



Received: 11 May 2018
Accepted: 19 May 2019
First Published: 02 June 2019

*Corresponding author: Edmore Mahembe, Doctoral Research Fellow, Economics Department, University of South Africa, Pretoria, South Africa
E-mail: emahembe@gmail.com; 47193573@mylife.unisa.ac.za

Reviewing editor:
Robert Read, Economics, University of Lancaster, UK

Additional information is available at the end of the article

SOCIOLOGY | RESEARCH ARTICLE

Foreign aid and poverty reduction: A review of international literature

Edmore Mahembe*¹ and Prof Nicholas M. Odhiambo¹

Abstract: This main objective of this paper is to present a synthesis of the empirical literature on the effectiveness of foreign aid on poverty reduction. This is done through a review of empirical studies on the impact and effectiveness of official development assistance (ODA) or foreign aid on poverty reduction. The study divided the reviewed empirical literature into two broad groups: the studies which used non-monetary measures of poverty and those that used monetary measures of poverty. The survey results show that foreign aid has a positive impact on poverty, as reported by the majority of studies in both the non-momentary and monetary measures of poverty groups. This means that in general, foreign aid reduces poverty, irrespective of the type of poverty measures used. Of the studies which showed that foreign aid was effective in reducing poverty, it was highlighted that: (i) democracy enhances the effectiveness of aid; (ii) aid targeted at pro-poor public expenditures such as agriculture, education, health and other social services was effective; and (iii) aid disbursed in production sectors, infrastructure and economic development was more effective in reducing poverty. These channels should, therefore, be considered when making policy decision on aid allocation.

Subjects: Development Studies; Development Policy; Development Theory; Economics and Development; Economics; DevelopmentEconomics

ABOUT THE AUTHORS

Edmore Mahembe is a PhD Student in Economics in the Department of Economics at the University of South Africa. He holds an MCom in Economics from Unisa, BCom Honours in Econometrics from the the University of Pretoria and a BSc Honours in Economics from the University of Zimbabwe. His areas of research are Development Economics, Panel Data Econometrics, Poverty and Economic Growth. He has published articles in the following journals, among others: *International Journal of Emerging Markets*, *Journal of Governance and Regulation*, and *African Integration Review Journal*.

Prof Nicholas M. Odhiambo holds a PhD (Economics) degree from the University of Stellenbosch and a Master's degree in Economics from the University of Dar-es-salaam. He is currently listed as one of the top authors in Africa and ranked among the top 5% most-cited economics authors worldwide by RePEc/IDEAS. He is currently working at Unisa as Professor and Chair of Macroeconomic Policy Analysis program.

PUBLIC INTEREST STATEMENT

This study reviewed empirical studies on the impact and effectiveness of official development assistance (ODA) or foreign aid on poverty reduction. The majority of the studies reviewed showed evidence that foreign aid has a positive impact on poverty, irrespective of the type of poverty measures used. Of the studies which showed that foreign aid was effective in reducing poverty, it was found that: (i) democracy enhances the effectiveness of aid; (ii) aid targeted at pro-poor public expenditures such as agriculture, education, health and other social services was effective; and (iii) aid disbursed in production sectors, infrastructure and economic development was more effective in reducing poverty. This study recommends that these channels be considered when making policy decision on foreign aid allocation.

Keywords: official development assistance; foreign aid; poverty reduction; non-monetary measures of poverty; monetary measures of poverty; inequality; theoretical and empirical literature

Jel: F35 foreign aid; I32 measurement and analysis of poverty; O47 empirical studies of economic growth

1. Introduction

The debate on the effectiveness of foreign aid is as old as the history of foreign aid itself. Many studies have been conducted, and the raging debates have led to the emergence of three distinct camps. The first camp consists of proponents of foreign aid who argue that targeted aid can contribute towards the eradication of poverty in developing countries (Arndt, Jones, & Tarp, 2010, 2015; Sachs, 2005; Stiglitz, 2007). On the other extreme are aid critics such as Friedman (1958), Bauer (1972), Easterly (2003, 2006, 2008), Moyo (2009) and Doucouliagos and Paldam (2006) who uphold that aid is ineffective. Moyo (2009, p. 28) further argues that aid “*perpetuates the cycle of poverty and derails sustainable economic growth*”. In between these two groups are those who believe that aid can be effective under certain conditions (Burnside & Dollar, 2000, 2004; Collier & Dollar, 2002; Collier, 2007; Mosley, Hudson, & Verschoor, 2004; Gomanee, Morrissey, Mosley, & Verschoor, 2005a; Gomanee, Girma, & Morrissey, 2005b). This third group claims that the impact and effectiveness of aid are dependent on the method employed by donors to allocate aid and the recipient country’s characteristics such as governance, commitment, ownership of projects and institutional capacity (Riddell, 2008).

The main objective of this paper is to present a synthesis of the empirical literature on the effectiveness of foreign aid on poverty. This is done through a review of empirical studies on the impact and effectiveness of foreign aid on poverty reduction. This paper reviews major findings from the research studies on the direct effects of foreign aid on poverty. Presently, the empirical literature on aid effectiveness is dominated by studies on the effectiveness of foreign aid on economic growth. There is a general dearth of the empirical literature on the effectiveness of foreign aid on poverty reduction. Thus, the poverty-reducing effects of aid are not well documented (White, 2015, p. 187). Mosley (1987) refers to the lack of attention to poverty impact of aid as “a disgrace”. This paper is timely, given the need to evaluate the concluded Millennium Development Goals (MGDs) in order to document the lessons learnt in view of the recently promulgated Sustainable Development Goals (SDGs), which envision a world of “no poverty”. In both the MDGs and SDGs, foreign aid is presented as one of the main tools for fighting global poverty.

The rest of the paper is organised as follows: Section 2 offers a brief discussion on poverty and foreign aid definitions and measurements; Section 3 presents a brief review on the theoretical link between foreign aid and poverty and a review of the empirical literature on the impact of foreign aid on (i) non-monetary and (ii) monetary measures of poverty. Section 4 concludes the article with a summary of the findings and a call for further research.

2. Definition foreign aid and poverty

2.1. Definition and measurement of poverty

Broadly, there are three basic approaches to measuring the prevalence of poverty in a household, community, country, or region. The first approach is termed the income or expenditure method, which is mainly based on the human basic needs approach (BNA). The BNA sets minimum absolute standards of (primarily material) needs in a number of measurable dimensions (Clunies-Ross, Forsyth, & Huq, 2009, p. 251). It is a consumption-oriented approach, as it predominantly focuses on the minimum requirements for a decent life, such as health, nutrition, and literacy. In this approach, poverty is defined as a lack of income or consumption (Deaton, 2006, p. 9). This approach to poverty measurement assumes that individuals are poor if their income or

consumption is below a particular level, usually defined as a minimum threshold or a “poverty line”. The BNA leads to several poverty indicators, commonly referred to as monetary measures of poverty, such as per capita gross national product (GNP), headcount index, poverty gap index, and squared poverty gap.

According to the World Bank “*people are considered as poor if their standard of living falls below the poverty line, that is, the amount of income (or consumption) associated with a minimum acceptable level of nutrition and other necessities of everyday life.*” (World Bank, 1992, p. 5). From this definition, the World Bank and its affiliates adopted monetary or income measures of poverty, as contemplated by the BNA. The poor are distinguished from the non-poor by reference to a poverty line that is defined from a critical level of money income or expenditure (Hanmer, Pyatt, & White, 1999).

The second method of measuring the prevalence of poverty is called the human capabilities approach (CA) and is centred on the pioneering work of Amartya Sen during the 1980s and 1990s. This approach defines poverty as the absence of basic human capabilities to function at a minimally acceptable level within a society (Lok-Dessallien, 1999, p. 11; Deaton, 2006, p. 10). The CA looks at improving people’s well-being by expanding their “capabilities” so that they can look after themselves. The CA notion hypothesises that poverty is a result of a lack of capability to “function” or to “achieve” well-being (Wagle, 2005, p. 302). Well-being is defined as the “ends”, while capability is defined as the “means” to achieve it (United Nations Development Programme [UNDP], 2000). Furthermore, the CA to poverty measurement tries to measure poverty by looking at poverty outcomes, or “ends”, such as individuals’ abilities and opportunities to live long, healthy, and enjoyable lives; to be literate; and to have the freedom to pursue what they value (Clunies-Ross et al., 2009; Sen, 1981, 1992, 1999). Based on this definition, it can be argued that the CA is a more comprehensive approach to poverty measurement, compared to the BNA, as it places poverty within the broader context of human development (Lok-Dessallien, 1999, p. 11). The majority of the CA poverty indicators include non-monetary poverty measures or social indicators such as life expectancy, literacy rates, and malnutrition.

The third method to poverty measurement is a hybrid approach, which recognises that poverty is a multidimensional phenomenon. Perry, López, and Maloney (2006) and Deaton (2013) argue that poverty is a multidimensional concept, and it broadly covers an array of aspects such as health, mortality, security, consumption and income poverty. From this expanded definition, the poverty line may be multi-dimensional, incorporating both an income poverty line for needs that can be met monetarily, and non-monetary lines for other needs (Bourguignon, 2004; Deaton, 2006).

The poverty indicators under this third approach can be referred to as multidimensional poverty indicators, indices, or composite measures. Examples of these indicators include the United Nations Development Programme’s (UNDP) Human Development Index (HDI), which is a mixed measure of three dimensions of human development, namely (i) a long and healthy life, as measured by life expectancy at birth; (ii) education or knowledge, measured by adult literacy and the gross enrolment ratio for primary, secondary, and tertiary institutions; and (iii) a decent living standard, which is proxied by the gross domestic product (GDP) per capita in PPP in U.S. dollars (UNDP, 2005, p. 214). Another example is the Human Poverty Index (HPI), which was developed by the UNDP as a complementary measure to the HDI (UNDP, 1997). The HPI combines basic dimensions of poverty, and the variables used are longevity (percentage of the people expected to die before age 40), adult illiteracy, access to health services and to safe water, and under five malnutrition rates (UNDP, 1997, p. 14; Lok-Dessallien, 1999, p. 8). In 2010, the UNDP replaced the HPI with its new Multidimensional Poverty Index (MPI), which identifies the poor using dual cut-offs for levels and numbers of deprivations, and then multiplies the percentage of people living in poverty by the percentage of weighted indicators for which poor households are deprived (Todaro & Smith, 2012, p. 215). The MPI uses a range of health, education and standard of living indicators, which are considered as important direct

household indicators of deprivation (Todaro & Smith, 2012). Recently, Alkire and Foster (2011) and Alkire and Santos (2014) developed what is termed the global Multidimensional Poverty Index (MPI-1), which aggregates 10 poverty indicators in the dimensions of health (under-nutrition and child mortality); education (years of schooling completed and school attendance); and “standards of living” (which includes access to infrastructure such as electricity, sanitation, water, housing, and use of improved cooking fuel, as well as ownership of household assets).¹

Historically, it has been known that poverty is a result of poor people’s “dissolute behaviours” such as having many children, idleness, or bad spending choices, for example; excessive consumption of alcohol (Ravallion, 2015, p. 1971). From this argument, one can suggest that a change of behaviour can eradicate poverty. However, the recently adopted outlook is that poverty is a reflection of public and uncorrected market failures (Ravallion, 2015, p. 1974). This new outlook suggests that policymakers can intervene in the market and help reduce poverty. It is therefore important to adequately define and measure poverty levels, using all or a combination of the methods discussed above. This would help in developing effective policy interventions.

This paper focuses on the multi-dimensional measure of poverty and surveys literature which deals with both non-monetary and monetary measures of poverty. The non-monetary measures of poverty used in empirical literature include HDI, infant mortality, literacy, school enrolment, life expectancy, and GDP per capital income of the poorest quintile. Conversely, the monetary measures of poverty include poverty rate, poverty gap, and squared poverty gap.

The headcount index or the poverty rate, measures the proportion of households in a population, with income per person below the poverty line. Thus, it measures the prevalence of poverty, in terms of the spread of poverty within the population. Although the headcount index is the most popular measure used by researchers, its main disadvantage is that it does not give an indication of the poverty depth (Schaffner, 2014). The poverty-gap index measures the depth of poverty; and it takes into account the dispersal of the poor. It averages the proportional income gaps across everyone in the population against the poverty line. According to Schaffner (2014, p. 88), the poverty gap index can be interpreted as the cost per person for eliminating poverty in the entire country.² The squared poverty-gap index, on the other hand, is sensitive to the global prevalence and the average depth of poverty, as well as the occurrence of deep poverty among the poor. The index is also referred to as the poverty-severity index because of this wider reach. It is argued that squaring of the gap or shortfall magnifies the state of those in deepest poverty (Alvi & Senbeta, 2012; Schaffner, 2014).

2.2. Definition of foreign aid

The disbursement of official development assistance (ODA) or foreign aid as it is known today started soon after the World War II (McGillivray, Feeny, Hermes, & Lensink, 2006; World Bank, 1998). The donors’ main motives for aid allocation are diverse; they include (i) assist in meeting humanitarian or emergence needs, (ii) assist developing countries achieve developmental (growth and poverty reduction) goals, (iii) show solidarity, (iv) secure political and strategic interest, (v) further commercial interest, (v) strengthen historical ties, and more recently (vi) fighting war on terror and (vii) promoting human rights (Riddell, 2008, pp. 91–92).

Broadly defined, foreign aid comprises all resources; physical goods, skills and technical know-how, financial grants (gifts) or concessional loans, which are transferred by donors to recipient countries (Riddell, 2008). There are two broad types of foreign aid: official development finance (ODF) and official development assistance (ODA). ODA is sometimes used interchangeably with official aid (OA). ODA and OA cover (i) grants and (ii) concessional loans that have at least a 25% grant component (World Bank, 1998, p. 6). Both ODA and OA derive from the official sources and are given principally for promoting economic development and welfare of developing countries (OECD, 2009, p. 50). The only difference between ODA and OA is that OA is the payments to

“transitional countries” and some “advanced” developing countries while ODA covers the rest of the developing countries (Clunies-Ross et al., 2009, p. 618).

Furthermore, ODA is a subset of ODF. ODF also includes non-concessional multilateral and bilateral developmental loans with a less than 25% grant element (OECD, 2006). Foreign aid can be classified into two broad groups, bilateral (two-sided) and multilateral (many-sided) aid. The former refers to aid given by one donor government directly to a recipient government. The latter is aid given by an international institution representing a number of government donors. In some cases, however, a donor can contract with a multilateral agency to deliver a programme or project on its behalf in a recipient country. Such cases are typically counted as bilateral flows and are often referred to as Bi/Multi (OECD, 2018). International institutions which administer multilateral aid include the United Nations Development Programme (UNDP) and the World Bank (WB). Furthermore, bilateral aid is administered by agencies of the donor governments. According to OECD (2009) more than two-thirds of total ODA from DAC member countries is provided bilaterally, mostly in the form of grants. Some of the aid funds are from private organisations such as “non-governmental organisations” (NGOs).

Lastly, foreign aid can be classified according to its intended use. Project aid is granted solely to finance a specific project, such as the construction of a dam or road. Programme aid, on the other hand, is less restrictive. The recipient government has some discretion over the use of programme aid within a sector (for sectoral aid) or for general government support (Clunies-Ross et al., 2009). Figure 1, shows the percentage composition of total sectoral aid in constant 2016 prices.

As shown in Figure 1, of all the aid disbursed from 1967 to 2016, 35% went towards social infrastructure and services, which include education, health, water and sanitation, and governance support. The second largest component (21%) was allotted to economic infrastructure and services (e.g. transport, communication, energy, and banking services). The third highest amount (15%) was allocated to production sectors (such as agriculture, mining, construction, and tourism) and the least, at 6% apiece, comprises allocations related to debt and humanitarian aid. Empirical studies surveyed herein include all types of foreign aid from different sources.

3. Impact of foreign aid on non-monetary measures of poverty

3.1. Theoretical link between foreign aid and poverty

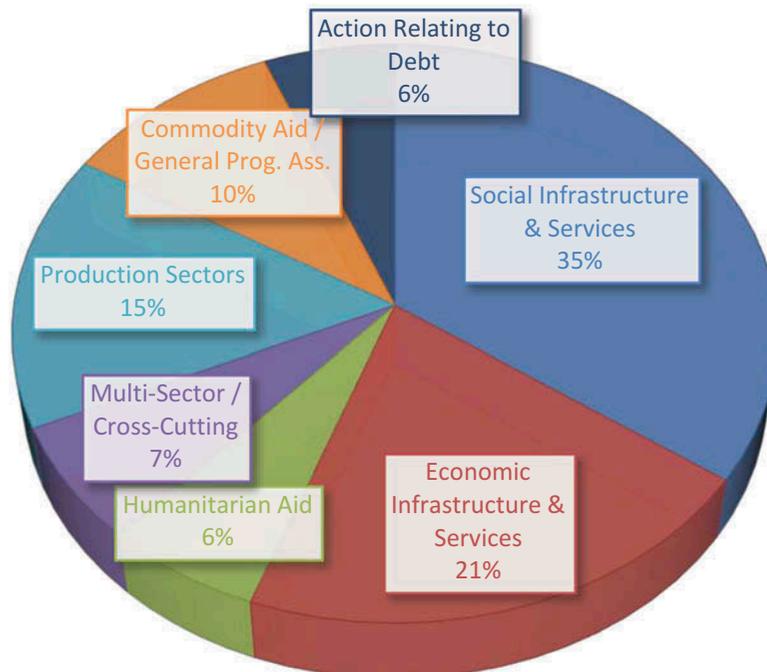
Earlier theorists (Rosenstein-Rodan, 1943; Nurske, 1953; Lewis, 1954) suggest that foreign aid provides the necessary capital to boost developing countries into self-sustaining economic growth. It was argued that poor countries needed a “big push” to free themselves from the constraints of the low-level trap (Clunies-Ross et al., 2009; Rosenstein-Rodan, 1943), and therefore foreign aid “*jump starts economic growth, and initiates a virtuous cycle whereby investment generates income and thus raises the economic return to further investment*” (Shleifer, 2009, p. 381). Based on this assumption that aid reduces poverty through economic growth, many poverty allocation models were developed in line with the theories by Harrod (1939; 1948), Domar (1946), Chenery and Bruno (1962), Chenery and Strout (1966), and Thirlwall and Hussain (1982).

Seminal empirical studies by Burnside and Dollar (2000, 2004), Sachs (2005), Rajan and Subramanian (2008), Clemens, Radelet, Bhavnani, and Bazzi (2011) and Arndt et al. (2010, 2015) found evidence that, in general, the increase in foreign aid has had a positive impact on investment and growth. However, the magnitude of the impact has varied across different countries, regions, level of aid disbursed and recipient country policies, among other factors.

There are, however, two main problems with this aid-growth nexus. First, it does not directly address the primary objective of aid allocation, which is poverty reduction. The second problem is its implicit assumption that aid affects poverty through growth (Burnside & Dollar, 2000; Collier & Dollar,

Figure 1. Sectoral composition of foreign aid, net disbursement total (1967–2016), constant 2016 prices.

Source: OECD (2017), DAC statistics.



2001, 2002; White, 2015). Though this might be correct, as sustainable improvements in social outcomes require high and sustained growth rates. However, there has been a narrow interpretation that if aid does promote economic growth; then, it implies that there is poverty reduction. This is not satisfactory, because aid can affect poverty directly or through other channels.

As shown in Mahembe and Odhiambo (2017), channels through which foreign aid affect poverty include economic growth, pro-poor public expenditure (such as education, health and other social programmes), macroeconomic stabilisation effect, and funding of infrastructure and other development initiatives. This study, however, focuses on the studies which empirically examined the direct effect of foreign aid on poverty.

3.2. Impact of foreign aid on non-monetary measures of poverty

Boone (1996) is one of the earliest papers to empirically test the effectiveness of aid in increasing investment (and therefore growth) and poverty. One of the widely quoted findings is that; aid does not have a significant impact on poverty indicators (infant mortality and primary schooling ratios).

Collier and Dollar (2001) developed a model that they termed “efficient aid”, which would be allocated according to “policy improvements that create a better environment for poverty reduction and effective aid” (Collier & Dollar, 2001, p. 1787). The paper categorically stated that “poverty reduction ... depends primarily on the quality of economic policy” (Collier & Dollar, 2001, p. 1800). The policy implications from this analysis were that a mixture of good policy and foreign aid can lead to economic growth and poverty reduction.

Collier and Dollar (2002) further derived what they termed a ‘poverty-efficient’³ allocation of aid criteria; and they used it to compare “poverty-efficient” with the actual aid allocations and to estimate the impact on poverty reduction. The authors showed that aid, operating through increased economic growth, was responsible for lifting about 10 million people out of extreme poverty each year. The study further estimated that approximately 19 million people could be lifted out of poverty each year—if aid agencies used a “poverty-efficient” aid-allocation strategy. However, this poverty-efficient reallocation of aid, which was also discussed in the World Bank

(1998) Report: *Assessing Aid* was heavily criticised by Lensink and White (2000). The main criticism stemmed from its over reliance on the assumption that “poverty depends on growth, and growth on aid”. Lensink and White (2000) argue that foreign aid can affect poverty through other channels.

Hirano and Otsubo (2014) applied the conceptual framework of globalization and the poverty-growth-inequality (P-G-I) relationship to investigate the effectiveness of aid to development. The paper finds that social aid (education, health and water and sanitation spending) significantly and directly benefits the poorest in society and economic aid (transportation, energy and communication and financial infrastructure spending) increases the income of the poor through growth.

A recent study by Arndt et al. (2015) assessed the impact of aid on economic growth, social welfare indicators (poverty and infant mortality) and intermediate outcomes (such as investment, consumption, health, education and agriculture). The study estimated the long-run

cumulative effects of aid in developing countries using limited information maximum likelihood (LIML) and inverse probability weighted squares (IPWLS) estimators in a simultaneous equations model framework, for the period 1970–2007. They found evidence that aid does stimulate growth, improve social welfare indicators and reduces poverty. Though the results indicate that aid does not have a significant effect on inequality, it was discovered that aid can raise investment, improve school enrolment, boost life expectancy and reduce infant mortality (Arndt et al., 2015, p. 14).

3.3. Impact of foreign aid on monetary measures of poverty

Arvin and Barillas (2002) employ the Granger causality model to investigate the direction of causality between aid and poverty in a bivariate framework, including democracy in a trivariate Granger model. Both the bivariate and trivariate models are tested on annual data from 1975 to 1998 from a sample of 118 aid-receiving countries. The study categorised countries into two broad groups: geographical regions and levels of income. For the full sample, the study results show that aid did not affect poverty and vice versa. For the sub-samples, aid was found to reduce poverty in East Asia and the Pacific but had a detrimental impact on poverty in low-income countries (Arvin & Barillas, 2002, p. 2154).

Kosack (2003) assesses the effectiveness of aid on the quality of life in aid recipient countries. The study used the ordinary least squares (OLS) and two-stage least squares (2SLS) estimation techniques on a sample of 49 developing countries over the period 1974–1985. The study found that aid can directly increase welfare but only in democratic structures, and not in autocratic structures. Moreover, the paper establishes strong evidence that foreign aid has an indirect effect on poverty and well-being if it is spent on disadvantaged poor people.

Bahmani-Oskooee and Oyolola (2009) used the pooled-time series and cross-sectional data for 49 developing countries over the period 1981–2002, in order to estimate the impact of foreign aid on poverty. In order to control for endogeneity, the study used the 2SLS panel-estimation techniques. The paper found that aid reduces poverty; and that inequality is detrimental to poverty reduction. Chong, Grandstein, and Calderon (2009) used dynamic panel-data methods (GMM-IV) to examine the effect of aid on income inequality and poverty reduction for the period 1971–2002. The study could not find any robust statistical relationship between foreign aid and poverty reduction or income inequality.

Mosley et al. (2004) examined the direct effect of aid on poverty, using the GMM 3SLS methodology in a simultaneous equation set-up. The three main equations were poverty, aid and policy. The policy variable in the analysis of Mosley et al. (2004) represented a significant departure from the World Bank (1998), and the “good” economic policies (Burnside & Dollar, 2000). They termed the proposed policies “new conditionality” to emphasise the departure. They further developed a pro-poor public expenditure (PPE) measure, called the PPE index. The study found strong

evidence that corruption, inequality, and the composition of public expenditure are strongly associated with aid effectiveness (Mosley et al., 2004, p. F236). The main conclusion and policy implications of the study were that aid allocations, which take into account good micro and macro policies, income distribution, and GDP per capita, are more effective in reducing poverty.

Mosley and Suleiman (2007) followed up on the arguments advanced in the earlier paper by Mosley et al. (2004). The latest study used both the panel data econometric analysis covering all developing countries, and four case studies of heavily aid-dependent countries in Africa.⁴ Mosley and Suleiman (2007) estimated a poverty equation which incorporates the effects of aid through growth, macro-economic policy, pro-poor expenditures, and instability in aid levels. They found evidence that the level composition and the stability of foreign aid, matter in poverty reduction. The paper reaffirms the earlier findings that aid is most effective in reducing poverty if it is used for pro-poor expenditures such as agriculture, education and infrastructure. Military expenditure was found to have a negative impact on poverty reduction.

Gomanee et al. (2005a) tested the hypothesis that aid leads to increasing aggregate welfare using the fixed effect panel data estimation method on a sample of 104 countries for the period 1980–2000. The proxies for welfare were infant mortality and the HDI. The main findings of the paper were that aid directly improves welfare indicators and that the impact is greater in low-income countries, compared to middle-income countries. The paper also found that the channels through which aid indirectly affects welfare is growth. They found no evidence that aid conducted through PPE has a positive impact on welfare.⁵ Another study by Gomanee et al. (2005b) also investigated the impact of aid on human welfare using quantile regressions. The results contradicted the earlier paper as they found evidence that aid can affect welfare through public expenditure, and that the effect is greater in countries with lower welfare (poorer countries). They further found evidence that the marginal effectiveness of aid in alleviating poverty is higher in poorer countries than in richer countries (Gomanee et al., 2005b, p. 308).

Masud and Yontcheva (2005) assessed the effectiveness of foreign aid in reducing poverty, using infant mortality and illiteracy or education as proxies for poverty. The paper compared the impact of the two measures of foreign aid: official bilateral aid, which flows directly from a donor government to a recipient country, and projects aid, which is disbursed through international NGOs to developing countries. The two methodologies used are two-stage least-squares (2SLS) regression and the system Generalized-Method of Moments (SGMM) approach. The study concluded that NGO aid significantly reduces infant mortality compared to bilateral aid; and that the impact of both types of aid on illiteracy is less significant (Masud & Yontcheva, 2005, p. 20).

Alvi and Senbeta (2012) examined the effect of foreign aid on poverty in a sample of 79 developing countries over the period 1981–2004. The study used the dynamic panel-data estimation methods (SGMM) proposed by Blundel and Bond (1998). The paper used three measures of poverty: headcount index; the poverty-gap index and the squared poverty-gap index; two sources of aid: bilateral and multilateral; and two compositions of aid: grants and concessionary loans. The study found that “aid reduces poverty after controlling for average income and income distribution” (Alvi & Senbeta, 2012, p. 968). The study further found that multilateral aid and grants reduce poverty, while bilateral aid and loans do not.

Kaya, Kaya, and Gunter (2013) investigate the effectiveness of aid given to the agricultural sector in reducing poverty. The study disaggregated total aid into subcategories and focused on the agricultural aid. The empirical analysis used 4 years averaged cross-country data for a panel of 46 developing aid recipient countries over the 1980–2003 period. The main dependent variable is the poverty headcount ratio at US\$ 1 while the main explanatory variables are aid given to the agricultural sector and the PPE.⁶ The fixed effects panel estimator was used and found that a 1% increase in agricultural aid reduces the headcount poverty ratio by 0.2% in the aid recipient countries. The study also found that the growth elasticity of the headcount poverty ratio ranges

from 1.7 to 3.5 based on different specifications. The paper concluded that agricultural aid is effective in poverty reduction directly and indirectly through growth (Kaya et al., 2013, p. 593).

3.4. Summary of findings from a survey of the empirical literature

Table 1 gives a summary of some empirical studies reviewed herein. The first panel of Table 1 shows studies which used non-monetary or social development indicators as proxies for poverty, and the second panel shows studies which used monetary measures of poverty (such as poverty rate, poverty gap and squared poverty gap).

In summary, the empirical studies reviewed herein show mixed results. The main finding from this selective survey of the literature is that though the impact of aid on poverty yields inconclusive and conflicting results, the majority of the papers surveyed found significant evidence of the effectiveness of foreign aid on poverty reduction. This means that in general, foreign aid reduces poverty, irrespective of the type of poverty measures used. Of the studies which showed that foreign aid was effective in reducing poverty, it was found that: (i) democracy enhances the effectiveness of aid; (ii) aid targeted at pro-poor public expenditures such as agriculture, education, health and other social services was effective; and (iii) aid disbursed in production sectors, infrastructure and economic development was more effective in reducing poverty.

4. Conclusions

The main objective of this study was to survey empirical literature on the impact and effectiveness of foreign aid on poverty reduction. In order to include many studies, we used wide-ranging definitions of both poverty and foreign aid. However, despite using the wide-ranging definitions, there is a general scarcity of studies which focus specifically on the poverty-aid nexus.

The study divided the reviewed empirical literature into two broad groups: the studies which used non-monetary measures of poverty and those that used monetary measures of poverty. The survey results show that foreign aid has had a positive impact on poverty reduction, as reported by the majority of studies in both the non-momentary and monetary measures of poverty groups. This means that in general, foreign aid reduces poverty, irrespective of the type of poverty measures used. However, this study shows that the recently developed multidimensional measures of poverty such as HPI, MPI and MPI-1 have not been used in the literature on the effectiveness of foreign aid.

Of the studies which showed that foreign aid was effective in reducing poverty, it was highlighted that (i) democracy enhances the effectiveness of aid; (ii) aid targeted at pro-poor public expenditures such as agriculture, education, health and other social services was effective; and (iii) aid disbursed in production sectors, infrastructure and economic development was more effective in reducing poverty. The main policy implication is that these channels should be considered when making policy decision on aid allocation.

However, given the relatively few studies, further studies are recommended, especially studies which (i) investigate the impact of foreign aid on poverty using the different measures of poverty, including the recently developed multidimensional measures of poverty; and (ii) assess the channels through which foreign aid affects poverty.

Funding

The authors received no direct funding for this research.

Author details

Edmore Mahembe

E-mail: emahembe@gmail.com

E-mail: 47193573@mylife.unisa.ac.za¹

ORCID ID: <http://orcid.org/0000-0002-3108-699X>

Nicholas M. OdhiamboProf¹

E-mail: odhianm@unisa.ac.za

¹ Department of Economics, University of South Africa, Pretoria, South Africa.

Citation information

Cite this article as: Foreign aid and poverty reduction: A review of international literature, Edmore Mahembe & Nicholas M. Odhiambo, *Cogent Social Sciences* (2019), 5: 1625741.

Notes

1. Please see Aguilar and Sumner (2019) for a detailed discussion of the Global Multidimensional Poverty (MPI-1).
2. Assuming, that money and resources are targeted perfectly and costlessly.

Table 1. Summary of empirical studies on aid and poverty

Study/author(s)	Period	Countries	Main dependent variables	Main explanatory variables	Methodology	Main findings
A: FOREIGN AID AND NON-MONETARY MEASURES OF POVERTY						
Boone (1996)	1971–1990	96 countries	<ul style="list-style-type: none"> • Infant mortality and • Primary schooling ratios 	<ul style="list-style-type: none"> • Aid as % of GNP • Per capita GDP growth rate 	OLS, IV and Fixed Effects	<ul style="list-style-type: none"> • Aid does not have significant impact on human development indicators (infant mortality and primary schooling ratios).
Arvin and Barillas (2002)	1975–1998	118 aid-receiving countries.	<ul style="list-style-type: none"> • GNP per capita 	<ul style="list-style-type: none"> • Aid as % of GNP • Democracy (Aid) x (Democracy) 	Granger causality	<ul style="list-style-type: none"> • The study results show that aid did not affect poverty (GNP per capita) and vice versa.
Kosack (2003)	1974–1985	49 developing countries	<ul style="list-style-type: none"> • Human Development Index (HDI) 	<ul style="list-style-type: none"> • Aid as % of GDP • Democracy index 	OLS and 2SLS	<ul style="list-style-type: none"> • The study finds that aid can directly increase welfare but only in democracies, and not in autocracies. • The paper also finds strong evidence that foreign aid has an indirect effect on poverty and well-being if it is spent on disadvantaged poor people.
Masud and Yontcheva (2005)	1990–2001.	58 developing countries	<ul style="list-style-type: none"> • Infant Mortality, • Illiteracy 	<ul style="list-style-type: none"> • NGO aid, • Bilateral aid 	2SLS and System GMM.	<ul style="list-style-type: none"> • NGO aid significantly reduces infant mortality compared to bilateral aid. • The impact of both types of aid on illiteracy is less significant.
Gomanee et al. (2005a)	1980–2000	104 countries	<ul style="list-style-type: none"> • HDI • Infant mortality 	<ul style="list-style-type: none"> • Aid as % of GNI • GNP per capita, • Pro-poor public expenditure 	Fixed effects panel.	<ul style="list-style-type: none"> • Aid directly improves welfare indicators and that the impact is greater in low-income countries, compared to middle-income countries.

(Continued)

Table 1. (Continued)

Study/author(s)	Period	Countries	Main dependent variables	Main explanatory variables	Methodology	Main findings
Hirano and Otsubo (2014)	1990s-2000s	99 countries	<ul style="list-style-type: none"> Capita Income of the Poorest Quintile 	<ul style="list-style-type: none"> Growth rate of GDP per capita Aid as % of GNP Sectorial aid. 	Panel 2SLS	<ul style="list-style-type: none"> Economic aid is good for the poor due to its growth-inducing impact, and Social aid is good for the poor through systematic distributional effects.
Arndt et al. (2015)	1970-2007	78 countries	<ul style="list-style-type: none"> school enrolment, life expectancy infant mortality 	<ul style="list-style-type: none"> Aid as % of GDP 	LIML and IPWLS in SEMs	<ul style="list-style-type: none"> aid can raise investment, improve school enrolment, boost life expectancy and reduce infant mortality.
B: FOREIGN AID AND MONETARY MEASURES POVERTY						
Mosley et al. (2004)	1980-2000	34 countries	<ul style="list-style-type: none"> Poverty headcount, Infant Mortality, 	<ul style="list-style-type: none"> Aid as % of GNI GNP per capita, Pro-poor public expenditure, 	GMM 3SLS	<ul style="list-style-type: none"> Corruption, inequality, and the composition of public expenditure are strongly associated with aid effectiveness.
Mosley and Suleiman (2007)	1980-2002	39 developing & transitional economies	<ul style="list-style-type: none"> Poverty head-count 	<ul style="list-style-type: none"> Aid as % of GNP GNP per capita, Agriculture expenditure (%) 	GMM 3SLS	<ul style="list-style-type: none"> Aid is most effective in reducing poverty if it is used for pro-poor expenditures such as agriculture, education and infrastructure.
Bahmani-Oskooee and Oyalola (2009)	1981-2002	49 developing countries	<ul style="list-style-type: none"> Headcount ratio 	<ul style="list-style-type: none"> Bilateral aid GPD per capita Gini coefficient 	2SLS panel estimation	<ul style="list-style-type: none"> Foreign aid reduces poverty.
Chong et al. (2009)	1971-2002.	136 countries	<ul style="list-style-type: none"> Poverty rate, Poverty gap, and Squared poverty gap 	<ul style="list-style-type: none"> ODA as a % of GDP (Aid) Aid squared Aid x Corruption 	System GMM estimator.	<ul style="list-style-type: none"> Insignificant statistical relationship between foreign aid and poverty or income inequality.

(Continued)

Table 1. (Continued)

Study/author(s)	Period	Countries	Main dependent variables	Main explanatory variables	Methodology	Main findings
Alvi and Senbeta (2012)	1981–2004	79 developing countries	<ul style="list-style-type: none"> Poverty rate, Poverty gap, and Squared poverty gap 	<ul style="list-style-type: none"> Aid as a % of GNI GDP per capita Gini coefficient 	System GMM estimator.	<ul style="list-style-type: none"> Foreign aid reduces poverty. Multilateral aid and grants reduce poverty Bilateral aid and loans do not reduce poverty.
Kaya et al. (2013)	1980–2003	46 developing countries	<ul style="list-style-type: none"> Poverty head-count ratio 	<ul style="list-style-type: none"> Agricultural aid GNP per capita, Pro-poor public expenditure, 	Fixed effects panel, 3SLS	<ul style="list-style-type: none"> Agricultural aid is effective in poverty reduction directly and indirectly through growth.
Arndt et al. (2015)	1970–2007	78 countries	<ul style="list-style-type: none"> Poverty head-count (\$1.25 and \$2 a day) 	<ul style="list-style-type: none"> Aid as % of GDP 	LIML and IPWLS	<ul style="list-style-type: none"> Aid does stimulate growth, improve social welfare indicators and reduces poverty.

Source: Authors' compilation.

Notes: The abbreviations OLS stands for ordinary least squares; IV: instrumental variables; 2SLS: two-stage least squares; 3SLS: three-stage least squares; GMM: generalized method of moments; SGMM: two-step system GMM; LIML: limited information maximum likelihood; IPWLS: inverse probability weighted squares; SEM: simultaneous equation model; ODA: official development assistance; GDP: gross domestic product; GNI: gross national income; GNP: gross national product; NGO: non-governmental organizations; and HDI: human development index.

3. A poverty-efficient aid program is one which reduces poverty by as much as possible.
4. The case studies are Ethiopia and Uganda, where aid effectiveness has been impressively high and Zimbabwe and Malawi, where it has been depressingly low (Mosley & Suleiman, 2007, p. 140).
5. See also Gomanee et al. (2003) for a detailed discussion of PPE.
6. As per Mosley et al. (2004) and Gomanee et al. (2005a).

References

- Aguilar, G. R., & Sumner, A. (2019). *Who are the world's poor? A new profile of global multidimensional poverty*. Washington, DC: Center for Global Development. Working Paper 499.
- Alkire, S., & Foster, J. (2011). Counting and multidimensional poverty measurement. *Journal of Public Economics*, 96(7–8), 476–487.
- Alkire, S., & Santos, M. E. (2014). Measuring acute poverty in the developing world: Robustness and scope of the multidimensional poverty index. *World Development*, 59, 251–274. July 2014. doi:10.1016/j.worlddev.2014.01.026
- Alvi, A., & Senbeta, A. (2012). Does foreign aid reduce poverty? *Journal of International Development*, 24(8), 955–976. doi:10.1002/jid.1790
- Arndt, C., Jones, S., & Tarp, F. (2010). Aid, growth, and development: Have we come full circle? *Journal of Globalization and Development*, 1(2), 1–27. doi:10.2202/1948-1837.1121
- Arndt, C., Jones, S., & Tarp, F. (2015). Assessing foreign aid's long-run contribution to growth and development. *World Development*, 69, 6–18. May 2015. doi:10.1016/j.worlddev.2013.12.016
- Arvin, M. B., & Barillas, F. (2002). Foreign aid, poverty reduction, and democracy. *Applied Economics*, 34(17), 2151–2156. doi:10.1080/00036840210136718
- Bahmani-Oskooee, M., & Oyolola, M. (2009). Poverty reduction and aid: Cross-country evidence. *International Journal of Sociology and Social Policy*, 29(5/6), 264–273. doi:10.1108/01443330910965796
- Bauer, P. T. (1972). *Dissent on development*. Cambridge, Mass: Harvard University Press.
- Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics*, 87(1), 115–143.
- Boone, P. (1996). Politics and the effectiveness of foreign aid. *European Economic Review*, 40(2), 289–329. doi:10.1016/0014-2921(95)00127-1
- Bourguignon, F. (2004). The poverty-growth-inequality triangle. Paper Presented at the Indian Council for Research on International Economic, New Delhi.
- Burnside, C., & Dollar, D. (2000). Aid, policies and growth. *American Economic Review*, 90(4), 847–868. doi:10.1257/aer.90.4.847
- Burnside, C., & Dollar, D. (2004). *Aid, policies, and growth: Revisiting the evidence*. Washington DC: World Bank. Working Paper 3251.
- Chenery, H., & Bruno, M. (1962). Development alternatives in an open economy: The case of Israel. *Economic Journal*, 77(285), 79–103. doi:10.2307/2228618
- Chenery, H., & Strout, S. (1966). Foreign assistance and economic development. *American Economic Review*, 56(4), 679–753.
- Chong, A., Grandstein, M., & Calderon, C. (2009). Can foreign aid reduce income inequality and poverty? *Public Choice*, 140(1–2), 59–84. doi:10.1007/s11127-009-9412-4
- Clemens, M. A., Radelet, S., Bhavnani, R. R., & Bazzi, S. (2011). Counting chickens when they hatch: Timing and the effects of aid on growth. *The Economic Journal*, 122(561), 590–617. doi:10.1111/j.1468-0297.2011.02482.x
- Clunies-Ross, A., Forsyth, D., & Huq, M. (2009). *Development economics* (1st ed.). Berkshire: McGraw-Hill Higher Education.
- Collier, P. (2007). *The bottom billion: Why the poorest countries are failing and what can be done about it*. New York: Oxford University Press.
- Collier, P., & Dollar, D. (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. doi:10.1016/S0305-750X(01)00076-6
- Collier, P., & Dollar, D. (2002). Aid allocation and poverty reduction. *European Economic Review*, 46(8), 1475–1500. doi:10.1016/S0014-2921(01)00187-8
- Deaton, A. (2006). Measuring poverty. In A. V. Banerjee, R. Benabou, & D. Mookherjee (Eds.), *Understanding poverty* (pp. 3–15). New York: Oxford University Press.
- Deaton, A. (2013). *The great escape: Health, wealth, and the origins of inequality*. New Jersey: Princeton University Press.
- Domar, E. D. (1946). Capital expansion, rate of growth and employment. *Econometrica*, 14(2), 137–147. doi:10.2307/1905364
- Doucoulagos, H., & Paldam, M. (2006). Aid effectiveness on accumulation: A meta study. *Kyklos*, 59(2), 227–254. doi:10.1111/kykl.2006.59.issue-2
- Easterly, W. (2003). Can foreign aid buy growth? *The Journal of Economic Perspectives*, 17(3), 23–48. doi:10.1257/089533003769204344
- Easterly, W. (2006). *The white man's burden: Why the West's efforts to aid the Rest have done so much ill and so little good*. New York: Penguin Books.
- Easterly, W. (2008). Introduction: Can't take it anymore? In W. Easterly (Ed.), *Reinventing foreign aid* (pp. 1–45). London: The MIT Press.
- Friedman, M. (1958). Foreign economic aid: Means and objectives. In J. Bhagwati & R. Eckhaus (Eds.), *Foreign aid* (pp. 500–516). Harmondsworth: Penguin.
- Gomanee, K., Girma, S., & Morrissey, O. (2005b). Aid, public spending and human welfare: Evidence from quantile regressions. *Journal of International Development*, 17(3), 299–309. doi:10.1002/(ISSN)1099-1328
- Gomanee, K., Morrissey, O., Mosley, P., & Verschoor, A. (2005a). Aid, government expenditure, and aggregate welfare. *World Development*, 33(3), 355–370. doi:10.1016/j.worlddev.2004.09.005
- Gomanee, K., Morrissey, O., Mosley, P., & Verschoor, A. (2003). Aid, pro-poor government spending and welfare, Nottingham: University of Nottingham, CREDIT Research Paper, No. 03/03.
- Hanmer, L. C., Pyatt, G., & White, H. (1999). What do the World Bank's poverty assessments teach us about poverty in Sub-Saharan Africa? *Development and Change*, 30(4), 795–823. doi:10.1111/dech.1999.30.issue-4
- Harrod, R. F. (1939). An essay in dynamic theory. *Economic Journal*, 49(193), 14–33. doi:10.2307/2225181
- Harrod, R. F. (1948). *Towards a dynamic economics*. London: Macmillan.
- Hirano, Y., & Otsubo, S. (2014). *Aid is good for the poor*. Washington DC: World Bank. Policy Research Working Paper No. 6998.
- Kaya, O., Kaya, I., & Gunter, L. (2013). Foreign aid and the quest for poverty reduction: Is aid to agriculture

- effective? *Journal of Agricultural Economics*, 64(3), 583–596. doi:10.1111/1477-9552.12023
- Kosack, S. (2003). Effective aid: How democracy allows development aid to improve the quality of life. *World Development*, 31(1), 1–22. doi:10.1016/S0305-750X(02)00177-8
- Lensink, R., & White, H. (2000). Aid allocation, poverty reduction and the 'Assessing aid' report. *Journal of International Development*, 12(3), 399–412. doi:10.1002/(ISSN)1099-1328
- Lewis, A. W. (1954). Economic development with unlimited supplies of labour. *The Manchester School*, 22(2), 139–191.
- Lok-Dessallien, R. (1999). Review of poverty concepts [Online]. Retrieved from http://kambing.ui.ac.id/onno/pubo/library/library-ref-ind/ref-ind-1/application/poverty-reduction/Poverty/Review_of_Poverty_Concepts.pdf
- Mahembe, E., & Odhiambo, N. M. (2017). On the link between foreign aid and poverty reduction in developing countries. *Revista Galega De Economia*, 26(2), 113–132.
- Masud, N., & Yontcheva, B. (2005). *Does foreign aid reduce poverty? Empirical evidence from nongovernmental and bilateral aid*. Washington DC: IMF Working Paper WP/05/100.
- McGillivray, M., Feeny, S., Hermes, N., & Lensink, R. (2006). Controversies over the impact of development aid: It works; it doesn't; it can, but that depends *Journal of International Development*, 18(7), 1031–1050. doi:10.1002/(ISSN)1099-1328
- Mosley, P. (1987). *Overseas development aid: Its defence and reform*. Brighton: Wheatsheaf.
- Mosley, P., & Suleiman, A. (2007). Aid, agriculture and poverty in developing countries. *Review of Development Economics*, 11(1), 139–158. doi:10.1111/rode.2007.11.issue-1
- Mosley, P., Hudson, J., & Verschoor, A. (2004). Aid, poverty reduction and the 'new conditionality'. *The Economic Journal*, 114(496), F217–F243. doi:10.1111/j.1468-0297.2004.00220.x
- Moyo, D. (2009). *Dead aid: Why aid is not working and how there is a better way for Africa*. New York: Farrar, Straus and Giroux.
- Nurske, R. (1953). *Problems of capital formation in underdeveloped countries*. New York: Oxford University Press.
- OECD. (2006). *Development assistance: Efforts and policies*. Paris: Author.
- OECD. (2009). *Managing aid: Practices of DAC member countries*. Paris: Author.
- OECD. (2017, November 21). Development aid rises again in 2016 but flows to poorest countries dip [Online]. Retrieved from <http://www.oecd.org/dac/financing-sustainable-development/development-aid-rises-again-in-2016-but-flows-to-poorest-countries-dip.htm>
- OECD. (2018). Frequently asked questions: What are the differences between bilateral, multilateral and Bi/Multi aid? [Online]. Retrieved from <http://www.oecd.org/dac/stats/faq.htm>
- Perry, G. E., López, H. J., & Maloney, W. F. (2006). From vicious to virtuous circles. In G. E. Perry (Ed.), *Poverty reduction and growth: Virtuous and vicious circles* (pp. 1–20). Washington DC: The World Bank.
- Rajan, R. G., & Subramanian, A. (2008). Aid and growth: What does the cross-country evidence really show? *The Review of Economics and Statistics*, 90(4), 643–665. doi:10.1162/rest.90.4.643
- Ravallion, M. (2015). The idea of antipoverty policy. In A. Atkinson & F. Bourguignon (Eds.), *Handbook of income distribution* (pp. 1966–2061). Amsterdam: Elsevier B.V.
- Riddell, R. C. (2008). *Does foreign aid really work?* New York: Oxford University Press.
- Rosenstein-Rodan, P. N. (1943). Problems of industrialisation of Eastern and Southern Europe. *The Economic Journal*, 53(210/211), 202–211. doi:10.2307/2226317
- Sachs, J. D. (2005). *The end of poverty: Economic possibilities for our time*. New York: Penguin Books.
- Schaffner, J. (2014). *Development economics: Theory, empirical research, and policy analysis*. Danvers, MA: John Wiley & Sons, Inc.
- Sen, A. K. (1981). *Poverty and families: An essay on entitlement and deprivation*. Oxford: Clarendon Press.
- Sen, A. K. (1992). *Inequality re-examined*. Oxford: Oxford University Press.
- Sen, A. K. (1999). *Development as freedom*. Oxford: Oxford University Press.
- Shleifer, A. (2009). Peter Bauer and the failure of foreign aid. *Cato Journal*, 29(3), 379–390.
- Stiglitz, J. E. (2007). *Making globalization work*. New York: W. W. Norton & Company, Inc.
- Thirlwall, A., & Hussain, M. N. (1982). The balance of payments constraint, capital flows and growth rate differences between developing countries. *Oxford Economic Papers*, 34(3), 498–510. doi:10.1093/oxfordjournals.oep.a041565
- Todaro, M. P., & Smith, S. C. (2012). *Economic development* (11th ed.). Boston: Addison-Wesley, Pearson Education, Inc.
- UNDP. (1997). *Human development report in 1997*. New York: Oxford University Press.
- UNDP. (2000). *Overcoming human poverty: United Nations development programme poverty report 2000*. New York: Author.
- UNDP. (2005). *Human development report 2005*. New York City: Author.
- Wagle, U. (2005). Multidimensional poverty measurement with economic well-being, capability, and social inclusion: A case from Kathmandu, Nepal. *Journal of Human Development*, 6(3), 301–328. doi:10.1080/14649880500287621
- White, H. (2015). Chapter 12 evaluating aid impact: Approaches and findings. In S. Lahiri (Ed.), *Theory and Practice of Foreign Aid (Frontiers of Economics and Globalization, Volume 1)* (pp. 187–209). Emerald Group Publishing Ltd. doi:10.1016/S1574-8715(06)01012-8
- World Bank. (1992). Operational directive 4.15. Washington D.C.: Author.
- World Bank. (1998). *Assessing aid: What works, what doesn't, and why*. New York: Oxford University Press.



© 2019 The Author(s). This open access article is distributed under a Creative Commons Attribution (CC-BY) 4.0 license.

You are free to:

Share — copy and redistribute the material in any medium or format.

Adapt — remix, transform, and build upon the material for any purpose, even commercially.

The licensor cannot revoke these freedoms as long as you follow the license terms.

Under the following terms:

Attribution — You must give appropriate credit, provide a link to the license, and indicate if changes were made.

You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.

No additional restrictions

You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits.



Cogent Social Sciences (ISSN: 2331-1886) is published by Cogent OA, part of Taylor & Francis Group.

Publishing with Cogent OA ensures:

- Immediate, universal access to your article on publication
- High visibility and discoverability via the Cogent OA website as well as Taylor & Francis Online
- Download and citation statistics for your article
- Rapid online publication
- Input from, and dialog with, expert editors and editorial boards
- Retention of full copyright of your article
- Guaranteed legacy preservation of your article
- Discounts and waivers for authors in developing regions

Submit your manuscript to a Cogent OA journal at www.CogentOA.com

