

Money to the People: Estimates of the Potential Scale of Direct Dividend Payments in Africa

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Abstract

Historical data shows that large natural resource endowments have not translated into better quality of life in Sub-Saharan Africa (“Africa” for short). The problem is becoming more urgent, as new exploration technologies are rapidly expanding the number of countries whose fiscal revenues will grow, in many cases massively, with new oil, gas, and mineral discoveries. A search is on for innovative approaches in managing this commodity bonanza. This paper focuses on the distribution of resource rents as cash transfers to citizens, so-called “Direct Dividend Payments” (DDPs). It expands on recent related literature by calculating such transfers, whether universal or targeted,

for every African country for which data is available, and compares them to measures of poverty depth under both national and global definitions. Furthermore, it extends the analysis to a different kind of resource flow enjoyed by most African countries—foreign aid. We found that DDPs can account for a large proportion of the income Africa’s poor need to step over the poverty line.

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Preface

The discovery of oil in a developing country is potentially beneficial and, simultaneously, potentially calamitous. While countries could put oil revenues toward building much-needed schools and roads, fixing and staffing health systems, and policing the streets, many resource-rich states fare little better—and often much worse—than their resource-poor counterparts. Too often public money is misallocated and funds meant to be saved are raided, and those living in poor resource-rich countries pay the price. While this so-called resource curse is well established in the literature, solutions to counteract its corrosive effects remain highly elusive.

CGD's Oil-to-Cash initiative is exploring one policy option that may address the root mechanism of the resource curse: using cash transfers to hand the money directly to citizens and thereby protect the social contract between the government and its people. Under this proposal, a government would transfer some or all of the revenue from natural resource extraction to citizens in universal, transparent, and regular payments. The state would treat these payments as normal income and tax it accordingly—thus forcing the state to collect taxes, and adding additional pressure for public accountability and more responsible resource management.

This paper by Marcelo Giugale and Nga Thi Viet Nguyen, commissioned by CGD as part of Oil-to-Cash, calculates the potential scale of resource-linked transfers for every African country (for which data is available) and compares these levels to poverty depth estimates. They make a similar calculation for inward aid flows. Thus the authors make a contribution to the literature by providing a sense of how important such transfers might be, at least theoretically, to increasing incomes of Africa's poor over the poverty line.

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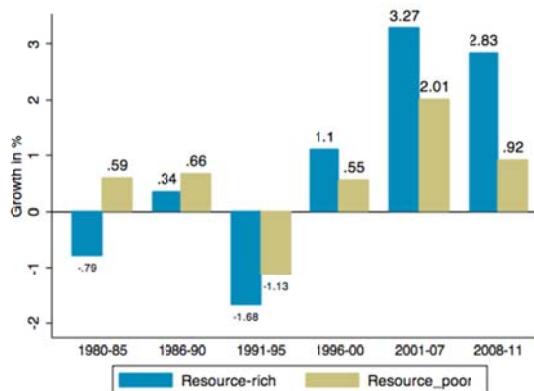
I. Introduction

The past 20 years have witnessed fast and sustained economic growth in Africa, especially in resource-rich countries, thanks to improved macroeconomic policies, buoyant commodity prices, and new mineral resource discoveries [World Bank (2013); Hostland and Giugale (2013)]. Despite such progress, poverty levels remain stubbornly high, and recent studies have shown that the current pace of economic growth and poverty reduction will not be enough to bring extreme poverty below 3 percent by 2030, neither globally nor in Africa [see Dabalen and Nguyen (2013); Chandy et al. (2013)].

More fundamentally, basic human development outcomes have been particularly dismal among African countries with large natural wealth. As shown in Figures 1, 2 and 3, even when their per-capita GDP grew more slowly, resource-poor countries in Africa outperformed their resource-rich peers in extreme poverty reduction and, controlling for income level, did better in measures like life expectancy and child mortality. For example, given their similar per capita income levels, life expectancy in oil-exporter Cameroon is on average 7.7 years shorter than in Senegal. And primary school completion rate in Chad is less than half of Rwanda's despite the countries' similar per capita income [World Bank (2013)].

Figure 1

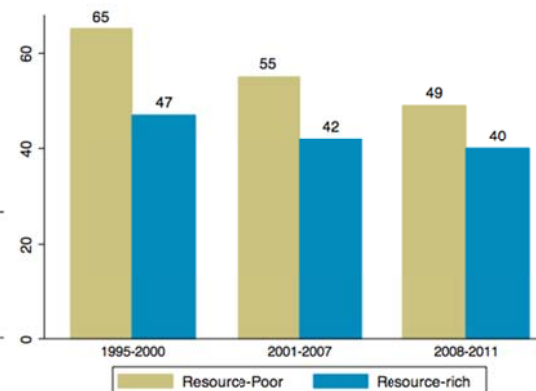
GDP per capita growth in Sub-Saharan Africa (SSA)



Source: World Bank (2013)

Figure 2

Poverty Headcount at \$1.25 (PPP, in %) in Sub-Saharan Africa (SSA)



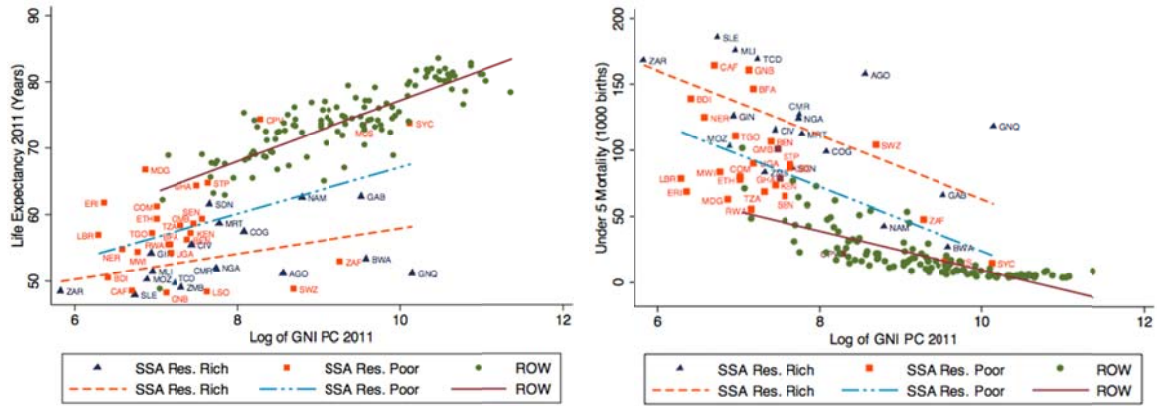
Source: Christiaensen, Chuhan-Pole and Sanoh (2013)

Figure 3

Selected Human Development Indicators in Sub Saharan Africa (SSA); 2011

(a) Life Expectancy (years)

(b) Under 5 Child Mortality (per 1000 births)



Source: World Bank (2013).

This seeming inability to turn resource rent into poverty-reducing development has intensified the search for new approaches to manage commodity revenues. One of those approaches is Direct Dividend Payments (DDPs), that is, the distribution of part of the resource rent that would otherwise accrue to governments, directly to citizens. The idea is not new, and the literature contains arguments for and against DDPs. They are ably reviewed in Moss and Majerowicz (2013). The debate is mainly about technical and political feasibility, individual identification, conditionality, public goods production, macroeconomic implications, effect on governance, progressivity, taxation, fiscal sustainability, social impact, and behavior of the beneficiaries.

This paper contributes to that debate by providing a piece of information that has so far been missing: a simple but comprehensive calculation that illustrates how DDPs would actually look in Africa. It extends previous work by Devarajan and Giugale (2013) in three ways. First, it covers all resource-rich countries in the region for which data is available. Second, it compares DDPs to both national and global poverty lines—the latter being 1.25 PPP dollars per person per day in 2005 prices. And third, it calculates DDPs from both natural-resource fiscal revenues and foreign aid flows.

The objective is not to prescribe DDPs for any one country or of any one size. Rather, we explore how relatively-modest, universal DPPs (say, ten percent of fiscal resource revenue)

compare with poverty levels, and how costly, in terms of foregone fiscal revenue, DDPs would be if they were perfectly targeted to raise the income of the poor up to the poverty line. We then replicate the calculation using official development assistance (ODA), rather than resource revenues, as the means of funding the DDPs.

We organized the paper as follows. A brief review of the literature is presented in Section 2. The methodological challenges of this kind of calculations in Africa are listed in Section 3. Section 4 contains our quantitative results. And Section 5 concludes.

II. The Literature on DDPs

Sala-i-Martin and Subramanian (2003) were among the first to call for DDPs in the context of a resource-rich developing country, in their case as a means to compensate for the poor governance of oil revenues in Nigeria. Their underlying reason is that resource revenues go directly from extracting companies to governments, without citizen involvement—people do not have full information about the rent that is being extracted. This weakens their incentive to scrutinize government expenditures and, thus, fosters corruption. The process is reinforced by the fact that the larger the resource revenues, the less need for taxation and, thus, lesser accountability to taxpayers for the use of public funds [Bornhorst et al. (2009); McGuirk (2010)]. This lies behind the proposal by Devarajan et al. (2012) that resource-rich governments transfer some or even all of their resource revenues directly to their citizens and then tax them back to finance public spending.

The case is further made by Arezki et al. (2012). They find that, as the size of the resource windfalls increases in countries with weak administrative capacity, the optimal spending policy should put more emphasis on redistribution and less on public investment. This is based on the assumption that adjustment costs, reflecting the limited administrative capacity, increase with the size of the resource windfalls.

Falkinger and Grossmann (2005) take a different tack. They submit that a more equal distribution of resource rents promotes economic growth and structural change by facilitating investments by credit-constrained entrepreneurs. This shifts the distribution of political power from public officials toward a new business class, resulting in an economic and political environment more favorable to productivity gains. The idea is given indirect backing by Segal (2011) who uses a global dataset on resource rents and distribution of income to claim that, under certain conditions, DDPs could cut the number of people living under US\$1 a day by up to 66 percent.

A number of more recent studies also argue that resource-rich countries, including Iraq, Nigeria, Uganda, and Ghana, should adopt DDPs as a way to accelerate political and economic transformation and a new social contract [see, for example, Sala-i-Martin and Subramanian (2013); Gelb and Majerowicz (2011); Moss and Young (2009); Sandbu (2006); Birdsall and Subramanian (2004); Palley (2003)]. These papers all carry an implicit sense of urgency with regards to Africa: with the help of new technologies in exploration and extraction, over the next ten years the region is likely to experience a massive wave of new oil and gas discoveries from the East African Rift Valley to West Africa's Gulf of Guinea [Diamond and Mosbacher (2013)].

III. Calculating DDPs in Africa: Methodology

The calculations presented in this paper are only meant to provide an order of magnitude to possible DDPs in Africa. As such, they ignore any improvement in governance that DDPs may trigger, assume a zero opportunity cost for the funds used to pay for DDPs, and do not incorporate the economy-wide impacts of putting money in the hands of the poor. In other words, they ignore the net impact on baseline poverty of possible improvements in the quality of public expenditures, contractions in the quantity of public investment, distributional effects on aggregate consumption, and the related changes in relative prices.

Still, because of data paucity, even order-of-magnitude calculations are challenging in Africa. We present our data in Annex 1. We used the World Development Indicators (WDI) 2013 as the primary source on country population, GDP in current US dollars, net ODA per capita in current US dollars, poverty headcount ratios, and poverty gaps under either national or the international poverty lines. National poverty lines are as provided by the countries' national statistical offices.

Fiscal revenue from natural resources is an indicator that needs to be taken with special caution since its definition varies widely across sources. We use the IMF Article IV Consultation Reports and Country Reports as our primary source. The IMF defines revenues from non-renewable resources as (i) royalties, (ii) income from profit sharing agreements, (iii) dividends or other payments from national resource companies, and (iv) taxes on resource profits or production. When information from the IMF is unavailable, we use the Extractive Industries Transparency Initiative (EITI), which provides resource revenues broken down by categories such as corporate tax, dividend, royalty, property rent,

and licenses. When IMF and EITI figures are unavailable, we use government reports. See Annex 2 for the country-by-country list of our fiscal data sources.

We picked 2011 as the reference year for all indicators except the poverty rate. Household surveys are carried out non-concurrently across countries and, on the whole, infrequently (for example, data was collected in Guinea in 2012 and Zimbabwe in 2011, but it dates back to 2003 in Botswana and Lesotho). We thus use the most up to date surveys available and assume that poverty rates, either using the national or international definitions, remained unchanged until 2011. This is, in practice, a conservative assumption, as all countries in Africa have experienced positive economic growth in the period since their last household survey.¹

For each country, the WDI provides data on the poverty gap as defined by Foster, Greer, and Thorbecke (1984). That gap is calculated as the sum of the distances between each poor person's income or consumption and the poverty line, divided by the total size of the population, whether poor or not. In that sense, it represents a hypothetical average contribution that every member of society would have to make to end poverty. We use that information to compute the average poverty "depth" as defined by Devarajan and Giugale (2013). The average poverty depth is also calculated as the sum of the distances between each poor person's income and the poverty line, but divided by the size of the poor population only. It thus reflects the transfer that the average poor person needs to receive to reach the poverty line. This makes it the right measure to compare against DDPs.

IV. DDPs in Africa: Results

As expected, wide heterogeneity in resource endowments, foreign aid flows, population sizes, and poverty depth across Africa translates into equally wide heterogeneity in how large DDPs are in relation to poverty, and how expensive in relation to fiscal revenues.

a) Natural Resources, National Poverty Line

Say that governments decide to distribute ten percent of their natural-resource fiscal revenues equally among all citizens, rich or poor. How big would these uniform and universal transfers be compared to the average poverty depth, that is, to the money needed to bring the average poor person up to the national poverty line? The answer is presented in Table 1. Only in three countries (Angola, Equatorial Guinea, and Gabon) would that transfer

¹ Ravallion and Chen (1997) document a positive growth elasticity of poverty.

amount to half or more of the average poverty depth. Two more countries (Republic of Congo and Nigeria) join that group when the 10 percent DDP is distributed only among the poor.

What if the comparison is not against half or more of the average poverty depth but, say, a tenth of it? Using that standard, DDPs of ten percent of resource-related fiscal revenue would make the cut in eight African countries (Angola, Botswana, Chad, Republic of Congo, Equatorial Guinea, Gabon, Nigeria, and South Sudan) when universally distributed, and in twelve when given only to the poor (Cote d'Ivoire, South Africa, South Sudan, and Sudan would join the group). These are not negligible numbers as, depending on definitions, the total number of resource-rich countries in the region currently stands at about 30.

A related question is how expensive it would be to “eradicate” poverty. That is, what proportion of natural-resource fiscal revenues would need to be transferred in a perfectly-targeted way to raise the income of every poor person up to the poverty line? In a few cases (Angola, Equatorial Guinea, Gabon), it would be extremely cheap—six percent of revenues. In some (Botswana, Chad, Republic of Congo, Nigeria, South Sudan), it would be more expensive—between a tenth and a third of revenue. But in most, it would be unaffordable—more than 100 percent.

A point of note. Because of their country's relatively large resource revenues and very small population size of less than one million, a universal DDP of ten percent of those revenues would give citizens of Equatorial Guinea the highest absolute payment in the region in US dollars—approximately US\$ 765 per person per year. This amount would be more than 20 percent larger than the size of the average poverty depth. Similarly, only six percent of the resource revenues would be needed to bring every poor Equatorial Guinean up to the national poverty line. That would be no small achievement given that more than three quarters of Equatorial Guineans are currently living in poverty.

Nigeria, on the other hand, while benefitting from resource revenues that are ten times the size of those of Equatorial Guinea, has a population that is more than two hundred times larger. Consequently, a universal DDP at ten percent of revenue would be significantly lower—around US\$35 per capita per year. And yet, it would cover half of the amount needed to get the average poor person out of poverty. But it would take a fifth of the resource revenue to eliminate poverty in Nigeria all together. The point is clear: the impact of DDPs depends as much on the volume of natural resource riches as it does on

demographics and the initial position of the national poverty line. The following section alters that, by using the international definition of extreme poverty, rather than the national ones.

b) Natural Resources, International Poverty Line of \$1.25 per day at 2005 international prices

How does using the international extreme poverty line of 1.25 PPP dollars per day per person (in 2005 prices), instead of each country's own poverty line, change the size of DDPs relative to poverty depth and fiscal revenue? It does not change the results much. This is shown in Table 2.

c) Official Development Assistance (ODA), National Poverty Line

The funding of DDPs need not come from natural wealth. Conceivably, it can come from another of Africa's resources—its donors. They contributed some US\$ 43 billion, or just over 3 percent of the Region's GDP, in 2011. This is, on average, equivalent to about a third of the fiscal revenues received from natural resource exploitation (10.4 percent of GDP in 2011). Africa's ODA has proven fairly stable in nominal terms although, as a proportion of regional GDP, it has been in gradual decline since 2000.

Table 3 shows how DDPs could look across countries when funded out of ODA, using national poverty lines. A universal, uniform distribution of 10 percent of ODA would represent half or more of the average poverty depth in only one country (Sao Tome & Principe). Focusing that 10 percent of ODA only on the poor would add just two countries (Cape Verde and Rwanda).

If the coverage sought is not half but a tenth of the average poverty depth, those kinds of ODA-funded transfers would make the cut in six countries (Cape Verde, Cote d'Ivoire, Rwanda, Sao Tome & Principe, Sierra Leone, and Tanzania) if they are distributed to all citizens, and in 19 countries if they are distributed only among the poor (the previously-mentioned ones plus Benin, Burkina Faso, Ethiopia, Ghana, Liberia, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, South Sudan, and Uganda).

Remarkably, there are 18 countries in which the flow of ODA would be more than enough to bring everyone up to the national poverty line. In fact, in 11 of those countries half or less of the ODA flow would suffice (Benin, Cape Verde, Cote d'Ivoire, Ethiopia, Mauritius, Namibia, Rwanda, Sao Tome & Principe, Sierra Leone, Tanzania, and Uganda).

d) Official Development Assistance (ODA), International Poverty Line of \$1.25 per day at 2005 international prices

Finally, Table 4 shows that in no country will a distribution of a tenth of the ODA uniformly across all citizens suffice to cover half or more of the average poverty depth, when poverty is defined as \$1.25 PPP dollars per day per person. If, instead, that tenth of the ODA is distributed only among the poor, the transfer would cover half or more of the average poverty depth in six countries (Cameroon, Cape Verde, Gabon, Mauritania, Sao Tome & Principe, and Seychelles).

A ten-percent DDP distributed universally and uniformly continues to cover half or more of the average poverty depth only in three countries (Angola, Republic of Congo, and Gabon). And focusing the DDP only on the poor, again adds only two more countries to that list (the two additional countries are Cameroon and South Africa). Notably, Nigeria now drops out of the list, as the 1.25 PPP dollar line is, in fact, higher than the national poverty line.

The change from national to international poverty line does not alter the lists of countries when the DDP is compared with a tenth of the average poverty depth. In that case, DDPs of ten percent of revenue would “work” in seven countries (Angola, Cameroon, Chad, Republic of Congo, Gabon, Nigeria, and Sudan) when given out universally, and in twelve (add Cote d’Ivoire, Ghana, Mauritania, Namibia, and South Africa) when distributed only among the poor.

How costly is it to bring everyone up to the international, instead of the national, poverty line? Only in four countries (Angola, Cameroon, Gabon, and Republic of Congo) would it cost ten percent or less of fiscal resource revenue. For all other countries in Table 2, except South Africa and Sudan, the DDP needed to “end poverty” would represent more than a third of resource revenue.

Table 1: Direct Dividend Payments from Natural Resources and National Poverty Lines

Country	DDP per capita at 10% distribution (current US\$, 2011)	DDP per poor at 10% distribution (current US\$, 2011)	DDP per capita at 10% distribution as % of average poverty depth (%)	DDP per poor at 10% distribution as % of average poverty depth (%)	Share of resource revenues needed to eliminate poverty (%) (*)
Angola	201	550	64	175	6
Botswana	75	244	10	32	31
Cameroon	6.5	16	3.2	8.1	123
Central African Republic	0.6	0.9	0.2	0.3	3,304
Chad	18	38	14	30	34
Congo, Dem. Rep.	1.2	1.7	0.6	0.8	1,205
Congo, Rep.	115	246	41	89	11
Cote d'Ivoire	3.1	7.3	5.1	11.8	84
Equatorial Guinea	765	996	124	162	6
Gabon	182	558	57	176	6
Ghana	3.5	12.4	2.3	8.1	123
Guinea	1.7	3.1	1.2	2.2	447
Liberia	0.9	1.4	0.4	0.7	1,452
Mali	2.0	4.7	1.9	4.3	232
Mauritania	2.2	5.3	1.2	2.9	344
Mozambique	0.4	0.7	0.3	0.6	1,623
Namibia	11	38	5.1	18	56
Niger	0.7	1.2	0.6	0.9	1,063
Nigeria	35	76	24	53	19
Sierra Leone	0.4	0.7	0.9	1.8	568
South Africa	6.6	29	2.7	12	86
South Sudan	34	66	16	31	32
Sudan	18	39	7.3	16	63
Tanzania	0.7	2.0	1.4	4.2	239
Togo	0.5	0.9	0.2	0.4	2,789
Uganda	0.4	1.6	0.7	3.0	332
Zambia	7.7	13	4.4	7.2	139
Zimbabwe	1.2	1.6	0.3	0.4	2713

(*) Calculated as average poverty depth times the number of poor divided by fiscal resource revenue.

Note: SSA countries with no or insignificant fiscal revenues coming from natural resources in 2011 are excluded from this list. These countries are Benin, Burkina Faso, Burundi, Cape Verde, Comoros, Eritrea, Ethiopia, Gambia, Guinea-Bissau, Kenya, Lesotho, Madagascar, Malawi, Mauritius, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Somalia, and Swaziland. Among those, many are expected to have large resource revenues flowing in in the near future, for example, Ethiopia, Kenya, Malawi, Mauritius, Gambia, Sao Tome and Principe, and Senegal (see Diamond and Mosbacher, 2013).

Table 2: Direct Dividend Payments from Natural Resources and the International Poverty Line (US\$1.25-a-day, PPP 2005)

Country	DDP per capita at 10% distribution (current US\$, 2011)	DDP per poor at 10% distribution (current US\$, 2011)	DDP per capita at 10% distribution as % of average poverty depth (%)	DDP per poor at 10% distribution as % of average poverty depth (%)	Share of resource revenues needed to eliminate poverty (%) (*)
Angola	201	464	73	169	6
Botswana	75	N.A.	N.A.	N.A.	N.A.
Cameroon	6	68	15	158	6
Central African Republic	0.6	0.9	0.3	0.5	1,987
Chad	18	29	12	20	50
Congo, Dem. Rep.	1.2	1.4	0.4	0.4	2,271
Congo, Rep.	115	212	57	105	10
Cote d'Ivoire	3	13	3	11	91
Equatorial Guinea	765	N.A.	N.A.	N.A.	N.A.
Gabon	182	3,768	200	4,139	0.2
Ghana	3.5	12	3.7	13	77
Guinea	1.7	4.0	1.7	4.0	253
Liberia	0.9	1.1	0.6	0.7	1,501
Mali	2.0	4.1	1.9	3.7	268
Mauritania	2.2	10	2.7	11	87
Mozambique	0.4	0.7	0.3	0.5	2,044
Namibia	11	34	7.8	24	41
Niger	0.7	1.6	0.8	1.8	545
Nigeria	35	51	17	25	40
Sierra Leone	0.4	0.7	N.A.	N.A.	N.A.
South Africa	7	48	9	68	15
South Sudan	34	N.A.	N.A.	N.A.	N.A.
Sudan	18	91	15	77	13
Tanzania	0.7	1.0	0.7	1.0	1,022
Togo	0.5	1.8	0.5	1.7	573
Uganda	0.4	1.0	0.5	1.2	830
Zambia	8	10	3	4	255
Zimbabwe	1.2	N.A.	N.A.	N.A.	N.A.

(*) Calculated as average poverty depth times the number of poor divided by fiscal resource revenue.

Note (1): SSA countries with no or insignificant fiscal revenues coming from natural resources in 2011 are excluded from this list. These countries are Benin, Burkina Faso, Burundi, Cape Verde, Comoros, Eritrea, Ethiopia, Gambia, Guinea-Bissau, Kenya, Lesotho, Madagascar, Malawi, Mauritius, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Somalia, and Swaziland. Among those, many are expected to have large resource revenues flowing in in the near future, for example, Ethiopia, Kenya, Malawi, Mauritius, Gambia, and Senegal (see Diamond and Mosbacher, 2013)

Note (2): Poverty rates and gaps at US\$1.25-a-day (PPP 2005) are not available for some resource-rich countries (namely, Botswana, Equatorial Guinea, South Sudan, and Zimbabwe). Consumer Price Index is not available for Sierra Leone in 2005. Therefore, our calculations cannot be applied to this country.

Table 3: Direct Dividend Payments from ODA and National Poverty Lines

Country	DDP per capita at 10% distribution (current US\$, 2011)	DDP per poor at 10% distribution (current US\$, 2011)	DDP per capita at 10% distribution as % of average poverty depth (%)	DDP per poor at 10% distribution as % of average poverty depth (%)	Share of ODA needed to eliminate poverty (%) (*)
Angola	1	3	0.3	0.9	1159
Benin	7	21	8	25	40
Botswana	6	20	0.8	3	379
Burkina Faso	6	13	8	18	56
Burundi	6	9	6	9	117
Cameroon	3	7	1.4	4	275
Cape Verde	51	192	23	88	11
Central African Republic	6	10	2	3	316
Chad	4	8	3	6	156
Comoros	7	16	2	5	221
Congo, Dem. Rep.	9	12	4	6	165
Congo, Rep.	6	13	2	5	209
Cote d'Ivoire	7	17	12	28	35
Equatorial Guinea	3	4	0.5	0.7	1398
Eritrea	2	N.A.	N.A.	N.A.	N.A.
Ethiopia	4	13	6	22	46
Gabon	4	13	1.4	4	241
Gambia, The	8	16	3	6	162
Ghana	7	25	5	17	60
Guinea	2	3	1.3	2	431
Guinea-Bissau	7	11	4	6	168
Kenya	6	13	3	6	171
Lesotho	13	23	N.A.	N.A.	N.A.
Liberia	19	29	9	15	68
Madagascar	2	3	4	6	174
Malawi	5	10	5	11	92
Mali	9	20	8	19	54
Mauritania	10	25	6	13	75
Mauritius	14	180	3	35	29
Mozambique	8	15	7	13	75
Namibia	12	43	6	21	49
Niger	4	7	3	5	186
Nigeria	1	2	1	2	604
Rwanda	11	25	32	72	14
Sao Tome and Principe	41	62	58	87	11
Senegal	8	17	3	7	144
Seychelles	24	178	1	9	110
Sierra Leone	7	14	18	34	29
Somalia	11	N.A.	N.A.	N.A.	N.A.
South Africa	3	12	1	5	206
South Sudan	10	21	5	10	104
Sudan	2	5	1	2	479
Swaziland	10	16	3	4	249
Tanzania	5	16	11	34	30
Togo	9	15	4	6	166
Uganda	5	18	9	35	28
Zambia	8	13	4	7	140
Zimbabwe	5	7	1	2	586

(*) Calculated as average poverty depth times the number of poor divided by ODA.

Note: Poverty headcount ratios and poverty gaps at national poverty lines are not available for Eritrea, Lesotho, and Somalia. Therefore, our calculations cannot be applied to these two countries.

Table 4: Direct Dividend Payments from ODA and the International Poverty Line (US\$1.25-a-day, PPP 2005)

Country	DDP per capita at 10% distribution (current US\$, 2011)	DDP per poor at 10% distribution (current US\$, 2011)	DDP per capita at 10% distribution as % of average poverty depth (%)	DDP per poor at 10% distribution as % of average poverty depth (%)	Share of ODA needed to eliminate poverty (%) (*)
Angola	1	2	0.4	0.8	1201
Benin	7	15	6	13	74
Botswana	6	N.A.	N.A.	N.A.	N.A.
Burkina Faso	6	14	7	15	65
Burundi	6	7	5	6	174
Cameroon	3	30	7	70	14
Cape Verde	51	243	31	149	7
Central African Republic	6	10	3	5	190
Chad	4	6	3	4	233
Comoros	7	16	4	8	129
Congo, Dem. Rep.	9	10	3	3	311
Congo, Rep.	6	11	3	6	177
Cote d'Ivoire	7	31	6	26	38
Equatorial Guinea	3	N.A.	N.A.	N.A.	N.A.
Eritrea	2	N.A.	N.A.	N.A.	N.A.
Ethiopia	4	13	6	21	48
Gabon	4	89	5	98	10
Gambia, The	8	23	11	32	31
Ghana	7	25	8	26	38
Guinea	2	4	2	4	243
Guinea-Bissau	7	15	6	13	78
Kenya	6	14	4	10	99
Lesotho	13	29	8	19	52
Liberia	19	22	12	14	71
Madagascar	2	3	1.3	1.6	630
Malawi	5	8	4	7	140
Mali	9	17	8	16	62
Mauritania	10	44	12	53	19
Mauritius	14	N.A.	N.A.	N.A.	N.A.
Mozambique	8	14	6	11	94
Namibia	12	39	9	28	36
Niger	4	9	5	10	95
Nigeria	1	2	0.5	0.8	1293
Rwanda	11	18	9	14	69
Sao Tome and Principe	41	145	30	108	9
Senegal	8	27	7	25	40
Seychelles	24	9,552	27	10,853	0.1
Sierra Leone	7	14	N.A.	N.A.	N.A.
Somalia	11	N.A.	N.A.	N.A.	N.A.
South Africa	3	20	4	28	35
South Sudan	10	N.A.	N.A.	N.A.	N.A.
Sudan	2	12	2	10	98
Swaziland	10	25	7	18	56
Tanzania	5	8	5	8	127
Togo	9	31	8	29	34
Uganda	5	12	5	14	71
Zambia	8	10	3	4	258
Zimbabwe	5	N.A.	N.A.	N.A.	N.A.

(*) Calculated as average poverty depth times the number of poor divided by ODA.

Note: Poverty rates and gaps at US\$1.25-a-day (PPP 2005) are not available for some SSA countries (namely, Botswana, Eritrea, Equatorial Guinea, Mauritius, Somalia, South Sudan, and Zimbabwe). Consumer Price Index is not available for Sierra Leone in 2005. Therefore, our calculations cannot be applied to these countries.

When the threshold for coverage is reduced to a tenth or more of the average poverty depth, the ODA-funded, 10-percent DDP makes the mark in six countries (Cape Verde, Gambia, Liberia, Mauritania, Sao Tome & Principe, and Seychelles) when distributed universally, and in 27 countries when distributed only among the poor (add to the list Benin, Burkina Faso, Cameroon, Cote d'Ivoire, Ethiopia, Gabon, Ghana, Guinea-Bissau, Kenya, Lesotho, Mali, Mozambique, Namibia, Niger, Rwanda, Senegal, South Africa, Sudan, Swaziland, Togo, and Uganda).

More to the point, in those same 27 countries the flow of ODA is more than sufficient to raise everyone up to the international poverty line. In fact, in 14 of them, just half or less of the ODA would be sufficient (Cameroon, Cape Verde, Cote d'Ivoire, Ethiopia, Gabon, Gambia, Ghana, Mauritania, Namibia, Sao Tome & Principe, Senegal, Seychelles, South Africa, and Togo).

e) Putting it all together

Tables 5 and 6 list countries across the various calculations performed above. They convey three main messages. First, for a few countries, DDPs can be both extremely large (relative to poverty depth) and extremely cheap (relative to resource revenues). In places like Angola, Cameroon, Republic of Congo, Equatorial Guinea, and Gabon, even universal DDPs that take up a tenth or less of the natural resource revenue can make a major contribution to poverty alleviation efforts—and in some cases, suffice to raise the income of the poor up to the poverty line.

Second, in a few countries, DDPs that are tailored to cover exactly the poverty depth of each poor person ("perfect targeting") can be a potentially powerful tool to cut poverty headcounts, while accounting for only a small share of revenue. That is true whether the DDPs are funded through natural resource rents or official donors.

And third, in about a third of all African countries, ODA is more than sufficient to lift everyone's income above the poverty line, assuming perfectly-targeted DDPs are possible. In fact, for about a dozen countries, less than half of the ODA flow would be enough. This calls attention to the funding source of DDPs, for African countries that lack natural resource rents usually get relatively large aid flows.

In sum, the quantitative analysis indicates that DDPs have obvious country candidates, can help with poverty alleviation, and need not be funded by natural wealth.

Table 5 – Direct Dividend Payments from Natural Resources

Poverty Line Type	Covers Half Or More of the Average Poverty Depth		Covers a Tenth or More of the Average Poverty Depth		% of Resource Revenue Needed to Lift Everyone up to the Poverty Line	
	10% DDP to All	10% DDP to Poor	10% DDP to All	10% DDP to Poor	10% or Less	A Third or Less
National Poverty Line	Angola Equatorial Guinea Gabon	Angola Equatorial Guinea Gabon Rep. of Congo Nigeria	Angola Botswana Chad Rep. of Congo Equatorial Guinea Gabon Nigeria South Sudan	Angola Botswana Chad Rep. of Congo Cote d'Ivoire Equatorial Guinea Gabon Namibia Nigeria South Sudan South Africa Sudan	Angola Equatorial Guinea Gabon	Angola Botswana Chad Rep. of Congo Equatorial Guinea Gabon Nigeria South Sudan
International Poverty Line (US\$1.25-a-day, PPP 2005)	Angola Republic of Congo Gabon	Angola Cameroon Republic of Congo Gabon South Africa	Angola Cameroon Chad Rep. of Congo Gabon Nigeria Sudan	Angola Cameroon Chad Rep. of Congo Cote d'Ivoire Ghana Mauritania Namibia Nigeria South Africa Sudan	Angola Cameroon Rep. of Congo Gabon	Angola Cameroon Rep. of Congo Gabon South Africa Sudan

Table 6: Direct Dividend Payments from Official Development Assistance

Poverty Line Type	Covers Half Or More of the Average Poverty Depth		Covers a Tenth or More of the Average Poverty Depth		% of ODA Needed to Lift Everyone up to the Poverty Line	
	10% DDP to All	10% DDP to Poor	10% DDP to All	10% DDP to Poor	Half or Less	100% or Less
National Poverty Line	Sao Tome and Principe	Cape Verde Rwanda Sao Tome and Principe	Cape Verde Cote d'Ivoire Rwanda Sao Tome and Principe Sierra Leone Tanzania	Benin Burkina Faso Cape Verde Cote d'Ivoire Ethiopia Ghana Liberia Malawi Mali Mauritania Mauritius Mozambique Namibia Rwanda Sao Tome and Principe Sierra Leone South Sudan Tanzania Uganda	Benin Cape Verde Cote d'Ivoire Ethiopia Mauritius Namibia Rwanda Sao Tome and Principe Sierra Leone Tanzania Uganda	Benin Burkina Faso Cape Verde Cote d'Ivoire Ethiopia Ghana Liberia Malawi Mali Mauritania Mauritius Mozambique Namibia Rwanda Sao Tome and Principe Sierra Leone Tanzania Uganda
International Poverty Line (US\$1.25-a-day, PPP 2005)	No country	Cameroon Cape Verde Gabon Mauritania Sao Tome and Principe Seychelles	Cape Verde Gambia Liberia Mauritania Sao Tome and Principe Seychelles	Benin Burkina Faso Cameroon Cape Verde Cote d'Ivoire Ethiopia Gabon Gambia Ghana Guinea-Bissau Kenya Lesotho Liberia Mali Mauritania Mozambique Namibia Niger Rwanda Sao Tome and Principe Senegal Seychelles South Africa Sudan Swaziland Togo Uganda	Cameroon Cape Verde Cote d'Ivoire Ethiopia Gabon Gambia Ghana Mauritania Namibia Sao Tome and Principe Senegal Seychelles South Africa Togo	Benin Burkina Faso Cameroon Cape Verde Cote d'Ivoire Ethiopia Gabon Gambia Ghana Guinea-Bissau Kenya Lesotho Liberia Mali Mauritania Mozambique Namibia Niger Rwanda Sao Tome and Principe Senegal Seychelles South Africa Sudan Swaziland Togo Uganda

V. Conclusions: Value and Limitations of the Analysis

The calculations presented in this paper suggest that DDPs, at least in terms of relative size and cost, could be a powerful new tool in poverty alleviation among African countries. But, while helpful as an indication of orders of magnitude, this analysis has both conceptual and methodological limitations.

First, transfers by themselves do not ensure poverty reduction, as they may, and probably will, have second-order effects on the income of the poor, both positive and negative. That is, of course, also true of the more traditional Conditional Cash Transfer programs (CCTs) currently deployed in some 70 developing countries, 35 of which are African. In fact, the only difference between DDPs and CCTs is that the latter require a specific behavior by the recipient—say, consuming basic health services—and are not explicitly linked to any specific source of funding. Money being fungible, CCTs may actually be funded with fiscal resource rents, especially in resource-rich countries.

Second, DDPs do not “work” in all countries, in that they may be too small to make a difference to the recipients or too large for a government to afford them—especially those governments that are unable to pay for basic public goods. At the same time, for countries whose governments have enjoyed large resource rents for a long time and where poverty remains stubbornly high, DDPs could be an interesting game-changer.

Third, for the purpose of cross-country comparison, the figures shown in this paper correspond to a single point in time—the year 2011. But fiscal resource rents can, and do, fluctuate significantly. When computed for a single country, DDPs should optimally be calculated on the basis of structural, long-term flows. For most African countries, such data does not yet exist.

Fourth, while ignored in this paper, the political economy of DDPs is complex. DDPs imply a reduction in the discretionary power of incumbent governments to allocate rents, say, through public employment or price subsidies. And the choice between universal transfers and transfers focused exclusively on the poor is a major societal decision. Whether in practice those issues can be arbitrated by political contestability, enhanced citizen information, or both, remains to be seen.

Finally, drastic resource price changes or major resource discoveries may quickly render this paper’s calculations obsolete. In that sense, they should be taken only as indications of

potential magnitudes. While prices are not expected to rise in real terms in the medium-term, and may in fact begin to fall, quantities are bound to expand on the wake of faster, cheaper and cleaner exploration and exploitation technologies. The net effect on fiscal resource revenues as a source of DDPs is uncertain.

Annex 1. Africa's Data for DDP analysis

country	Population (2011), million	GDP (current US\$, 2011), billion	Natural-resource fiscal revenue (% of GDP, 2011)	Natural-resource fiscal revenues (current US\$, 2011), billion	Net ODA received per capita (current US\$, 2011)	National poverty line						International poverty line (US\$1.25-a-day, PPP 2005)				
						Survey year	Poverty headcount ratio (% of population)	Poverty gap (%)	Poverty line (annual, US\$ at survey year)	Poverty line (annual, current US\$, 2011)	Average poverty depth (current US\$, 2011)	Poverty headcount ratio (% of population)	Poverty gap (%)	Poverty line (US\$ PPP 2005)	Poverty line (annual, current US\$, 2011)	Average poverty depth (current US\$, 2011)
Angola	20	104	39	41	10	2008	36.6	13	767	904	314	43	16.5	456	724	274
Benin	10	7.3	N.A.	N.A.	69	2007	33.3	10	243	286	82	47	15.7	456	324	108
Botswana	2.0	15	9.7	1.5	61	2003	30.6	12	1396	1966	752	N.A.	N.A.	456	381	N.A.
Burkina Faso	16	10	N.A.	N.A.	62	2009	46.7	15	225	229	74	45	14.7	456	277	91
Burundi	10	2.4	N.A.	N.A.	61	2006	66.9	23	220	303	106	81	36.4	456	290	130
Cameroon	21	25	5.4	1.4	29	2007	39.9	12	562	646	199	10	1.2	456	342	43
Cape Verde	0.5	1.9	N.A.	N.A.	511	2007	26.6	8	612	717	218	21	6.1	456	569	164
Central African Republic	4.4	2.2	1.2	0.0	61	2008	62.0	33	578	585	312	63	31.3	456	372	185
Chad	12	11	20.5	2.2	39	2011	46.7	20	307	306	129	62	25.6	456	352	146
Comoros	0.7	0.6	N.A.	N.A.	74	2004	44.8	16	726	1001	364	46	20.8	456	458	207
Congo Dem. Rep.	64	16	4.8	0.8	87	2005	71.3	32	287	N.A.	200	88	52.8	456	N.A.	307
Congo Rep.	4.2	14	33.5	4.8	61	2011	46.5	17	769	769	276	54	22.8	456	478	201
Cote d'Ivoire	19	24	2.5	0.6	74	2008	42.7	15	167	171	61	24	7.5	456	377	119
Equatorial Guinea	0.7	17	32.6	5.5	34	2006	76.8	45	712	1042	615	N.A.	N.A.	456	582	N.A.
Eritrea	5.9	2.6	N.A.	N.A.	23	1993	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	456	N.A.	N.A.
Ethiopia	89	32	N.A.	N.A.	40	2011	29.6	8	223	235	62	31	8.2	456	231	62
Gabon	1.6	19	15.5	2.9	43	2005	32.7	10	814	1038	318	5	0.9	456	490	91
Gambia, The	1.7	0.9	N.A.	N.A.	78	2010	48.4	28	456	450	260	34	11.7	456	207	72
Ghana	25	40	2.2	0.9	73	2006	28.5	10	405	454	153	29	9.9	456	277	96
Guinea	11	5.1	3.8	0.2	18	2012	55.2	18	452	422	141	43	15.0	456	293	101
Guinea-Bissau	1.6	1.0	N.A.	N.A.	73	2010	69.3	25	446	492	177	49	16.6	456	343	116
Kenya	42	34	N.A.	N.A.	59	2005	45.9	16	356	621	220	43	16.9	456	345	134
Lesotho	2.0	2.5	N.A.	N.A.	128	2003	56.6	N.A.	234	399	N.A.	43	20.8	456	319	153
Liberia	4.1	1.5	2.3	0.04	188	2007	63.8	24	436	525	201	84	40.9	456	324	158
Madagascar	22	10	N.A.	N.A.	20	2010	75.3	34	21	104	47	81	43.3	456	296	158
Malawi	15	5.6	N.A.	N.A.	52	2010	50.7	19	245	254	95	62	26.2	456	278	118
Mali	14	11	2.8	0.3	88	2010	43.6	13	334	361	109	50	16.4	456	336	109
Mauritania	3.7	4.3	1.9	0.1	103	2008	42.0	15	535	529	183	23	6.8	456	286	83
Mauritius	1.3	11	N.A.	N.A.	142	2006	7.9	2	1450	2144	516	N.A.	N.A.	456	412	N.A.
Mozambique	25	13	0.8	0.1	84	2009	54.7	21	259	297	115	60	25.1	456	316	133
Namibia	2.2	13	1.9	0.2	124	2009	28.7	9	538	685	210	32	9.5	456	470	139
Niger	17	6.0	1.9	0.1	39	2007	59.5	20	315	372	122	44	12.4	456	301	86
Nigeria	164	244	23.4	5.7	11	2010	46.0	17	355	384	142	68	33.7	456	415	206
Rwanda	11	6.4	N.A.	N.A.	113	2011	44.9	15	107	107	35	63	26.6	456	294	124
Sao Tome and Principe	0.2	0.2	N.A.	N.A.	408	2009	66.2	25	171	189	71	28	7.9	456	479	134
Senegal	13	14	N.A.	N.A.	79	2011	46.7	15	785	784	243	30	9.1	456	341	105
Seychelles	0.1	1.1	N.A.	N.A.	239	2006	13.4	9	3378	2816	1954	0	0.1	456	314	88
Sierra Leone	5.9	2.9	0.8	0.02	72	2011	52.9	16	132	133	40	52	16.6	456	N.A.	N.A.
Somalia	10	N.A.	N.A.	N.A.	111	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	456	N.A.	N.A.
South Africa	51	402	0.8	3.3	28	2006	23.0	7	421	813	247	14	2.3	456	422	71
South Sudan	10	19	18.2	3.5	105	2009	50.6	24	376	461	216	N.A.	N.A.	456	N.A.	N.A.
Sudan	36	64	10.3	6.6	24	2009	46.5	16	588	709	247	20	5.5	456	430	119
Swaziland	1.2	4.0	N.A.	N.A.	103	2009	63.0	30	655	845	408	41	16.0	456	358	141
Tanzania	46	24	1.3	0.3	53	2007	33.4	10	135	158	47	68	28.1	456	238	98
Togo	6.5	3.7	0.9	0.0	86	2011	58.7	24	586	586	243	28	8.8	456	324	104
Uganda	35	17	0.8	0.1	45	2009	24.5	7	173	187	52	38	12.2	456	260	84
Zambia	14	19	5.5	1.1	77	2010	60.5	28	365	384	178	74	41.9	456	472	266
Zimbabwe	13	10	1.6	0.2	54	2011	72.3	34	920	920	434	N.A.	N.A.	456	N.A.	N.A.

Note: N.A means "Not Available"

Annex 2: Data Sources for Fiscal Revenue from Natural Resources in 2011

Country	Resource Revenues (% GDP)	Sources
Angola	39	IMF Article IV 2012
Botswana	9.7	IMF Article IV 2012
Cameroon	5.4	IMF Article IV 2012
Central African Republic	1.2	IMF Article IV 2011
Chad	20.5	IMF Article IV 2012
Congo, Dem. Rep.	4.84	IMF and government data
Congo, Rep.	33.5	IMF Article IV 2012
Cote d'Ivoire	2.5	IMF Article IV 2011
Equatorial Guinea	32.6	IMF Article IV 2012
Gabon	15.5	IMF Article IV 2012
Ghana	2.2	IMF Article IV 2011
Guinea	3.8	IMF Country Report 2013
Liberia	2.3	IMF Article IV 2012
Mali	2.77	Ministry of Finance
Mauritania	1.9	IMF Article IV 2012
Mozambique	0.76	Government's Budget Execution Reports
Namibia	1.9	IMF Article IV 2012
Niger	1.9	IMF Article IV 2011
Nigeria	23.4	IMF Article IV 2012
Sao Tome and Principe	0.0*	IMF Article IV 2011
Sierra Leone	0.7	IMF Article IV 2010
South Africa	0.8	South African Revenue Service (SARS)
South Sudan	18.2	Ministry of Finance
Sudan	10.3	IMF Article IV 2012
Tanzania	1.27	EITI
Togo	0.9	EITI
Uganda	0.8	IMF Country Report 2013
Zambia	5.5	World Bank (2012)
Zimbabwe	1.6	IMF Staff Monitoring Program 2013

(*) In Sao Tome and Principe, oil revenue is expected to start flowing in in 2015 at 14.3 percent of GDP. There is also a one-time oil bonus of 8.8 percent of GDP in 2012.

Annex 3: Exiting and Potential Resource-rich Countries in Africa in 2011

Country	Non-renewable Resources	
	Produced in 2011	Planned Production
Angola	Oil, diamond	Gas
Botswana	Diamond, copper, coal	
Burkina Faso	Gold, zinc	
Burundi		Nickel
Cameroon	Oil	Iron ore
Central African Republic	Diamond	
Chad	Oil	
Congo, Dem. Rep.	Oil, copper, cobalt	
Congo, Rep.	Oil	Iron ore
Cote d'Ivoire	Oil	Gold
Equatorial Guinea	Oil	
Ethiopia		Gold
Gabon	Oil, manganese	Iron ore
Ghana	Oil, Gold, Bauxite, Manganese	
Guinea	Bauxite	Iron ore, gold
Kenya	Mineral sands	Oil
Lesotho	Diamond	
Liberia	Iron ore	Gold
Madagascar	Mineral sands	Nickel
Malawi	Uranium	Niobium, coal
Mali	Gold, copper	
Mauritania	Iron Ore, Gold, Oil	Gas
Mozambique	Gas, coal, gold	
Namibia	Diamonds, uranium	
Niger	Oil, Uranium	
Nigeria	Oil, gas	
Rwanda	Coltan, tin	
Sao Tome and Principe		Oil
Senegal		Mineral Sands, Gold
Sierra Leone	Diamonds, Mineral Sands, Iron Ore	
South Africa	Diamond and other mineral (copper, etc.)	
South Sudan	Oil	
Sudan	Oil, gold	
Swaziland	Coal	
Tanzania	Gold, gas	Coal
Togo	Phosphate	
Uganda	Oil	
Zambia	Copper, cobalt	
Zimbabwe	Diamond, Gold, Platinum, Nickel, Coal	

Bibliography

- African Development Bank, 2007. "African Development Report 2007". Oxford University Press, Oxford.
- African Development Bank, 2009. "Oil and Gas in Africa". Oxford University Press. July 29, 2009.
- Akee, Randall K. Q., William E. Copeland, Gordon Keeler, Adrian Angold, and E. Jane Costello, 2010. "Parents' Incomes and Children's Outcomes: A Quasi-experiment Using Transfer Payments from Casino Profits." *American Economic Journal: Applied Economics*, 2(1): 86-115.
- Akresh, Richard, Damien de Walque, and Harounan Kazianga, 2013. "Cash Transfers and Child Schooling: Evidence from a Randomized Evaluation of the Role of Conditionality," World Bank Policy Research Working Paper Series 6340, Washington D.C.
- Arezki, Rabah and Markus Bruckner, 2011. "Oil Rents, Corruption, and State Stability: Evidence from Panel Data Regressions," International Monetary Fund Working Paper 09/267, Washington D.C.
- Arezki, Rabah, Arnaud Dupuy, and Alan Gelb, 2012. "Resource Windfalls, Optimal Public Investment and Redistribution: The Role of Total Factor Productivity and Administrative Capacity," International Monetary Fund Working Paper 12/200, Washington D.C.
- Baird, Sarah, Craig McIntosh, and Berk Ozler, 2009. "Designed Cost-Effective Cash Transfer Programs to Boost Schooling among Young Women in Sub-Saharan Africa," World Bank Policy Research Working Paper 5090, Washington D.C.
- Birdsall, Nancy and Arvind Suramianian, 2004. "Saving Iraq from Its Oil," *Foreign Affairs* 83(4): 77-89.
- Bornhorst, Fabian, Sanjeev Gupta, and John Thornton, 2009. "Natural Resource Endowments, Governance, and the Domestic Revenue Effort: Evidence from a Panel of Countries," *European Journal of Political Economy*, 25(4), pp.439-446.
- Case, Anne, 2001. "Does Money Protect Health Status? Evidence from South African Pensions." National Bureau of Economic Research Working Paper 8495.
- Chandy, Laurence, Natasha Ledlie, and Veronika Penciakova, 2013. "The Final Countdown: Prospects for Ending Extreme Poverty by 2030," Global Economy and Development Policy Paper 2013-04. The Brookings Institution.
- Christiaensen, Luc, Punam Chuhan-Pole, and Aly Sanoh, 2013. "Africa's Growth, Poverty, and Inequality Nexus – Fostering Shared Prosperity". *Forthcoming*.
- Dabalén, Andrew and Nga Nguyen, 2013. "Poverty and Economic growth in East Africa". *Forthcoming*.
- De Carvalho Filho, Irineu, 2008. "Household Income as a Determinant of Child Labor and School Enrollment in Brazil: Evidence from a Social Security Reform," International Monetary Fund Working Paper 08/241, Washington D.C.
- Department For International Development, 2011. "Cash Transfers Literature Review". Policy Division 2011.

- Devarajan, Shantayanan and Marcelo Giugale, 2013. "The Case for Direct Transfers of Resource Revenues in Africa," Center for Global Development Working Paper 333, Washington D.C.
- Devarajan, Shantayanan, Hélène Ehrhart, Tuan Minh Le, and Gaël Raballand, 2011. "Direct Redistribution, Taxation, and Accountability in Oil-Rich Economies: A Proposal," Center for Global Development Working Paper 281, Washington D.C.
- Diamond, Larry and Jack Mosbacher, 2013. "Africa's Coming Resource Curse – And How to Avoid It," *Foreign Affairs*, September/October 2013 issue.
- Duflo, Ester, 2003. "Grandmothers and Granddaughters: Old Age Pensions and Intra-Households Allocation in South Africa," *World Bank Economic Review* 17(1), 1-25, Washington D.C.
- Economist, The, 2011. "Africa's Hopeful Economies: The Sun Shines Bright". Available at <http://www.economist.com/node/21541008>
- Edmonds, Eric V., 2006. "Child Labor and Schooling Responses to Anticipated Income in South Africa," *Journal of Development Economics* 81: 386-414.
- Ehrhart, Helene (2012), draft manuscript.
- Falkinger, Josef and Volker Grossmann, 2005. "Distribution of Natural Resources, Entrepreneurship, and Economic Development: Growth Dynamics with Two Elites," IZA Discussion Paper No. 1756.
- Fiszbein, Ariel and Norbert Schady, 2009. Conditional Cash Transfers – Reducing Present and Future Poverty, A World Bank Policy Research Report, Washington, D.C.
- Foster, James, Joel Greer, and Erik Thorbecke, 1984. "A Class of Decomposable Poverty Measures," *Econometrica*, Vol. 52, No. 3. (May, 1984), pp. 761-766.
- Frankel, Jeffrey, 2010. "The Natural Resource Curse: A Survey," *NBER Working Paper* 15836.
- Gelb, Alan and Caroline Decker, 2011. "Cash at Your Fingertips: Biometric Technology for Transfers in Resource-Rich Countries", Center for Global Development Working Paper 253, Washington, D.C.
- Gelb, Alan and Julia Clark, 2013. "Identification for Development: The Biometrics Revolution," Center for Global Development Working Paper 315, Washington D.C.
- Gelb, Alan and Stephanie Majerowicz, 2011. "Oil for Uganda – or Ugandans? Can Cash Transfers Prevent the Resource Curse?," Center for Global Development Working Paper 261, Washington D.C.
- Gillies, Alexandra, 2010. "Giving Money Away? The Politics of Direct Distribution in Resource-Rich States", Center for Global Development, Working Paper 231, Washington, D.C.
- Gylfason, Thorvaldur, 2001. "Natural Resources, Education, and Economic Development", *European Economic Review*, 45, pp. 847-859.
- International Monetary Fund, various years, Article IV Consultation Reports.
- Mauro, Paolo, 1995. "Corruption and Growth," *The Quarterly Journal of Economics*, Vol. 110, No. 3, pp. 681-712

- McGuirk, Eoin, 2010. "The Illusory Leader: Natural Resources, Taxation and Accountability," The Institute for International Integration Studies Discussion Paper Series 327, IIS.
- Moss, Todd, 2011. "Oil-to-Cash: Fighting the Resource Curse through Cash Transfers", Center for Global Development Working Paper 237, Washington, D.C.
- Moss, Todd and Stephanie Majerowicz, 2013. "Oil-to-Cash Won't Work Here! Ten Common Objections," Center for Global Development Policy Paper 024, Washington D.C.
- Moss, Todd and Lauren Young, 2009. "Saving Ghana from Its Oil: The Case for Direct Cash Distribution," Center for Global Development Working Paper 186, Washington D.C.
- Palley, Thomas, 2003. "Combating the Natural Resource Curse with Citizen Revenue Distribution Funds," *Foreign Policy in Focus* (December): 1-12.
- Ravallion, Martin and Shaohua Chen, 1997. "What Can New Survey Data Tell Us About Recent Changes in Distribution and Poverty?," *World Bank Economic Review*, 11(2), 357-82.
- Rajkumar, Andrew S. and Vinaya Swaroop, 2008. "Public Spending and Outcomes: Does Governance Matter?," *Journal of Development Economics*, 86, pp. 96-111.
- Rodríguez, Pedro, Jose Morales, and Francisco Monaldi, 2012. "Direct Distribution of Oil Revenues in Venezuela: A Viable Alternative?," Center for Global Development Working Paper 306, Washington, D.C.
- Sachs, Jeffrey D. and Andrew M. Warner, 1995. "Natural Resource Abundance and Economic Growth", NBER Working Papers 5398, National Bureau of Economic Research, Inc., Cambridge, M.A.
- Sala-i-Martin, Xavier and Arvind Subramanian, 2013. "Addressing the Natural Resource Curse: And Illustration from Nigeria." *Journal of African Economies*, vol 22, no. 1.
- Sala-i-Martin, Xavier and Arvind Subramanian, 2003. "Addressing the Natural Resource Curse: Evidence from Nigeria," NBER Working Paper No. 9804. Cambridge, Massachusetts: National Bureau of Economic Research.
- Sandbu, Martin E., 2006. "Taxable Resource Revenue Distributions: A Proposal for Alleviating the Natural Resource Curse," *World Development* 34(7):1153-70.
- Segal, Paul, 2011. "Resource Rents, Redistribution, and Halving Global Poverty: The Resource Dividend," *World Development*, 2011.
- World Bank, 2012. "Zambia Economic Brief: Recent Economic Developments and the State of Basic Human Opportunities for Children". Lusaka, Zambia.
- World Bank, 2013. "Africa's Pulse Volume 7". Available at http://www.worldbank.org/content/dam/Worldbank/document/Africa/Report/Africa-Pulse-brochure_Vol7.pdf
- Yanez-Pagans, Monica, 2008. "Culture and Human Capital Investment: Evidence of an Unconditional Cash Transfer Program in Bolivia," IZA Discussion Paper 3678.