A Time Series Analysis of Development Aid and Human Development in DRC post-Two Congo Wars

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ABSTRACT

The effect of development aid on human development in developing countries has been widely debated in academic circles. This study builds upon this debate and examines the impact of Official Development Assistance (ODA) on human development in the Democratic Republic of the Congo (DRC) post-Millennium Declaration and post-two Congo wars. It determines the state of human development in DRC and analyses the relationship between aid and human development using a combination of quantitative and qualitative methods. The research finds that human development has improved in DRC after the wars, but ODA has not significantly contributed to this improvement. Thus, it is important to enhance accountability mechanisms in donor and state institutions. This study adds to the current discourse surrounding human development and ODA and provides valuable insights for policymakers and practitioners concerning the utilisation of ODA in DRC.

Keywords: Foreign aid; human development; DRC; accountability; capability theory; Congo wars; Millennium Declaration

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Introduction

At the turn of the millennium, African nations faced significant development challenges such as high mortality rates, inadequate healthcare, poverty, and low literacy (United Nations Africa Renewal, n.d). To address these issues and improve human development, international organisations such as the World Bank and IMF have increased their development aid efforts towards African countries, aligning their efforts with the Millennium/Sustainable Development Goals. ODA is the single largest component of such aid and is defined by the OECD (2021) as 'government aid that promotes and specifically targets the…welfare of developing countries.' While ODA has the potential to bring positive change to nations grappling with poverty and economic instability, the outcome of aid efforts can vary greatly depending on how the aid is disbursed and used. In some cases, ODA can provide much-needed support for development initiatives, but in others, it may prove to be ineffective, exacerbate global inequality, or even have a destructive impact. To maximise the impact of ODA, it is essential for there to be strong accountability mechanisms in place within both donor and recipient institutions. In the absence of such systems, the effectiveness of ODA is often limited.

One such instance where aid has proved ineffective by increasing corruption, as well as mismanagement, was under General Mobutu Sese Seko in Zaire (DRC) between the late 1970s and 1990 where no fewer than eleven IMF loans meant to finance a 10-year development plan were grossly mismanaged despite warnings by an IMF-appointed Central Bank personnel in Zaire that there was no prospect of Zaire's creditors to get their money back (Grieco et al., 2019; World Bank, 2012; Moyo, 2009). The mismanagement under Mobutu's 32-year regime, among other factors, led to a decade of violence and conflict that devastated DRC's economy,

social fabric, government capacity, and infrastructure (DFID, 2008; World Bank, 2012). This resulted in DRC being off track against all of the MDGs and one of the poorest countries in the world with 72 per cent of its population living in extreme poverty in 2018 (DFID, 2008; World Bank, 2020).

The polarised debates on the impact of aid on human development result from how differently development aid affects human development in recipient nations. While some scholars, such as Clemes and Gani (2003) and Sachs (2005), contend that aid is essential for battling poverty and misery in underdeveloped countries, others, such as Moyo (2009) and Easterly (2002, 2006), contend that aid is unnecessary, increases dependency, and as such, should be stopped (Moyo, 2009).

DRC is a country that is heavily reliant on development aid and has increasingly received aid since the Millennium Declaration; thus, the research investigated what impact ODA has had on human development in the country since the two Congo wars and the signing of the Millennium Declaration. To do this, the research undertook: (i) the main process of discerning, through hypothesis examination, the degree of association between the net ODA (received) and the HDI value in the Congo from the year 2000 to 2018; (ii) the sub-process of discerning the state of human development in the Congo by examining its HDI from 2000 to 2018. These are important for this study as the results indicated, on the one hand, the state of human development in DRC following decades of conflict and misrule and, on the other, whether the significant increase in ODA to DRC since the Millennium Declaration has catalysed human development in the country.

Literature Review

The Problem of an Inadequate Development Indicator

The problem of an inadequate development indicator is a problem in international relations. By exploring some development indicators, this sub-section sought to justify the focus on measures of human development as opposed to those of economic growth. This sub-section focused on the four main indicators of development, which are: Per Capita Income, [Poverty, Inequality, and Unemployment], Gross Domestic Product, and Human Development Index. In doing so, other 'substitutes' to these main indices were examined. These arguments are explored below.

Per Capita Income, Happiness, and (Poverty, Inequality, and Unemployment)

Per Capita Income is the commonest among development indicators. It measures the average income earned per person in a given area. Regardless of its popularity, per capita income is riddled with weaknesses as a measure of development. One of the many weaknesses of this measure is that it merely examines the amount of money earned by individuals in the form of wages and salaries. The vital components of standards of living [such as infrastructure, environment, health, education, and law and order] are not captured in this measure (Anand and Sen, 1994). This also goes for indicators such as Happiness and life satisfaction which are contemporarily translated into statistics.

How much one is satisfied with one's life, the whole life is what is usually called happiness (Ott, 2010). Economists like Obeng-Odoom (2013) construe this to be the greatest measure of development considering that others are just parts of the broader

phenomenon of Happiness. By this measure, Africa is seen to be developed by making up the top 20 performers in a league containing the US, UK, the Netherlands, France, Sweden, and Australia with Liberians being the happiest people on earth by that measure (UNDP in Obeng-Odoom, 2013). By contrast, this measure lacks an objective benchmark and relies wholly on individual views and social influence; hence, explains why the indicator is of little help when comparing nations and different historical periods.

The per capita income indicator is further criticised for failing to capture inequality existing within a population (Seers, 1972). Put differently, there exists a possibility of two countries having the same per capita income: one country with its population living in a polarisation of profound poverty and abundant affluence while the other country with more equitable wealth distribution. In this case, inequality is largely downplayed in measuring development. However, poverty, inequality, and unemployment as a measure of development advocated by Seers (1972) fails to take cognisance of other important economic indicators of development like those of economic growth measured by the GDP and GNP.

Gross Domestic Product (GDP)

GDP is the monetary value of all goods and services produced in a country in a year. As opposed to GNP, GDP as a measure of development excludes the net income from abroad. GDP and Life expectancy are, however, correlated. This relationship has been demonstrated by some statistical studies. Rafia and Samreen (2019), for example, find that increase in life expectancy in G7 countries is positively correlated with increases in GDP.

GDP, however, falls short as a measure of development for failing to take into account intrinsic factors like efficiency, viability,

human well-being, economic productivity, externalities, trade by barter in contributing to development, and economic development *per se*. Simply put, the economic activities that take place in the massive informal sector, for instance, in sub-Saharan Africa and other regions count for little or nothing in this measure. It is simply a measure of taxation or taxability. As such, it fails as an adequate measure of development.

The capability theory demands a holistic inclusion of aspects of an individual's well-being in social welfare measurements. It then follows that a viable indicator of development must go beyond national or per capita income by adequately capturing the important socioeconomic aspects of a population.

Human Development Index (HDI)

If GDP, [Poverty, Inequality, and Unemployment], and Per Capita Income are narrow as measures of development, and Happiness too diffuse, then the HDI can arguably suffice as an encompassing middle point. Anand and Sen's capability theory holds that at the centre of the development is the gradual improvement of peoples' capabilities; while peoples' welfare cannot be ascertained by cardinal measures or policies, it is safe to say that improving their capabilities will enable them to reach their goals. Since its formulation, the HDI has been popularised by its constant appearance in the UN Development Report since 1990 and comes up inevitably in any development discussion (Anand and Sen, 1994). The HDI fundamentally integrates three basic dimensions of human development – a long and healthy life, access to knowledge, and a decent standard of living (UNDP, 2019).

The HDI is based primarily on international data from the United Nations Population Division (the life expectancy data), the United

Nations Educational, Scientific, and Cultural Organization Institute for Statistics (the mean years of schooling and expected years of schooling data) and the World Bank (the GNI per capita data) (UNDP, 2019). Countries with similar per capita incomes can differ substantially under this measure; thus, the HDI is intended to be a more comprehensive measure of development than national or Per Capita Income (Meier and Rauch, 2000), and was adopted in this study in addressing the research objectives.

Other Indicators

In developmental discussions, various measures of development are often considered in addition to conventional indicators. Some of these measures can be viewed as substitutes for conventional measures, while others are integrated into them. Examples of such measures include school completion rates, physical quality of life index, infant mortality rate, purchasing power parity, school enrolment rates, and indicators of child malnutrition.

However, it is important to note that each of these measures has its own strengths and limitations. While some may demonstrate development in one context, they may not do so in another. To put this into perspective, just as a medical practitioner conducts a series of tests to identify different illnesses, we can identify various development-related issues through the different measures of development. Therefore, a comprehensive approach to measuring development should consider multiple indicators and take into account the strengths and limitations of each. This would help provide a more nuanced understanding of development and guide more effective policymaking.

Development Aid and its Impact on Human Development in Developing Countries

The impact of development aid on human development in

developing countries has been highly debated over the years, especially since the Millennium Declaration and the shift in global development framework and policy away from economic growth to a new focus on poverty through the Comprehensive Development Framework (CDF). While the supporters in this debate contend that aid can be quite helpful to recipient countries, opponents of this position reject this claim and contend instead that aid poses risks to these nations. One of the arguments in favour of the latter, as explained by Grieco et al. (2019), borders on the practice of tied aid and how it reduces the development prospects of bilateral aid. In tied aid, donor governments often require that the funds they give to a recipient country must be used to purchase goods and services provided by firms from the donor country (Grieco et al., 2019). The tying of aid suppresses international competition among firms who supply for the project being funded, which in turn reduces the efficiency of the aid for the developing country (Grieco et al., 2019).

Development aid can play an important role in improving human capabilities and living conditions in developing countries. However, the opposite appears to be the case in sub-Saharan Africa and developing countries in recent years. It is in this sense that Lohani (2004)'s examination of 120 developing countries found that foreign aid has a negative relationship with human development. In a similar vein, Easterly (2002, 2006) and Gray (2011) found that aid is ineffective at promoting development in sub-Saharan Africa and developing countries at large. Moyo (2009) equally found that in the last five decades, aid recipients in Africa are not better off because of aid, but worse – much worse.

Other scholars like Aremu (2002) and Sachs (2005) on the other hand argue that ODA is an important tool for enhancing agriculture, food security, education, public infrastructure development, health,

and rural development. This is supported Clemes and Gani (2003) who found that in lower-middle-income countries, health and education aid positively correlates with human development; Kosack (2003) found that…aid was positively associated with the level of well-being achievement in countries, as measured by the HDI; and Asongu and Nnanna (2018) whose examination of 53 African countries reveal that foreign aid increases inclusive human development in African countries but only in the short term. It is in this respect that this article examined whether the significant increase in ODA flows from donors and aid agencies to DRC since the Millennium Declaration has benefited human development in the country. Generally, this research contributes to the above-polarised literature by investigating and offering evidence that shows whether aid has been of help or hindrance to human development in a country that is heavily reliant on development aid – the Congo.

As previously noted, the key determinant of aid outcomes in developing countries is mutual accountability. Poor domestic political institutions often characterised by low levels of accountability can impede the effectiveness of development aid. Thus, while Sachs and Easterly, for example, share polarised viewpoints on the impact of aid on human development, they both agree that for aid to reach end users in developing countries, it is important that accountability mechanisms are present and strengthened in recipient countries (Easterly, 2006; Sachs, 2005).

Trends in Human Development and ODA Flows to DRC

Despite being the largest country in Africa with abundant natural resources, DRC faces a stark contrast between wealth and poverty. Its economy has failed to provide for basic human needs, despite its wealth of resources. This disparity between resource abundance and widespread poverty is a clear indication of the failure of domestic political institutions resulting from decades of misrule

and two civil wars. Despite a slight decrease in poverty rates over the past two decades, the DRC remains one of the poorest countries in the world. In 2018, 72% of its population lived in extreme poverty (World Bank, 2020). The persistence of poverty is characterised by limited or no access to basic social services such as adequate housing, reliable transportation systems, clean water, security, robust infrastructure, quality healthcare, basic education, and general life quality. This situation can be attributed to rapid population growth, limited investment, and inefficient use of existing resources in the DRC (World Bank, 2012: 29). This highlights the restricted choices of the Congolese people and the profound development challenges confronting its domestic political institutions and citizens.

Certain scholars who support aid programs assert that ODA can aid in addressing these issues. Aremu (2002), for instance, argues that ODA is a crucial tool for promoting agriculture, food security, education, public infrastructure development, health, and rural development. Considering its weak governing capacity, DRC has been one of the largest recipients of ODA in Africa since 1970 and such receipts are equivalent to about half of the annual expenditures of its government, invested in unstable parts of the country (HFTT, 2019: 3; OECD, 2019: 8). ODA to DRC was relatively low in the few years preceding the second civil war that ended Mobutu's 32-year regime but resumed gradually during and after the war. These trends are depicted in Figure 2 and further explained in the research data analysis.

Data and Methods

Data and Data Sources

This study used secondary data from the UNDP (2022), the World Bank (2022), and the OECD (2022). The data from the UNDP was used to determine the dependent variables for each model, which included the HDI and its component measures: life expectancy, mean years of schooling, expected years of schooling, and the gross national product. As previously noted, these component indicators capture the three key aspects of human development according to the UNDP, which are health, education, and income.

The main independent variables, as well as the ODA variables and control variables, were sourced from both the World Bank and the OECD. The study utilised the 'Net ODA' data rather than the 'Gross ODA' data because it considers repayments of the principal on loans made in prior years, offsetting entries for forgiven debt and any recovery made on grants (OECD, 2020). It is worth noting that the logarithmic transformation was applied to certain variables before the regression analysis to correct error variance. Before applying this transformation to the government expenditure and health, education, and total ODA variables, they were first normalised for country size by dividing them by the population variable.

Control variables that explain ODA's impact on human development were also included in each of the models to strip away parts of the spurious components of the relationship between ODA and the indicators of human development. The control variables included in the models were voice and accountability, government expenditure, GDP per capita, trade, and population. The lagged

versions of the dependent variables in each model were also included as control variables to account for the lags between receiving aid and seeing changes in the human development indicators**.** *Log(government expenditure)* was accounted for since a large portion of ODA goes to governments, particularly in the form of budget support, and donors often attempt to monitor such spending in previous years. The effect of ODA is also possibly conditional on the level of accountability in aid-recipient countries. I accounted for this using a measure of *voice and accountability* from the World Bank. This variable captures sentiments on citizens' political participation as well as media freedom, freedom of expression, and freedom of association (World Bank, 2022). *Log(trade)* was included in the models as a proxy for economic openness since a more open economy is often linked with higher aid levels and improvements in social welfare. I control for *log(GDP per capita)* and *log(population)* since these are linked with human development and more populous countries often receive higher levels of aid (Gibson et al., 2015). Overall, this study relied on a variety of secondary data sources to conduct statistical analysis, which was carefully processed to ensure accuracy and validity.

Investigation Sample

The study focused on aid and human development in DRC from 2000 to 2018. DRC was examined because of its heavy reliance on development assistance and its ranking as 'the fifth highest receiver of ODA in Africa' (OECD, 2019). The period for this study was considered significant as it was a period from 2000 when global development policy, in line with the Millennium Declaration, was moved from a focus on economic growth to one that focuses on poverty (human development) and also a period when ODA flows to DRC saw a significant increase. It was also a period that marked the winding down of the two Congo wars.

Research Model

The research adopted a quantitative multiple regression and a qualitative case study approach. Multiple regression allows for the discernment of whether there is a relationship between ODA and each of the human development variables given the control variables in each model while the case study approach allows the interpretation of the data in causal terms. To account for the lags between receiving aid and seeing changes in the human development indicators in the multiple regression model, and consistent with other scholars (Beck, 2001; Gibson et al., 2015), I included a lagged dependent variable in each of the models. To perform the analysis in the quantitative part of the research, an initial univariate analysis of the variables was carried out through descriptive statistics before the regression analysis.

Data Analysis Technique

The Ordinary Least Squares (OLS) technique and the case study method of data analysis were adopted for the study. OLS regression was adopted due to the nature of the variables used in the analysis. In testing the research hypothesis, the existence of a positive and significant association between ODA and the human development indicators with statistical significance set at the 95 per cent ($p \leq 0.05$) confidence level was largely considered. To complement the analysis in the quantitative part, the study adopted the qualitative case study approach in analysing the connection between aid and human development in DRC since the two Congo wars and the signing of the Millennium Declaration. Data were analysed using the R statistical software version 4.0.4.

Results

This section is in two parts. Part A addressed the sub-research objective which is to ascertain the state of human development in DRC while part B addressed the main objective of what impact ODA has had on human development in DRC.

Part A: Sub-Research Objective

Figure 1. Congo (Democratic Republic of the)'s HDI and Component Trends Based on Consistent Time Series Data and New Goalposts

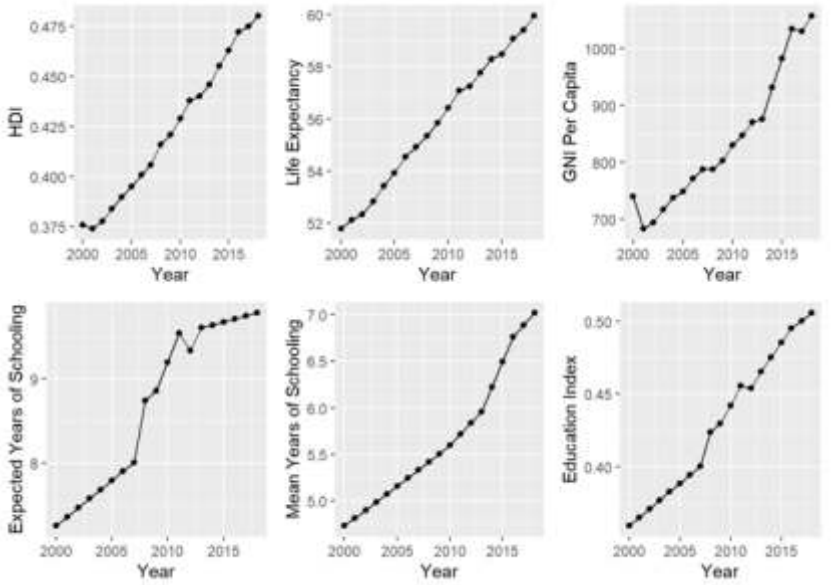


Figure 1 depicts DRC's advancement in each of the HDI indicators. As the figure shows, between 2000 and 2018, DRC's HDI value increased from 0.376 to 0.48. Between 2000 and 2018, DRC's life expectancy at birth increased by 8 years; expected years of schooling increased by 2.7 years; mean years of schooling increased by 2.3 years; GNI per capita increased by 43 per cent and their overall HDI increased by 28 per cent. This progress, however, is insufficient as 'the 2018 HDI value still places the Congo in the low human development category positioning it at 179 out of 189 countries and territories' (UNDP, 2019). This is likely due to the long period of misrule and conflict that has marred its domestic institutions and brought about the inefficient use of resources. Nevertheless, by examining the improvement in HDI indicators and HDI value from 2000 to 2018, it can be safely said that human development has been improving in DRC despite decades of violence and misrule that have marked its history. The following section discerned whether this stems from the enormous

development assistance the country has been receiving since the Millennium Declaration and the winding down of the war.

Part B: Main Research Objective

Univariate Analysis: Summary Statistics

Table 1. Summary Statistics for each Variable

variable names	n	mean	sd	median	min	max	skew	kurtosis
HDI	19.00	0.42	0.04	0.42	0.37	0.48	0.13	-1.48
Life Expectancy (LE)	19.00	55.83	2.63	55.84	51.78	59.94	-0.04	-1.45
Expected Years of Schooling (EYS)	19.00	8.68	0.97	8.86	7.25	9.78	-0.19	-1.80
Mean Years of Schooling (MYS)	19.00	5.67	0.72	5.51	4.73	7.02	0.53	-1.08
GNI Per Capita (GNIPC)	19.00	838.35	118.76	803.14	682.77	1057.25	0.54	-1.10
ODA	19.00	2508674218.43	1519394123.11	2360729980.00	281579986.60	7017770020.00	1.36	2.14
Health ODA	17.00	115.74	61.09	111.59	29.22	206.59	-0.07	-1.63
Education ODA	17.00	58.29	27.88	58.97	21.44	121.62	0.70	-0.30
Voice & Accountability	17.00	-1.44	0.13	-1.46	-1.70	-1.21	0.02	-0.69
Trade	19.00	62.18	19.84	65.08	25.04	90.75	-0.51	-0.93
GDP Per Capita	19.00	410.22	60.85	392.07	334.02	506.96	0.32	-1.50
Government Expenditure	19.00	2535774830.90	1479418704.24	2380847821.00	540568625.50	5039567062.00	0.35	-1.30
Population Size	19.00	63607600.05	11654685.27	62448572.00	47105830.00	84068092.00	0.22	-1.36

Table 2 provides the summary statistics for the transformed versions of the variables used in this analysis. As the table shows, and as discussed in the previous section, with a mean value of 0.42, DRC scores very low on the HDI within the study period suggesting low levels of human development in DRC. Of all the component indicators of the human development index, it is evident that across the sample, the worst-performing indicators are the mean years of schooling and GNI Per Capita since they have very low means that are far from the midpoint values of their respective goalposts of 15 years and $75,000. The better-performing indicator is life expectancy with a mean value of 55.83 years which is above the midpoint value of the goalpost of 85 years set by the UNDP. With negative and extremely low positive skew and kurtosis values, a low standard deviation, and mean and median values that are within a narrow range, the transformed versions of these variables employed in the regression analysis, as shown in Table 2, are closer to equal variance. These show a lack

of heteroskedasticity, which lowers the possibility that extreme values would mar the regression results.

Table 2. Summary Statistics for each Transformed Variable

variable names	n	mean	sd	median	min	max	skew	kurtosis
HDI	19.00	0.42	0.04	0.42	0.37	0.48	0.13	-1.48
Life Expectancy (LE)	19.00	4.02	0.05	4.02	3.95	4.09	-0.09	-1.45
Expected Years of Schooling (EYS)	19.00	8.68	0.97	8.86	7.25	9.78	-0.19	-1.80
Mean Years of Schooling (MYS)	19.00	5.67	0.72	5.51	4.73	7.02	0.53	-1.08
GNI Per Capita (GNIPC)	19.00	6.72	0.14	6.69	6.53	6.96	0.39	-1.20
ODA	19.00	3.49	0.68	3.54	1.79	4.92	-0.66	1.19
Health ODA	17.00	-13.41	0.52	-13.20	-14.35	-12.79	-0.58	-1.15
Education ODA	17.00	-14.03	0.35	-14.04	-14.66	-13.45	-0.17	-1.03
Voice & Accountability	17.00	-1.44	0.13	-1.46	-1.70	-1.21	0.02	-0.69
Trade	19.00	4.07	0.39	4.18	3.22	4.51	-1.00	-0.26
GDP Per Capita	19.00	6.01	0.15	5.97	5.81	6.23	0.21	-1.53

Multivariate Analysis: Multiple Regression Results

Table 3. Summary of Multiple Regression Models

Table 3 shows that in their respective models, health, education, and total ODA were not positively and significantly associated with any of the human development indicators at the 90%, 95% and 99% confidence levels. The 'weakest' ODA coefficient (-0.171) is in Model 3 between education ODA and the expected years of schooling, while the 'strongest' coefficient (0.032) is in Model 4 with the mean years of schooling as the dependent variable. However, at the 90%, 95%, and 99% levels across the five models, ODA is not positively and significantly linked with the human development indicators suggesting that ODA has not catalysed human development in DRC since the two Congo wars and the signing of the Millennium Declaration. This result was subjected to further confirmation in the case study analysis.

Examining the relationship between the various control variables and the human development indicators is equally important. As one would expect, there is a reasonably strong positive association between GDP per capita (at the 95% confidence level) and the mean years of schooling. This suggests that improving access to

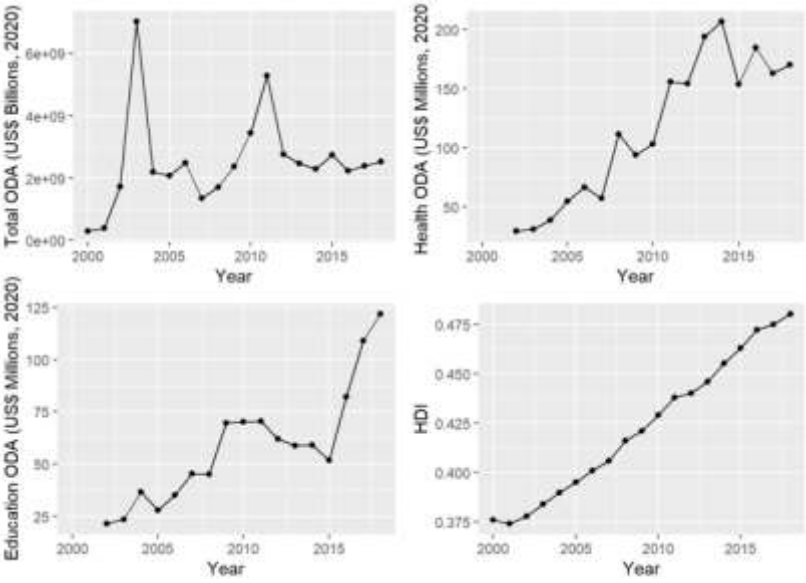
	Dependent variable:				
	HDI	LE	EYS	MYS	GNIPC
	(1)	(2)	(3)	(4)	(5)
Log(ODA)	0.001				0.009
	(0.001)				(0.014)
Log(Health ODA)		0.004			
		(0.003)			
Log(Education ODA)			-0.171	0.032	
			(0.447)	(0.091)	
Voice & Accountability	-0.002	0.007	-0.522	0.020	0.051
	(0.005)	(0.005)	(0.462)	(0.086)	(0.044)
Log(Government Expenditure)	-0.001	0.005	0.334	-0.079	-0.004
	(0.002)	(0.004)	(0.254)	(0.086)	(0.025)
Log(GDP Per Capita)	0.034	-0.067*	-3.345	2.504**	
	(0.034)	(0.034)	(4.908)	(0.968)	
Log(Trade)	0.002	0.003	0.395	-0.050	-0.031
	(0.004)	(0.003)	(0.287)	(0.059)	(0.024)
Log(Population)	0.120	0.361***	5.077	-0.881	0.353
	(0.116)	(0.099)	(5.273)	(1.177)	(0.308)
HDI_{t-1}	0.269				
	(0.480)				
LE_{t-1}		-0.285			
		(0.319)			
EYS_{t-1}			0.426		
			(0.291)		
MYS_{t-1}				0.778***	
				(0.207)	
$GNIPC_{t-1}$					0.617
					(0.360)
Constant	-2.054	-0.870*	-72.016	3.098	-3.564
	(1.740)	(0.456)	(70.558)	(17.749)	(3.049)
Observations	17	17	17	17	17
R^2	0.998	0.999	0.978	0.998	0.988
Adjusted R^2	0.996	0.998	0.961	0.997	0.981
Residual Std. Error	0.002	0.002	0.176	0.036	0.018
F Statistic	643.018***	1,350.631***	57.645***	821.579***	142.133***
Note:					*p<0.1;* ***p<0.05;*** p<0.01

education for adults aged 25 years and above in DRC would be guaranteed as income levels increase. This also suggests that income per person has a stronger link with educational access and attainment for adults aged 25 and older in DRC than aid and government expenditure. Population size is also positively and significantly linked with life expectancy at the 99% level, revealing that demographic changes strongly shape life expectancy in DRC.

Case Study Method of Data Analysis

However, considering that the sample size is not very large and that most of the variables were driven by the world's most deadly war since World War II (and then by the end of the war), it becomes difficult to disentangle the effects of ODA on HDI and interpret the regression results in causal and true terms. As such, this part of the analysis plotted the time trends, as depicted in Figure 2, and treated them as a descriptive context for the case study to circumvent these issues.

Figure 2. Trends in ODA and HDI (DRC)



The history of DRC has been one marked by conflicts. The civil war that broke out in 1997, which ended Mobutu's regime, continued until 2003. ODA flows gradually resumed after Mobutu's regime to aid post-conflict reconstruction from the worst civil war. ODA increases in Figure 2 corresponded with significant political events in the political development of the country. Following the Sun City Agreement of 2002, ODA peaked at $7.02bn in 2003 when the war ended but sharply declined afterwards by 70.5 per cent in 2005 (see Figure 2). The country's HDI value, on the other hand, maintained an uptrend increasing by 7.2 per cent between 2001 to 2006.

ODA increased again in the 2006 national election year to promote better governance following the war but declined by 45.8 per cent and remained relatively low in 2007 and afterwards because 'donors fell behind in the $4bn pledges made during the World Bank-led Consultative Group in 2007 in support of the PRGSP (Poverty Reduction and Growth Strategy Paper) and PAP (Plan d'Actions Prioritaires) for the 2008–2010 period' in DRC (DFID, 2010). HDI, on the other hand, maintained an uptrend from 2007 to 2011 increasing by 3.7 per cent.

ODA, nevertheless, witnessed another significant increase of almost $6bn in DRC's election year of 2011 with a better part of ODA likely used in sponsoring the country's 2011 democratic elections. ODA trended downwardly in the following years till 2014 decreasing by 56.8 per cent while HDI continued to trend upwards by 5.2 per cent from 2012 to 2015. In 2015, ODA to DRC increased by 19.7 per cent compared to 2014 due to 'commitments by DAC donors to reverse recent declines' **(**OECD, 2016**)** but declined again in 2016 by 18.3 per cent before increasing slightly by 7.2 per cent in 2017 prior to the election year of 2018. HDI, however, still maintained an upward trend within this period (2016-2018) increasing by 1.7 per cent.

Generally, the graphs show increasing trends in both ODA and HDI from 2000 to 2018, coming out of the worst civil war – with two big spikes in ODA in the years 2003 and 2011. The HDI component trends from 2000 to 2018 in Figure 1 indicate that the component indices usually most directly sensitive to state resources/capacity (health and education) trended upwardly more than income within the examined period thus, contributing more to improved HDI. However, this increase cannot be traced to ODA targeted specifically to sustaining the health and education sectors in DRC. This is primarily because the annual variations in health, education and total ODA from 2000 to 2018 were not in tandem with annual variations in the HDI and its component education and health measures within the studied period (see Figures 1 and 2) and secondarily because of the possibility that the improvement in health and education could just be due to the winding down of the war. This conclusion, therefore, bolsters the finding in the quantitative part that ODA has not catalysed human development in DRC since the two Congo wars and the signing of the Millennium Declaration.

Hypothesis Decision

H_0 - ODA *has had no positive impact on human development in the Democratic Republic of the Congo.*

The results are not consistent with the possibility that the increased ODA to DRC contributed to improved human development in the country given that first, there exists no positive and significant relationship between ODA and each of the five indicators of human development in the regression results and secondly, the case study graphs do not show increasing trends in both ODA and HDI in each year included in the sample.

Summary of Findings

Human development has been improving in DRC since the two Congo wars and the signing of the Millennium Declaration**s**

1. Human development has been improving in DRC since the two Congo wars and the signing of the Millennium Declaration..
2. The analysis and results reveal that ODA has not contributed to this improvement.
3. GDP Per Capita is more likely to shape educational access in DRC than aid and government expenditure.

Conclusion and Policy Recommendations

Research findings were drawn from the data presented above and were discussed in this section. The capability theory and the notion of accountability in development aid as reviewed in the related literature were most appropriate for the discussion in this part. It was found in this study that human development has been improving in DRC, but the results are not consistent with the possibility that ODA contributed to this improvement. This shows a disconnection between ODA and its objective of welfare promotion in DRC. This result is similar to some of the findings reviewed in the related literature. More generally, the results are similar to the findings in the studies by Lohani (2004) and Gray (2011) who found that development aid has failed to promote human development in developing countries due to poor management and utilisation of aid, by aid agencies and domestic institutions and Moyo (2009) for this reason, recommended that aid flows should be discontinued. However, the general findings are different from those of the studies by Sachs (2005), Asongu and Nnanna (2018), Kosack (2003), and Clemes and Gani (2003). They found that development aid improves human development in developing countries.

Specifically, the research results on the impact of ODA on human development in DRC echo the findings of Easterly (2002, 2006) that aid is ineffective and inessential in improving social welfare

and ending poverty in developing countries. The research, therefore, adds to the strand of growing argument for aid ineffectiveness on human development having employed the quantitative multiple regression and qualitative case study approaches to arrive at the conclusion.

It can, thus, be inferred from the results that while human capabilities have improved in DRC coming out of the worst civil wars, aid did not catalyse such improvement since the winding down of the wars. This is possibly due to weak accountability mechanisms in domestic political institutions in DRC following years of misrule and two civil wars. This, thus, means that more needs to be done to boost aid effectiveness on human development in the country.

It is consequently recommended that ODA is first used in enhancing accountability mechanisms in both donor and domestic institutions to ensure aid effectiveness for its intended beneficiaries. This would have to involve robust transparency, monitoring, and feedback mechanisms in each step to ensure that aid resources are used for this purpose. The massive injection of ODA into DRC should, thus, follow such improvements in accountability mechanisms. This way, donors would be ensuring the utmost effectiveness of aid on human development in the country.

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