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Foreign Aid Effectiveness in Ghana

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Keywords

Aid Conditionality; Aid Effectiveness; Economic Growth; Error Correction Model; Ghana; Reform Ownership

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ABSTRACT

Ghana has been the recipient of large levels of aid since the 1980s. This coincides with significant improvements in the country including increased growth and poverty reduction. We analyze the role of foreign aid in Ghana's success. Using annual data from 1961 to 2012, we employ an error correction model to estimate the long-run relationship between aid and *conditional* aid in Ghana's economic growth. We find that conditional aid has a positive and statistically significant impact on growth. Through an examination of Ghana over three phases with varying aid and conditionality, we conclude that Ghana's success with conditional aid is related to the country's ownership of reforms.

INTRODUCTION

The purpose of this paper is to analyze the effectiveness of aid on Ghana's growth. Early models have linked economic growth to exogenous factors such as savings (Harrod-Domar model) and technological progress (Solow model). The endogenous growth literature has emphasized a role for human capital and policies that support openness, competition, and innovation. Common in all these growth models is the role of capital or investment as a driver of growth. The *two-gap* model of Chenery and Strout (1966) provides the rationale for incorporating aid as a determinant of growth. In this framework, investment is necessary for growth and aid fills the gap between required investment and available finances (Sachs, 2005).

However, the effectiveness of aid is fiercely debated. Some studies show a positive (although small and diminishing) effect on growth (Arndt, Jones and Tarp, 2011; Clemens et al. 2004; Hansen and Tarp, 2001). Others argue that aid is only effective under certain circumstances, namely a good policy environment (Burnside and Dollar, 2000; Gomanee, et al., 2005; Alvi, et al., 2008; and Armah and Nelson, 2008). However, critics question the assumption that aid translates into investment. As Easterly (2006) argues, if there are no incentives to invest prior to aid, then resources from aid will not result in greater investment. And the benefits of an improved policy environment have been contradicted by Easterly et al., (2003).

The vast empirical literature that has estimated the impact of aid on growth has yielded inconclusive results (Doucouliagos and Paldam, 2008 and Rajan and Subramanian, 2008). One concern is the use of cross-country estimation which combines economies with different economic and political environments in one study. Another is the use of estimation techniques that focus on short-term effects which may not capture the full impact of aid. This paper addresses these concerns by analyzing the long-run relationship between aid and growth for a single country, Ghana. Ghana is an important case study for aid effectiveness. The first two and a half decades after the country gained independence were periods of economic decline. Starting in the 1980s, Ghana began receiving high and increasing levels of aid which were linked to structural adjustment programs. Today, Ghana has achieved middle-income country status and has made major progress on achieving several of the Millennium Development Goals including that of reducing poverty. Are these successes linked to foreign

foreign aid flowing into Ghana? Our empirical work estimates the impact of aid and *conditional* aid on Ghana's economic growth. For the latter, we include an interactive term between aid and the period of structural adjustment programs in Ghana. We use the Error Correction Model (ECM) framework and find evidence that conditional aid has promoted growth in Ghana.[1]

The paper is organized as follows: the next section provides an overview of the Ghanaian economy. The empirical framework for estimating the impact of aid on growth and the results for Ghana are discussed in the following sections. The last section concludes.

OVERVIEW OF GHANA

In 1957 Ghana became the first among the colonized countries in sub-Saharan Africa to gain independence. Ghana has struggled with growth and development since gaining independence. The first president, Dr. Nkrumah (1957-1966) embraced state-led industrialization policies starting in 1961. Heavy government intervention took its toll on fiscal balances. In addition, controls on the economy led to declines in the trade sector and combined with falling cocoa prices (Ghana's major export), led to balance of payments deficits (Tsikata, 1999). In 1966, following a coup by the National Liberation Council, the new economic team attempted to reduce government expenditures and liberalize trade, policies that the next civilian government (1969) continued until the coup of 1972 by the National Redemption Council reversed the trend (Tsikata, 1999). The next civilian government that came into power in 1979 was mostly ineffective, and due to widespread public dissatisfaction resulted in another coup by the Provisional National Defence Council (PNDC) in 1981 (Tsikata, 1999). Under the PNDC, the 1980s became a decade for major reforms which included market-oriented policies to promote growth. The focus was on reversing state-led industrialization and promoting trade and private sector investment. Over the next two decades, there was an added focus on poverty-reduction, human resource development, and institutional reforms which were supported by increasing levels of aid.

Since independence, Ghana has seen many successes. A stable democracy since 2004, Ghana was declared a middle-income country in 2010 when its real GDP per capita (PPP) surpassed $ 1,000 and reached $ 4,000 in 2016 (Table 1).

An important concern is the dependence on cocoa (Ghana is the world's largest cocoa producer) and gold, which account for 62% of export revenue (ISSER, 2013). Also, Ghana depends on imports for manufacturing goods (ISSER, 2013). A reason to be hopeful about trade diversification is the improved investment climate (Ackah, et al., 2009) which has led to increased foreign direct investment and is currently 8.5% of GDP (Table 1).

There are some challenges for Ghana. Macroeconomic instability is a concern with high inflation at 17.47% and fiscal deficits at 8.7% of GDP (Table 1). Moreover, while Ghana achieved the Millennium Development Goal (MDG) of halving poverty ahead of the 2015 schedule, poverty rates continue to be high. Half of Ghana's population lived in poverty (defined as living on less than $ 3.10 a day) and 25% lived in extreme poverty (defined as living on less than $ 1.95 a day) in 2005 (Table 1). And, the country was not able to meet the infant mortality rate goal of 21.5 by 2015.

Overall, it is clear that Ghana has made great economic progress since independence. The increasing trajectory of real GDP per capita and the positive and stable growth rates since the 1980s is particularly noteworthy (Figures 1 and 2). The 1980s saw a significant increase in the level of official development assistance (ODA), although assistance as a percentage of gross national income was about the same as earlier periods (Figures 3 and 4). The 1990s saw an increase in ODA and once again in the 2000s and by 2012 reached a high of $ 1.8 billion (Figure 3). Similarly, ODA as a percentage of GNI rose dramatically in the 1990s and early 2000s reaching over 16% in 2005 but began falling after that (Figure 4). In 2013 and 2014 the country experienced a decline in aid in levels and as a percentage of income (Figures 3 and 4) which is likely related to Ghana's economic progress that caused some countries like the UK to review their aid policy to Ghana. Following the decline in oil prices, assistance has once again increased to $ 1.77 billion which is just under 5% of GNI in 2015 (Table 1).

Development assistance was primarily from the World Bank[3] and members of the Development Assistance Committee (DAC). The largest amount of official development assistance (ODA) is from the World Bank through the International Development Association (IDA) while U.S. is the largest bilateral

donor followed by UK (Figures 5 and 6).

The high and increasing levels of assistance were conditional on structural adjustment policies. As noted earlier, the focus from the 1980s onwards were the implementation of market reforms. Did aid and its conditionality help Ghana? In the following section we provide the theoretical and empirical framework for estimating the impact of aid on growth.

EMPIRICAL FRAMEWORK FOR ANALYZING THE ROLE OF AID ON GROWTH

The empirical framework is based on an endogenous growth model which includes investment, human capital, and the policy environment as important drivers of growth. Although education is an important factor in economic growth (Barro, 1991), we exclude the variable because of data constraints.[5] Investment and government expenditure are both included in the model. Government spending, if used for infrastructure, could be growth promoting. Moreover, government expenditure could be seen as a substitute for investment (Senadza and Laryea, 2012) which has been important for Ghana. This would be one reason to combine private and public investment. However, government spending has been criticized for not being productive and associated with rising budget deficits which create macroeconomic instability and hinders growth. Thus, we separate private and public investment in our model.

Aside from fiscal discipline other elements of a *good* policy environment are lower levels of inflation and a more open trading regime Burnside and Dollar (2000). A more stable macroeconomic environment with low inflation is expected to increase investment and thus promote growth. The argument for openness is linked to access to foreign markets. A more open environment allows for increased exports and can help growth. Also, it may help a country import unavailable goods, which may be inputs for exports. Thus, both directly and indirectly, greater trade can be growth enhancing. We follow the literature and include inflation and openness (Kargbo, 2012; Arndt et al., 2011; Alvi et al., 2008; Armah and Nelson, 2008; Feeny, 2005).

There are other variables to capture a better policy environment such as "good governance", "stability" and "democratization". Similar to education, we cannot include the first two political variables because of lack of adequate data. However, we do incorporate a variable for democratization. The Center for Systemic Peace (CSP), Integrated Network for Societal Conflict Research (INSCR) computes a polity index. Countries are scored on a 10 point scale for democratic and autocratic regimes. A country can have both autocratic and democratic elements, so the CSP scores both regimes on a 10 point scale where 10 indicates the most democratic and most autocratic regime and 0 being the least democratic and least autocratic regime. The polity index is computed by subtracting the autocratic score from the democratic score and can thus take on a value between -10 (highly autocratic) and 10 (highly democratic).

Democratization can be chaotic and can thus hurt growth. However, democracy can make governments more accountable to its citizens and thus result in more effective policy-making. In that case, democratization is seen to be growth enhancing. We hypothesize that democracy has a positive impact on economic growth and use the polity variable to test this hypothesis. However, we do not include the polity index variable as is because as Gerring, et al. (2005) note "institutional effects [*related to democracy*] unfold over time, sometimes a great deal of time, and that these temporal effects are cumulative". Thus, they propose creating a *stock* variable where there is accumulation of democracy. The longer a country has been a democracy, the greater the positive impact on growth (Gerring, et al., 2005). They construct this stock variable by adding up the polity variable from 1900 onwards with a 1% annual depreciation rate. We construct the variable in the same way but use 1961 as the starting point. . This is because it is the first data point available for us and makes sense for Ghana which only gained independence in 1957.

Finally, we estimate the impact of aid on growth. As noted earlier, based on the Chenery and Strout (1966) rationale, by filling the financing gap aid can promote growth (Sachs, 2005).[6] The argument rests on the idea that without domestic and/or foreign investment, aid is frequently the only recourse to finance investment that promotes growth in some countries. The hope is that the initial support provided by aid can bolster economic activity and lead to higher levels of private investment.

Easterly (1999) writes that "There is no theoretical or empirical justification for the assumption that filling a "financing gap" determined by "investment requirements" will raise investment or growth in the short run." Yet, the financing gap model continues to be widely used as a justification for providing aid assistance. Perhaps, one way to reconcile this is that aid might help over the long-term (which is the focus of this paper).

Since aid has been conditional on structural adjustment policies, we include another term to capture this impact. In Ghana's case, structural adjustment policies started in 1983 and have continued in varying forms until the present. We create a dummy variable taking a value of 1 for the period following the reforms (beginning in 1983) and 0 for earlier periods. We incorporate this variable as an interactive variable with aid which captures the role of conditionality in the impact of development assistance on economic growth. Based on the above, the model to be estimated is

$$RGDPPC_t = \beta_0 + \beta_1 Inv_t + \beta_2 Gov_t + \beta_3 Inf_t + \beta_4 Open_t + \beta_5 Demo_t + \beta_6 Aid_t +$$
$$\beta_7 (Co * Aid)_t + \varepsilon_t$$

(1)

where $RDGPPC_t$ = real GDP per capita, Inv_t = investment as a percentage of GDP, Gov_t = government expenditure as a percentage of GDP, Inf_t = CPI based inflation rate, $Open_t$ = exports and imports as a percentage of GDP and $Demo_t$ = accumulation of polity index variable, Aid_t = foreign aid as a percentage of GDP, and Co_t is the dummy variable which takes on a value 1 from 1983 onwards. Investment and democracy are expected to be positively linked to growth, inflation is expected to be negatively related and the others are ambiguous based on the discussion noted earlier.

This paper estimates the long run impact of aid on growth using the ECM technique. The procedure is as follows: first we test the series for unit roots using the Augmented Dickey-Fuller (ADF) test. If the series are I(1) in levels and I(0) in first differences we can test for cointegration. We use the Akaike and Schwarz criterion to determine lag length of the VAR and use the Johansen test for cointegration. If we find evidence of cointegration we use ECM to estimate the relation between aid and growth and analyze the results. The ECM equation is,

$$\Delta y_t = \alpha + \beta(y_{t-1} - \delta x_{t-1}) + \sum_{i=1}^{q} \gamma_i \, \Delta y_{t-i} + \sum_{i=1}^{q} \vartheta_i \, \Delta x_{t-i} + \varepsilon_t$$

(2)

where y is real GDP per capita and x is a vector of explanatory variables (given in equation 1). Through the estimation we can get both the long run and short run estimates for the determinants of real GDP per capita. Also, the speed of adjustment to equilibrium after a shock can be captured through the ECM term (β in equation 2). Results from our estimation are analyzed in the following section.

DATA AND EMPIRICAL RESULTS

We use data from 1961 to 2012[7] for our estimation. The base year for $RGDPPC_t$ is 2005, Inv_t is domestic private capital formation as a percentage of GDP, Gov_t is central government expenditure as a percentage of GDP, Inf_t is the GDP implicit deflator based inflation rate, $Open_t$ is the sum of exports and imports as percentage of GDP, $Demo_t$ is the accumulation of the polity index (which takes on a value between -10 for perfect autocracy and 10 for perfect democracy) since 1961 with a 1% annual depreciation (based on Gerring et al., 2005), Aid_t includes total official development assistance inflows as a percentage of GDP, and Co_t for the interactive takes on a value of 1 for 1983 onwards. All variables except Inf_t, $Demo_t$ and Co_t are expressed as a natural log. Data for $Demo_t$ is obtained from CSP, INCSR database. Other data is obtained from the World Bank database.

As noted earlier, the first step is to test for stationarity of the variables. The ADF test results are reported in Table 2 and show that all the variables are I(1) in levels and I(0) in first differences. The lag length of the underlying VAR is determined to be two lags by Schwarz criterion. The cointegration test shows that there is one cointegrating equation which is reported in Table 3. Based on these preliminary results, the ECM equation is estimated and results are presented in Table 4.

If the error correction term is negative (lies between 0 and -2), the long-run relationship is stable. Our results show a negative and statistically significant EC term which confirms a stable long term relation between growth and the right hand side variables. The coefficient of -0.19 indicates that about a fifth of the disequilibrium to a shock will be corrected each year which means adjustment takes approximately 5 years.

Table 4 reports both the long-run and short-run results. Our empirical results show that in the long-run, *investment* is a statistically significant positive determinant of growth. This is an expected result. However, we find that in the short run, investment has a negative albeit not statistically significant impact on growth. The other potential source of capital, *government expenditure* hinders growth according to our results. We find the variable has a statistically significant and negative impact on Ghana's growth in the long- and short- run. Perhaps this is related to concerns with rising deficits that are associated with higher government expenditures. These results support the argument for private investment rather than public investment for promoting growth.

The policy environment results are mixed. Unexpectedly, *inflation* is positively related to real GDP per capita in the long-run although the variable is not statistically significant. In the short-run however, inflation has an expected negative impact on growth. On the other hand, *trade openness* and *democratization* yield expected results. Trade openness is positive and statistically significant in the long- and short- run. Our results show in the long-run democratization has helped growth in Ghana. While the sign is positive for the variable in the short-run as well, it is not a statistically significant determinant of growth.

We find a negative long-run relationship between *aid* and growth although the relationship is not statistically significant. This contradicts the conclusion reached by Kargbo (2012) for Sierra Leone but supports that of Feeny (2005) for Papua New Guinea.

In the short-run the impact of aid on growth is positive, but not statistically significant. *Conditional aid* has a long-run positive and statistically significant impact on economic growth. However, the short-run effect is negative and statistically significant. Given that structural adjustment programs take a long-term view of growth, we conclude that conditional aid has a positive impact on growth in Ghana.

To better understand these results, we analyze Ghana's experience with aid and conditionality in the following sub-section.

Aid and Conditionality in Ghana

The benefit of conditionality is heavily debated because of the "knowledge problem" associated with policies. Information on need and the best use of aid in promoting growth is a challenging task by definition. This is made more difficult of the asymmetric information between donors and recipients (Prokopijević, 2007). Recipients have more reliable information related to the need for aid than donors, but it is the latter that controls the flow of aid (Williamson, 2009). They make decisions on the type, level and duration of aid (Prokopijević, 2007) which are all critical for the effectiveness of aid. However, these decisions are made on incomplete and unreliable information. As a result, aid may either be insufficient or flow into less desirable sectors. And as noted earlier, in the last decade or so, this task has become more challenging because of the changing objectives of aid from growth to poverty reduction and institutional development.

Conditionality has, not surprisingly, intensified from the 1980s onwards in Ghana. Martin (1991) notes that in Ghana's case, World Bank conditionality rose from 20 conditions in 1983 to 40-50 in 1988-1989 and the conditionality itself became much stricter. And, a 2006 report showed that 14 of 20 countries (including Ghana) that received World Bank loans in 2003-2005 had over 50 conditions and 3 of these countries (not Ghana) had more than 100 conditions (Eurodad, 2006). To examine the role of aid and changing conditionality in Ghana we consider three phases with different conditionality, phase I: 1983-1991; phase II: 1992-2000; and phase III: 2001- onwards. We discuss the reforms undertaken during these periods and highlight the main successes[8] below.

Phase I (1983-1991)

The years between 1983 to 1991 covers the period of Ghana's first major sustained economic reforms under the PNDC, the *Economic Recovery Program* (*ERP*) from 1983-1986, and *Structural Adjustment Program* (*SAP*) from 1986-1991. The reforms were supported by aid which began rising dramatically in this period (Figure 3). As noted earlier, the major sources of aid were the World Bank and members of the DAC. The focus of these programs was reversing earlier state-led industrialization policies (increasing private investment), fiscal discipline, devaluing the cedi and liberalizing trade (policies that came to be known as the Washington Consensus).

Success in trade liberalization during this period was achieved in two areas. First, despite the concerns that food aid may hurt the sector by falling prices, we see an increase of the share of food in exports and a decline in imports. The average share of food in exports rose from 71% prior to 1982 to 76% in this phase and the average share of food in imports fell from 16% to 11% over that same period (World Bank data). This may be because as Barret (1998) argues that food aid "relieves foreign exchange constraints" which may have led to imports of fertilizers and pesticides. And, these have been critical for improving productivity of farmers in Ghana (Kuwornu, et al., 2013). Also, devaluation (which was part of ERP) led to real depreciation of the cedi. This helped reduce the overvaluation of the currency (Opoku-Afari, 2011) which had created an anti-export bias earlier. There was an improvement in the current account position (Figure 7), although Ghana experienced rising trade deficits toward the end of the decade (Figure 8).

In this period, central government expenditure as a percentage of GDP declined in the 1980s from the previous two decades. Average government expenditure as a percentage of GDP fell from 12% prior to 1982 to 9% in this period (World Bank data). Thus, Ghana reduced fiscal deficits and in fact, recorded a surplus by the end of SAP (Tsikata, 1999). In turn, inflation fell compared with the previous decade (Figure 9).

Phase II (1992-2000)

Aid increased in 1990s (Figures 3 and 4) and conditionality intensified. Some reforms from the 1980s continued with with special attention to privatization (Tsikata, 1999) which had not been successful earlier.

Global initiatives to reduce poverty, for example, the Millennium Development Goals (MDG) and Heavily

Indebted Poor Countries (HIPC) initiative shifted the focus from growth to development. Moreover, donors

began questioning whether aid could help without institutional reforms. This led to an expanded list of condi-

tions, sometimes called the Augmented Washington Consensus, which included poverty reduction measures

(social safety nets, human resource development), and legal and political reform among others (Rodrik, 2001).

Since World Bank aid to Ghana increased substantially in this period, the country was subject to this intensi-

fied conditionality. Poverty declined in this period (Figure 10).

In phase II, trade liberalization efforts saw an improvement in diversification. The share of manufacturing

rose to 13% in this period from approximately 1% in the previous three decades (World Bank data). Also, ex-

port growth increased in this period (Figure 8). Ghana did not significantly reduce government spending this

period, but made some progress in privatization in this period. Of 300 public sector enterprises, only 30 were

privatized in the earlier reforms, while in this period, approximately 1/3 were privatized (Tsikata, 1999).

This phase was also the period of political reform. Democratization in Ghana came about because of a

"confluence of internal and external pressures" with donors providing the external pressure (Tsikata, 1999).

The hope was that democratization would improve policy-making. During the 1990s, Ghana was beginning its

experiment with democracy. Figure 11 which maps the autocratic and democratic scores for Ghana shows that

the 1990s marks a shift away from a mostly autocratic regime, although the country exhibited both democratic

and autocratic[9] characteristics during the 1990s. In addition, the CSP, INSCR rates countries on effectiveness

and legitimacy of four dimensions, security, political, economic and social for a total of 25 points (13 for ef-

fectiveness and 12 for legitimacy) computed as the State Fragility Index (SFI). A higher score implies greater

fragility. There was an improvement on both aspects of the SFI from 1995 until the end of that decade (Figure

12).

Phase III (2001 onwards)

Again, aid increased in the 2000s including in the form of debt forgiveness with Ghana's participation in

the HIPC initiative. While U.S. and UK were major donors this period saw the rise of new donors such as

Denmark and the Netherlands (World Bank data). In the 2000s, there have been global efforts such as the Paris Declaration, 2005 to improve aid effectiveness.[10] The work from the Paris Declaration has been integrated into Ghana's development frameworks. In addition, Ghana has developed strategic partnerships with donors to improve aid effectiveness. One such example is the Multi-Donor Budget Support (MDBS) Annual Review. The MDBS is a partnership between Ghana and 11 development partners[11] where the latter contribute resources through the government. In the annual review, partners and the government of Ghana monitor progress on achieving growth and poverty reduction.

Conditionality increased even more in this decade. The earlier decade's focus on poverty reduction continued and Ghana pursued anti-poverty reforms through the *Ghana Poverty Reduction Strategy* from 2003-2005 and *Growth and Poverty Reduction Strategy* from 2006-2009. Reforms during this period addressed familiar policies like macroeconomic stability, trade liberalization and private sector-led growth but also increasingly focused on gender and human resource development.

The earlier efforts continued to improve trade diversification with the share of manufactured goods in exports increasing in this period.[12] Also, the cedi had moved to a floating regime which was expected to help reduce misalignment, although concerns of overvaluation continued. And, although current account and trade deficits rose to "unsustainable" levels (Figures 7 and 8) Sissoko and Sohrabji (2012) show that Ghana's current account deficits are weakly sustainable. It also helps that average export growth (17%) exceeded import growth (15%) in this period (World Bank data).

While government spending continued to be high[13], it can be argued that this is related to anti-poverty measures and human resource development which were important reforms in this period. Ghana had reduced poverty rates (Figure 10) in the 2000s and was able to achieve the first MDG of halving poverty rates prior to the 2015 deadline. The focus on human resource development has led to improvements in education enrollment (UNDP, 2012) and life expectancy and infant mortality rates (Figures 13 and 14).

SUMMARY

Ghana has witnessed significant improvement in the economy over these three phases. GDP per capita rose and growth accelerated and stabilized since the mid-1980s (Figures 1 and 2). Democratization efforts were successful by the end of the second phase and according to an OECD (2011) report "Ghana continues to be politically stable, with a competitive multi-party political system". And the anti-poverty efforts in the third phase were successful in reducing poverty levels and helping Ghana achieve the MDG goal of halving poverty prior to 2015.

So why did conditional aid work in Ghana when it has failed elsewhere? We believe the answer lies in Ghana's growing leadership in the reform process. The first phase which stabilized the macroeconomic environment and put Ghana's GDP per capita on a healthy trajectory was possible because the Ghanaian government was able sustain reforms through aid (Tsikata, 1999). And, the conditionality associated with ERP came out of policies of the "Programme for Reconstruction and Development" introduced by Dr. Botchwey, Ghana's Secretary of Finance at the end of 1982 (Tsikata, 1999). This was true (although to a lesser extent) for the SAP as well because it continued the main ideas of the ERP. And, the initial collaboration between the World Bank and Ghana during the late 1980s related to the SAP was considered productive with the World Bank providing "quality macroeconomic analysis" and the Ghanaian team a "context" for the reform (Tsikata, 1999). Since conditionality arose from homegrown policies it reduced the knowledge problem that is typically associated with failed aid programs.

The political reforms of the 1990s which according to Tsikata (1999) may have "complicated the process of reform" did ultimately help improve Ghana's credibility once democratization was stabilized. This in turn helped Ghana take on a greater leadership role in aid effectiveness in the 2000s. For example, Ghana has been part of aid effectiveness efforts such as the MDBS initiative discussed earlier. By improving collaboration efforts Ghana is able to reduce the knowledge problem associated with aid programs.

CONCLUSION

Ghana's economic successes have coincided with rising aid and an increasingly complex conditionality environment. We find evidence that conditional aid has a positive and statistically significant impact on growth in Ghana. We argue that conditionality based on homegrown policies is an important factor in Ghana's success with aid. This is because homegrown policy-making reduces the knowledge problem. But, while they help, homegrown policies do not *eliminate* the knowledge problem. And, the growing complexity of aid objectives (and thus intensified conditionality) has exacerbated the knowledge problem.

Why has conditional aid been successful in Ghana? We believe the answer lies in another important effect associated with homegrown policy-making, *ownership of reforms*. Ownership is necessary for governments to sustain reforms even in the face of severe challenges which is critical to the success of reform programs (Killick et al., 1998; Johnson and Wasty, 1993; Kahler, 1992). Killick et al. (1998) and Lancaster (1999) show, ownership is a measure the dominance of government goals over donors' objectives. If government goals are subordinate to those of donors, sustaining reforms becomes much harder and hurts effectiveness of reforms (and thus aid which funds these reforms).

The Paris Declaration institutionalized collaboration between donors and recipients which shifted aid from *external* conditionality to *internal* conditionality and thus increases ownership of reforms. While Ghana needs more work in establishing ownership, the 2000s have made good progress in this area which explains the country's success in this decade.

However, Ghana continues to face challenges controlling fiscal balances and debt that can exacerbate macroeconomic instability. The discovery of oil raises concerns of the *resource curse*. And, export successes which are related to higher prices for cocoa and gold may not be sustainable. Although Ghana has seen increases in real GDP per capita and reduced poverty, much more work is necessary in these areas. And, inequality has increased. This puts more pressure to improve the success of aid programs. Ghana's growing ownership of reforms, gives cause to be hopeful and the country continues to make progress. The follow-up to the Paris Declaration was the Accra Agenda for Action, 2008 which shows Ghana's growing influence in the global aid

community. Ghana has also developed strategic partnerships with donors to improve effectiveness of aid

which shows a more collaborative relationship between the donors and Ghana. This should improve aid effec-

tiveness in the future.

REFERENCES

Ali, A.M., H.S. Isse and W. Peek (2009), A Sensitivity Analysis Approach on the Effect of Foreign Aid on Growth. *Journal of Applied Business and Economics*, 10(3): 97-110.

Alvi, E., D. Mukherjee and E.K. Shukralla (2008), Foreign Aid, Growth, Policy and Reform. *Economics Bulletin* 15(6): 1-9.

Armah, S. and C. Nelson (2008), Is Foreign Aid Beneficial for Sub-Saharan Africa? A Panel Data Analysis. *Working Paper*.

Barret, C.B. (1998) Food Aid: Is it Development Assistance, Trade Promotion, Both or Neither? *American Journal of Agricultural Economics*, 80: 566-571.

Barro, R.J. (1991), Economic Growth in a Cross-Section of Countries. *The Quarterly Journal of Economics*, 106 (2): 407-443.

Burnside, C. and D. Dollar (2000), Aid, Policies and Growth. *American Economic Review*, 90(4): 847-868.

Center for Systemic Peace, Integrated Network for Societal Conflict Research database.

Chenery, H., and S. Strout (1966), Foreign Assistance and Economic Development. *American Economic Review*, 66: 679–753.

Clemens, M.A., S. Radalet, R. Bhavnani and S. Bazzi (2004), Counting Chickens When

They Hatch: The Short-Term Effect of Aid on Growth. *Center for Global Development Working Paper* No. 44.

Dalgaard, C-J., H. Hansen, and F. Tarp (2004), On the Empirics of Foreign Aid and Growth. *Economic Journal*, 114(496): 191-216.

Doucouliagos, H. and M. Paldam (2008), Aid Effectiveness on Growth: A Meta Study. *European Journal of Political Economy*, 24(1): 1–24.

Easterly, W. (1999), The Ghost of Financing Gap Testing the Growth Model Used in the International Financial Institutions. *Journal of Development Economics*, 60(2): 423-438.

Eurodad (2006), World Bank and IMF Conditionality: A Development Injustice. Available at http://www.eurodad.org/uploadedfiles/whats_new/reports/eurodad_world_bank_and_imf_conditionality_report.pdf.

Feeny, S. (2005), The Impact of Foreign Aid on Economic Growth in Papua New Guinea. *The Journal of Development Studies*, 41(6): 1092 – 1117.

Ghana: Millennium Development Goals Report (2010). National Development Planning Commission/ Government of Ghana and the United Nations Development Programme Ghana.

Gerring, J., P. Bond, W. T. Barndt, and C. Moreno (2005), Democracy and Economic Growth A Historical Perspective. *World Politics*, 57:323-364.

Gomanee, K., S. Girma and O. Morrissey (2005), Aid and Growth in Sub-Saharan Africa Accounting for Transmission Mechanisms. *United Nations University-World Institute for Development Economics Research (UNU-WIDER) Research Paper* No. 2005/60.

Hansen, H and F. Tarp (2001), Aid Effectiveness Disputed. *Journal of International Development*, 12(3): 375-398.

ISSER (2013). The State of the Ghanaian Economy in 2012. University of Ghana, Legon.

Johnson, J.H. and S.S. Wasty (1993), Borrower Ownership of Adjustment Programs and the Political Economy of Reform. *World Bank Discussion Paper*, No. 199, World Bank: Washington DC.

Kahler, M. (1992), External Influence, Conditionality, and the Politics of Adjustment. In

S. Haggard, and R.R. Kaufman (eds.) <u>The Politics of Economic Adjustment: International Constraints, Distributive Conflicts, and the State</u>, Princeton University Press: Princeton NJ, 89-138.

Kargbo, P.M. (2012), Impact of Foreign Aid on Economic Growth in Sierra Leone Empirical Analysis. *United Nations University-World Institute for Development Economics Research (UNU-Wider) Working Paper* No. 2012/07.

Killick, T. with R. Gunatilaka and A. Marr (1998) <u>Aid and the Political Economy of Policy</u>

<u>Change</u>, Routledge: London and New York.

Kuwornu, J.K.M, D.M. Suleyman, D.P.K. Amegashie (2013) Analysis of Food Security Status of Farming Households in the Forest Belt of the Central Region of Ghana. Russian Journal of Agricultural and Socio-Economic Sciences, 1(13):26-42.

Lancaster, C. (1999), Aid Effectiveness in Africa: The Unfinished Agenda. *Journal of*

African Economies, 8(4): 487-503.

Leechor, C. (1994), Ghana: Frontrunner in Adjustment. In I. Husain and R. Faruqee (eds.) <u>Adjustment in Africa: Lessons from Country Case Studies</u>, Washington DC: The World Bank, 153-192.

Lesson, P.T. (2008), Escaping Poverty: Foreign Aid, Private Property, and Economic Development. *Journal of Private Enterprise*, 23(2): 39-64.

Lloyd, T., O. Morrisey and R. Osei (2001) Aid, Exports and Growth in Ghana. *Center for Research in Economic Development and International Trade Research Paper*, No. 01/01.

Martin, M. (1991), Negotiating Adjustment and External Finance: Ghana and the International Community, 1982-1989. In D. Rothchild (ed.) The Political Economy of Recovery, Boulder, Lynne Rienner.

Moyo, D. (2009), Dead Aid: Why Aid is Not Working and How There is a Better Way for Africa. New York: Farrar, Straus and Giroux.

OECD (2011) Ghana Report.

OECD, International Development Statistics Database.

Opuku-Afari M. (2011), Measuring the Real Effective Exchange Rate (REER) in Ghana. *Center for Research in Economic Development and International Trade Research Paper*, No. 04/11.

Osei, R.B. (2012), Aid, Growth and Private Capital Flows to Ghana. *United Nations University-World Institute for Development Economics Research (UNU-Wider) Working Paper* No. 2012/22.

Prokopijević, M. (2007), Why Foreign Aid Fails. Panoeconomicus, 1: 29-51.

Radelet, S. (2006), A Primer on Foreign Aid. *Center for Global Development Working Paper* No. 92.

Rajan, R. and A. Subramanian (2008), Aid and Growth: What Does the Cross Country Evidence Really Show? *Review of Economics and Statistics*, 90(4): 643-665.

Rodrik, D. (2001), The Global Governance of Trade -- As If Development Really Mattered. Available at http://www.is.gd/L4M267.

Sachs, J. (2005), The Development Challenge. *Foreign Affairs,* 84(2): 78-90.

Senadza, B., and A.D.A. Laryea (2012), Managing Aid for Trade and Development
Results: Ghana Case Study, *OECD Report*.

Sissoko, Y. and N. Sohrabji (2012), Current Account Sustainability of ECOWAS Countries. *African Finance Journal* 14(2): 1-22.

Sissoko, Y. and N. Sohrabji (2012), Current Account Sustainability of ECOWAS Countries. *African Finance Journal* 14(2): 1-22.

Tsikata, Y.M. (1999), Aid and Reform in Ghana. *Aid and Reform in Africa: Country Case Study Papers*, World Bank.

_____ (2001), Owning Economic Reforms A Comparative Study of Ghana and Tanzania. *United Nations University-World Institute for Development Economics Research (UNU-Wider) Working Paper* No. 2001/53.

UNDP (2012), 2010 Ghana Millennium Development Goals Report. Available at http://www.gh.undp.org/content/dam/ghana/docs/Doc/Inclgro/UNDP_GH_IG_2010MDGreport_18102013.pdf.

Williamson C.R. (2009), Exploring the Failure of Foreign Aid: The Role of Incentives and Information. *Review of Austrian Economics*, 23(1): 17 – 33.

World Bank, World Development Indicators Database.

Youngblood, C. (2004), Equilibrium Exchange Rate Framework. *Trade and Investment Reform Program, Improved Policy Reform and Financial Intermediation* USAID Contract No. 641-C-00-98-00229.

Table 2: Unit Root Tests		
Variables	**ADF – Levels**	**ADF – First Differences**
$RGDPPC_t$	0.18 [1]	-4.58[*] [0]
Inv_t	-1.46 [0]	-7.33 [0]
Gov_t	-0.003 [0]	-7.28[*] [0]
Inf_t	-2.42 [1]	-11.98[*] [0]
$Open_t$	-1.51 [1]	-5.08[*] [1]
$Demo_t$	-1.27 [1]	-3.13[*] [0]
Aid_t	-1.98 [0]	-6.76[*] [0]

Notes: ADF t-test statistics are reported for levels and first differences assuming an intercept term. Numbers in brackets denote lags. Maximum lags were set at 5 and lag length is determined using the Schwarz criterion. [*] indicates rejection of the null hypothesis of no unit root at 5% level

Table 3: Johansen Cointegration Test Results				
	Adj. Trace Value	Adj. Eigenvalue	Adj. Trace Value	Adj. Eigenvalue
No CEs	153.97[*]	53.60[*]	100.37[*]	35.94
At most 1 CE				

Notes: The cointegration test is conducted assuming an intercept in the cointegrating equation (CE) and the VAR. Adjusted values indicate that the statistics are multiplied by the small

$$\frac{T-pk}{T}$$

sample correction factor where T is the number of observations, p is the # of lags and k is the # of variables.

[*] indicates rejection of the null hypothesis of no cointegration at 5% level of significance.

Variable	Coefficients
Table 4: ECM Results (Dependent Variable is $RGDPPC_t$)	
Long-run estimates	
Inv_t	$0.31^* (0.05)$
Gov_t	$-0.14^* (0.06)$
$Infl_t$	$0.046 (0.06)$
$Open_t$	$0.19^* (0.04)$
$Demo_t$	$0.01^* (0.001)$
Aid_t	$-0.05 (0.04)$
$(Aid * SAP)_t$	$0.10^* (0.03)$
EC term	$-0.19^* (0.08)$
Short-run estimates	
$dRGDPPC_{t-1}$	$0.34^{**} (0.22)$
$dInv_{t-1}$	$-0.02 (0.04)$
$dGov_{t-1}$	$-0.11^{**} (0.06)$
$dInfl_{t-1}$	$-0.03^+ (0.03)$
$dOpen_{t-1}$	$0.10^* (0.04)$
$dDemo_{t-1}$	$0.001^+ (0.001)$
$dAid_{t-1}$	$0.02 (0.03)$
$d(Aid * SAP)_{t-1}$	$-0.05^{**} (0.03)$
R^2	0.42
R^2 Adj.	0.24

Notes: * and ** indicates statistical significance at 5% and 10% level of significance respectively. $^+$ indicates that although not statistically significant, exclusion of the variable would hurt the regression.

Figure 1: Real GDP Per Capita
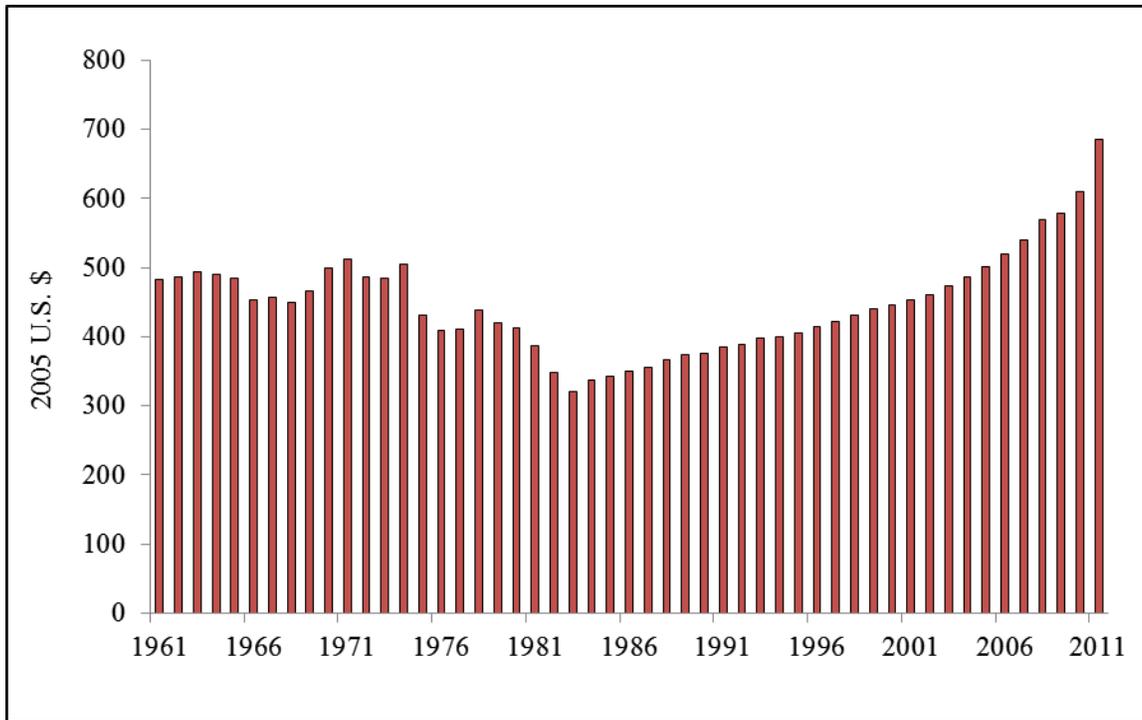
Figure 2: Real GDP Growth Rate
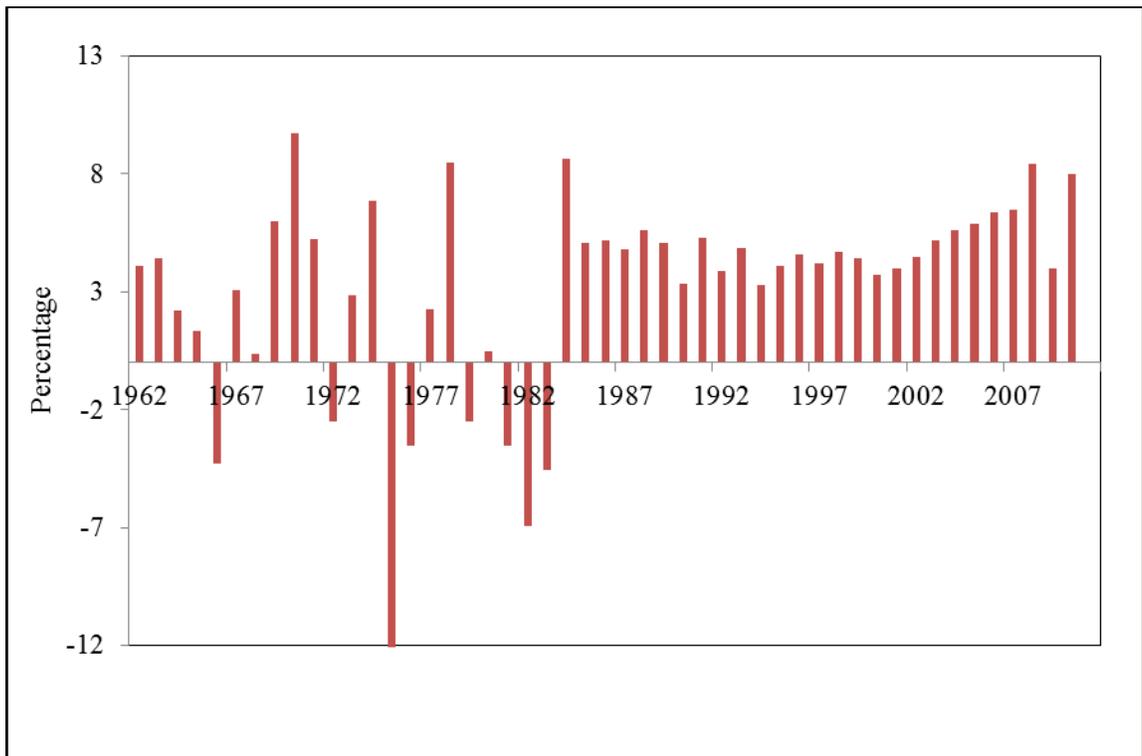
Figure 3: Level of Official Development Assistance
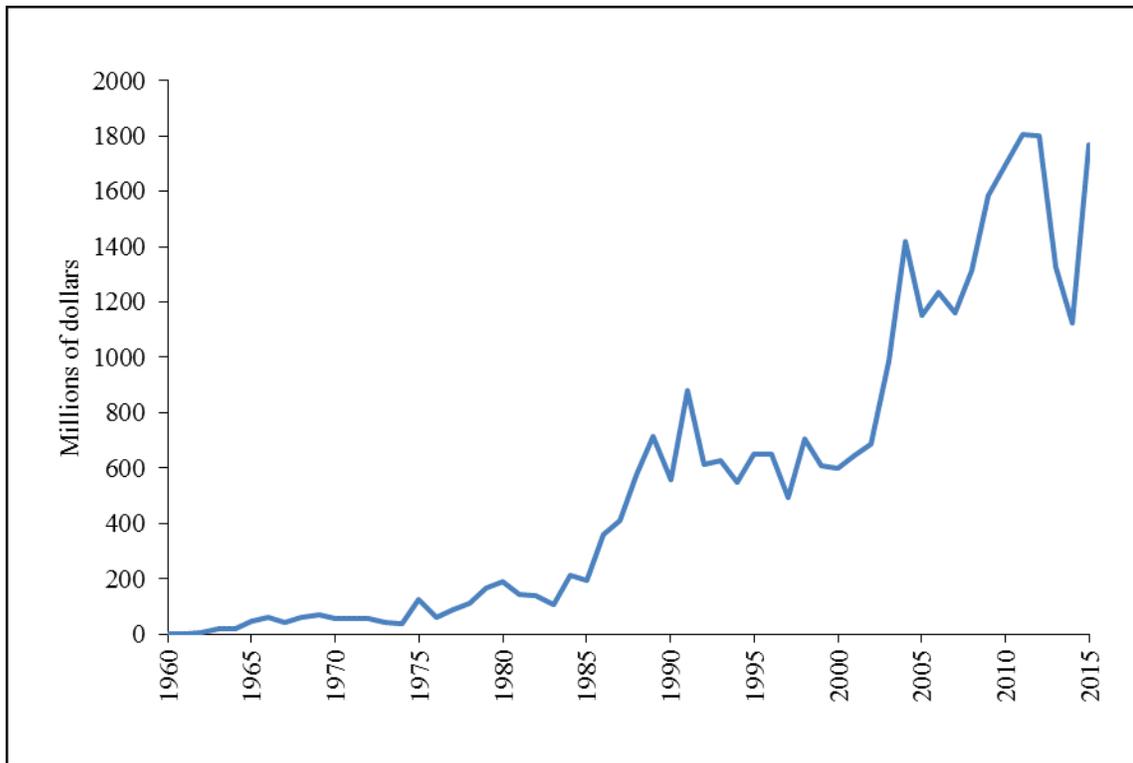
Source: World Bank Data

Figure 4: Official Development Assistance as a Percentage of GNI
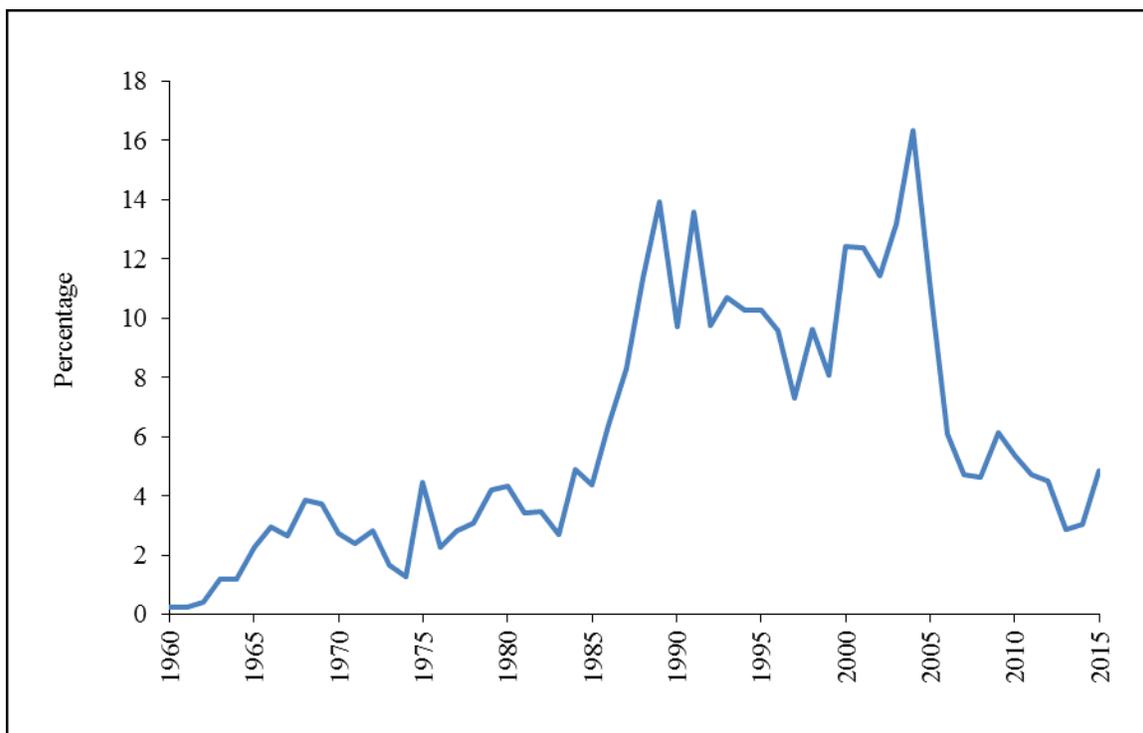
Source: World Bank Data

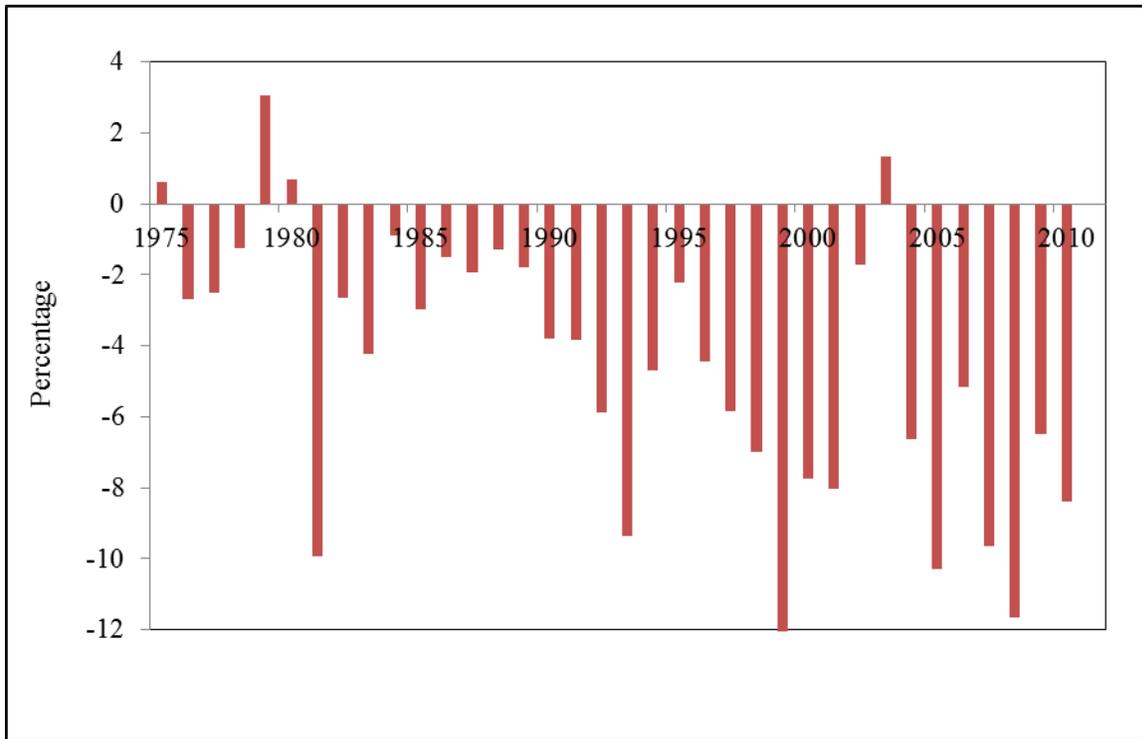**Figure 5: Official Development Assistance, IDA and DAC**
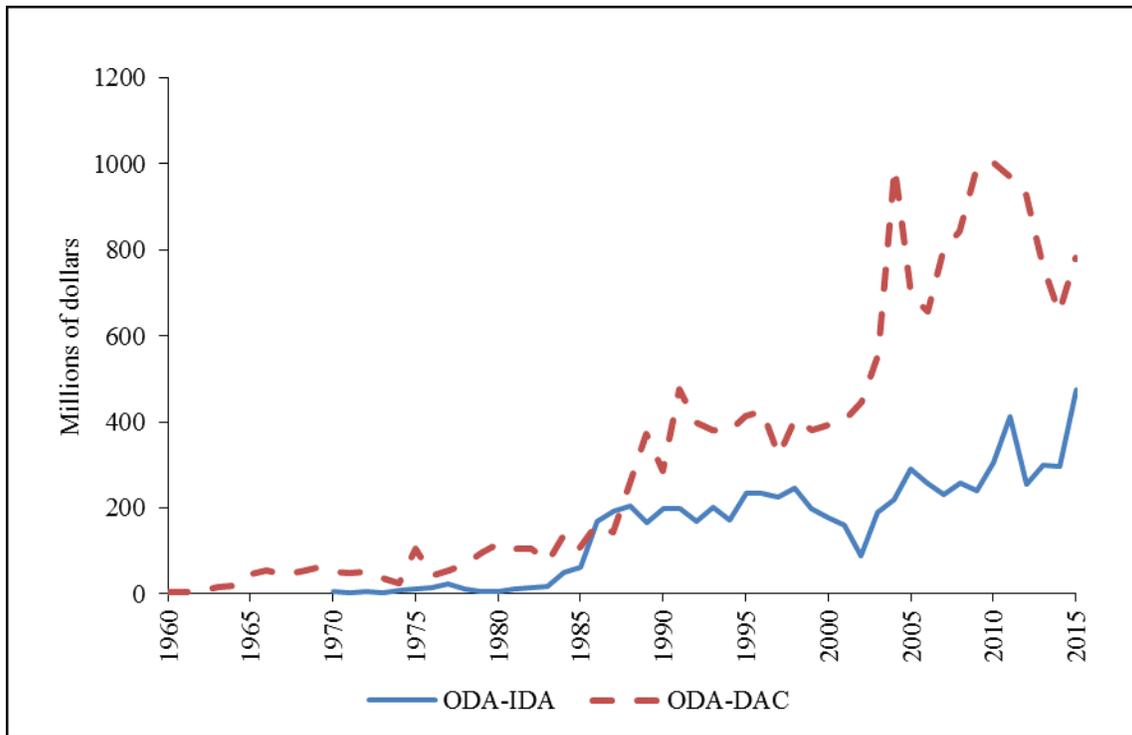
Source: World Bank Data

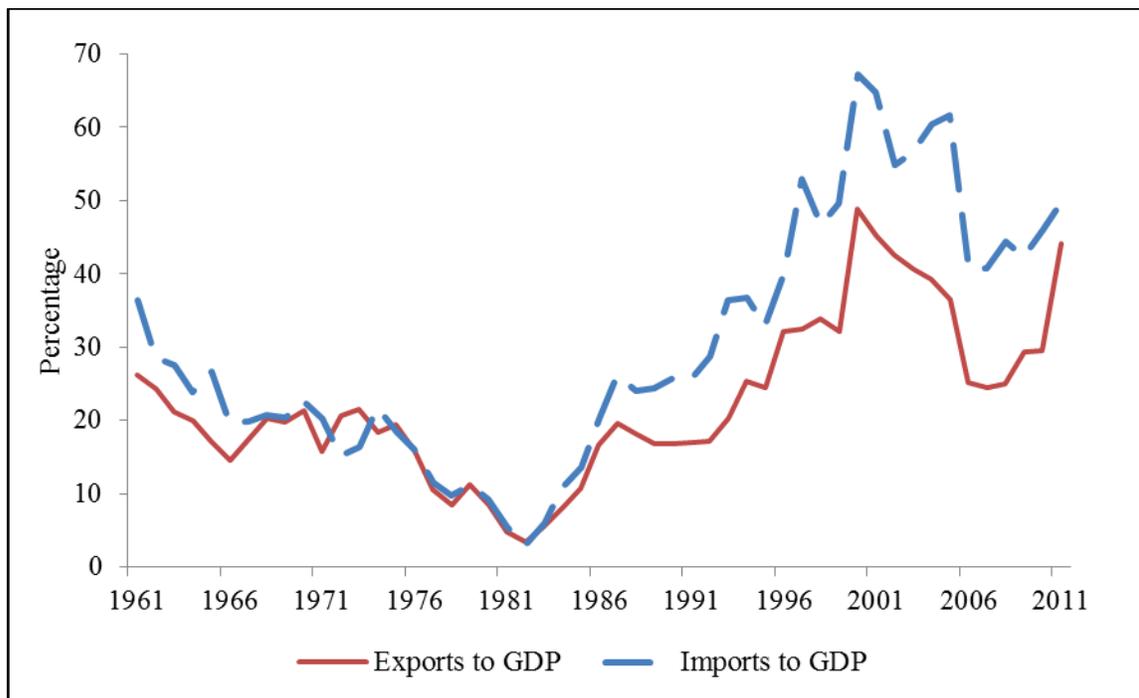**Figure 6: Official Development Assistance, U.S. and UK**
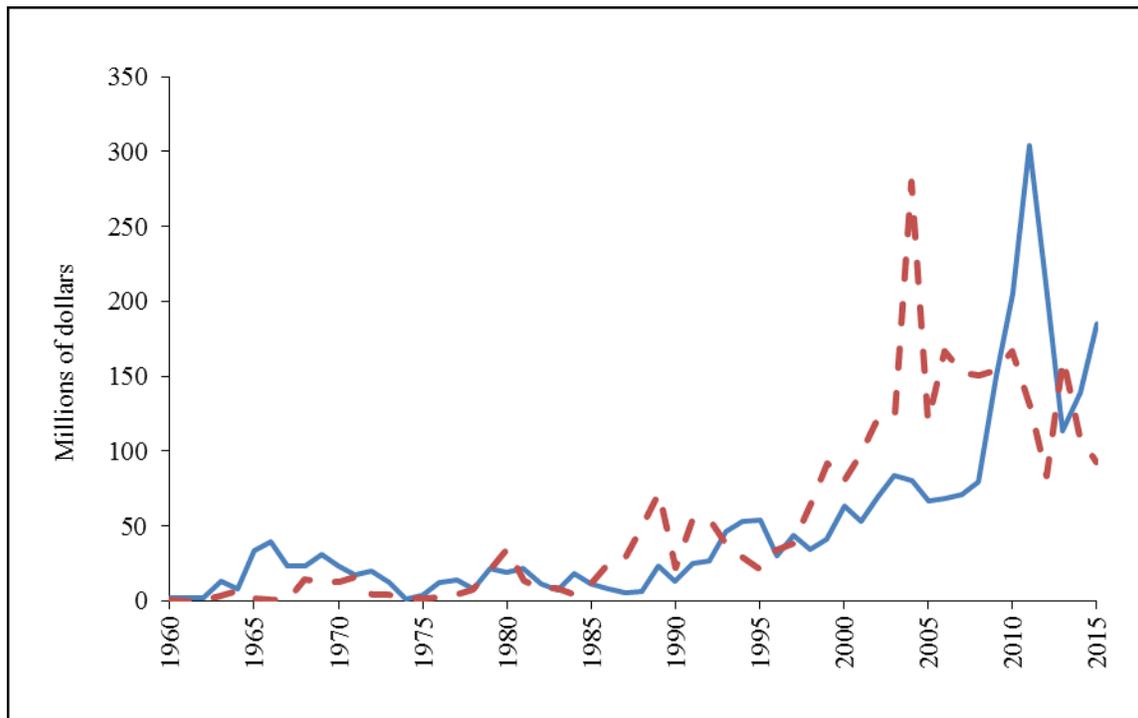
Source: World Bank Data

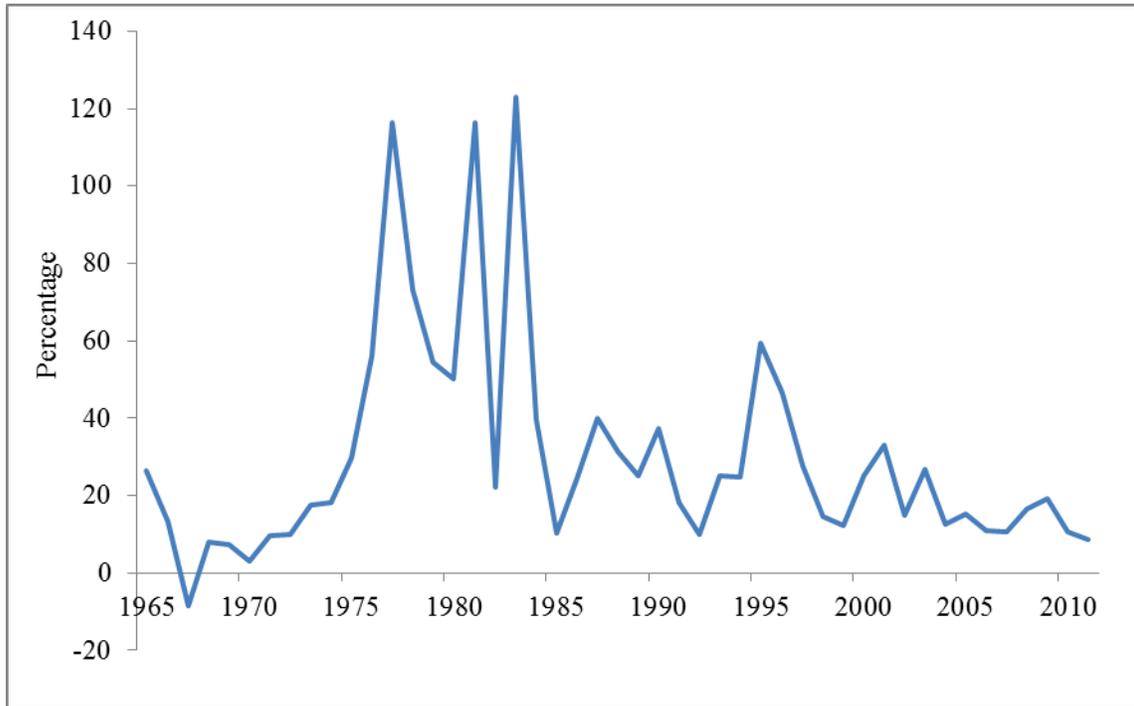**Figure 7: Current Account Balance as a Percentage of GDP**

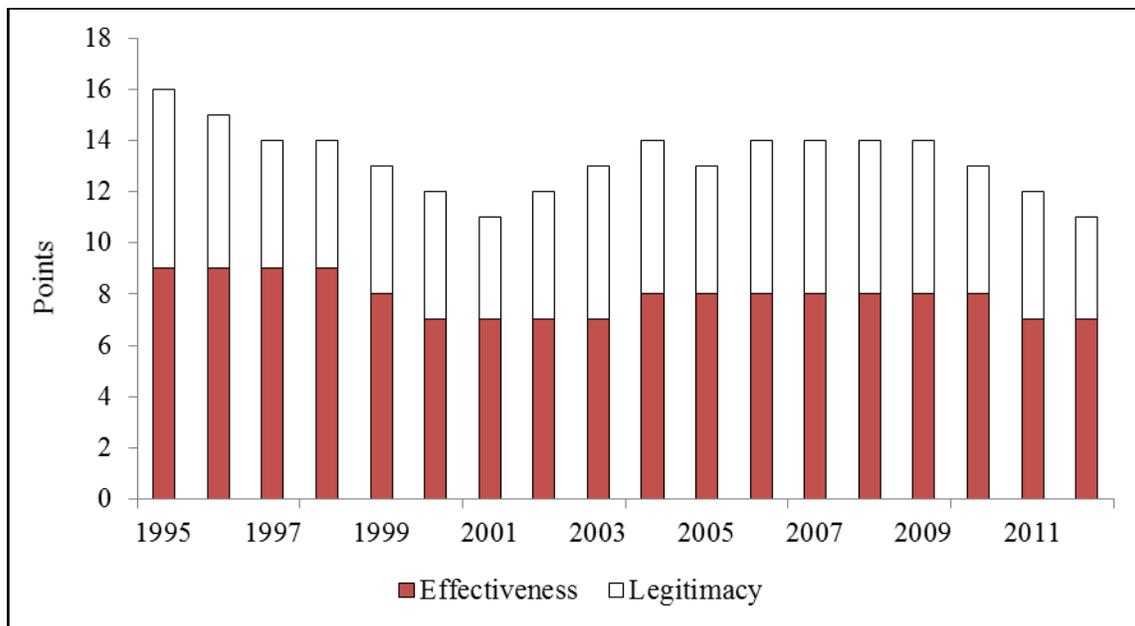**Figure 8: Exports and Imports as a Percentage of GDP**

Figure 9: Inflation Rate

Figure 10: Poverty Rate
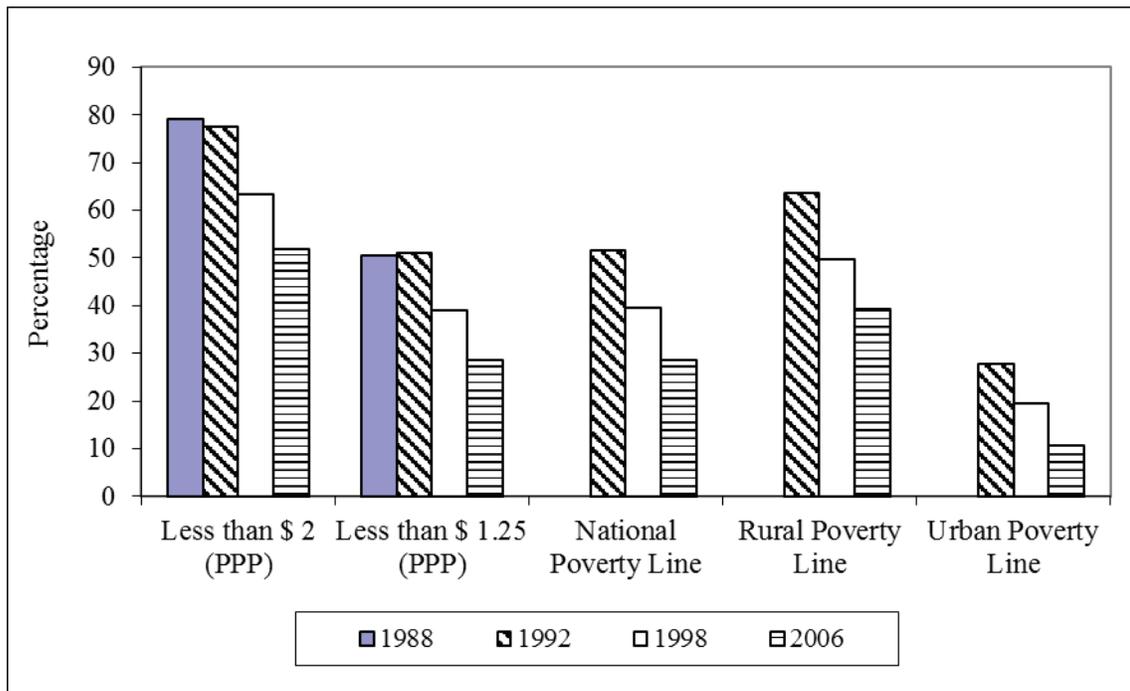
Figure 11: Polity Index
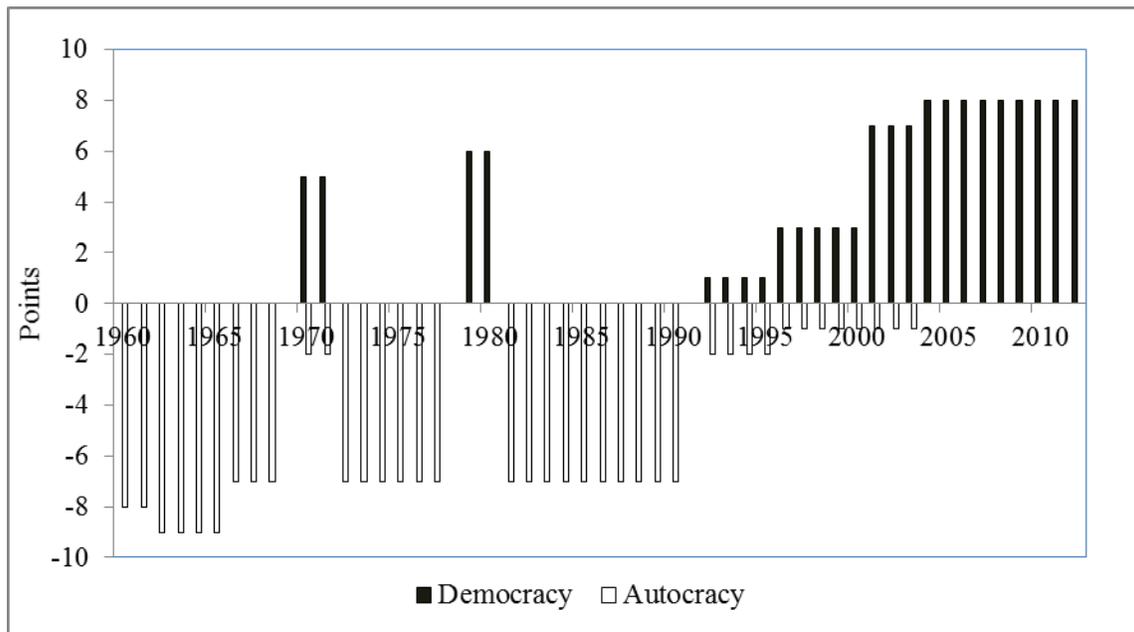
Notes: Democratic and autocratic scores range from 0 to 10, with 10 being the most democratic or autocratic.

Autocratic scores are multiplied by -1 for easier comparison.
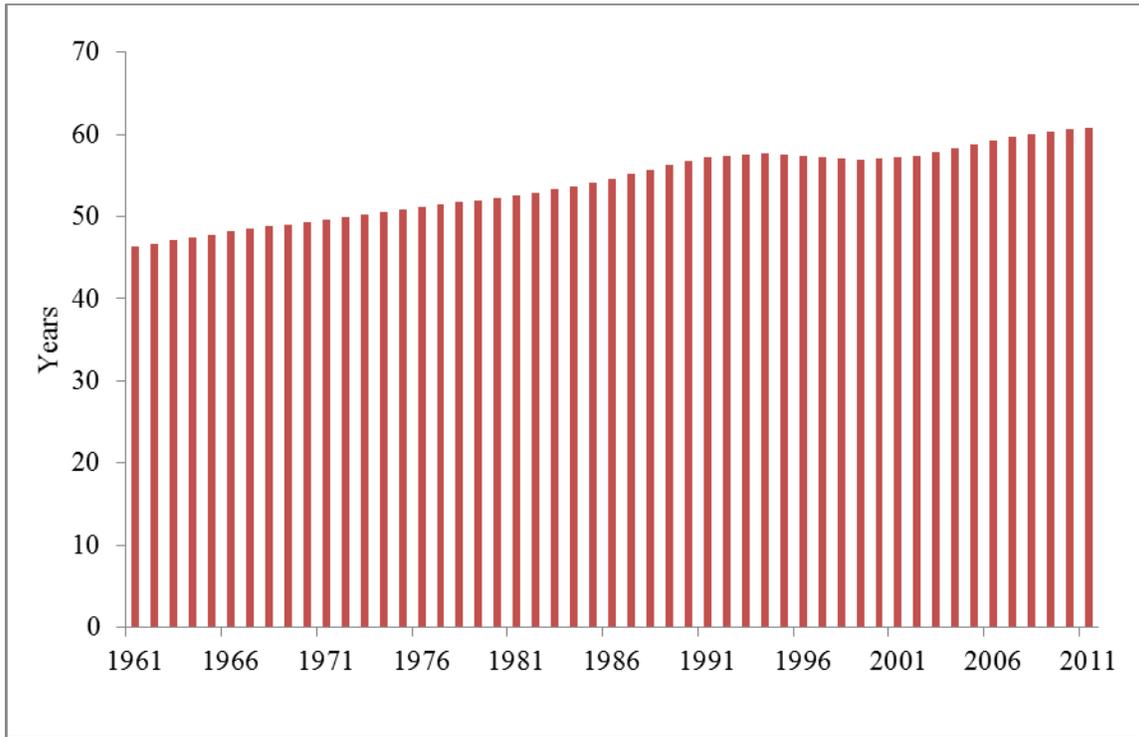
Source: Center for Systemic Peace, INSCR data

Figure 12: Fragility Index

Notes: Fragility scores (on four dimensions, economic, political, security, and social) range from 0 to 25,
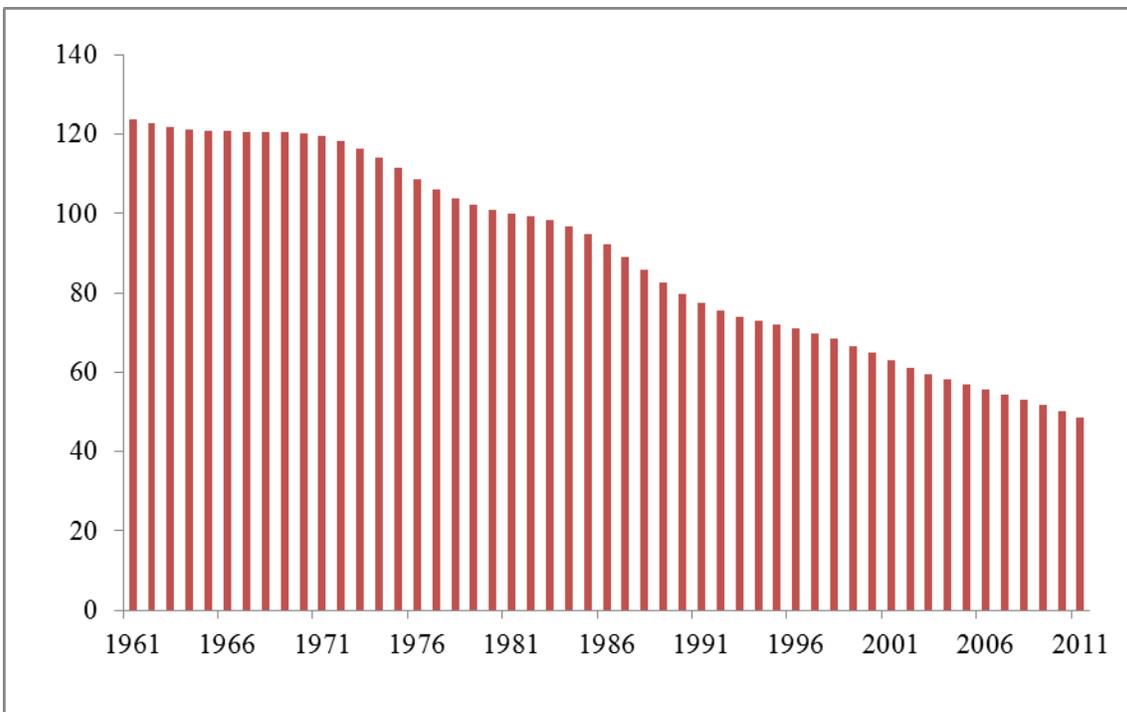
with 25 being the most fragile.

Source: Center for Systemic Peace, INSCR data

Figure 13: Life Expectancy at Birth

Figure 14: Infant Mortality (Per 1000 Live Births)

Notes:

[1] Aid effectiveness in Ghana has also been studied by Lloyd et al. (2001) but they investigate the effect of aid on growth in private consumption.

[2] This is similar and comparable to the ARDL estimation of Sierra Leone by Kargbo (2012) and Papua New Guinea by Feeny (2005).

[3] The World Bank provides development assistance through its two institutions, the International Bank of Reconstruction and Development (IBRD) and the International Development Association (IDA).

[4] The DAC, was formed in 1961 and consists of 29 members including Australia, Austria, Belgium, Canada, Czech Republic, Denmark, EU Institutions, Finland, France, Greece, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, the Netherlands, New Zealand, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, UK and U.S.

[5] Both primary and secondary education data is not available for most of the period under study.

[6] There is some overlap between aid and government expenditures, but leaving out either would lead to an omitted variable bias.

[7] As noted earlier, there is significant volatility in aid received between 2013 and 2015. Thus, we only focus our discussion on aid and growth until 2012.

[8] We acknowledge the failures in aid programs over this period. However, our focus is on what worked and hence leave the comprehensive analysis of Ghana's experience with reforms to others.

[9] The autocratic scores are multiplied by -1 for a more convenient comparison.

[10] The global aid community agreed upon five principles and twelve indicators to improve the effectiveness of aid and the OECD has conducted surveys on the progress of individual countries in 2006, 2008 and 2011. Ghana has made progress in some of the indicators although more work is necessary.

[11] Including African Development Bank, Canada, Denmark, EU, France, Germany, Japan, the Netherlands, Switzerland, UK and the World Bank.

[12] The average share of manufactured goods in exports was approximately 15% between 1996-2000 and jumped to 20% in the 2000s (World Bank data).

[13] Average annual government expenditure to GDP was 12% for this period (World Bank data).