The long-term impact of U.S. aid on poverty: the role of a seat in the Security Council of the United Nations

This version of 5th March 2017 is preliminary and not to be circulated

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Abstract

Fifty years of literature on aid-effectiveness has been so far inconclusive. The main remaining challenges are to properly identify the causal effect of aid on poverty alleviation and to dispose of reliable data on poverty. To confront the first problem we use the number of years a country has spent at the Security Council of the United Nations (UNSC) as the instrumental variable to explain the amount of U.S. aid received (Kuziemko and Werker, 2006). Using cross section data on multidimensional poverty (OPHI, 2016) for 64 developing countries, we conduct an empirical analysis on the impact of aid received during 1946-1999 on poverty alleviation between 2000 and 2014. Our results suggest that a country that has spent at least 2 mandates at the UNSC between 1946 and 1999 has succeeded in the long run to significantly reduce the percentage of population living in multidimensional poverty by 0.33 percent. The highest effect is through years of schooling (0.71 percent) and to a lesser extent through living standards (0.41 percent on average).

Keywords: Multidimensional Poverty, Aid, Sustainable Development, Security Council

JEL Classification: O11, F35, I3, H5

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[*]I am very grateful to Carl-Johan Dalgaard, Steven Poelhekke, Chiara Ravetti, Suman Seth, Gerhard Toews, Rick Van der Ploeg and to seminar participants at the OxCarre Lunchtime Seminar, at the OPHI Lunchtime Seminar, at the Informal Workshop on Quantitative Development Studies at the University of Oxford, at the Research Workshop on the Determinants of Multidimensional Poverty Reduction and at the RIDGE-UBA Workshop on Macroeconomics, Development and Structural Change for helpful comments and suggestions.

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1. Introduction

Fifty years of literature on aid-effectiveness has been so far inconclusive. Despite the enormous amounts of aid that the developing world has received – almost 1 billion on average since 1960 --, extreme poverty has not been eradicated yet. Income poverty represented 14.5 percent of the world's population in 2011 (World Bank Group, 2014) whereas multidimensional poverty affects around 30 percent of people (OPHI, 2016). Analyzing the effectiveness of aid requires to properly identifying the causal effect of aid on poverty alleviation. In order to confront this problem, it is necessary to find a valid and strong instrumental variable. However, as put forward by recent research from Galieni et al. (2016) and Clemens et al. (2012), the literature still does not currently possess one.

Moreover, the unavailability of a complete and reliable database on poverty has encouraged previous studies to focus their analysis on the aid-growth relationship. Nonetheless, the link between poverty and economic growth is not direct and poverty reduction is not only the result of changes in average income but also of shifts in income distribution (Bourguignon, 2004). Further, analyzing the impact of aid on income poverty through economic growth has the shortcoming of not considering other social factors that indeed affect the *well-being* of people such as education, health and quality of life among others (World Bank, 2000).

In this study, we seek to contribute to the large aid-effectiveness literature by offering new empirical evidence on the *real* impact of aid on poverty from a multidimensional perspective. Our contribution is two-fold. First, we tackle the endogeneity problems faced by previous studies by instrumenting aid disbursements through a novel approach. We build and expand on the work of Kuziemko and Werker (2006) by using data on U.S. economic aid disbursements and we explain it by the number of years a country has spent in the Security Council of the United Nations (UNSC). Second, we use the new and original database on multidimensional poverty from the Oxford Poverty and Human Development Initiative[2] that provides information about the different forms of deprivation poor people can indeed experience.

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We conduct an empirical analysis, using cross-section data, on the impact of average U.S. aid[3] from 1946 to 1999, explained by the number of years a country has spent at UNSC during the same period, on average poverty levels between 2000 and 2014 among 64 developing countries. Our results tend to favor the importance of aid disbursements on poverty reduction, as measured by multidimensional data. We find indeed that council membership is associated with 11.13 percent increase in U.S. aid on average during the 1946-1999 period. The back of the envelope suggests that a country that has spent at least 2 mandates at the UNSC between 1946 and 1999, has succeeded in the long run to significantly reduce the percentage of population living in multidimensional poverty by 0.33 percent, which is equivalent, for instance, to the average increase of the percentage of population with at least five years of schooling in Zimbabwe between 2006 and 2010/11.

This results contrast those related to income poverty, which do not seem to be statistically significant as also found by several early works on aid-effectiveness. However, we find that aid might slightly impact income poverty alleviation in more democratic countries. More precisely, an increase of $1 million (2014 US$) per year – $53 million over the 1946-1999 period – towards more democratized economies, has contributed to alleviate the percentage of people living under $3.10/day by almost 0.1 percentage points on average.

The highest effect on multidimensional poverty alleviation is through years of schooling (0.71 percent) and to a lesser extent through living standards (0.41 percent on average). The impact of U.S. aid on child mortality mitigation or improvement of nutrition does not seem statistically significant.

Our results are robust to a wide range of specifications, including alternative measures of poverty and human development indicators, controlling for the conditionality on the institutional framework of the recipient country, for alternative measures of institutional quality and for the addition of relevant control variables such as the share of U.S. aid over the total aid received by the country and percentage of government consumption to GDP. We find indeed that spending at least two years at the UNSC has contributed to

[3] The amount that this country has given as official development assistance between 1960 and 2014 represents 30 percent of the total amount given by the Development Assistance Committee (DAC), which doubles the amount given by Japan, the next most important donor.

reduce extreme multidimensional poverty by around 0.45 percent on average in the long run.

The rest of the paper is organized as follows. Section 2 goes through a brief review of the large empirical literature on aid-effectiveness and several works on the determinants of aid on which our paper is build and expands from. Section 3 presents key stylized facts, data description and basic statistics. Section 4 introduces the economic and numeric motivations of the instrumental variable. Section 5 presents baseline results on income and multidimensional poverty as well as the impact of aid on the development indicators included in the Multidimensional Poverty Index (MPI). Section 6 reports a battery of robustness checks. Section 7 concludes.

2. Literature Review

The rather large literature on aid-effectiveness has been developed over the last fifty years and has mainly focused on the impact of development aid on economic growth in less developed countries. It can be chronologically classified in three groups: *"it works; it doesn't; it can; but that depends..."* (McGillivray et al., 2006). The first two characterize empirical works between the 1960s and the 1990s, which were mainly based on the Harrod-Domar/Financing Gap model and its extensions that included a foreign exchange gap (Chenery and Strout, 1966) and a fiscal gap (Bacha, 1990; Taylor, 1990). They mainly aimed at analyzing whether the macroeconomic theoretical impact of aid could indeed be found in the data. However, despite the levels of aid that subsequent these theories were more than achieved[4], economists observed that anticipated growth was not (White, 1992) and the results obtained where a huge controversy. Findings were either on the direction of a positive or a negative and even no relationship between foreign aid and economic growth[5]. Moreover, the controversy was also emphasized by the presence of a paradox between the positive results summarized at micro-level and the ambiguous evidence at the macro-level, the micro-macro paradox (Mosley, 1987; White, 1992).

[4]"Aid has grown dramatically in the post-war period, increasing by 4.2 per cent per annum in real terms over the period 1960-88, to reach nearly US70 billion dollars by 1988. In 1988 prices and exchange rates, almost US1.4 trillion (thousand billion) dollars has been disbursed during the last three decades", (White, 1992).

[5]For an extensive review of the literature see White (1992), McGillivray et al. (2006) and Clemens et al. (2004).

The publication of the World Bank report (1998) and the subsequent Burnside and Dollar (2000) work marked a turning point and a new wave of aid effectiveness studies emerged by the early 2000s such as Collier and Dehn (2001), Collier and Hoeffler, (2002) and Collier and Dollar (2002). These works introduced not only an innovative macro-econometric framework of analysis by addressing the endogeneity of aid through lagged disbursements but they also dealt with non-linear effects and found support for a conditional effect of aid on growth according to the policy regime of the recipient country. This result was indeed largely discussed and studies were then divided on those that concluded that the allocation of aid should be contingent on sound institutional environment and those that failed to arrive to this conclusion. In this latest category, we can find works such as Daalgard and Hansen (2001), Hansen and Tarp (2001), Lensink and White (2001), Easterly et al. (2004) and Roodman (2004).

New controversies stimulated the development of several alternative explanations such as the negative impact of uncertainty (as measured by the instability of aid receipts) on the economic performance through the positive relationship between aid and investment (Lensink and Morrissey, 2000); climate-related circumstances that can either enhance the positive impact of aid on growth (Guillaumont and Chauvet, 2001) or can diminish it (Daalgard et al., 2004); conditionality of aid-effectiveness on political stability and good institutional quality (Chauvet and Guillaumont, 2002; Islam, 2002; Burnside and Dollar, 2004b and Acemoglu and Robinson, 2012[6]) and the presence of diminishing returns to foreign aid beyond a certain threshold (Durbarry et al., 1998; Lensink and White, 1999; Hansen and Tarp, 2000; Dalgaard and Hansen, 2001 and Islam, 2002[7]).

More recently, Clemens et al. (2004; 2012) argue that aid flows should not be considered in an aggregate manner (as all previous studies) since significant portions of aid are most unlikely to have an impact on growth over the short period usually

[6] Acemoglu and Robinson (2012) highlight that countries failing to liberalize markets or move towards democracy typically have a greater need for aid. Thus, they will either receive as much aid as those that do meet the conditions or the amount of additional foreign aid will not worth the risk for the leaders of the extractive institutions to lose their continued dominance over the country. In any case, conditionality would not be the best answer to reduce poverty around the world but perhaps structuring foreign aid in order to bring external groups into the decision-making process of economic development would do.

[7] The turning point at which absorptive capacity limits show up differs among the empirical studies and relies between 5.5 per cent (Dalgaard and Hansen, 2001) and 50 per cent of aid to GDP (Lensink and White, 2001) with an average level of 20.7 per cent. For an extensive review of this results see Table A1 of the Appendix on Feeny and McGillivray (2011, pp. 66).

considered (four years). By analyzing the "early" impact of aid flows (which they highlight it accounts for about 53 percent of all aid flows) on economic growth, they find a positive causal relationship (with diminishing returns) between these two variables. Moreover, their main results are not actually affected by the quality of institutions and policies as previous studies found relevant but the impact on growth seems larger in countries with better institutions or better health (as measured by life expectancy). Raghuram and Subramanian (2005) extend previous studies and examine the robustness of the aid-growth relationship across different time horizons (medium and long run), periods (1960s through 1990s), sources of aid (multilateral and bilateral), types of aid (economic, social, food, etc.), timing of impact of aid (contemporaneous and lags varying from 10 to 30 years), specifications by using both cross-sectional and panel database and samples where they include and exclude outliers. All in all, the authors' central conclusion is that aid does not impact economic growth and they find this result robust to time horizons, time periods, cross-section and panel context and different types of aid.

At this stage, and as far as we are concerned, all the aid-effectiveness studies have focused on the aid-growth relationship, assuming that higher growth would lead to less poverty levels. However, the controversial effect of aid on economic growth should not be taken as granted for aid-ineffectiveness on poverty reduction. Instead, empirical work should rather focus on the aid-poverty relationship (Feeny and McGillivray, 2011). To our knowledge, the only study that has focused on this link is the one of Masud and Yontcheva (2005). The authors analyze the impact of NGO and bilateral aid on human development indicators and they find that foreign aid reduces government efforts in achieving development goals, so that NGO aid is more effective than the bilateral one and mainly in reducing infant mortality.

Moreover, the new development agenda calls for alternative ways of measuring poverty. With this purpose, the Oxford Poverty and Human Development Initiative (OPHI) research center at the International Development Department of the University of Oxford, builds data on Multidimensional Poverty by considering three dimensions of poverty: education, health and living standards[8]. The Multidimensional Poverty Index (MPI) and its components have been published since 2010 in the United Nations

[8] For further information, please refer to the Data section.

Development Program and cover more than 100 developing countries. The construction of this index is done using the Alkire-Foster method which identifies the set of indicators in which each person is deprived at the same time and summarizes their poverty profile in a weighted deprivation score (Alkire et al., 2016). Their findings are that, on average, 30 percent of people are MPI poor, that is, 50 percent more than income poor people using the $1.90/day (OPHI, 2016).

Santos, Dabus and Delbianco (2016) exploit this database to analyze the impact of economic growth on income and multidimensional poverty. Their findings suggest that there exists a significant relationship between the three variables but that the impact of growth on reducing multidimensional poverty is far lower than the impact on reducing income poverty: *"growth does not seem to be particularly pro-poor when poverty is measured from a multidimensional perspective"*. They conclude that although countries need to grow in order to reduce poverty, there is a limited power of economic growth in the achievement of great reductions in poverty.

Overall, one of the main lessons that we draw from the last fifty years of aid-effectiveness is that empirical results do not converge and there is still lot of controversy on the real impact of aid on poverty. The main challenge is the endogeneity bias that appears due to reverse causality between growth and aid. As previously highlighted, the way that many studies have tackled this problem has been by instrumenting contemporaneous aid by its past levels. However, considering that poverty levels do not change drastically in the short run, past levels of aid may still introduce endogeneity bias in the estimations. As Clemens et al. (2012) highlights *"the aid-growth literature does not currently possess a strong and patently valid instrumental variable with which to reliably test the hypothesis that aid strictly causes growth"*.

A recent research by Galiani et al. (2016) support that *"identification of the causal effect of aid on growth has been elusive so far due to foreign aid being endogenous in growth models. An instrumental variable is needed to address these problems"*. To analyze the impact of aid on growth, the authors exploit as instrument the eligibility for aid from the International Development Association (IDA). Their results suggest that aid as a share of gross national income (GNI) drops 59 percent when a country crosses a per capita income threshold. They focus on 35 countries between the period 1987- 2010

and they find that a one percentage point increase in the aid to GNI ratio raises per capita economic growth by 0.35 percentage points on average.

Kuziemko and Werker (2006) provide some insight on a potential, and yet not largely exploit, instrument. The analyze the impact of being elected into the Security Council of the United Nations (UNSC) on aid disbursements from the United States during 1946-2001. The authors find that the amount of U.S. aid received by a country during that period increased by 59 percent when it rotates into the council. Moreover, this effect is more pronounced during key years for international diplomacy. They also find a significant increase, but lower, for the aid given by the United Nations through UNICEF, an organization over which the United States has exerted great control. Their conclusions highlight the political and even *"corrupted"* character of U.S. aid flows since the creation of the United Nations and until the launch of the Millennium Development Goals (MDGs).

In this line, Meernik et al. (1998) analyze the role played by three different goals of U.S. foreign policy on the amount of aid distributed during and after the cold war through the analysis of a panel dataset of 127 countries during 1977-1994. These goals are *systemic security* such as U.S. overseas military presence, protection of U.S. allies and the containment of communism; *societal economic* such as the protection and expansion of trade and the promotion of open markets abroad; and *statist ideological* such as the promotion of democracy, the encouragement towards the respect of human rights and the promotion of economic development abroad. Although the authors find all three approaches to be relatively important during the cold war, they show that there has been a substitution of relevance from the security-driven goals towards the ideological ones after the cold war. Thus, they provide empirical evidence of a shift in the intentions of U.S. foreign aid from strategic and diplomatic needs to development promotion after the war.

Considering then that aid disbursement from United States before the 2000s was mainly politically-intended and probably "corrupted", this paper intends to exploit this instrument and contribute to the aid-effectiveness literature by analyzing the impact of aid on poverty alleviation.

3. Data description and basic statistics

Our analysis focuses on the impact of average U.S. aid from the period 1946-1999 on average poverty levels from 2000 to 2014. The dynamic constraint is related to data on multidimensional poverty, which is available from 2000, only for few years and, in some cases, there exists just one observation per country. Data is also not available for the same years for all countries. Following Kuziemko and Werker (2006) and Santos et al. (2016), we build a cross-sectional database for 64 developing countries that have at least spent one year as a temporary member of the UNSC during that period and for which we have data on Multidimensional Poverty[9]. Our sample includes 8 countries from Asia, 6 from Eastern Europe, 14 from Latin America and the Caribbean, 3 from Middle East, 3 from North Africa and 30 from Sub-Saharan Africa. Table 1 below gives descriptive statistics of the explained and explicative variables.

Table 1. Descriptive statistics of used variables

Variables	N obs	Mean	Std. Dev.	Min	Max
Alternative Y_i (explained) variables 2000-2014					
Mean MPI (in %)	64	19,5	17,2	0,0	62,3
Mean Multidimensional Poverty Headcount Ratio (in %)	64	36,2	28,9	0,0	90,8
Mean Income Povery Gap ($PPP3.10/day) (in %)	60	21,3	17,1	0,1	66,7
Mean Income Headcount Ratio ($PPP3.10/day) (in %)	60	46,3	29,7	0,1	94,5
Mean Multidimensional Extreme Poverty Headcount Ratio (in %)	57	22,1	20,8	0,0	79,8
Mean Income Headcount Ratio ($PPP1.90/day) (in %)	60	28,3	24,2	0,0	85,6
Mean Human Development Index (in %)	64	58,4	14,0	32,5	86,7
X_{ji} (explanatory) variables					
Mean Economic U.S. aid (in millions) (1946-1999)	64	143,7	303,5	1,6	1948,7
Number of years at the U.N. Security Council (1946-1999)	64	3,8	2,9	1,0	16,0
Mean Polity2 (1946-1999)	64	-1,6	5,1	-8,2	10,0
Mean per capita GDP growth (constant 2010 US$) (in%) (1960-1999)	64	0,8	1,9	-7,2	4,6
Mean Trade (as % GDP) (1960-1999)	64	58,4	29,3	13,5	147,4
Mean Population Density (1960-1999)	64	65,2	96,5	1,3	652,3
Mean per capita GDP (constant 2010 US$) (1960-1999)	64	2448,3	3156,9	263,3	16394,7
Mean share U.S. aid over total aid received (in %) (1960-1999)	60	24,6	18,53	2,09	80,4
Mean Government Consumption (% GDP) (1960-1999)	63	14,37	5,29	6,03	31,83

Source: OPHI, WDI, UNDP, U.S Agency for International Development and the U.N website
Note: As explained variables we also analyze the 10 indicators that compose the MPI and whose descriptive statistics are available in Table A.3 of the Appendix: Years of Schooling, Child School Attendance, Child Mortality, Nutrition, Electricity, Improved Sanitation, Drinking Water, Flooring, Cooking Fuel and Asset Ownership

[9] Table A.6 in the Appendix provides information on countries, years at the council, average aid received and average multidimensional poverty headcount ratio.

The main explained variables that we analyze are the Multidimensional Poverty Index, which is transformed in percentage for easiest comparison across alternative measures, the Multidimensional Poverty Headcount ratio, the Income Poverty Gap at $3.10/day (PPP) which is comparable to the MPI and the Income Poverty Headcount ratio at $3.10/day which is comparable to the headcount ratio of multidimensional poverty (Santos et al., 2016). We also analyze the 10 indicators composed in the MPI[10] and robustness checks include results on the Human Development Indicator (HDI) and some of its components such as expected years of schooling; the Multidimensional Poverty Headcount ratio of extreme poverty[11] and the Income Poverty Headcount ratio at $1.90/day, which is comparable to the headcount ratio of extreme multidimensional poverty.

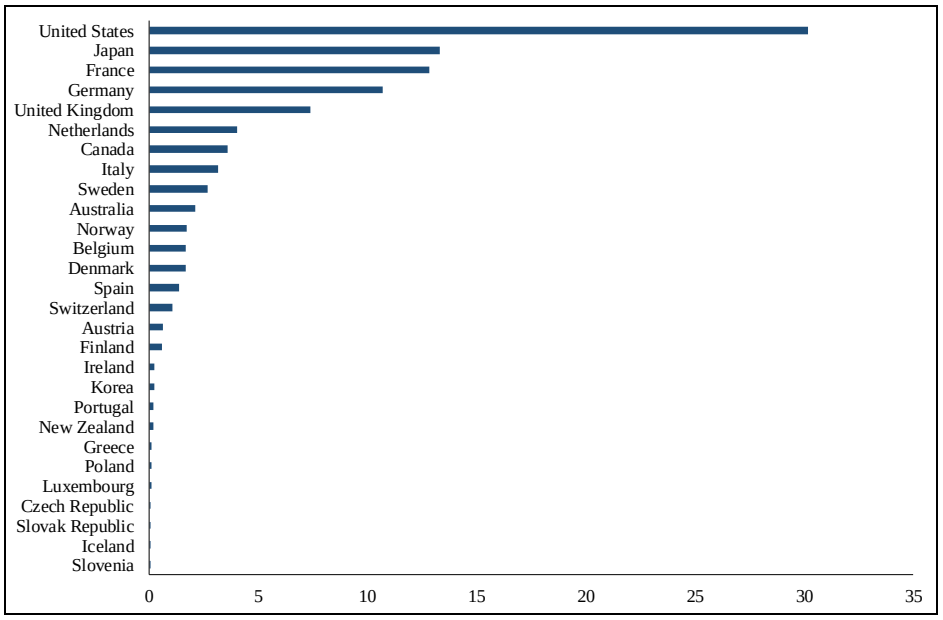
The Multidimensional Poverty Index captures the severe deprivations that people face per three dimensions of poverty: education, health and living standards[12]. The deprivation score of each person is constructed based on a weighted average of the deprivation they experience in each indicator and the person is considered multidimensionally poor if the deprivation score meets or exceeds the 33.33 percent threshold. The Global Multidimensional Poverty Index (MPI) covers 110 countries and 5.4 billion people. On average, 30 percent of people are MPI poor, that is, 50 percent more than income poor people using the $1.90/day (PPP) (OPHI, 2016).

Data on U.S. foreign aid is extracted from the "Greenbook", which is the U.S. Overseas Loans and Grants database complied by the U.S Agency for International Development. Contrary to Kuziemko and Werker (2006), we only consider the economic aid[13] and not the military one since we are interested in purely analyzing the role of development aid[14]. We also consider as a control variable the share of U.S. aid over the total aid received by the country over the 1960-1999 period. Figure 1 below shows the average of ODA between 1960 and 2014 that each DAC country has given as a percentage of the total. The percentage for the U.S. is on average around 30, which is the double of

[10] Details of these indicators are given in table A2 of the Appendix.
[11] Percentage of population that is deprived in more than half of the weighted indicators that MPI uses and therefore considered as being in severe poverty (OPHI, 2014) .
[12] Figure A.1 in the Appendix shows the 10 indicators that are considered in the Multidimensional Poverty Index and Table A.3 gives a detailed description and the cutoffs rates.
[13] Only positive values of aid are considered, thus gross disbursements.
[14] This aid is classified within different purposes such as "Economic and Security Support Assistance", "Food for Education", "Refugee and Migrations" and "Global Health and Child Survival" to name a few. Therefore it englobes the whole amount of development aid given by the United States to each developing country.

that of Japan, the second main donor[15]. Since U.S. data on aid is available from the creation of the United Nations in 1946, by using it we are able to consider the real amount of economic aid given by the United States before the "formalization" of the development assistance in the 1960s.

Figure 1. ODA Gross Disbursements 1960-2014 (% of total ODA from DAC countries)



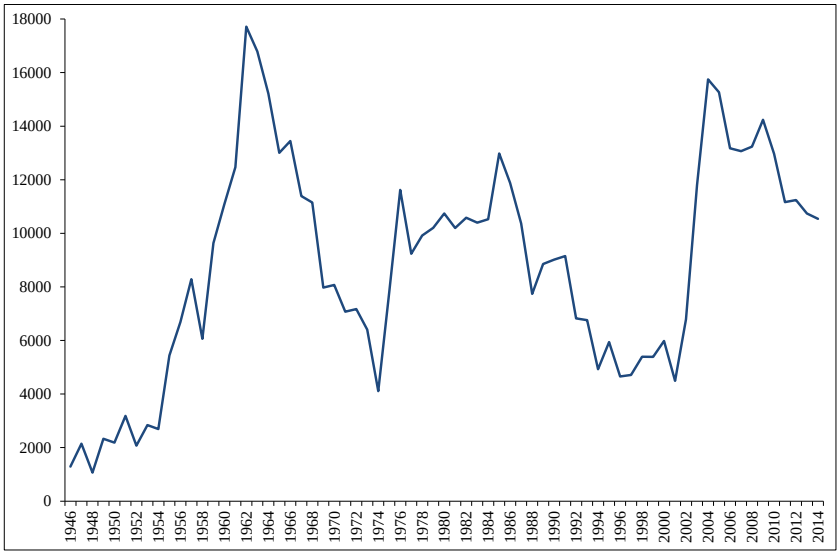
Source: OECD Development database

Also, by considering U.S. aid during the period 1946-1999, we analyze the impact of specific and politicized disbursements that were characterized by diplomatic decisions on international security (Meernik et al., 1998; Kuziemko and Werker, 2006), whereas the implementation of the Millennium Development Goals (MDGs) in 2000 changed the aid strategy towards the most needed countries (Radelet, 2004). Figure 2 below shows the evolution of economic U.S. aid towards developing countries between 1946 and 2014. We can observe that the first big increase on the aid program was in 1955, when Dwight D. Eisenhower became President of the United States and the Warsaw Pact was founded in Eastern Europe as a Communist military counterpart to NATO. Foreign aid from the U.S. starts to decrease and reach its first bottom in 1973, during the first oil crises, then rises again before decreasing again in the 1990s, mainly due to higher control of fiscal deficits (World Bank report, 1998). It reaches its second bottom

[15] Although we only consider U.S. aid, we control in our estimations for the share of U.S. aid over the total aid received (in %).

in 1997 before increasing drastically after the publication of the World Bank report (1998) and the implementation of the MDGs by the United Nations.

Figure 2. Economic U.S aid (in millions) to 64 developing countries 1946-2014



Source: U.S Agency for International Development

Figure 4 below shows the correlation between the amount of U.S. aid received and the headcount ratio of Multidimensional Poverty. We observe that there are three outliers that seem to cancel the relationship between these two variables. Indeed, Egypt, India and Pakistan have all three received significantly high amounts of U.S. aid and register relatively low and high levels of poverty respectively. Nonetheless, when controlling for these outliers, there seem to exist a negative and relatively high correlation between the amount of U.S. economic aid received and the level of multidimensional poverty of the country (-0.32 percent).

Data on the number of years a country has spent as a permanent member of the Security Council of the United Nations is available online in the U.N. website[16]. The data on poverty has two main sources: The Oxford Poverty and Human Development Initiative[17] that constructs an index on Multidimensional Poverty and the World Development Indicators for the Income Poverty measures. Data on control variables such as Polity 2 is extracted from the Polity IV dataset (Marshall and Jaggers, 2002) and the World Development Indicators database is used for the others. Finally, data on

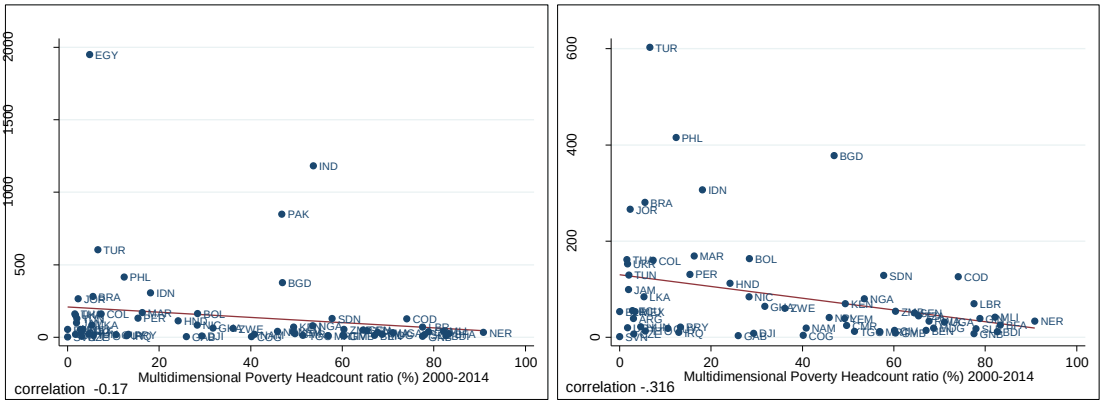
[16] http://www.un.org/en/sc/members/elected.asp

[17] International Development Department, University of Oxford. For further information, please visit their website at http://www.ophi.org.uk/

Human Development Index and its components is drawn from the United Nations Development Program (UNDP)[18].

Figure 4. Relationship between U.S. economic aid and MP Headcount ratio

64 developing countries **without outliers (India, Pakistan and Egypt)**



Source: OPHI and U.S Agency for International Development

Following Kuziemko and Werker (2006), we use the Polity 2 variable as a political and institutional quality control. It ranges from -10 to +10 scores and it examines qualities of democratic and autocratic authority in governing institutions that spans from fully institutionalized autocracies (ranges from -10 to -6) to fully institutionalized democracies (ranges from +6 to +10), with an intermediate and mixed authority regime named anocracy ranging from -5 to +5 scores. As alternative measures of institutional quality, we have used Political Rights and Civil Liberties from *Freedom in the World* survey. These ratings are calculated by measuring over 25 indicators and they range between 1 for most free conditions and 7 for the least free. These variables assess the real-world rights and freedoms enjoyed by individuals rather than government performance[19]. Other variables of political economy that are used are ethnic, language and religion fractionalization (Alesina et al., 2003). These measures represent the percentage of each respective fragmentation within the population. The higher the percentage is, the higher the fragmentation.

[18] Please, refer to Table A.1 in the Appendix for further information about the source and description of all variables used in the analysis.

[19] Refer to the Annual Report of Freedom in the World (2016) for further information about these variables.

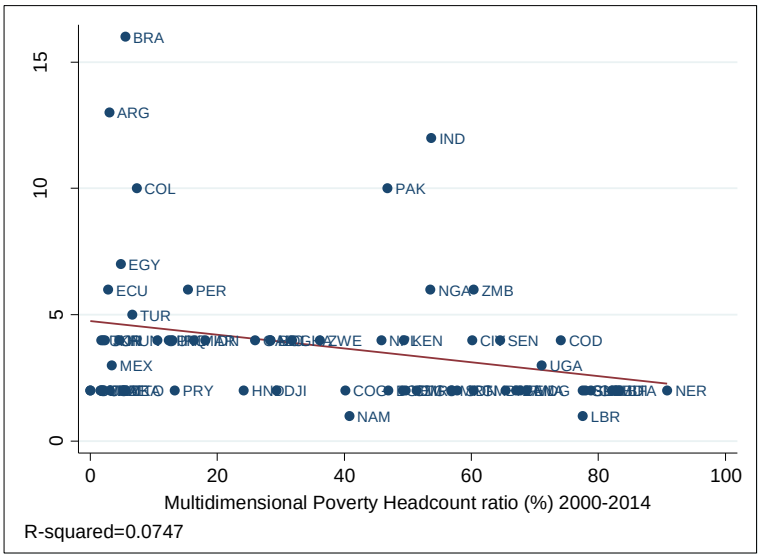
4. The instrument

Ten out of fifteen seats of the UNSC are held by rotating members serving two years. The other five are the permanent seats of Russian Federation, France, the United States, the United Kingdom and China. Several reasons lying behind the assignment of a temporary seat may be: to increase attention of a country's needs, the country is more integrated in the world community or as vote trading for political or financial favors.

Kuziemko and Werker (2006) have intensively analyzed these reasons during the period 1946-2001 for a group of 83 developing countries and have found indeed that some countries were serving during calm years while others were doing it during the debate of key resolutions, i.e. when the vote of the elected country was more valuable: "… *correlation is being driven by an unobserved, secular change in a country's international influence or diplomatic savoir faire".*

Graphically, we show in Figure 3 below that more internationally integration, and thus lower poverty levels, does not seem to drive the probability of taking part on the council. We indeed observe that countries with high spreads in Multidimensional Poverty such as Uganda and Mexico, Ecuador and Nigeria or Peru and Zimbabwe, spent the same amount of years at the Security Council during the period 1946-1999.

Figure 3. Relationship between Multidimensional Poverty and service in the Council



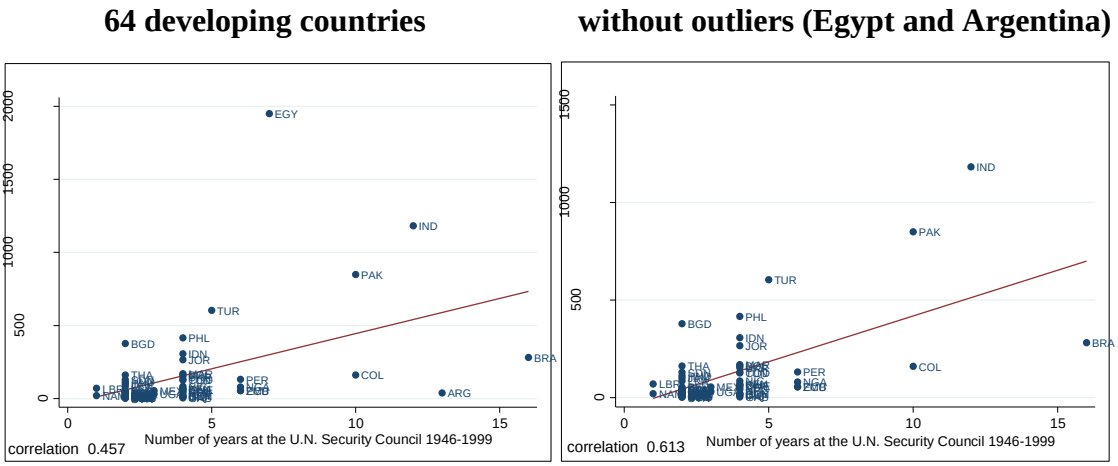
Source: OPHI and the U.N website

Further in their study, Kuziemko and Weker (2006) mainly find that the amount of U.S. aid that a country receives increases sharply (59 percent) when it is elected into the UNSC and returns to previous levels upon completion of two-years term: *"the rapid return…suggests that aid is not due to a newfound awareness of the country's need"*.

Following their research, a developing country can anticipate an additional amount of money of $16 million coming from the United States when serving on the council and an additional $1 million from the United Nations through the organization over which the United States has historically had great control, UNICEF. It seems then that neither the country needs nor the level of international integration lies behind the election into the council. Instead, and although the study does not officially test for the hypothesis of vote buying, the significant increase of aid disbursements towards rotating members suggest that world affairs implicitly drive the election into the UNSC.

We show graphically in Figure 5 that there exists indeed an important correlation between the number of years a country has spent at the UNSC and the amount of U.S. economic aid received (0.46 percent). We notice, however, two important outliers such Egypt and Argentina that have respectively receive exceptionally high and relatively low amounts of aid in relation to the numbers of years at the council. When controlling for these outliers, the correlation between the two variables increases to 0.61 percent.

Figure 5. Relationship between the number of years at the UNSC and U.S. economic aid



Source: U.S Agency for International Development and the U.N website

This is consistent with Alesina and Dollar (2000) that underlines that colonial past, voting patterns in the United Nations and political alliances could be major determinants of foreign aid. Moreover, Meernik, Krueger and Poe (1998) highlights that

there was indeed a shift in the intentions of the United States foreign aid from strategic and diplomatic needs to development promotion after the Cold War.

Kuziemko and Werker (2006) suggest then that the weak historical relationship between aid and poverty alleviation may be explained though the fact that aid has indeed been targeted by strategic and diplomatic means and humanitarian concerns have not been prioritized. This, in turn, may advocate that more development-oriented aid could have a different impact.

5. Empirical Strategy and Main Results

5.1 Empirical Strategy

To study the impact of U.S. aid on poverty we estimate a cross-section linear regression model both with two Two-Stage Least-Squares (2SLS) and Ordinary Least Squares (OLS), as to compare both empirical results, given by:

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \ldots + \beta_k X_{ji} + \alpha A_i + e_i \quad (1)$$

where Y_i is the average of poverty levels for country $i=1,\ldots,64$ between 2000 and 2014, $X_{ji,}\ j=1,\ldots,k$ are the control variables, A_i is the average of U.S aid between 1946 and 1999 and e_i is assumed to be a zero-mean error term[20]. The coefficient of interest throughout the paper is α, the effect of U.S. aid on poverty levels. The average of U.S. aid variable, A_i, is treated as endogenous, and modeled as:

$$A_i = \mu_0 + \mu_1 X_{1i} + \mu_2 X_{2i} + \ldots + \mu_k X_{ji} + \gamma SC_i + \upsilon_i \quad (2)$$

where SC_i is the number of years at the UNSC. The exclusion restriction is that this variable does not appear in (1).

5.2 Main Results

Table 2 below shows empirical results from the 2SLS and OLS estimations of equation (1). The first part of the table presents OLS regressions of U.S. aid on Income Poverty as measured by the poverty gap and the headcount ratio of $3.10/day and on Multidimensional Poverty as measured by the Index and the headcount ratio. As a first glance, if we compare OLS results from both measures, we can observe that U.S. aid has a significant and larger impact on multidimensional poverty alleviation than on

[20] The option to account for robust estimations of the variance has been applied in order to control for heteroskedastic residuals.

income poverty. This is true when considering a simple correlation, when controlling for outliers and additional variables and when removing the unobservable characteristics of Sub-Saharan Africa. The impact on Income Poverty appears significant when controlling for additional variables and outliers but it disappears when introducing a regional dummy for Sub-Saharan Africa in the estimated equation.

To control for potential endogeneity, we run 2SLS regressions in the second part of the table, instrumenting U.S. aid by the number of years at the UNSC. Columns (1), (3), (5) and (7) show first stage results. We observe that the coefficient is positive and statistically significant at the 1 percent confidence level in any of the specifications, suggesting that rotation into the council increases the amount of aid received. Moreover, the reported Kleibergen-Paap Wald F statistic on excluded instrument is largely above 10 and the t-statistic of the estimated coefficient is above 3 in all specifications, which seem to validate the instrument as Stock, Wright and Yogo (2002) and Angrist and Pischke (2009) suggest.

Further, the small p-value of the Hausman statistic in columns (5) and (7) tells us that the average of U.S. economic aid is indeed an endogenous regressor at the 1 percent confidence level when analyzing its impact on multidimensional poverty. However, it does not seem to be an endogenous regressor when measuring poverty from an income perspective in columns (1) and (3). This suggest that the reverse causality issues rather concerns multidimensional poverty, meaning that aid is more likely to be directed to countries manifesting worse human development indicators irrespective to the level on income.

This observation suggests two things: that we should proceed with 2SLS estimations only when analyzing the impact of aid on multidimensional poverty since OLS results may be misleading (Hayashi, 2000) – we would choose OLS estimations when analyzing the effect of aid on income poverty since, in this case, instrumental variables results may be biased --; and that improving poverty measurement might help better aim aid disbursements.

Table 2. Baseline regressions on poverty

OLS regressions	**Income Poverty $3.10/day**						**Multidimensional Poverty**					
	Gap	H	Gap	H	Gap	H	Index	H	Index	H	Index	H
	(1)	(2)	(3)	(4)	(5)	(6)	(5)	(6)	(7)	(8)	(9)	(10)
U.S. aid	-0.013 (0.009)	-0.008 (0.017)	**-0.053***** **(0.017)**	-0.090*** (0.027)	**-0.016** **(0.013)**	-0.020 (0.025)	-0.009** (0.005)	-0.016* (0.008)	**-0.060***** **(0.016)**	-0.101*** (0.027)	**-0.023***** **(0.009)**	-0.036** (0.014)
Observations	60	60	60	60	60	60	64	64	64	64	64	64
Outliers dummies			x	x	x	x			x	x	x	x
Control variables			x	x	x	x			x	x	x	x
Regional dummy					x	x					x	x

Note: Robust standard errors in parentheses. Standard errors are clustered at the country level. Regional dummy is for Sub-Saharan Africa. Gap stands for income gap, index stands for the Multidimensional Poverty Index and H stands for the Headcount ratio of Multidimensional Poverty. Control variables are per capita GDP, per capita GDP growth, trade (% GDP), polity 2 and population density. *** p<0.01, ** p<0.05, * p<0.1

2SLS regressions	**Income Poverty $3.10/day**				**Multidimensional Poverty**			
	Gap				Index			
	(1) 1st stage **U.S. aid**	(2) 2nd stage **Poverty**	(3) 1st stage **U.S. aid**	(4) 2nd stage **Poverty**	(5) 1st stage **U.S. aid**	(6) 2nd stage **Poverty**	(7) 1st stage **U.S. aid**	(8) 2nd stage **Poverty**
Number of years at the U.N. Security Council	18.654*** (3.437) [5.43]		13.624*** (3.082) [4.42]		20.981*** (4.293) [4.89]		15.992*** (3.377) [4.74]	
U.S. aid		**-0.077**** **(0.034)**		**-0.008** **(0.032)**		**-0.128***** **(0.036)**		**-0.085**** **(0.036)**
Observations	60	60	60	60	64	64	64	64
Outliers dummies	x	x	x	x	x	x	x	x
Control variables	x	x	x	x	x	x	x	x
Regional dummy			x	x			x	x
First stage F statistic (Cragg-Donald Wald)	9.76		5.27		12.07		7.02	
First stage F statistic (Kleibergen-Paap Wald)	29.46		19.55		23.88		22.42	
First stage Hausman statistic p-value	0.384		0.820		0.006		0.006	

Note: Robust standard errors in parentheses and t-stat in brackets. Standard errors are clustered at the country level. Regional dummy is for Sub-Saharan Africa. Gap stands for income gap, index stands for the Multidimensional Poverty Index. Control variables are per capita GDP, per capita GDP growth, trade (% GDP), polity 2 and population density. *** p<0.01, ** p<0.05, * p<0.1

Moreover, we observe that results do not differ between the two types of estimations but α coefficients are higher in the 2SLS regressions, as expected. As column (7) of the 2SLS regressions indicate, one additional year at the UNSC during 1946-1999 has represented an increase on the average amount of aid received from the United States of $16 million on average among the 64 countries. In turn, however, the multidimensional poverty index has decreased in the long run by almost 0.1 percentage points whereas OLS regressions reflect an alleviation of 0.04 percentage points.

In table 3 below we present 2SLS results for the impact of U.S. aid on the Multidimensional Poverty Headcount ratio. We go step by step adding control variables and showing in each column first stage statistics for excluded instrument and the endogeneity test of the instrumented variable, as for table 2. Not only our instrument seem to pass the tests of exogeneity in each specification but also the p-value of the Hausman test indicates us that U.S. aid is endogenous, thus justifying the instrumental variable regressions. Moreover, our coefficient of interest is highly significant and negative in all columns, even when controlling for the size of the population.

Columns (7) and (8) present baseline results for equation (2) and (1) respectively. As previously noted, an additional year at the UNSC during 1946-1999 increased the average amount of aid received from the United States by $16 million, on average among the 64 countries of our study. In a period of 53 years, this represents an increase of $300 thousand (2014 US$) of aid per year on average. Since the average amount of aid received over the period was of $143.7 million (following table 1), we can roughly say that a regular developing country received 11.13 percent more aid on average during that period when spending at least one year into the council. This represents an increase of 0.21 percent per year over 53 years.

Table 3. Baseline regressions on Multidimensional Poverty Headcount ratio

2SLS regressions							**Baseline regression**	
	(1) 2nd stage **Poverty**	(2) 2nd stage **Poverty**	(3) 2nd stage **Poverty**	(4) 2nd stage **Poverty**	(5) 2nd stage **Poverty**	(6) 2nd stage **Poverty**	(7) 1st stage **U.S. aid**	(8) 2nd stage **Poverty**
Number of years at the U.N. Security Council							15.992*** (3.377) [4.74]	
U.S. aid	-0.210*** (0.061)	-0.186*** (0.056)	-0.163*** (0.054)	-0.304*** (0.089)	-0.235*** (0.077)	-0.203*** (0.056)		-0.118** (0.051)
Polity 2		-2.118*** (0.755)	-2.158*** (0.674)	-1.306 (1.089)	-0.259 (1.016)	-0.809 (0.929)		-0.284 (0.533)
Per capita GDP growth			-3.430* (2.059)	-3.422* (1.895)	-1.845 (1.996)	-2.383 (1.991)		-0.739 (1.290)
Trade (% GDP)				-0.630*** (0.226)	-0.419*** (0.142)	-0.367*** (0.118)		-0.264*** (0.089)
Per capita GDP					-0.005*** (0.001)	-0.004*** (0.001)		-0.003*** (0.001)
Population Density						0.048 (0.032)		0.050** (0.022)
Observations	64	64	64	64	64	64	64	64
Outliers dummies	x	x	x	x	x	x	x	x
Control variables		x	x	x	x	x	x	x
Regional dummy							x	x
First stage F statistic (Cragg-Donald Wald)	9.68	8.95	8.04	5.01	7.44	12.07	7.02	
First stage F statistic (Kleibergen-Paap Wald)	18.91	17.59	16.78	8.84	11.96	23.88	22.42	
First stage Hausman statistic p-value	0.038	0.009	0.003	0.001	0.005	0.012	0.015	

Note: Robust standard errors in parentheses and t-stat in brackets. Standard errors are clustered at the country level. Regional dummy is for Sub-Saharan Africa. *** p<0.01, ** p<0.05, * p<0.1

At the same time, an increase of $1 million (2014 US$) per year – $53 million over the 1946-1999 period – has contributed to alleviate the percentage of people living in multidimensional poverty by 0.12 percentage points on average. Since the average headcount ratio on multidimensional poverty is 36.2 percent, we can say that a developing country that has received on average $1million per year from the United States over half a century has succeeded to reduce its level of multidimensional poverty by 0.33 percent[21]. But how big or small is this impact? Here some statistics: India has significantly improved child school attendance by 0.16 percentage points between 1998/9 and 2005/6; Zimbabwe has significantly increased the percentage of population with at least five years of schooling by 0.14 percentage points between 2006 and 2010/11 and Dominican Republic has significantly reduced the percentage of undernourished population by 0.13 percentage points between 2002 and 2007 (OPHI database).

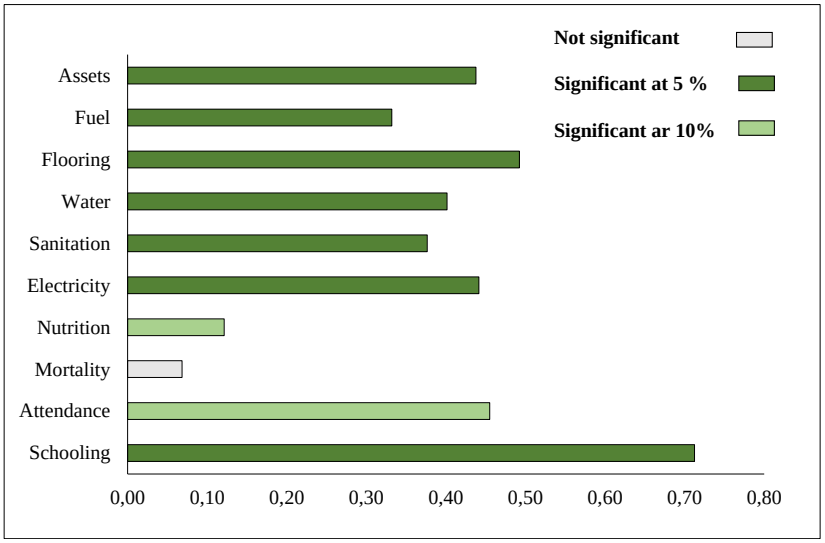
The back of the envelope suggests then that a country that has spent at least 2 mandates at the UNSC between 1946 and 1999, has succeeded in the long run to significantly reduce the percentage of population living in multidimensional poverty by 0.33 percent, which is equivalent, for instance, to the average increase of the percentage of population with at least five years of schooling in Zimbabwe over 4 years. Therefore, despite its possible "corrupted" side, the disbursements of aid that were distributed by the United States to developing countries over 53 years have indeed contributed to reduce multidimensional poverty far more than one could expect.

We are then interested in analysing the impact of aid on each indicator considered in the MPI in order to assess the dimension through which U.S. aid contributes most to poverty reduction. For this purpose, we run previous regressions but we replace the global poverty measures by each indicator (years of schooling, nutrition, drinking water, etc.). We estimate the equations by both OLS and 2SLS and we present the results on table 4 below. We can observe that the main channels of poverty alleviation through aid are years of schooling and living standards, irrespective of the econometric method used. Moreover, the first stage results on the second part of the table indicate that the instrument passes the exogeneity tests and that U.S. aid is significantly explained by the number of years at the UNSC. The Hausman test shows that the main regressor is

[21] The impact on percentage is calculated by dividing the estimated coefficient by the mean of the outcome variable.

endogenous and that 2SLS results provide an unbiased estimator of its coefficient, except when analysing the dimension of health where OLS results are preferred. Using the mean of the outcome variables from table A.4 in the Appendix, we present in figure 6 below the impact of U.S. aid on each indicator (in %) as well as its significance[22].

Figure 6. Contribution of U.S. aid on Multidimensional Poverty reduction



Note: results for all indicators but nutrition and mortality are from 2SLS regressions. Since the first stage Hausman statistic p-value for mortality and nutrition is higher than 0.100, 2SLS results may be biased. Hence, we use OLS results to analyse the impact of U.S. aid on these two indicators.

The highest effect relates to education and especially to the number of years of schooling, where the magnitude of the impact is 0.71 percent on average. A lower effect concerns the dimension of living standards, ranging from the highest through the improvement of the household flooring (0.49 percent) to the lowest through the access to improved cooking fuel (0.33 percent). On average, the impact of U.S. aid on the reduction of the percentage of population with poor standards of living is of 0.41 percent. The impact on child mortality alleviation is not significant and the one on nutrition is very low (0.12 percent).

[22] The impact on percentage is calculated by dividing the estimated coefficient by the mean of the outcome variable.

Table 4. Baseline regressions on the ten indicators of the Multidimensional Poverty Index

OLS regressions	**Education**		**Health**		**Living Standards**					
	(1) Schooling	(2) Attendance	(3) Mortality	(4) Nutrition	(5) Electricity	(6) Water	(7) Sanitation	(8) Flooring	(9) Fuel	(10) Assets
U.S. aid	-0.033*** (0.011)	-0.020* (0.011)	-0.014 (0.009)	-0.018* (0.010)	-0.035*** (0.013)	-0.022** (0.009)	-0.024* (0.012)	-0.031** (0.014)	-0.039** (0.019)	-0.019* (0.010)
Observations	64	58	61	60	63	64	64	63	62	64
Outliers dummies	x	x	x	x	x	x	x	x	x	x
Control variables	x	x	x	x	x	x	x	x	x	x
Regional dummy	x	x	x	x	x	x	x	x	x	x

Note: Robust standard errors in parentheses. Standard errors are clustered at the country level. Regional dummy is for Sub-Saharan Africa. Control variables are per capita GDP, per capita GDP growth, trade (% GDP), polity 2 and population density. *** p<0.01, ** p<0.05, * p<0.1

2SLS regressions	**Education**		**Health**		**Living Standards**					
	(1) Schooling	(2) Attendance	(3) Mortality	(4) Nutrition	(5) Electricity	(6) Water	(7) Sanitation	(8) Flooring	(9) Fuel	(10) Assets
U.S. aid	-0.113** (0.051)	-0.086* (0.050)	-0.045 (0.030)	-0.042 (0.026)	-0.131** (0.057)	-0.077** (0.032)	-0.113** (0.046)	-0.122** (0.053)	-0.117** (0.053)	-0.088** (0.038)
Observations	64	58	61	60	63	64	64	63	62	64
Outliers dummies	x	x	x	x	x	x	x	x	x	x
Control variables	x	x	x	x	x	x	x	x	x	x
Regional dummy	x	x	x	x	x	x	x	x	x	x
First stage coefficient p-value	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
First stage F statistic (Cragg-Donald Wald)	7.02	4.67	6.36	7.61	6.74	7.02	7.02	6.86	12.51	7.02
First stage F statistic (Kleibergen-Paap Wald)	22.42	12.57	20.48	26.09	21.91	22.42	22.42	21.89	33.33	22.42
First stage Hausman statistic p-value	0.008	0.052	0.202	0.185	0.005	0.036	0.004	0.019	0.020	0.011

Note: Robust standard errors in parentheses. Standard errors are clustered at the country level. Regional dummy is for Sub-Saharan Africa. Control variables are per capita GDP, per capita GDP growth, trade (% GDP), polity 2 and population density. *** p<0.01, ** p<0.05, * p<0.1

6. Robustness Checks and Further Results

In this section, we test the robustness of our previous results. First, we analyze the impact of U.S. aid on extreme multidimensional poverty headcount ratio, on severe income poverty as measured by $1.90/day, on the Human Development Index and two of its components --life expectancy and expected years of schooling. Table 4 shows OLS and 2SLS results. Because U.S. aid is not found to be an endogenous regressor in column (3) (p-value of the Hausman test is 0.257), we can interpret OLS results which tell us that aid improves significantly the human development indicator. We observe that aid also contributes to increase the expected years of school, although it does not seem to have a significant impact on life expectancy or the average length of school.

Finally, we observe that U.S. aid contributes to significantly reduce extreme multidimensional poverty whereas it does not affect severe income poverty, irrespective of the estimation method. More precisely, an increase of $1 million (2014 US$) per year – $53 million over the 1946-1999 period – has contributed to alleviate the percentage of people living in extreme multidimensional poverty by 0.10 percentage points on average. Here, the back of the envelope suggests then that a country that has spent at least 2 mandates at the UNSC between 1946 and 1999[23], has succeeded in the long run to significantly reduce the percentage of population living in extreme multidimensional poverty by 0.45 percent[24].

In table 5 on the following page we control for alternative measures of institutional quality, such as political rights, civil liberties and three different types of fractionalization (ethnic, religious, language). We find no significant change on the α coefficient, except for religious fractionalization in column (5) and (6). We find indeed that the main regressor is not reported as endogenous when controlling for the effect of this variable so we report unbiased OLS results. The coefficient for aid is, in this case, much lower but still significant at the 1 percent confidence level.

[23] When analysing the impact of U.S. aid on extreme multidimensional poverty, the first stage coefficient for the number of years at the UNSC is equal to 15.79 which is very close to that from regressions on table 2 (15.99). Therefore, we can apply the same interpretation as for the main results.

[24] Since the average headcount ratio on extreme multidimensional poverty is 22.1 percent, we can say that a developing country that has received on average $1million per year from the United States over half a century has succeeded to reduce its level of multidimensional poverty by 0.45 percent.

Table 4. Regressions on alternative measures of poverty and human development indicators

OLS regressions	(1) Income Poverty 1.90$/day H	(2) Extreme Multidimensional Poverty H	(3) HDI	(4) Life Expectancy	(5) Mean Years of School	(6) Expected Years of School
U.S. aid	-0.027 (0.017)	-0.042** (0.016)	0.016** (0.006)	0.004 (0.004)	-0.003 (0.002)	0.003* (0.002)
Observations	60	57	64	64	64	64
Outliers dummies	x	x	x	x	x	x
Control variables	x	x	x	x	x	x
Regional dummy	x	x	x	x	x	x

Note: Robust standard errors in parentheses. Standard errors are clustered at the country level. Regional dummy is for Sub-Saharan Africa. Control variables are per capita GDP, per capita GDP growth, trade (% GDP), polity 2 and population density. *** p<0.01, ** p<0.05, * p<0.1

2SLS regressions	(1) Income Poverty 1.90$/day H	(2) Extreme Multidimensional Poverty H	(3) HDI	(4) Life Expectancy	(5) Mean Years of School	(6) Expected Years of School
U.S. aid	-0.025 (0.047)	-0.104* (0.062)	0.034 (0.023)	-0.014 (0.012)	0.009 (0.007)	0.012** (0.006)
Observations	60	57	64	64	64	64
Outliers dummies	x	x	x	x	x	x
Control variables	x	x	x	x	x	x
Regional dummy	x	x	x	x	x	x
First stage coefficient p-value	0.000	0.000	0.000	0.000	0.000	0.000
First stage F statistic (Cragg-Donald Wald)	5.27	9.18	7.02	7.02	7.02	7.02
First stage F statistic (Kleibergen-Paap Wald)	19.55	18.02	22.42	22.42	22.42	22.42
First stage Hausman statistic p-value	0.967	0.090	0.257	0.125	0.287	0.074

Note: Robust standard errors in parentheses. Standard errors are clustered at the country level. Regional dummy is for Sub-Saharan Africa. Control variables are per capita GDP, per capita GDP growth, trade (% GDP), polity 2 and population density. *** p<0.01, ** p<0.05, * p<0.1

Table 5. Controlling for alternative measures of institutional quality

2SLS regressions	**Multidimensional Poverty Headcount ratio**						
	(1) 2nd stage	(2) 2nd stage	(3) 2nd stage	(4) 2nd stage	(5) 2nd stage	(6) OLS	(7) 2nd stage
U.S. aid	-0.118** (0.051)	-0.116** (0.051)	-0.114** (0.049)	-0.107** (0.051)	-0.088* (0.046)	-0.043*** (0.014)	-0.115** (0.051)
Polity 2	-0.284 (0.533)						
Political Rights		1.225 (1.777)					
Civil Liberties			2.030 (2.153)				
Ethnic Fractionalization				4.614 (10.064)			
Religious Fractionalization					-17.486* (10.039)	-14.859 (11.055)	
Language Fractionalization							0.103 (0.128)
Observations	64	64	64	64	64	64	64
Outliers dummies	x	x	x	x	x	x	x
Control variables	x	x	x	x	x	x	x
Regional dummy	x	x	x	x	x	x	x
First stage F statistic (Cragg-Donald Wald)	7.02	6.73	6.93	6.07	9.20		7.40
First stage F statistic (Kleibergen-Paap Wald)	22.42	23.16	26.53	23.49	25.35		29.78
First stage Hausman statistic p-value	0.015	0.020	0.022	0.029	0.173		0.0236

Note: Robust standard errors in parentheses. Standard errors are clustered at the country level. Regional dummy is for Sub-Saharan Africa. Control variables are per capita GDP, per capita GDP growth, trade (% GDP) and population density. *** p<0.01, ** p<0.05, * p<0.1

We also test the largely analyzed hypothesis that aid plays only a significant role on poverty reduction in more democratized countries. To do this, we simply interact the aid and polity2 variables and we instrument it with the interaction between the polity2 variable and the number of years at the UNSC. OLS and 2SLS results for income and multidimensional poverty are presented in table 6 on the next page. As for table 1, aid is reported as endogenous only for the regressions on multidimensional poverty, thus the analysis on income poverty should rather focus on the first part of the table (OLS results).

An interesting observation comes out from results on both measures of poverty: aid seems to have only a slightly significant effect on income poverty alleviation in more democratic countries (column (2) of the first part of the table). More precisely, an increase of $1 million (2014 US$) per year – $53 million over the 1946-1999 period – towards more democratized economies, has contributed to alleviate the percentage of people living under $3.10/day by almost 0.1 percentage points on average.

This result adds then the extensively examined hypothesis. However, we are not able to conclude equally for multidimensional poverty, where aid has a significant impact irrespective of the degree of democracy of the country. Our results add then to two literatures, the one that supports the first results (World Bank report, 1998, Burnside and Dollar, 2000) and the one that criticized it and rather defend the second result (Daalgard and Hansen, 2001; Hansen and Tarp, 2001; Lensink and White, 2001; Easterly et al., 2004 and Roodman, 2004). We are now able to conclude that the impact seems to differ depending on how poverty is measured.

Table 6. Controlling for conditionality on institutional quality

OLS regressions	**Income Poverty Headcount ratio**				**Multidimensional Poverty Headcount ratio**			
	3.10$/day	3.10$/day	1.90$/day	1.90$/day	H	H	Extreme	Extreme
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
U.S. aid	-0.020 (0.025)	0.007 (0.030)	-0.027 (0.017)	-0.014 (0.027)	-0.036** (0.014)	-0.0324** (0.016)	-0.042** (0.016)	-0.043*** (0.016)
Polity 2	-0.379 (0.442)	0.340 (0.527)	-0.108 (0.432)	0.243 (0.577)	-0.468 (0.374)	-0.300 (0.472)	-0.309 (0.348)	-0.267 (0.466)
U.S. aid * Polity 2		-0.008* (0.004)		-0.004 (0.004)		-0.002 (0.002)		-0.0005 (0.004)
Observations	60	60	60	60	64	64	57	57
Outliers dummies	x	x	x	x	x	x	x	x
Control variables	x	x	x	x	x	x	x	x
Regional dummy	x	x	x	x	x	x	x	x

2SLS regressions	**Income Poverty Headcount ratio**				**Multidimensional Poverty Headcount ratio**			
	(1) 3.10$/day	(2) 3.10$/day	(3) 1.90$/day	(4) 1.90$/day	(5) H	(6) H	(7) Extreme	(8) Extreme
U.S. aid	0.003 (0.047)	0.010 (0.062)	-0.025 (0.047)	-0.034 (0.067)	-0.118** (0.051)	-0.134** (0.061)	-0.104* (0.062)	-0.117* (0.065)
Polity 2	-0.445 (0.462)	-0.223 (0.866)	-0.114 (0.428)	-0.400 (0.994)	-0.284 (0.533)	-1.127 (1.116)	-0.411 (0.375)	-1.715 (1.062)
U.S. aid * Polity 2		-0.003 (0.010)		0.003 (0.011)		0.009 (0.010)		0.017 (0.012)
Observations	60	60	60	60	64	64	64	64
Outliers dummies	x	x	x	x	x	x	x	x
Control variables	x	x	x	x	x	x	x	x
Regional dummy	x	x	x	x	x	x	x	x
First stage F statistic (Kleibergen-Paap Wald) First instrument	19.55	8.76	19.55	8.76	22.42	10.16	18.02	8.84
First stage F statistic (Kleibergen-Paap Wald) Second instrument		2.85		2.85		2.72		6.43
First stage Hausman statistic p-value	0.662	0.660	0.967	0.950	0.015	0.021	0.090	0.024

Note: Robust standard errors in parentheses and t-stat in brackets. Standard errors are clustered at the country level. Regional dummy is for Sub-Saharan Africa. Control variables are per capita GDP, per capita GDP growth, trade (% GDP), polity 2 and population density. The second instrument is the interaction between the number of years at the UNSC and the variable polity 2*** p<0.01, ** p<0.05, * p<0.1

Further robustness checks include alternative measures of development indicators considered in the MPI such as: total primary completion rate (% of relevant age group), primary and secondary enrolment ratio for both sexes (% population of the age group that officially corresponds to that level of education) for the education dimension; under-five and infant mortality rate (per 1,000 live births) and low-birthweight for the health dimension; percentage of population with access to electricity, improved drinking water, non-solid fuel and improved sanitation facilities for the living standards dimension. All variables are drawn from World Development indicators and further information can be found in table A.1 in the Appendix. OLS and 2SLS results are present in table A.3 of the Appendix. We observe that the impact of U.S. aid on poverty alleviation is robust to alternative measures of development indicators: highly significant effect on the education dimension, secondary role for the improvement of living standards and no significant effect on the health dimension.

Finally, we consider necessary to control as well by the share of the U.S. aid over the total aid received by the country (in percentage) since the amount given by other countries can be significantly correlated with the amount given by the United States. We show indeed in table A. 2 of the Appendix that the correlation between the two variables is around 0.35 percent. We also control for the percentage of government consumption to GDP since the impact of aid on multidimensional poverty alleviation may also depend on how the government spends the money received. Indeed, several indicators such as the access to electricity or improved drinking water are mainly dependent on public spending.

Tables A. 4 and A.5 in the Appendix show results for regressions in tables 1 and 3 with these two additional controls. We observe in table A.4 that the impact of U.S. aid on income and multidimensional poverty is not affected when controlling for the effect of any of these two variables. Results on each indicator included in the MPI are not globally altered, although coefficients are smaller and the significance is reduced for several indictors. Only the impact on the percentage of people without access to non-solid fuels, which was the indicator whose impact was the lowest on the living standards dimension, is no longer significant. Despite results do not seem to be significantly altered by the control of these variables -- and mainly by the share of U.S aid over the total -- the number of observations is reduced due to missing data on total aid received by developing countries from Eastern Europe. However, according to the U.S.

"Greenbook", these countries have received significant aid from the United States since their creation after the dissolution of Soviet Union, $58 million on average. Further, multidimensional poverty data is available for these countries. Therefore, we consider coherent to include them in the main results and discard them on the robustness checks.

7. Conclusions

This paper focuses on the long-term macroeconomic impact of economic aid disbursed by the United States during the period 1946-1999 on poverty reduction during 2000-2014, from a multidimensional perspective. The main contribution of the paper is that we use recently released data on Multidimensional Poverty, while existing studies use data on economic growth, which is related to income poverty. The analysis of this alternative measure provides some insights neglected in previous studies. We further contribute to the extensive literature by controlling for potential endogeneity bias in OLS results due to reverse causality issues between aid and poverty. To do this, we build and expand on previous research and explain U.S. aid by the number of years a country has spent at the United Nations Security Council between 1946 and 1999, while existing studies use lagged aid as the instrument which might still be endogenous. By doing so we are able to use aid data that was mainly intended for political purposes, instead of aiming at development, and thus identify the causal relationship from aid to poverty in the developing world

The study considers cross-sectional data for 64 developing economies from Asia, Latin America and the Caribbean, North Africa, Sub-Saharan Africa and Eastern Europe, ranging from Low Income to Upper Middle Income.

Our results tend to favor the importance of aid disbursements on poverty reduction, as measured by multidimensional data. We find indeed that council membership is associated with 11.13 percent increase in U.S. aid on average during the 1946-1999 period. The back of the envelope suggests that a country that has spent at least 2 mandates at the UNSC between 1946 and 1999, has succeeded in the long run to significantly reduce the percentage of population living in multidimensional poverty by 0.33 percent, which is equivalent, for instance, to the average increase of the percentage of population with at least five years of schooling in Zimbabwe between 2006 and 2010/11. Therefore, despite its possible "corrupted" side, the disbursements of aid that

were distributed by the United States to developing countries over 53 years have indeed contributed to reduce multidimensional poverty far more than one could expect.

This results contrast those related to income poverty, which do not seem to be statistically significant as also found by several early works on aid-effectiveness. However, we find that aid might slightly impact income poverty alleviation in more democratic countries. More precisely, an increase of $1 million (2014 US$) per year – $53 million over the 1946-1999 period – towards more democratized economies, has contributed to alleviate the percentage of people living under $3.10/day by almost 0.1 percentage points on average.

The highest effect on multidimensional poverty alleviation is through years of schooling (0.71 percent) and to a lesser extent through living standards (0.41 percent on average). The impact of U.S. aid on child mortality mitigation or improvement of nutrition does not seem statistically significant.

Our results are robust to a wide range of specifications, including alternative measures of poverty and human development indicators, controlling for the conditionality on the institutional framework of the recipient country, for alternative measures of institutional quality and for the addition of relevant control variables such as the share of U.S. aid over the total aid received by the country and percentage of government consumption to GDP. We find indeed that spending at least two years at the UNSC has contributed to reduce extreme multidimensional poverty by around 0.45 percent on average in the long run.

The differences in the results between these two measures of poverty contribute in several folds. First, they reaffirm results from previous studies that found a non-significant relationship between development aid and per capita GDP growth in developing countries. Second, they suggest that poverty measurement remains a challenge and it provides incentives for further research on this area and on the analysis of the aid-poverty relationship. Third, they suggest that economic aid does play an important role in improving poor people's life in developing countries and can indeed help them reach the "bottom rung, from which they can then proceed to climb on their own" (Sachs, 2005).

Finally, if all dimensions of poverty must be ended, as highlighted by the new

sustainable development agenda, multidimensional poverty data might help better understand the role of aid disbursements in the developing world since poor people can indeed experience many different forms of deprivation at the same time other than the lack of money. Further research should focus on the impact of more precise dimensions of aid on the intended indicators overt time. Enlarging the available data on poverty in order to be able to consider the temporal dimension should be a priority. We also claim that all these results might be relevant for policy making in developing countries in order to achieve the Sustainable Development Goals (SDGs) approved in September 2015. However, goals should be expected to be attained in the long-run rather than in the short or medium term.

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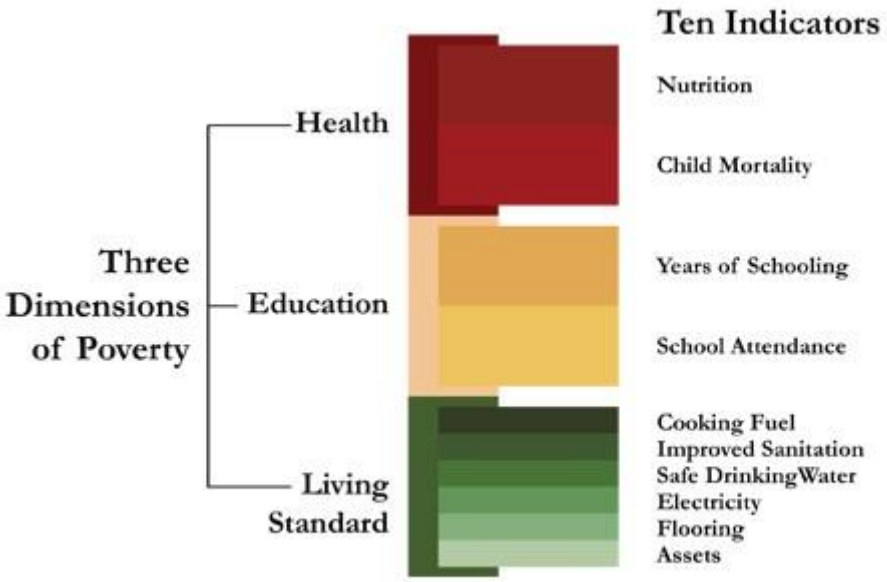
Appendix

Figure A1. Multidimensional Poverty Index



Source: Extracted from the OPHI Multidimensional Poverty Index website http://www.ophi.org.uk/.

Table A.1. Data description and sources

Variables	Description	Sources
MPI	Average of Multidimensional Poverty Index (%) 2000-2014	Oxford Poverty and Human Development Initiative (OPHI)
MPI_H	Average of Multidimensional Poverty Headcount ratio (%) 2000-2014	Oxford Poverty and Human Development Initiative (OPHI)
IP_GAP $3.10/day	Average poverty gap at $3.50 a day (2011 PPP) 2000-2014. It is the mean shortfall in income or consumption from the poverty line $3.50 a day (counting the nonpoor as having zero shortfall), expressed as a percentage of the poverty line. This measure reflects the depth of poverty as well as its incidence. As a result of revisions in PPP exchange rates, poverty rates for individual countries cannot be compared with poverty rates reported in earlier editions.	World Development Indicators
IP_H $3.10/day	Average poverty headcount ratio at $3.50 a day 2000-2014. It is the percentage of the population living on less than $3.50 a day at 2011 international prices. As a result of revisions in PPP exchange rates, poverty rates for individual countries cannot be compared with poverty rates reported in earlier editions.	World Development Indicators
Extreme MPI_H	Average of Multidimensional Poverty Headcount ratio of destitute population (%) 2000-2014	Oxford Poverty and Human Development Initiative (OPHI)
IP_GAP $1.90/day	Average poverty gap at $1.90 a day (2011 PPP) 2000-2014. It is the mean shortfall in income or consumption from the poverty line $1.90 a day (counting the nonpoor as having zero shortfall), expressed as a percentage of the poverty line. This measure reflects the depth of poverty as well as its incidence. As a result of revisions in PPP exchange rates, poverty rates for individual countries cannot be compared with poverty rates reported in earlier editions.	World Development Indicators
IP_H $1.90/day	Average poverty headcount ratio at $1.90 a day 2000-2014. It is the percentage of the population living on less than $1.90 a day at 2011 international prices. As a result of revisions in PPP exchange rates, poverty rates for individual countries cannot be compared with poverty rates reported in earlier editions.	World Development Indicators
SC	Number of years a country has spent at the Security Council of the United Nations 1946-1999	U.N. website http://www.un.org/ website.
ODA	Average of gross (the actual amounts disbursed) ODA disbursements from DAC (in millions) 1960-2014. Represent the actual international transfer of financial resources.	OECD Statistics
U.S. aid	Average economic grants and loans from the United States 1946-1999 (in millions).	The "Greenbook". U.S Agency for International Development
Growth rate	Annualized per capita growth rate, constant GDP (2010US$) (%) 1960-1999	World Development Indicators
Trade	Average of trade (% of GDP) 1960-1999. Trade is the sum of exports and imports of goods and services measured as a share of gross domestic product.	World Development Indicators
Polity 2	Average of the revised combined Polity Score 1946-1999. This variable is a modified version of the POLITY variable added in order to facilitate the use of the POLITY regime measure in time-series analyses. The POLITY score is computed by substracting the AUTOC score from the DEMOC score; the resulting unified polity scale ranges from +10 (strongly Democratic) to -10 (strongly Autocratic).	Polity IV from The Polity Project of the Center for Systemic Peace (Marshall et al., 2002)
Resources rents	Average of total natural resources rents (% of GDP). Total natural resources rents are the sum of oil rents, natural gas rents, coal rents (hard and soft), mineral rents, and forest rents.	World Development Indicators
HDI	Average Humand Development Indicator 2000-2014. A composite index measuring average achievement in three basic dimensions of human development—a long and healthy life, knowledge and a decent standard of living	United Nations Development Programme
Expected years of schooling	Average expected years of schooling 2000-2014. Number of years of schooling that a child of school entrance age can expect to receive if prevailing patterns of age-specific enrolment rates persist throughout the child's life.	United Nations Development Programme
Life Expectancy	Average Life Expectancy 2000-2014. Number of years a newborn infant could expect to live if prevailing patterns of age-specific mortality rates at the time of birth stay the same throughout the infant's life.	United Nations Development Programme
Primary completion rate	Average of primary completion rate, total (% of relevant age group) 2000-2014 and 1960-1999. Number of new entrants (enrollments minus repeaters) in the last grade of primary education, regardless of age, divided by the population at the entrance age for the last grade of primary education.	World Development Indicators
Primary enrolment ratio	Average of school enrollment, primary (% gross) 2000-2014 and 1960-1999. Gross enrollment ratio is the ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education shown.	World Development Indicators
Secondary enrolment ratio	Average of school enrollment, secondary (% gross) 2000-2014 and 1960-1999. Gross enrollment ratio is the ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education shown. Secondary education completes the provision of basic education that began at the primary level, and aims at laying the foundations for lifelong learning and human development, by offering more subject- or skill-oriented instruction using more specialized teachers.	World Development Indicators
Infant Mortality rate	Average of mortality rate, infant (per 1,000 live births)	World Development Indicators
Under 5 Mortality rate	Average of mortality rate, under-5 (per 1,000 live births) 2000-2014	World Development Indicators
Access to electricity	Average of access to electricity (% of population) 2000-2014	World Development Indicators
Access to non-solid fuel	Average of access to non-solid fuel (% of population) 2000-2014	World Development Indicators
Access to clean water	Average of improved water source (% of population with access) 2000-2014	World Development Indicators
Access to sanitation	Average of improved sanitation facilities (% of population with access) 2000-2014	World Development Indicators
Low Birthweight	Average of low-birthweight babies 2000-2014. Low-birthweight are newborns weighing less than 2,500 grams, with the measurement taken within the first hours of life, before significant postnatal weight loss has occurred.	World Development Indicators

Table A.2. Correlation matrix for 59 observations

Variables	MPI_H 2000-2014	U.S. aid 1946-1999	Security Council 1946-1999	Per capita growth 1960-1999	Per capita GDP 1960-1999	Trade (%GDP) 1960-1999	Polity2 1960-1999	Population Density	Share U.S. aid over total 1960-1999	Government Consumption (%GDP)
MPI_H 2000-2014	1,00									
U.S. aid 1946-1999	-0,20	1,00								
Security Council 1946-1999	-0,32	0,46	1,00							
Per capita growth 1960-1999	-0,56	0,28	0,26	1,00						
Per capita GDP 1960-1999	-0,55	-0,12	0,19	0,34	1,00					
Trade (%GDP) 1960-1999	-0,17	-0,24	-0,42	-0,11	0,19	1,00				
Polity2 1960-1999	-0,41	0,15	0,22	0,25	0,40	-0,05	1,00			
Population Density	-0,04	0,23	-0,03	0,14	-0,07	-0,21	0,31	1,00		
Share U.S. aid over total 1960-1999	-0,40	0,35	0,16	0,06	0,00	0,04	0,32	0,09	1,00	
Government Consumption (%GDP)	-0,08	-0,08	-0,19	0,17	0,09	0,66	-0,14	-0,31	-0,16	1,00

Table A.3. Dimensions, indicators, and deprivations cutoffs of the MPI

Dimensions of Poverty	Indicator	Deprived if..
Education	Years of Schooling	No household member aged 10 years or older has completed five years of schooling
	Child School Attendance	Any school-aged child+ is not attending school up to the age at which he/she would complete class 8
Health	Child Mortality	Any child has died in the family in the five-year period preceding the survey
	Nutrition	Any adult under 70 years of age, or any child for whom there is nutritional information is undernourished in terms of weight for ag
Living Standard	Electricity	The household has no electricity
	Improved Sanitation	The household's sanitation facility is not improved (according to MDG guidelines), or it is improved but shared with other households
	Improved Drinking Water	The household does not have access to improved drinking water (according to MDG guidelines) or safe drinking water is at least a 30minute walk from home, roundtrip
	Flooring	The household has a dirt, sand, dung or 'other' (unspecified) type of floor
	Cooking Fuel	The household cooks with dung, wood or charcoal
	Assets Ownership	The household does not own more than one radio, TV, telephone, bicycle, motorbike or refrigerator and does not own a car or truck

Source: Alkire et al. (2014, 2016)

Table A.4. Descriptive statistics of the ten indicators considered in the MPI

Indicators considered in the MPI		**N obs**	**Mean**	**Std. Dev.**	**Min**	**Max**
Education	Schooling	64	15,9	16,6	0,0	62,7
	Attendance	58	18,9	17,1	0,0	63,7
Health	Mortality	61	20,4	16,4	0,0	55,9
	Nutrition	60	14,8	12,0	0,0	38,2
Living Standards	Electricity	63	29,7	28,4	0,0	84,5
	Sanitation	64	30,0	25,7	0,0	86,2
	Water	64	19,2	18,3	0,0	57,7
	Flooring	63	24,8	23,7	0,0	82,6
	Fuel	62	35,2	29,6	0,0	90,7
	Assets	64	20,1	18,6	0,0	67,2

Source: Oxford Poverty and Humand Development Initiative

Table A.3. Regressions on alternative measures of human development indicators considered in the MPI

OLS regressions	**Education**			**Health**			**Living Standards**			
	(1) Primary enrolment	(2) Secondary enrolment	(3) Primary completion	(3) Infant Mortality	(4) Under 5 Mortality	(5) Low-birthweight babies	(5) Access Electricity	(6) Improved Water	(7) Improved Sanitation	(9) Access non-solid Fuel
U.S. aid	-0.005 (0.018)	0.037** (0.017)	0.035* (0.019)	-0.010 (0.011)	-0.026 (0.016)	-0.003 (0.007)	0.031* (0.016)	0.018* (0.011)	0.013 (0.023)	0.045 (0.028)
Observations	64	63	63	64	64	63	64	64	64	64
Outliers dummies	x	x	x	x	x	x	x	x	x	x
Control variables	x	x	x	x	x	x	x	x	x	x
Regional dummy	x	x	x	x	x	x	x	x	x	x

2SLS regressions	**Education**			**Health**			**Living Standards**			
	(1) Primary enrolment	(2) Secondary enrolment	(3) Primary completion	(3) Infant Mortality	(4) Under 5 Mortality	(5) Low-birthweight	(5) Access Electricity	(6) Improved Water	(7) Improved Sanitation	(9) Access non-solid Fuel
U.S. aid	0.121** (0.052)	0.122*** (0.036)	0.157** (0.062)	-0.015 (0.037)	-0.059 (0.064)	-0.017 (0.016)	0.106* (0.061)	0.052* (0.031)	0.053 (0.039)	0.127** (0.053)
Observations	64	63	63	64	64	63	64	64	64	64
Outliers dummies	x	x	x	x	x	x	x	x	x	x
Control variables	x	x	x	x	x	x	x	x	x	x
Regional dummy	x	x	x	x	x	x	x	x	x	x
First stage coefficient p-value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
First stage F statistic (Cragg-Donald Wald)	7.02	6.90	6.33	7.02	7.02	7.69	7.02	7.02	7.02	7.02
First stage F statistic (Kleibergen-Paap Wald)	22.42	20.98	19.51	22.42	22.42	25.14	22.42	22.42	22.42	22.42
First stage Hausman statistic p-value	0.043	0.031	0.003	0.880	0.571	0.209	0.071	0.209	0.228	0.047

Note: Robust standard errors in parentheses. Standard errors are clustered at the country level. Regional dummy is for Sub-Saharan Africa. Control variables are per capita GDP, per capita GDP growth, trade (% GDP), polity 2 and population density. *** p<0.01, ** p<0.05, * p<0.1

Table A.4. Baseline regressions on poverty. Controlling for the share of U.S. aid over total aid received (in %) and government consumption (% GDP)

	Income Poverty 3.10$/day Headcount ratio						Multidimensional Poverty Headcount ratio					
OLS regressions	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
U.S. aid	-0.052** (0.023)	-0.021 (0.023)	-0.092*** (0.027)	-0.019 (0.023)	-0.048** (0.020)	-0.016 (0.022)	-0.065*** (0.023)	-0.035*** (0.013)	-0.101*** (0.028)	-0.035** (0.015)	-0.060*** (0.022)	-0.301** (0.013)
Observations	56	56	59	59	55	55	64	64	64	64	64	64
Additional Controls	1	1	1	1	2	2	1	1	1	1	2	2
Regional dummy		x		x		x		x		x		x

	Income Poverty 3.10$/day						Multidimensional Poverty					
2SLS regressions	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
U.S. aid	-0.072 (0.049)	-0.001 (0.045)	-0.137** (0.060)	0.015 (0.050)	-0.051 (0.051)	0.027 (0.045)	-0.167*** (0.059)	-0.118** (0.055)	-0.205*** (0.058)	-0.113** (0.054)	-0.155** (0.062)	-0.106* (0.057)
Observations	56	56	59	59	55	55	60	60	63	63	59	59
Additional Controls	1	1	1	1	2	2	1	1	1	1	2	2
Regional dummy		x		x		x		x		x		x
First stage coefficient: no. years at the S.C.	16.369*** (3.216)	13.494*** (3.151)	19.406*** (3.768)	13.927*** (3.452)	16.481*** (3.721)	13.540*** (3.578)	17.817*** (3.638)	15.522*** (3.313)	21.761*** (4.641)	16.386*** (3.661)	17.595*** (4.012)	15.408*** (3.648)
First stage F statistic (Cragg-Donald Wald)	6.80	4.55	9.87	4.98	6.15	4.09	7.98	5.93	12.09	6.70	6.92	5.21
First stage F statistic (Kleibergen-Paap Wald)	25.91	18.34	26.53	16.28	19.62	14.32	23.98	21.95	21.99	20.03	19.23	17.84
First stage Hausman statistic p-value	0.627	0.689	0.318	0.549	0.942	0.431	0.015	0.021	0.001	0.025	0.031	0.040

Note: Robust standard errors in parentheses. Standard errors are clustered at the country level. Regional dummy is for Sub-Saharan Africa. Control variables included in all columns are per capita GDP, per capita GDP growth, trade (% GDP), polity 2 and population density. Dummies for the outliers Pakistan, Egypt, Argentina and India are included in all columns. Additional controls in columns (1),(2), (7) and (8) is the share of U.S. aid over the total aid received (in %). Additional controls in columns (3), (4), (9) and (10) is the government consumption (in % GDP). Columns (5), (6), (11) and (12) include both additional controls. *** p<0.01, ** p<0.05, * p<0.1

Table A.5. Baseline regressions on MPI indicators. Controlling for the share of U.S. aid over total aid received (in %) and government consumption (% GDP)

OLS regressions	**Education**		**Health**		**Living Standards**					
	(1) Schooling	(2) Attendance	(3) Mortality	(4) Nutrition	(5) Electricity	(6) Water	(7) Sanitation	(8) Flooring	(9) Fuel	(10) Assets
U.S. aid	-0.031 *** (0.011)	-0.021* (0.011)	-0.012 (0.009)	-0.010 (0.009)	-0.030** (0.013)	-0.018* (0.010)	-0.019 (0.012)	-0.027* (0.015)	-0.033* (0.019)	-0.013 (0.010)
Observations	59	55	58	56	58	59	59	58	57	59
Additional Controls	x	x	x	x	x	x	x	x	x	x
Regional dummy	x	x	x	x	x	x	x	x	x	x

2SLS regressions	**Education**		**Health**		**Living Standards**					
	(1) Schooling	(2) Attendance	(3) Mortality	(4) Nutrition	(5) Electricity	(6) Water	(7) Sanitation	(8) Flooring	(9) Fuel	(10) Assets
U.S. aid	-0.099** (0.050)	-0.080 (0.052)	-0.039 (0.033)	-0.034 (0.027)	-0.127* (0.067)	-0.074** (0.032)	-0.099* (0.055)	-0.127** (0.060)	-0.098 (0.060)	-0.075* (0.040)
Observations	59	55	58	56	58	59	59	58	57	59
Additional Controls	x	x	x	x	x	x	x	x	x	x
Regional dummy	x	x	x	x	x	x	x	x	x	x
First stage coefficient: no. years at the S.C.	15.407*** (3.648)	15.390*** (5.032)	15.261*** (3.763)	13.005*** (3.131)	15.294*** (3.755)	15.407*** (3.648)	15.407*** (3.648)	15.261*** (3.763)	15.936*** (3.044)	15.407*** (3.648)
First stage F statistic (Cragg-Donald Wald)	5.21	4.02	5.02	4.64	4.92	5.21	5.21	5.02	10.10	5.21
First stage F statistic (Kleibergen-Paap Wald)	17.84	9.35	16.45	17.25	16.59	17.84	17.84	16.45	27.41	17.84
First stage Hausman statistic p-value	0.021	0.093	0.292	0.249	0.012	0.026	0.016	0.018	0.073	0.029

Note: Robust standard errors in parentheses. Standard errors are clustered at the country level. Regional dummy is for Sub-Saharan Africa. Control variables included in all columns are per capita GDP, per capita GDP growth, trade (% GDP), polity 2 and population density. Dummies for the outliers Pakistan, Egypt, Argentina and India are included in all columns. Additional controls are the share of U.S. aid over the total aid received (in %) and government consumption (in % GDP). *** p<0.01, ** p<0.05, * p<0.1

Table A.6. Countries, service on the UNSC, U.S. aid received and multidimensional poverty

Country	Code	Multidimensional poverty Headcount ratio (in %) 2000-2014	Years on Security Council 1946-1999	Total U.S. Economic Aid 1946-1999 (in millions)
Sub-Saharan Africa				
Benin	BEN	67,0	2	14,1
Burkina Faso	BFA	83,3	2	25,2
Burundi	BDI	82,6	2	11,8
Cameroon	CMR	49,7	2	24,8
Congo, Democratic Republic of the	COD	74,1	4	126,1
Congo, Republic of	COG	40,2	2	4,1
Cote d'Ivoire	CIV	60,1	4	14,3
Djibouti	DJI	29,3	2	8,5
Gabon	GAB	25,9	4	3,3
Gambia	GMB	60,4	2	8,5
Ghana	GHA	31,8	4	64,1
Guinea	GIN	78,8	2	39,1
Guinea-Bissau	GNB	77,5	2	7,7
Kenya	KEN	49,4	4	69,8
Liberia	LBR	77,6	1	69,4
Madagascar	MDG	68,7	2	19,2
Mali	MLI	82,1	2	41,8
Mauritania	MRT	56,9	2	11,9
Namibia	NAM	40,8	1	19,3
Niger	NER	90,8	2	33,2
Nigeria	NGA	53,6	6	79,9
Rwanda	RWA	67,7	2	33,5
Senegal	SEN	64,5	4	50,6
Sierra Leone	SLE	78,0	2	17,7
Sudan	SDN	57,8	2	128,3
Tanzania	TZA	65,4	2	44,7
Togo	TGO	51,4	2	12,4
Uganda	UGA	71,1	3	31,7
Zambia	ZMB	60,4	6	54,1
Zimbabwe	ZWE	36,2	4	60,5
North Africa				
Egypt	EGY	4,8	7	1948,7
Morocco	MAR	16,3	4	169,0
Tunisia	TUN	2,0	4	129,3
North Africa				
Iraq	IRQ	12,9	4	10,0
Jordan	JOR	2,3	4	266,3
Yemen	YEM	49,2	2	38,9
Latin America and the Caribbean				
Argentine	ARG	3,0	13	39,0
Bolivia	BOL	28,4	4	163,3
Brazil	BRA	5,5	16	280,8
Colombia	COL	7,3	10	159,9
Ecuador	ECU	2,8	6	55,3
Guyana	GUY	10,6	4	18,1
Honduras	HND	24,2	2	112,4
Jamaica	JAM	1,9	2	99,2
Mexico	MEX	3,4	3	53,2
Nicaragua	NIC	28,3	4	84,1
Paraguay	PRY	13,3	2	20,8
Peru	PER	15,4	6	131,0
Trinidad and Tobago	TTO	5,6	2	12,9
Uruguay	URY	1,7	2	19,8
Eastern Europe				
Belarus	BLR	0,0	2	53,4
Czech Republic	CZE	3,1	2	6,6
Hungary	HUN	4,6	4	21,8
Slovenia	SVN	0,0	2	1,6
Turkey	TUR	6,6	5	603,3
Ukraine	UKR	1,7	4	152,3
Asia				
Bangladesh	BGD	46,9	2	377,6
India	IND	53,7	12	1181,4
Indonesia	IDN	18,1	4	306,6
Nepal	NPL	45,8	4	41,0
Pakistan	PAK	46,8	10	848,4
Philippines	PHL	12,3	4	415,5
Sri Lanka	LKA	5,3	2	84,1
Thailand	THA	1,6	2	161,7