schwarz criterion is employed.

Table 1 shows the results of the ARDL variance bounds test with respect to Equations (1) and (2) when EXPY is used as the measure of international trade. The test results using PFI as an additional variable affecting economic growth are reported in (a) to (c), while those using $AIDY \times PFI$ rather than using PFI are reported in (d) to (f) in Table 1. $GRPFI$ and $LOPFI$ stand for $GRANTY \times PFI$ and $LOANY \times PFI$, respectively. The test results show that the variables appearing in Equations (1) and (2) are cointegrated at the 1 or 5 percent level of significance, since the calculated

F-statistics are revealed to be greater than the upper bound critical value calculated by Narayan (2005), assuming that the number of observations is 40. Therefore, this paper concludes that the variables under consideration in equations (1) and (2) are cointegrated. The results from Pesaran et al.'s ARDL variance bounds test are complemented by those of the error correction models.

Table 1. ARDL Variance Bounds Test Results When $EXPY$ is Used as the Measure of International Trade

Type	Variables Concerned	F-statistics	Results
(a)	Y, INVY, EXPY, GRANTY, PFI	5.413	1% level: $CV_L < F < CV_U$ 5% level: $CV_U < F$
(b)	Y, INVY, EXPY, LOANY, PFI	5.834	1% level: $CV_U < F$ 5% level: $CV_U < F$
(c)	Y, INVY, EXPY, GRANTY, LOANY, PFI	4.224	1% level: $CV_L < F < CV_U$ 5% level: $CV_U < F$
(d)	Y, INVY, EXPY, GRANTY, GRPFI	5.146	1% level: $CV_L < F < CV_U$ 5% level: $CV_U < F$
(e)	Y, INVY, EXPY, LOANY, LOPFI	4.455	1% level: $CV_L < F < CV_U$ 5% level: $CV_U < F$
(f)	Y, INVY, EXPY, GRANTY, LOANY, GRPFI, LOPFI	4.142	1% level: $CV_L < F < CV_U$ 5% level: $CV_U < F$

Notes: F: estimated *F* statistics; CV_L: the lower bound of the critical value; CV_U: the upper bound of the critical value. The critical values are drawn from Narayan (2005).

Table 2 shows the results of the error correction models with respect to Equation (1), when $EXPY$ is used as the measure of international trade. In each case, the error correction (EC) term is revealed to be negative and statistically significant at the 1 percent level of significance. The estimated coefficients of the EC terms appear to be smaller than or near -1.0 in absolute value. This can be interpreted as reaffirming the result of the cointegrating relationship reported in Table 1. Among others, the coefficient of $INVY$ is estimated to be positive and statistically significant at the 1 or 5 percent level of significance. That is, investment is shown to have caused economic growth in Kenya. The coefficient of $EXPY$ is revealed to be not significant at any reasonable level of significance. Those of $LOANY$ and PFI are estimated to be statistically not significant, either, at any reasonable level of significance. What is interesting is that the coefficient of $GRANTY$ is estimated to be negative in every case and statistically significant in two out of four cases at the 5 or 10 percent level of significance. That is, grants appear to have affected economic growth negatively and concessional loans have not had a significant effect on economic growth in Kenya.

Table 2. The Estimation Results of the Error Correction Model When $EXPY$ is Used as the Measure of International Trade

Variable	(a)	(b)	(c)	(d)	(e)	(f)
Constant	-0.192 (-0.598)	-0.185 (-0.590)	-0.218 (-0.731)	-0.166 (-0.502)	-0.163 (-0.503)	-0.135 (-0.443)
$EC(t-1)$	-0.937*** (-4.596)	-1.030*** (-5.080)	-1.053*** (-5.296)	-0.901*** (-4.295)	-1.020*** (-4.610)	-1.006*** (-4.061)
$dINVY(t)$	0.643*** (2.870)	0.554** (2.577)	0.685*** (3.243)	0.629** (2.506)	0.636*** (2.893)	0.670*** (2.858)
$dEXPY(t)$	-0.004 (-0.035)	-0.041 (-0.359)	-0.010 (-0.086)	0.023 (0.183)	0.031 (0.251)	0.060 (0.473)
$dGRANTY(t)$	-75.082* (-1.736)		-98.020** (-2.168)	-55.175 (-0.625)		-154.034 (-1.410)
$dLOANY(t)$		-30.670 (-1.179)	-15.282 (-0.556)		-165.072 (-0.933)	-33.355 (-0.139)
$dPFI(t)$	0.014 (0.038)	0.404 (1.159)	0.210 (0.591)			
$dGRPFI(t)$				-1.539 (-0.176)		4.582 (0.461)
$dLOPFI(t)$					13.337 (0.851)	3.167 (0.151)
Adj. R^2	0.358	0.383	0.446	0.311	0.348	0.426
F stat.	3.288***	3.544***	3.746***	2.855**	3.189***	3.171***
D.W. stat.	2.161	2.096	2.031	2.139	2.094	1.956
J.B. stat.	1.598	1.773	1.909	2.151	2.324	0.215

Notes: In this Table, dY is used as the left hand side variable in estimations. EC shows the error correction term. The estimated values of the lagged terms are not reported to save space. Values within the parentheses denote the estimated t statistics. *J.B.* statistics denote Jarque-Bera normality test statistics. *, **, *** denotes statistically significant at the 10%, 5%, 1% level of significance, respectively.

Table 2 also shows the estimated results of the error correction model applied to Equation (2). In each case, the estimated coefficient of the error correction term is negative and statistically significant at the 1 percent level of significance, which shows that the variables concerned are cointegrated. The coefficient of $INVY$ is estimated to be positive and statistically significant at the 1 or 5 percent level of significance, regardless of the measure of $AIDY$. Those of $EXPY, GRPFI$ and $LOPFI$ are revealed to be statistically not significant at the 10 percent level of significance. This means that the impact of grants or loans on economic growth is not conditional on the degree of political freedom in the case of Kenya. Although net FDI inflows divided by GDP have also been added in the right hand side of Equations (1) and (2), this is revealed to be not statistically significant at any reasonable level of significance and the overall results reported in Table 2 do not change qualitatively.

Table 3 shows the results of the ARDL variance bounds test applied to Equations (1)

and (2) when TDR is used as the measure of international trade. The results show that the variables under consideration are cointegrated at the 1 or 5 percent level of significance, when the number of observations is assumed to be 40. Therefore, the variables under consideration in Equations (1) and (2) can be considered to be cointegrated.

Table 3. ARDL Variance Bounds Test Results When TDR is Used as the Measure of International Trade

Type	Variables Concerned	F-statistics	Results
(a)	Y, INVY, EXPY, GRANTY, PFI	5.879	1% level: $CV_U < F$ 5% level: $CV_U < F$
(b)	Y, INVY, EXPY, LOANY, PFI	6.099	1% level: $CV_U < F$ 5% level: $CV_U < F$
(c)	Y, INVY, EXPY, GRANTY, LOANY, PFI	4.584	1% level: $CV_L < F < CV_U$ 5% level: $CV_U < F$
(d)	Y, INVY, EXPY, GRANTY, GRPFI	5.556	1% level: $CV_U < F$ 5% level: $CV_U < F$
(e)	Y, INVY, EXPY, LOANY, LOPFI	4.376	1% level: $CV_L < F < CV_U$ 5% level: $CV_U < F$
(f)	Y, INVY, EXPY, GRANTY, LOANY, GRPFI, LOPFI	4.365	1% level: $CV_L < F < CV_U$ 5% level: $CV_U < F$

Notes: F: estimated *F* statistics; CV_L: the lower bound of the critical value; CV_U: the upper bound of the critical value. The critical values are drawn from Narayan (2005).

Table 4 shows the estimated results of the error correction model with respect to Equations (1) and (2) when using TDR as the measure of international trade. In each case, the error correction term is revealed to be negative and statistically significant even at the 1 percent level of significance, supporting the results of the cointegrating relationship reported in Table 3. Among others, the coefficient of $INVY$ is estimated to be positive and statistically significant at the 1 or 5 percent level of significance, which is a result consistent with Table 2. The coefficient of TDR is estimated to be statistically not significant at any reasonable level of significance. The coefficients of $LOANY$ and PFI are estimated to be statistically not significant at any reasonable level of significance. As is the case reported in Table 2, the coefficient of $GRANTY$ is estimated to be negative and statistically significant at the 5 or 10 percent level of significance in two out of four cases in Table 4. Neither $GRPFI$ nor $LOPFI$ is revealed to be statistically significant at any reasonable level of significance. That is, Table 4 also shows that the impact of grants or loans on economic growth is not conditional on the degree of political freedom. Inserting net FDI inflows divided by GDP did not change the overall results in Table 4 qualitatively.

Table 4. The Estimation Results of the Error Correction Model When TDR is Used as the Measure of International Trade

Variable	(a)	(b)	(c)	(d)	(e)	(f)
Constant	-0.220 (-0.677)	-0.139 (-0.447)	-0.172 (-0.578)	-0.138 (-0.420)	-0.128 (-0.389)	-0.119 (-0.393)
$EC(t-1)$	-1.221*** (-4.508)	-0.985*** (-4.843)	-1.019*** (-4.989)	-0.911*** (-4.232)	-0.974*** (-4.512)	-1.031*** (-4.120)
$dINVY(t)$	0.663*** (3.017)	0.506** (2.356)	0.616*** (2.945)	0.566** (2.383)	0.501*** (2.215)	0.594*** (2.670)
$dEXPY(t)$	-0.101 (-1.188)	-0.029 (-0.474)	-0.032 (-0.557)	-0.014 (-0.236)	-0.002 (-0.034)	-0.005 (-0.088)
$dGRANTY(t)$	-65.072* (-1.506)		-97.419** (-2.196)	-87.613 (-1.031)		-188.516* (-1.782)
$dLOANY(t)$		-35.995 (-1.336)	-17.230 (-0.595)		-97.299 (-0.530)	-10.611 (-0.044)
$dPFI(t)$	0.226 (0.610)	0.494 (1.410)	0.374 (1.071)			
$dGRPFI(t)$				1.243 (0.151)		8.014 (0.861)
$dLOPFI(t)$					6.649 (0.400)	0.970 (0.046)
Adj. R^2	0.381	0.377	0.439	0.314	0.315	0.422
F stat.	3.239***	3.486***	3.678***	2.879**	2.882**	3.136***
D.W. stat.	2.206	2.034	1.907	2.106	2.072	1.921
J.B. stat.	1.478	1.212	1.522	2.145	2.295	0.129

Notes: In this Table, dY is used as the left hand side variable in estimations. EC shows the error correction term. The estimated values of the lagged terms are not reported to save space. Values within the parentheses denote the estimated t statistics. *J.B.* statistics denote Jarque-Bera normality test statistics. *, **, *** denotes statistically significant at the 10%, 5%, 1% level of significance, respectively.

5. CONCLUSIONS

The present paper has compared the contributions of grants and concessional loans to the economic growth of Kenya and examined whether or not different degrees of political freedom have influenced this. The ARDL variance bounds tests show that the variables considered in the current paper are cointegrated. The estimated results of the error correction models indicate that investment led to economic growth in Kenya significantly. There is little evidence of globalization-related variables causing economic growth of Kenya, which is consistent with the description by Mwega and Ndung'u. According to them, for instance, during the 1980s and 1990s, export opportunities improved for domestic firms with structural adjustment and liberalization, but the Kenyan firms were not competitive enough to take advantage of this environment and many SMEs closed down in the midst of trade liberalization (Mwega and Ndung'u,

2007).

What is interesting is that there is evidence of grants affecting economic growth negatively, while there is no evidence of concessional loans affecting it significantly. This implies that Kenya needs to pursue its own economic development strategy not relying on aid inflows. Relying on grant inflows in pursuing more rapid economic growth needs to be avoided in particular. The impact of grants or loans on economic growth is revealed to be not conditional upon the degree of political freedom in the case of Kenya. The empirical results shown in the current paper indicate that sticking to an expansion of the amount of aid without serious consideration of its impact needs to be reconsidered carefully.

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Mailing Address: Jai S. Mah, Division of International Studies, Ewha Womans University, Seodaemu-gu, Seoul 03760, South Korea, *Email: jsmah@ewha.ac.kr*

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