

Linking Aid, Pro-Poor Public Spending and Poverty Reduction: A Cross Country Panel Analysis Using Eight Poverty and Well-being Indicators

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Abstract

Historically, the economic justification for aid-flows to developing countries is to reduce poverty, which can be applied through direct targeting of the poor or indirectly through economic growth or pro-poor public expenditure. This study investigates whether or not aid has produced the anticipated result in 144 developing economies using panel data analysis. Our variables of choice for measuring aid impact on poverty involve monetary and non-monetary poverty measures. Overall, Aid is good for poverty reduction; more so when institutional quality is controlled for. Secondly, for the analysis studying the poverty impact of aid via Pro-poor Public Expenditure (PPE), PPE was partially analysed as a function of aid, GDP and institutional quality (CPIA) using OLS in first differences. Evidence suggests that increase in aid does not lead to higher pro-poor public spending. In turn, pro-poor public spending is only good for the dollarized poverty measures, but not wellbeing. Consequently, institutional quality and absence of corruption is vital for aid effectiveness.

Keywords: Official Development Assistance, PPE, Poverty Reduction, Wellbeing, Institutional quality.

1. Introduction

The dual process of understanding the cause of poverty and the objective of devising strategies to ameliorate the scourge have been, and is still a central component of wider debates in development. In recent years, the objective of reducing poverty has moved to the forefront of the donor agenda. The declaration of the *Millennium Development Goals (MDGs)* and the launching of the so-called “*Comprehensive Development Framework*” (*CDF*) and *Poverty Reduction Strategies (PRS)* by the World Bank, constitute two pillars of these agendas. The formula of “doubling aid to reduce poverty by half” and many developmental objectives tied to these strategies are based on the assumption that aid is an effective instrument for poverty reduction (Guillaumont, 2009). Yet, the effectiveness of aid in reducing poverty and achieving other related developmental outcomes, including pre-conditions for poverty reduction, have been questioned for many decades (McGillivray, 2004). As Masud and Yontcheva (2005) rightly espoused, more than six decades since the first official development assistance (ODA) programs were instituted, the question of aid effectiveness remains an unresolved issue. While foreign aid is implicitly driven by the objective of promoting economic growth and stimulating poverty reduction, a parallel strand of literature on aid allocation has shown divergent views.

The impact of aid on economic growth has also been largely debated in recent years. The theoretical argument is that aid adds to investment and investment adds to growth and growth reduces poverty. From this perspective, there are several scholarly works on the macroeconomic impacts of aid but reported mixed outcomes and those that have identified significantly positive effects face heavy methodological criticism (Masud and Yontcheva 2005). At one end of the spectrum is the argument that aid contributes to growth and growth has a positive multiplier effect on poverty and welfare – “growth is good for the poor” (Dollar and Kraay, 2002). At the other end of the spectrum, the potential benefits of economic growth for the poor are undermined or even offset entirely by corruption and sharp increases in inequality that accompany growth (Weisbrot *et al*, 2000; Dollar and Kraay 2002). Some consider the effect via growth as the only way that aid can reduce poverty; as ‘donors cannot target their money on households, they can only affect poverty by raising aggregate income’ (Collier and Dollar, 2002:1483). Others have argued that most aid finances government spending, and if some of such expenditure enhances average welfare, then aid potentially benefits the poor via public expenditure rather than via growth (Gomanee, *et al* 2005a). Most cross-country econometric studies on aid effectiveness concluded that aid has no significant impact on growth, savings or investment. As suggested by Boone (1996), aid could be increasing consumption rather than investment, which would explain the disappointing results of studies on growth.

The broad objective of this paper is to contribute to the above debates, and to further test aid effectiveness based on an analytical and methodological framework that relates poverty reduction to public expenditure. However, the specific objective is to test the hypothesis that aid can improve the welfare of the poor whether through direct targeting or via the transmission channel of aid-financed public spending on social services as represented in pro-poor public expenditures (PPE). The general methodological approach of this study is cross-country regression; the study employs panel data covering a period of 33 years (1980-2012) for 144 developing countries.

The structure of the paper is as follows. The next section provides a review of related literature on the aid-poverty nexus looking at a variety of poverty indicators. This is followed by a section which presents a methodological framework. While the fourth section is concerned with discussion of results, the final section offers concluding remarks.

2. Literature Review

This section is divided into two; in the first is the theoretical framework underpinning the theoretical glories of aid and the template of achieving better results. This is followed by a review in the second section on empirical studies advanced by other scholars.

2.1 Theoretical Framework

The question of how will foreign aid effectively reduce poverty through pro-poor government expenditure has received divergent views from scholars throughout the world. As argued by Bauer (1971) and Friedman (1958), governments tend to use aid to increase transfers rather than reduce distortions in the economy. If such transfers are directed to the poor, aid will succeed in reducing poverty. Gomanee, *et al* (2005a) identified three ways through which aid can affect the welfare of the poor. Firstly is through direct projects funding (direct targeting) by donors in social sectors like health, education or sanitation. Secondly, the pro-poor public expenditure on skill acquisition and provision of capital can also be effective. Thirdly, aid can reduce poverty through government spending on social sectors that contribute to human welfare which traditionally comprises: Education (mainly primary), Health (mainly primary), Agriculture (mainly on training farmers), and building of rural roads and provision of more water sources among others. This study follows the format used by Gomanee, *et al* (2005a) which concentrated on the third transmission channel.

2.2 Review of Empirical Literature

Several empirical studies revealed that economic growth is important for poverty reduction (Ravallion and Chen, 1997; Dollar and Kraay, 2002, 2004; Besley and Burgess, 2003; Kraay, 2006). Although aid for growth is argued to be a necessary condition for poverty reduction, Le and winters (2001) maintain that aid should be optimally allocated to directly target the poorest and provide safety nets against poverty recurrences. Collier and Dollar (2002) argue that donors cannot target particular households directly; therefore, they can only help in poverty reduction by increasing aggregate income. This is because aid is viewed to increase growth, and growth is associated with lower levels of poverty. However, Gomanee, *et al* (2005b) contend that other means through which aid can affect poverty is through public spending on social sectors that enhance aggregate welfare, hence reducing poverty. Gomanee, *et al* (2005a) also maintain that aid may have no significant impact on growth but can still positively affect welfare.

Besides, recently influential papers have shown that aid on its own is ineffective, arguing that aid is only good for growth in countries with sound policies (Burnside and Dollar, 2000; Collier and Dollar, 2001, 2002). Opponents of 'aid-for-good-policies' have refuted such evidence (Hansen and Tarp, 2000, 2001; Lensink and White, 2000; Easterly, *et al*, 2004; Ram, 2004). Moreover, World Bank (2001) explains that policies and investments directed at reducing non-income dimensions of poverty may have more effect in improving the welfare of the poor than economic growth. Feeny (2003) also adds that in countries with high levels of inequality, growth has no significant effect on the poor as it does not ensure access to basic needs by some people living in absolutely remote areas.

Many papers have also attempted to look at aid effectiveness via government spending on social sectors and its impact on poverty and welfare. In other words, foreign aid has an indirect relationship with poverty and well-being through its impact on pro-poor expenditures of recipient countries (Mosley and Hudson, 2002; Gomanee and Morrissey, 2002; Mosley *et al*, 2004; Gomanee *et al*, 2005a, 2005b; Verschoor and Kalwij, 2006). To begin with, Boone (1996) examines the impact of aid on basic human development (HD) indicators – infant mortality, primary schooling and life expectancy – using panel data for 97 countries for the period 1971-90. He found no significant evidence that aid has an impact on the poor as measured by the selected HD indicators, arguing that aid mainly increases unproductive public consumption. Boone's results reveal that government expenditure rises by $\frac{3}{4}$ of the total aid received. There is also no significant impact of aid on infant mortality (henceforth IM), life expectancy and primary schooling ratios. A 10% rise in aid flows will reduce IM by only 2% over the decade; the coefficients of primary schooling and life expectancy are negative and not significant. Although aid increases the size of government, Boone (1996) argues that countries with more liberal political regimes tend to have better conditions for the poor. Therefore, liberalization induces governments to empower the poor and provide more basic services.

Following Boone (1996) on aid effectiveness on HD indicators, Masud and Yontcheva (2005) test the impact of two different kinds of aid (bilateral and NGO aid) on IM and illiteracy rates for 58 countries between 1990 and 2001 using the random effects model, 2SLS and the Generalized Method of Moments (GMM)

approaches. The results show that NGO aid significantly reduces IM and does so more effectively than official bilateral aid. The impact of aid on illiteracy is generally not significant. Their findings also report the absence of aid impact on PPE suggesting a substitution effect between bilateral aid and public social expenditures. However, they reveal that NGO aid does not reduce recipient governments' expenditure. They therefore conclude that NGO aid is more effective as a pro-poor initiative and that channelling aid through NGOs is a solution to positive aid effectiveness.

For 79 developing countries over the 1981-2004 period, Alvi and Senbeta (2012) also investigate aid effectiveness on poverty reduction by aid source and type using dynamic panel estimation technique and the GMM estimator. They reveal that aid has a significant poverty-reducing effect using monetary poverty indicators: For the headcount index, a one percentage point increase in aggregate aid will reduce the proportion of people living below the poverty line by 1.8%, 2.8% for poverty gap and 2.6% for squared poverty gap. Their findings on aid source and type tally with the results of Masud and Yontcheva (2005). To the authors, multilateral aid is likely to be more effective than bilateral aid; aid from multilateral sources have higher impacts on poverty than aggregate aid with 4% impact for headcount index at 5% significance level.

Kosack (2003) examined the impact of foreign aid on quality of life as proxied by Human Development Index (henceforth HDI) using data for three four-year periods of 1974-85; the author used OLS and then 2SLS for robustness checks. He explains that under the right circumstances, aid can invariably help to alleviate deprivation. He finds a positively significant relationship between aid and quality of life (as measured by HDI) when the recipient country is more democratic. His work would have been more robust using other wellbeing indicators like IM or life expectancy to reinforce findings. Also, the data period ends at 1985; more up-to-date data may have also determined what results to be obtained. The positive aid impact on HDI revealed by Kosack (2003) can also be as a result of the consistent increase in aid flows to countries with democratic regimes. More so, Alesina and Dollar (2000) provide evidence that countries that democratized received 50% increase in aid afterwards. Thus the positive aid-democracy correlation realized by Kosack (2003) can be related to the aid surge on typically democratizing countries.

Considering aid as an endogenous variable, Bahmani-Oskooee and Oyolola (2009) adopt fixed effect models and the 2SLS estimation techniques by instrumenting aid with population, IM, and donor interests. They studied the impact of foreign aid on poverty using panel data from 49 countries for the period 1981 to 2002 with only headcount ratio as a proxy for poverty. They found that poverty is effectively reduced through aid having a 35% reducing effect on the number of people living below \$1 a day at 10% level of significance. In a study by Gomanee and Morrissey (2002), panel data for 57 countries between 1980 and 1998 was used to test the hypothesis that the wellbeing of the poor can be improved through public expenditure allocation induced by aid. The authors employed a residual generated regressor which includes indirect effects of aid on the poor, hence, specifying a random effects model to test their hypothesis. Because comparative data on poverty levels are scarce, they also used two welfare indicators. They found that variations in income per capita and social spending explain about 57% of variations in poverty levels. Thus, higher social spending on education and health has a favourably significant impact on poverty. They conclude that IM rates are more responsive to social expenditures than the HDI having twice as much a positive effect.

For the data covering 55 countries over the period 1980-98, Verschoor and Kalwij (2006) also posit that aid contributes to pro-poor growth through increase in social expenditure in a recipient government's budget share. Testing the factors affecting the share a government allocates to social service expenditures, the authors found that aid increases this share; and hence promotes pro-poor growth – 1% increase in total aid leads to 0.25% increase in the share of PPE allocation. This increase in budget share on social services tends to increase income elasticity of poverty and IM. They add that social spending and policies which promote HD enables beneficiaries to make use of economic opportunities, hence, an increase in income elasticity of poverty. In other words, they suggested that poverty impact of aid is realistically attainable when aid is allocated to governments that promote widespread HD. Verschoor and Kalwij (2006) conclude that economic growth in countries that spend more on social services and receive more aid tend to have positive welfare outcomes. Another recommendation by the authors is that aid channelled through NGOs committed to the poor's services can contribute to increase in the degree of responsiveness of IM rate to income growth.

Gomanee *et al* (2005a), the researchers examine the effect of aid on aggregate welfare for 104 recipient countries using IM and HDI as welfare indicators. The data set covers an unbalanced panel of four four-year and one five-year period averages over 1980-2000. They adopted the fixed effect estimator to account for country specific features and also considered sub-sample estimates for low income and middle income countries. For the full sample, they find that aid has a direct effect on welfare or indirectly through growth with no evidence showing that aid operates via public spending. For the HDI estimates, a 10% increase in lagged aid is associated with an approximately 2% increase in HDI when full sample is considered. Aid is positively significant in all regressions and the PPE index is not in low income economies when sub-sample is considered. In middle income countries however, all variables appeared significant – higher HDI is associated with higher

PPE. For the IM results, PPE appeared not significant irrespective of the sample or income levels under consideration, showing that increase in PPE is not associated with lower IM for the economies under study. The authors however reveal that aid helps reduce IM because a 10% increase in aid can help reduce IM by 4% when full sample is considered. Nevertheless, the sub-sample estimates show that aid impact on IM is significant but weak in low income countries and not significant at all for middle income countries. Accordingly, Gomane, *et al* (2005a) declare that aid is significant for improving aggregate welfare especially in low income countries. The results for HDI were much more robust than those of IM; their findings therefore show aid having a direct impact on welfare or through growth effects but not through PPE.

3. Data and Methodology

Unbalanced panel data from 144 developing countries for the period 1980 to 2012 was employed as sample population. Since not all data are available on the variables for the selected countries in all periods, the actual sample size used in the regressions is considerably smaller. Also, because simple OLS regressions do not tell us about changes in poverty as a result of aid-giving which could lead to inconsistency or generation of biased estimates, this paper uses OLS in first differences to account for unobserved country-specific effects. Moreover, this technique will reveal how changes in aid flows have led to changes in poverty levels across countries over time. All variables have been logarithmically transformed for ease of results interpretation in form of elasticities as well as to have equivalent measurements for the respective variables. Three aid proxies and eight poverty indicators have been selected for this research (*See appendix A for the choice of variables, definitions and sources*). One-period lagged aid levels have been taken to correct for endogeneity concerns because more aid resources are allocated to poorer countries. Moreover, this study used lagged aid values because the effects of aid flows on the poor may not be visible immediately. The researcher also re-ran the selected models using period averaged data in order to reduce business-cycle effects and measurement errors as well as perform robustness checks. Since it is often expected that period averages should be in multiple of the total years in a sample, three-year averages are taken for the sample.

Traditionally, the OLS regression method suggests that the best way to choose *estimators* for population regression function (PRF) will be for b_1 and b_2 . The method further suggests that β_1 and β_2 should be chosen in such a way that the residuals sum of squares (RSS): $\sum_i e = \sum (Y_i - Y)^2 = \sum (Y_i - b_1 - b_2 X_i)^2$. How the values are determined involves the technique of differential calculus. Without going much into details, it can be shown that the value of b_1 and b_2 that actually minimize the RSS are obtained by solving the following two simultaneous equations:

$$\sum Y_i = nb_1 + b_2 \sum X_i \dots\dots\dots(1), \text{ \& } \dots \sum Y_i X_i = b_1 \sum X_i + b_2 \sum X_i^2 \dots\dots\dots(2)$$

The possible result to be obtained is $b_1 = Y - b_2 X$ which the estimator of the population intercept, β_1 is. The sample intercept is thus the sample mean value of Y minus the estimated slope times the sample mean value of X where $b_2 = \frac{\sum x_1 y_i}{\sum_i x^2} = \frac{\sum (X_1 - X)(Y_1 - Y)}{\sum (X_1 - X)^2} = \frac{\sum X_1 Y_i - nXY}{\sum_i X^2 - nX^2}$ which is the estimator of the

population slope coefficient, β_2 ... In another form, the model is expressed as: $Y = \beta_0 + \beta_1 X_i + \beta_2 X_i \dots\dots\dots u$
 The same experiment is applied for this study. Here the estimators for *PPE*, *Aid*, *CPIA* and *GDP* or β_1 , β_2 , β_3 , and β_4 were measured interchangeably particularly to capture the power of influence of two or more variables on another. Specifically, the model provides an organized set of economic indicators or agents explaining the inter relationship that exist among series and it takes the form:

Model A

Equation(1).....POV = B₀ + B₁Aid_{it} + B₂PPE_{it} + B₃GDP_{it} + u_{it}

Equation(2).....POV = B₀ + B₁Aid_{it} + B₂PPE_{it} + B₃GDP_{it} + B₄CPIA_{it} + U_{it}

Model B

Equation(3).....PPE = B₀ + B₁Aid_{it} + B₂GDP_{it} + B₃POP_{it} + B₄IM_{it} + u_{it}

Equation(4).....PPE = B₀ + B₁Aid_{it} + B₂GDP_{it} + B₃POP_{it} + B₄IM_{it} + B₅CPIA_{it} + u_{it}

Equation(5).....POV = B₀ + B₁PPE_{it} + B₂GDP_{it} + u_{it}

On the one hand, model A aims to examine the direct impact of aid on poverty and will consider two equations. Equation 1 estimates poverty regressions with aid and *PPE* as the variables of interest. Income variable is the GDP as we would expect it to have positive effects on the poor. Furthermore, equation 2 is an extension of equation 1 which controls for institutional quality as measured by the CPIA Public Sector Management and

Institutions Cluster Average. This study intends to examine whether controlling for institutional quality will positively affect poverty and influence the performance of our variables of interest.

On the other hand, model B will test the hypothesis that social spending is a transmission mechanism through which aid can impact on poverty. In equation 3, my econometric approach considers the determinants of PPE to be Aid, GDP per capita, population growth rate and IM in lagged periods. Equation 4 is an extension of equation 3 with the inclusion of the CPIA score. Equation 5 is the second part of model B to be estimated; it will examine the links between PPE and poverty. First, what is the impact of aid on PPE as estimated by equations 3 and 4 without and with institutional quality respectively? Second, what is the impact of PPE on poverty reduction as estimated by equation 5? If both estimations (*equations 3 and 5 or equations 4 and 5*) appear significant, then we can safely conclude that aid has a poverty-reducing impact through pro-poor public expenditure. In other words, our conclusions on the indirect links between aid and poverty via PPE will be based on results obtained from equations 3 and 5 OR equations 4 and 5 respectively (*Remember that each regression was run twice, one for the yearly data set and the other for the three-year averaged data set*).

3. Discussion of Results⁴

This research reveals that aid has little impact on poverty in the absence of good institutional quality. Without the institutional quality measure (CPIA), aid is not significant in monetary poverty reduction. My results do not support the findings of Alvi and Senbeta (2012) who suggested that aid helps in reducing monetary poverty when institutional quality is not included in the model. For non-monetary measures, a 1% point increase in aid (ODA/GNI) will in fact approximately increase IM, CM and MPI by 0.002, 0.001 and 0.41 log points respectively. The second aid measure (ODA/GOV) reinforces the findings of the ODA/GNI variable. ODA per capita has little or no poverty-reducing effect as the results suggest. Favourably, aid is good for human development as an increase in aid (ODA/GNI) will increase the HDI by 0.0009 log points; the second aid proxy (ODA/GOV) reports a very similar magnitude. This supports the findings of Kosack (2003). However, aid per capita shows no significance in this regard. The result of this study indicates that GDP per capita appears to be a significant determinant of poverty and wellbeing almost in all the regressions. PPE has significant effect in reducing monetary poverty measures rather than measures of wellbeing.

The second part of the regression results (*for model B*) suggests no significant effect of aid on PPE. If it does have a significant effect, the variables of interest do not show the expected signs. Overall, my conclusions are in line with the findings of Gomanee, *et al* (2005a) where they find direct effect of aid on poverty and wellbeing with very little evidence that aid operates on poverty through PPE. However, the results obtained here are in contrast with the findings of Mosley *et al* (2004) and Gomanee *et al* (2005b) which may likely be as a result of the choice of variables.

This study further re-analysed the data using three-year period averages. The results of the three-year averaged data were not very different from the yearly data regression results. On one hand, the period averaged data results estimating the *direct effect* of aid on poverty are similar to those obtained for the yearly data set.

On the other hand, the period averaged data set results examining the *indirect effects* of aid on poverty through PPE reveal no significant evidence that aid affects PPE irrespective of the aid variable under consideration. More so, the variables still do not carry the expected signs as in the yearly data set even after controlling for institutional quality in the model. On the effect of PPE on poverty, only poverty headcount and poverty gap at \$2 a day poverty measures entered significantly. In line with theory, increase in GDP per capita matters for poverty reduction having high level of significance. With the results obtained from equations 3 and 4, we cannot be confident that aid affects pro-poor public expenditures. Hence, we are unable to make valid conclusions in this case using the period averaged data set.

5. Summary, Conclusions and Recommendations

The aim of this research was to examine the nature and magnitude of the relationship between aid, PPE and poverty. Panel data for 144 developing economies for 33 years over the period 1980 to 2012 was utilized. Three-year averaged data was also utilized in the analyses; this reported similar results as the yearly data set. The research work used OLS regressions in first differences as a technique for panel data estimation.

The results show that increases in aid help to reduce headcount ratio and poverty gap at \$1.25 and \$2 a day monetary poverty measures as well as the HDI with no significant evidence on IM, CM and MPI. These results were realized due to the inclusion of the CPIA score of institutional quality and absence of corruption. Without the CPIA score, aid had little or no effect on poverty and wellbeing. While investigating the effects of aid on poverty via PPE, this research finds no evidence that aid increases PPE even when the institutional quality was controlled for. In fact, the only significant evidence found was through ODA per capita as a proxy for aid.

⁴ Due to the comprehensive nature of the analyses conducted, the tables of results could not be presented here. However, full details of results with tables are available on request from the author.

Contrary to expectations, the findings reveal a negative relationship between aid per capita and PPE; this research therefore suggests that aid through PPE only worsens poverty, this can be due to poor institutional quality and lack of commitment on the part of the government towards reducing poverty; the poorest of the populace are neglected in poverty initiatives. As expected, PPE exhibits a negative relationship with monetary poverty. However, no significant evidence of PPE effects on wellbeing measures was recorded. As such, this research work infers that increases in aid per capita reduce PPE and that reduction in PPE may adversely affect monetary poverty with no such evidence on wellbeing measures. In general, my results are in line with Gomane *et al* (2005a) who find much more robust results for HDI than for IM, finding little or no evidence that aid operates via PPE. Across all regressions, the results on GDP per capita are in conformity with the common theory that increase in GDP per capita is useful for poverty reduction and wellbeing improvement.

References

- Alesina, A., and D. Dollar (2000) "Who Gives Foreign Aid to Whom and Why?" *Journal of Economic Growth*, 5: pp. 33–63.
- Alvi, E. and A. Senbeta (2012) "Does Foreign Aid Reduce Poverty?" *Journal of International Development*, 24: 955–976.
- Bahmani-Oskooee, M. and M. Oyolola (2009) "Poverty Reduction and Aid: Cross-Country Evidence" *International Journal of Sociology and Social Policy*, 29: 264-273.
- Bauer, P.T. (1971) *Dissent on Development*, Weidenfield and Nicholson, London.
- Besley, T., and R. Burgess (2003) "Halving global poverty" *Journal of Economic Perspectives*, 17(3):3-22.
- Boone, P. (1996) "Politics and the Effectiveness of Foreign Aid", *European Economic Review* 40:289-329
- Burnside C. and D. Dollar (2000) "Aid, Policies, and Growth", *American Economic Review*, 90: 847–868
- Collier P. and D. Dollar (2001) "Can the World Cut Poverty In Half? How Policy Reform and Effective Aid Can Meet International Development Goals", *World Development*, 29(11): 1787–1802.
- Collier P. and D. Dollar (2002) "Aid Allocation and Poverty Reduction" *European Economic Review*, 46: 1475–1500.
- Dollar, D. and A. Kraay (2002) "Growth is good for the poor", *Journal of Economic Growth*, 7: 195–225.
- Easterly W., R. Levine and D. Roodman (2004) "New Data, New Doubts: a Comment on Burnside and Dollar's Aid, Policies, and Growth", *American Economic Review*, 94: 774–780.
- Friedman, M. (1958) "Foreign Economic Aid", *Yale Review* 47:500-516.
- Gomane, K. and O. Morrissey (2002) "Evaluating Aid Effectiveness against a Poverty- Reduction Criterion" *Prepared for the DESG conference*, Nottingham, April 2002.
- Gomane, K., O. Morrissey, P. Mosley, and A. Verschoor (2005a) "Aid, Government Expenditure, and Aggregate Welfare", *World Development*, 33(3): 355–370.
- Gomane, K., S. Girma, and O. Morrissey (2005b) "Aid, Public Spending and Human Welfare: Evidence from Quantile Regressions", *Journal of International Development*, 17: 299–309
- Guillaumont, P. (2009) "Aid effectiveness for poverty reduction: macroeconomic overview and emerging issues" *A report for the Department of Economic and Social Affairs (DESA)*, Division of Social Development, United Nations.
- Hansen, H and F. Tarp (2000) "Aid effectiveness disputed", *Journal of International Development*, 12: 375–398.
- Hansen, H and F. Tarp (2001) "Aid and growth regressions", *Journal of Development Economics*, 64: 547–570.
- Knack, S. and Keefer, P. (1995) "Institutions and economic performance: cross-country tests using alternative institutional measures", *Economics and Politics*, 2: 207-27.
- Kosack, S. (2003) "Effective Aid: How Democracy Allows Development Aid to Improve the Quality of Life" *World Development*, 31(1): 1–22.
- Kraay, A. (2006) "When is growth pro-poor? Evidence from a panel of countries", *Journal of Development Economics*, 80: 198-227.
- Le, T. H. and P. Winters (2001) "Aid Policies and Poverty Alleviation: The Case of Viet Nam" *Asia-Pacific Development Journal*, 8(2): 27-44.
- Lensink R. and H. White (2000) "Policy Arena Aid Allocation, Poverty Reduction and the Assessing Aid Report", *Journal of International Development*, 12: 399–412.
- Masud, N. and B. Yontcheva (2005) "Does Foreign Aid Reduce Poverty? Empirical Evidence from

Nongovernmental and Bilateral Aid”, *IMF WP/05/100*.

- McGillivray, M. (2004) “Is Aid Effective?”, *Institute for Development Economics Research (WIDER) of the United Nations*, University in Helsinki, Finland. Available at: www.oecd.org/dev/34353462.pdf. Accessed on: 04/09/2013.
- Mosley, P. and J. Hudson (2002) “Aid, poverty reduction and the new conditionality”, Universities of Nottingham and Sheffield: DFID Pro –Poor Growth Programme occasional paper 5.
- Ram, R. (2004), "Recipient Country's 'Policies' And the Effect of Foreign Aid on Economic Growth in Developing Countries: Additional Evidence," *Journal of International Development*, 16 (2):201–211.
- Weisbrot M., B. Dean, N. Robert and N. Gila (2000) “Growth May be Good for the Poor - But are IMF and World Bank Policies Good for Growth?”, *Centre for Economic and Policy Research*, University of Nottingham: CREDIT Research Paper 03/01.

Appendix A: Variable Definitions and Sources

Table 1: Variable Definitions and Sources

Definition	Measurement	Abbreviation	Data Source
Aid	Net ODA received (% of GNI)	ODA/GNI	Word Bank, World Development Indicators
Aid	ODA as a percentage of total government spending	ODA/GOV	Word Bank, World Development Indicators
Aid	Net ODA received per capita (current US\$)	ODAPC	Word Bank, World Development Indicators
Income	GDP per capita, PPP (constant 2005 international \$)	GDPPC	Word Bank, World Development Indicators
Education Spending	Public spending on education, total (% of government expenditure)	Eduspending	Word Bank, World Development Indicators
Health Expenditure	Health expenditure, public (% of government expenditure)	Healthexp	Word Bank, World Development Indicators
Pro-poor Public Expenditure	The sum of Education Spending and Health Expenditure	PPE	Word Bank, World Development Indicators
Poverty	Headcount at \$1.25 a day (PPP) (% of population)	HC1.25	Word Bank, World Development Indicators
Poverty	Headcount at \$2 a day (PPP) (% of population)	HC2	Word Bank, World Development Indicators
Poverty	Poverty Gap at \$1.25 a day (PPP) (%)	PG1.25	Word Bank, World Development Indicators
Poverty	Poverty Gap at \$2 a day (PPP) (%)	PG2	Word Bank, World Development Indicators
Wellbeing	Infant Mortality	IM	Word Bank, World Development Indicators
Wellbeing	Child Mortality	CM	Word Bank, World Development Indicators
Wellbeing	Human Development Index	HDI	UNDP, International Human Development Indicators
Wellbeing	Multidimensional Poverty Index	MPI	Oxford Poverty and Human Development Initiative (OPHI)
Institutional Quality and Corruption	CPIA public sector management and institutions cluster average (1=low to 6=high)	cpiapsmi	Word Bank, World Development Indicators
Population Growth	Population growth (annual %)	POP	Word Bank, World Development Indicators

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