

UC Berkeley

Undergraduate Research

Title

Altruism of Aid: Analysis of Canadian Official Development Assistance (ODA) into Sub-Saharan Africa (SSA)

Permalink

<https://escholarship.org/uc/item/7m29v9fc>

Author

Liu, Haikun

Publication Date

2024-04-01



*2024 Honorable Mention for
Best Undergraduate Thesis
in African Studies*

**Altruism of Aid:
Analysis of Canadian Official Development
Assistance (ODA) into Sub-Saharan Africa
(SSA)**

Haikun Liu
Undergraduate Economics Honors Thesis
May 2024

Recipient of Rita Ross Undergraduate Thesis Prize
and Martin Lubin Award in the Social Sciences

Undergraduate Advisors:
Professor J. Bradford DeLong, Economics
Professor Christopher L. Kutz, Law

Department of Economics
University of California, Berkeley

Table of Contents

0. Abstract	3
1. Introduction	4
2. Background and Literature Review	6
2.1 <i>Historical Context of Sub-Saharan African Economic History</i>	6
2.2 <i>Schools of Thought on the Altruism of Aid</i>	8
2.3 <i>Efforts of Canadian Bilateral ODA into Sub-Saharan Africa</i>	10
2.4 <i>(In)effectiveness of ODA in Ethiopia</i>	12
3. Data and Methodology	14
3.1 <i>Data</i>	14
3.2 <i>Methodology</i>	15
4. Findings	18
4.1 <i>Altruistic v. Weak Altruistic Cases</i>	18
4.2 <i>Examination of the Official Languages of Altruistic Aid Recipients</i>	19
4.3 <i>Geographic Exploration of Altruistic Aid Recipients</i>	20
5. Discussion	22
5.1 <i>Comparison of Outcomes with Other Models</i>	22
5.2 <i>Case Study of Canadian-Ethiopian Bilateral Aid</i>	23
5.3 <i>Case Study of Altruism in Chinese ODA v. World Bank Aid</i>	29
6. Conclusion	31
6.1 <i>Limitations and Future Research</i>	31
6.2 <i>Key Takeaways and Implications</i>	32
7. Appendix	35
<i>Appendix A: Table of Countercyclical Donations from Canada from 2010 to 2020</i>	35
<i>Appendix B: Total bilateral ODA from Canada to Ethiopia from 2017 to 2023</i>	36
<i>Appendix C: Sectoral Breakdown of Canadian ODA into Ethiopia from 2017 to 2023</i>	36
<i>Appendix D: Extractive Sectoral Breakdown of Canadian into Ethiopia from 2017 to 2023</i>	37
8. References	38

0. Abstract

The Canadian government frequently cites altruistic motivations for its foreign aid, as opposed to self-interest. Despite extensive literature on major aid contributors, Canadian official development assistance (ODA) in Sub-Saharan Africa (SSA) remains under-examined and presents a research gap. This paper aims to (1) assess Canada's claims of altruism in aiding the SSA region, and (2) bolster transparency in an increasingly opaque aid landscape.

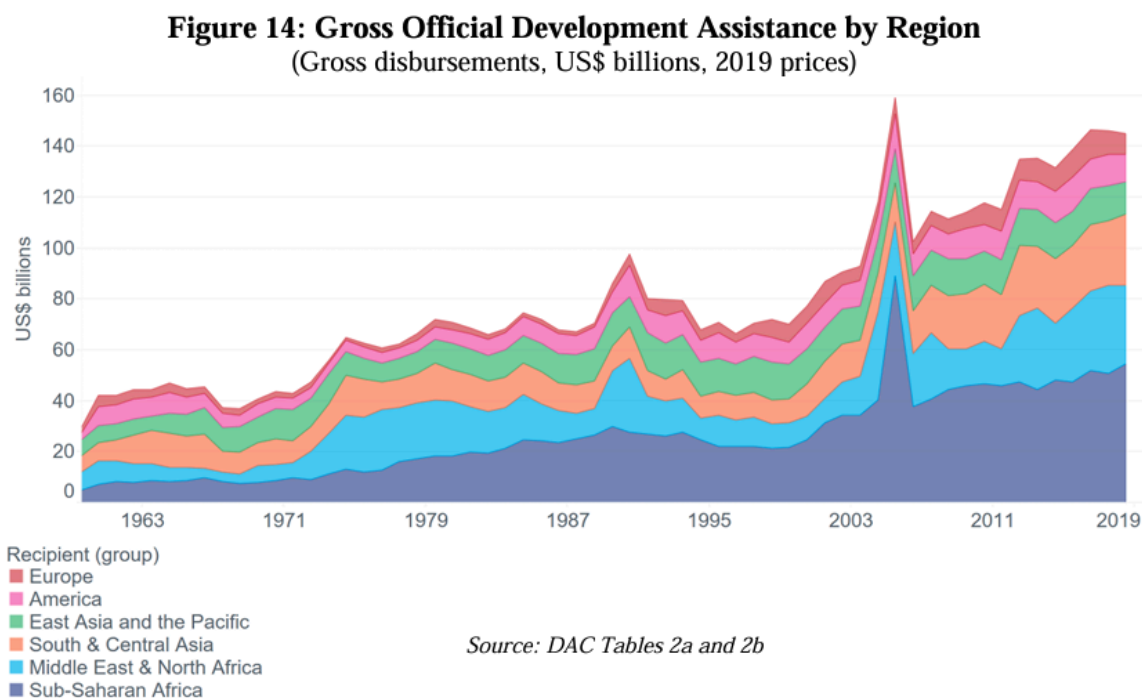
To evaluate “altruism,” I use a countercyclical model to identify instances when annual ODA increases despite a recipient country's negative GDP growth. This approach aligns with the notion that “altruistic aid” should be independent of donor nations' economic returns. An “altruistic case” arises when Canadian ODA grows even while the recipient nation experiences negative growth. Analyzing the World Bank’s dataset on Bilateral Flow of ODA, I found that 21 of the 46 instances from 2010-2020 (45.65% of all bilateral ODA) can be categorized as Canada's “altruistic aid” to SSA.

When compared to the 24 cases of “altruistic donations” from 1970-2010 (52.17% of all bilateral ODA), the subsequent decade witnessed a 12.5% decline (or a 6.52 percentage points decrease) in Canadian “altruistic aid.” My paper probes the connection between this decline and the Conservative Party of Canada (CPC)’s foreign policy from 2008-2015. This paper also offers case study evidence from Ethiopia. Exploiting the sectoral breakdown of bilateral ODA, I provide further support of self-interested Canadian aid motivations and present it as the cause of ineffective aid in Ethiopia over the past decade.

1. Introduction

Since the 1960s, billions of dollars have been channeled through bilateral foreign aid to Sub-Saharan Africa (SSA). The primary objective of these bilateral foreign aid, also known as official development assistance (ODA), centers around poverty reduction and economic development (Younas 2008). For nearly half a century, SSA’s total share of ODA has been growing — from approximately 22 percent in the 1960s and 1970s to about 35 percent in the 2000s (World Bank 2021). The region’s total share of ODA peaked in 2006 at about 56 percent before dropping to 37 percent in 2019 (Figure 1).

Figure 1: Sub-Saharan Africa’s total share of ODA (World Bank 2021)



However, the landscape of ODA has undergone significant changes in recent years. The emergence of new actors has diminished the dominance of traditional Western donors, reshaping the makeup of the landscape of foreign aid to the SSA region. Notably, the BRICS nations

(Brazil, Russia, India, China, and South Africa) have contributed over 22% of loan financing over the last 10 years (World Bank 2021). On an individual basis, China emerged as the primary aid source over the past decade (World Bank 2021). The rise of these unconventional donors have decreased the level of transparency exhibited in the foreign aid landscape, particularly as it relates to the flow of foreign aid into the SSA region (Isaksson and Kotsadam 2020; Isaksson and Kotsadam 2018; Asmus et al. 2017; Fan et al. 2014).

As non-Western donors gain prominence within the ODA landscape, scholarly attention has shifted away from conventional Western donors. This oversight has led to a lack of transparency and accountability for conventional ODA, especially when it comes to smaller players like Canada. However, given Canada's proclaimed "altruistic aid" and professed "moralism" on the international stage, scrutinization of the sincerity of aid remains vital (Global Affairs Canada 2020). In our context, "altruism" refers to the provision of assistance to benefit the well-being of the recipient without expecting economic, political, or strategic returns (Batson and Shaw 1991). Understanding altruism in aid is crucial for revealing donor intentions and their long-term impact on developing nations (Global Campaign for Aid Transparency 2017).

Consequently, the motivations behind this paper is two-fold:

- 1) Address the research gap by examining Canada's claims of altruism in aiding Sub-Saharan Africa.
- 2) Enhance transparency within an increasingly opaque foreign aid landscape.

To examine "altruism" in the context of Canadian foreign aid to SSA, I use a countercyclical ODA model to identify instances when annual ODA increases despite a recipient country's negative GDP growth. This approach aligns with the notion that "altruistic aid" should be independent of donor nations' economic returns (Civelli et al. 2015). An "altruistic case"

arises when ODA grows even while the recipient nation experiences negative GDP growth. Analyzing the World Bank’s dataset on Bilateral Flow of ODA with my model, I specifically focus on the period from 2010-2020 — which has largely remained unexamined. My data reveals that less than half of the ODA interactions from this period can be categorized as “altruistic aid,” exhibiting a 12.5% decline compared to previous decades (Civelli et al. 2014). My paper probes the connection between this decline in altruism with:

- 1) The Conservative Party of Canada (CPC)’s foreign policy agenda from 2008-2015.
- 2) Ineffective ODA in Ethiopia, Canada’s largest ODA recipient in Sub-Saharan Africa.

A case study approach is utilized to establish the connection between aid ineffectiveness in Ethiopia and (a lack of) “altruistic aid” from Canada as a donor. This qualitative approach seeks to accompany the quantitative countercyclical model to provide a holistic view of tackling the question of Canadian aid motivations to Sub-Saharan Africa.

2. Background and Literature Review

2.1 Historical Context of Sub-Saharan African Economic History

Much of the scholarly literature examining aid and economic development stems from a Western-centric perspective that focuses on the global north as the protagonists of the narrative, with the global south (and Sub-Saharan African in particular) viewed as a supporting character. As such, this section seeks to reframe the “hero and sidekick” narrative by equally weighing the voices of the global north and south — and this begins with a brief examination of the economic history of the Sub-Saharan Africa region.

During the late colonial period, numerous countries in SSA were tremendously rich in natural resources and agricultural outputs. As Robert Bates wrote, “Palm oil in Nigeria,

groundnuts in Senegal, cotton in Uganda, and cocoa in Ghana” were once considered to be among prosperous industries in Sub-Saharan Africa before production, exports, and earnings decreased in recent decades (1984). Prior to the concentration of the world’s three-fifths of the poorest population in Africa, the late colonial days saw Zambia “more industrialized” and equivalent in wealth as Portugal (DeLong 2022). One of the core reasons behind SSA’s decline was due to the immense scale of the slave trade, where more than 21 million individuals were enslaved from Africa — which left a persistent level of social distrust that adversely impacted long-run economic growth (Nunn 2008).

Other scholars have focused instead on the geography of Sub-Saharan Africa as the central piece to the region’s economic growth story. Bloom and Sachs argue that the “curse of the tropics” led to lower agricultural yields, more widespread diseases, and higher transportation costs that decreased foreign investments and technology transfers (1998). Acemoglu, Johnson and Robinson contend that the increased rates of tropical diseases discouraged European settlements, and in turn created less representative public institutions (i.e., rule of law) — ultimately contributing to more resource extraction (2001). The necessity of foreign aid into contemporary Africa is rooted in the colonial efforts and resource extraction put in place by the global north (Easterly 2007).

Foreign aid into Sub-Saharan Africa began in 1947 with the institution of the Marshall Plan (Center on Foreign Relations 2023). The foreign aid initiative was started by the U.S. to provide economic assistance in the aftermath of WWII — and eventually turned into the contemporary form of official development assistance that focuses on political, economic, and humanitarian causes (Brautigam and Knack 2004).

As we move beyond the historical contextualization of SSA economic development and the timeline of foreign aid, contemporary scholars have pondered why the presence of “global-north foreign-aid effort on the scale of the Marshall Plan” currently exhibited in Sub-Saharan Africa has failed to accelerate a triumphant trajectory of economic growth (DeLong 2022). To get to the root of this question, we must examine the motivations behind contemporary foreign aid to determine the causes behind the continued stagnation of Sub-Saharan African economies. In other words, are the contemporary frameworks of foreign aid investments into the SSA region motivated by self-interest or altruism?

2.2 Schools of Thought on the Altruism of Aid

Previous scholarships which examine foreign aid have exhibited a variety of perspectives in terms of the degree of altruistic motivations. It is important to note that donor motivations are likely to fluctuate over time periods while realistically exhibiting a mixture of multiple rationales — as such, this literature review section primarily focuses on analysis of donor motives within the past two decades.

The self-interested view argues that foreign aid is almost entirely motivated by self-interest for the donor nation. Scholars from economics and political science have pointed to various motivators – such as trade benefits, supportive UN votes, and balance sheet benefits via purchases of donor country exports – as primary factors that prevent bilateral ODA from being considered as “altruistic acts” (Younas 2008). Berthélemy and Tichit (2004) utilizes panel data analysis to establish one of the first papers examining how aid allocation was affected by trade interests while Berthélemy (2006) utilizes geopolitical dummies to further capture self-interested trade motives in the distribution of foreign aid. Alesina and Dollar (2000) provides one of the first analyses on the utilization of supportive UN votes as an instrument to capture the

self-interested motives of donors, in which Dreher, Nunnenkamp, and Thiele (2006) confirmed with more recent data on the UN general assembly votes. It should also be noted that political science research similarly reflects the presumption of donor self interest (Schrader, Hook, and Taylor 1998; Moyo 2009; de Mesquite and Smith 2010).

The altruistic view dictates that foreign aid tends to exhibit motivating factors beyond self-interest, as evidenced by the lack of “return” to a donor’s ODA. In particular, motivations beyond self-interest can be attributed to recipient need and the merit of the recipient (Civelli et al. 2015). Pierre and Lumsdaine (1993) were one of the earliest scholars that presented evidence which tied the primary motivation for aid allocation to recipient needs in SSA. Audet (2013) renewed this perspective and applied it to more recent data by contending a lack of reciprocal demands tied to Canadian aid from 2001 to 2010. The altruistic perspective remains realistic by conceding on the claim that the ODA stemming from most countries are in reality motivated by self-interest, with a selective few exhibiting appearances of altruistic motives (Civelli et al. 2015). Beyond the donor countries’ self-reported motivations, the altruistic scholars reference the adoption of standardized accounting methods, which objectively ensures the transfer of development finance yields no benefits to the donor countries (Civelli et al. 2014).

In response to the altruistic scholars’ line of reasoning, the scholars from the self-interested school responded by identifying the immeasurability of ‘indirect benefits’ that yielded no direct financial returns but rather come in forms such as votes in multilateral organizations (Bearce and Tirone 2010). Aid scholars have attempted to address this point of contention by developing models that empirically signal the motivation of ODA and reasonably provide labels of “strong altruism” (Civelli et al. 2014). From the period of 1970 to 2010, it was revealed that approximately 17% donor-recipient pairs (out of 2,603 samples) satisfied the

criteria of “strong altruism,” demonstrating motivations either rooted based in recipient needs or recipient merit (Civelli et al. 2014). Utilizing this model as a point of inspiration, this paper seeks to apply a similar approach to specifically examine Canadian ODA into Sub-Saharan Africa.

2.3 Efforts of Canadian Bilateral ODA into Sub-Saharan Africa

Canada's formal engagement in Official Development Assistance (ODA) began in the post-World War II era, although various forms of assistance and international relief efforts from Canada can be traced back even earlier (Pierre and Lumsdaine 1993). Canada has served as one of the core contributors within the Development Assistance Committee — which is a subset of OECD countries responsible for 95% of the globally reported ODA (Civelli et al. 2014). The caveat here is the emphasis on “globally reported” ODA as some of the world’s largest donor countries do not publish the breakdown of their ODA. The lack of transparency in the context of foreign aid activities has made assessments regarding the true impact of global aid the subject of much speculation (Strange et al. 2013).

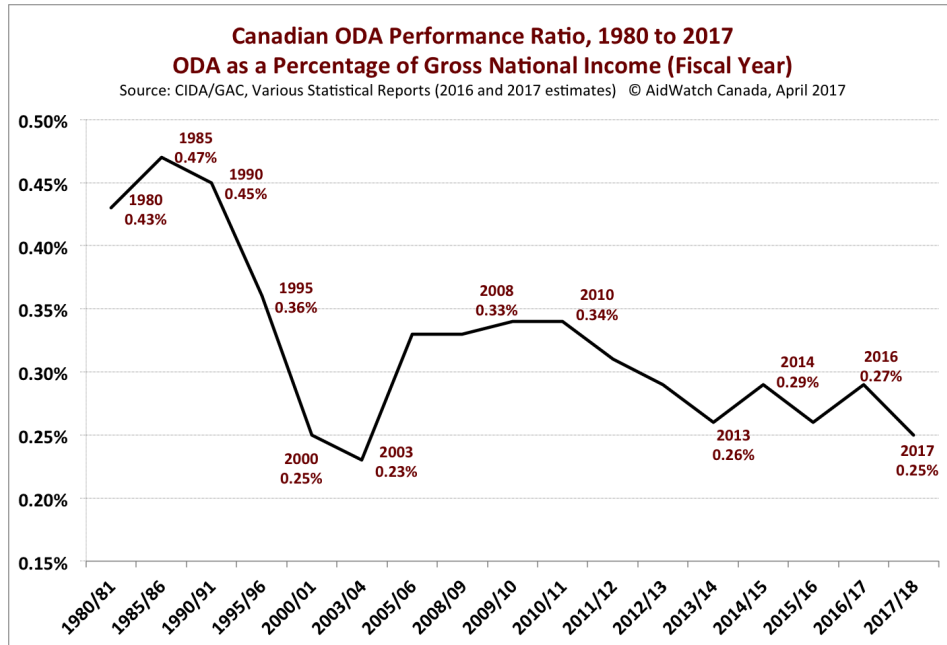
Canada's claims of “altruistic aid” is evident in the annual reports of the Canadian bilateral aid efforts, which often underlines the nation's commitment to moralistic and ethical international engagements (Canadian International Development Agency 2012). In recent decades, the Canadian government’s proposed emphasis on environmental sustainability along with the alleged goals of alleviating poverty and promoting human rights have maintained Canada’s reputation for “altruistic aid” (Global Affairs Canada 2020).

With this in mind, Canada has historically been considered to be amongst one of the most moralistic countries in terms of its commitment to aid on poverty alleviation, often claiming the top rankings among Scandinavian countries (Center for Global Development 2020). Starting with an analysis of Canadian aid over 1949 to 1989, Pierre and Lumsdaine (1993) has

categorized the “ethical impetus” for the country’s bilateral aid efforts. Audet (2013) utilizes religious nongovernmental organizations as an instrument to examine the lack of reciprocal demands tied to Canadian aid historically. Black et al. (2016) emphasizes the historical significance of maternal and child health as Canadian ODA sectoral targets compared to the focus on extractive sectors from other bilateral ODAs. While some scholars have pointed out a mixture of aid motivations (between altruistic intentions and national / diplomatic interests), the vast majority of academics designates Canada as one of the most selfless foreign aid donors (Brown 2012; Swiss 2012; Black et al. 2016).

As scholars have focused on addressing historical Canadian aid motivations, an evident research gap has emerged as it relates to the examination of contemporary Canadian aid. While a general consensus has been reached on the broad level of historical altruism exhibited by Canada, donor motivations tend to fluctuate drastically over different time periods (Civelli et al. 2015). Given this oversight, Canadian ODA has been the victim of significant shrinks in funding from 2010 to 2016 (AidWatch 2022). At the same time, Canadian ODA is exhibiting its lowest performance in decades — as evident from the 47% decline in ODA performance from 1985 to 2017 (Figure 2). ODA performance here refers to the ratio of aid as a percentage of gross national income, indicating the relative budget the government is allocating towards bilateral aid.

Figure 2: Canadian ODA performance ratio from 1980 to 2017 (AidWatch 2022)



The 47% decline (or 0.22 p.p) in Canadian ODA performance over the last 4 decades underscores the importance of scrutinizing aid motivations, especially in the present day. As such, this paper seeks to spark the return of examination of Canadian foreign aid into Sub-Saharan Africa for the sake of global accountability and the “deeply rooted [Canadian] values for justice and equity” (Tomlinson 2000).

2.4 (In)effectiveness of ODA in Ethiopia

The case of Ethiopia deserves particular attention given the large share of ODA it receives from both Canada and the world. Along with Sudan, it received the largest share of ODA across all Sub-Saharan African countries in 2008 (Smith 2013). From 2010 to the present, Ethiopia has remained as the largest (or second largest) recipient of Canadian ODA in the Sub-Saharan Africa region (OECD 2023).

Beyond the large share of foreign aid that the country receives, Ethiopia has also experienced a chain of crises in recent years that call for attention. From the Ethiopian ethnic conflict and the food insecurity and drought crisis that began in 2016 to the Tigray regional conflict and COVID-19 pandemic that started in 2020, the country remains a key contender for global aid (International Rescue Committee 2023). All of the aforementioned reasons call for an in-depth case study of Canadian-Ethiopian bilateral aid.

In terms of the effectiveness of ODA in Sub-Saharan African contexts, numerous scholars have contended that the nature of foreign aid is detrimental to the growth of the recipient country (Bauer 1971; Easterly 2007; Moyo 2009; Deaton 2015). Beyond the general critique on the effectiveness of ODA, foreign aid into Ethiopia is worthy of particular examination. Zewide (2017) presents evidence for the “negative and significant impact” that ODA exhibits on short-run agricultural growth in Ethiopia while Siraj (2012) demonstrates the country’s high dependency on foreign aid, which has resulted in inflated volatility in its growth. Meyer (2012) specifically addresses the human-right abuses that have remained in Ethiopia despite the flow of foreign aid into the country, indicating stagnancy in social progress. The root cause of ODA ineffectiveness in Ethiopia stems from a variety of factors: lack of policy coherence, failure to effectively manage and measure aid impact, inefficiencies of operations, and recipient country’s inability to govern effectively (Smith 2013). As it relates to this paper’s findings, it is evident that the sources of ODA inefficiency are exhibited in the case of Ethiopia.

Through the overview of the literature on ODA in Ethiopia, it is evident that an examination of Canadian ODA specifically into Ethiopia has been omitted from scholarly research. One reason could be the historical steady flow of Canadian ODA into Ethiopia, though this has seen drastic changes over the past decade (as discussed in section 5.2). Another reason

could be the relatively small proportion of Canadian ODA compared to other bilateral donors. Nevertheless, examinations on the motivations of Canadian foreign aid should reasonably include an in-depth case study on one of the single largest recipient countries in the history of Canadian ODA. Through this case study, the paper seeks to address the question of Canadian aid motivation and examine its relationship with the effectiveness of aid in Ethiopia.

3. Data and Methodology

3.1 Data

Two main sources of data are utilized in this paper to tackle the inquiry on aid motivation. The first data set comes from the IMF DataMapper, which provides measurements of the real annual GDP by country — which was used as a measure of economic performance (IMF 2023). This dataset was cleaned via restricting the selection to only Sub-Saharan African countries. The selection of Sub-Saharan African countries stems from the Library of Congress' Africana Collections (Library of Congress 2023). Moreover, the dataset was then processed by calculating the real GDP growth per country per year. The real GDP growth information is needed as an input into our model, described in the following section. The last piece of data cleaning was conducted by restricting the time period from 2010 to 2020. In terms of justifications for the timeline, a few are provided: 1) the paper seeks to provide insights that are most relevant to the discipline and utilize the most recently available datasets, 2) the 10-year period presents an appropriate timeline to measure long-term outcomes, and 3) the years of 2010 to 2020 serve as a continuation of most of the scholarly research examining Canadian aid — which mostly conclude with the year 2010 (Civelli et al. 2014). The cleaned and processed IMF

GDP dataset was cross-referenced with the dataset on Real GDP Growth by country, provided by the World Bank DataBank to confirm its accuracy (IMF 2023).

The second dataset focuses on Canadian bilateral aid to each Sub-Saharan African country (World Bank 2023). This dataset also stems from the World Bank DataBank to ensure data consistency (i.e. in terms of the units of measurement in USD). The source was also validated with another dataset focused on Canadian ODA from the OECD (OECD 2022). Similar to the dataset on GDP, this dataset was cleaned and processed to determine the real ODA growth per recipient country on an annual basis. The two datasets were ultimately merged (for the period of 2010 to 2020) to form the working dataset utilized in this paper.

3.2 Methodology

In this section, the paper describes the model that is developed to generate empirical signals for distinguishing measures of “altruism.” The model that is created is a measure of countercyclical donation that is associated with “altruistic behaviors” of foreign aid. The model is grounded in the notion that “altruistic aid” should be independent from any self-interested gains for the donor. (Civelli et al. 2014). As such, an “altruistic occurrence” arises when the donor aid grows even while the recipient nation experiences negative GDP growth (and is unable to provide any economic returns). In other words, an occurrence of countercyclical donation (or donation against economic uptrend) is considered as an instance of “altruistic aid.”

While critics may claim that this is not a direct measure of ‘returns’ to the donor nation, it is inevitable that Canada’s interests are tied to a recipient country’s macroeconomic performance once it has provided development financing to the nation. If this were to be compared to the case of investing in the stock market, would it be likely that an investor’s interest is not tied to the growth of its invested portfolio (in the absence of short-selling)? Simply put, the model interprets

aid as “altruistic” when Canadian ODA into a country continues to grow even with negative outcomes exhibited in the recipient nation.

The model of countercyclical donation is inspired by previous examinations of the efficacy of foreign aid (Civelli et al. 2014). However, this paper has redesigned the model to develop a focused algorithm that is applied specifically for the dataset on Sub-Saharan Africa. The model is applied to the aforementioned working dataset via the following steps:

1. The ODA and GDP growth rates for SSA recipients from 2010 to 2020 is calculated.
2. The ODA-GDP growth difference is computed (where a positive difference indicates an instance of countercyclical donation).
3. An aggregate threshold of 50% is applied to arrive at a binary evaluation of “altruism.”

My model only considers aid into a specific country as “altruistic” on an aggregate level if half (or more) of ODA over the decade have persisted countercyclically (or despite economic downturns).

Compared to similar algorithms of countercyclical donation developed in previous papers, which only requires a 10% countercyclical threshold to be categorized as “altruistic,” this paper believes that a 50% or more threshold is justified given claims of “altruism” must be demonstrated in a majority of the instances. Essentially, only countries that received five (or more) instances of countercyclical donation were given a “yes” categorization in the “altruism” column — see Figure 3 below for the finalized model output.

Figure 3: Simplified Table of Countercyclical Donation Occurrences from Canada (author’s model)

Country Name	countercyclical	altruism
Angola	4	no
Benin	7	yes
Botswana	3	no
Burkina Faso	4	no
Burundi	5	yes
Cameroon	6	yes
Central African Republic	5	yes
Chad	4	no
Comoros	4	no
Congo, Dem. Rep.	5	yes
Congo, Rep.	4	no
Cote d’Ivoire	6	yes
Djibouti	4	no
Equatorial Guinea	4	no
Eritrea	1	no
Ethiopia	0	no
Gabon	6	yes
Gambia, The	6	yes
Ghana	4	no
Guinea	4	no
Guinea-Bissau	6	yes
Kenya	2	no
Lesotho	5	yes
Liberia	5	yes
Madagascar	3	no
Malawi	3	no
Mali	1	no
Mauritania	4	no
Mauritius	6	yes
Mozambique	5	yes
Namibia	4	no
Niger	5	yes
Nigeria	5	yes
Rwanda	4	no
Sao Tome and Principe	5	yes
Senegal	4	no
Seychelles	0	no
Sierra Leone	5	yes
Somalia	4	no
South Africa	4	no
Sudan	2	no
Tanzania	5	yes
Togo	5	yes
Uganda	4	no
Zambia	5	yes
Zimbabwe	5	yes

A comprehensive table of the countercyclical calculations can be seen in Appendix A.

4. Findings

4.1 *Altruistic v. Weak Altruistic Cases*

As evident from Figure 3, there are 21 total cases where Canadian ODA demonstrated altruistic behavior from 2010 to 2020. The recipient nations of “altruistic aid” were: Benin, Burundi, Cameroon, Central African Republic, Democratic Republic of the Congo, Côte d'Ivoire (Ivory Coast), Gabon, Gambia, Guinea-Bissau, Lesotho, Liberia, Mauritius, Mozambique, Niger, Nigeria, Sao Tome and Principe, Sierra Leone, Tanzania, Togo, Zambia, and Zimbabwe.

Utilizing Angola and Benin as examples to walk through the model, it is evident that over the period of 2010 to 2020 Canada donated “countercyclically” to Angola only 4 out of the 10 years while donating “countercyclically” 7 times to Benin. With our threshold of 50% (or 5 countercyclical donations), only Benin would be given a binary value of “yes” in the altruism column while Angola would not be considered to have received aggregate “altruistic aid” from Canada. Instead, Angola (and other SSA countries that have received 4 or less countercyclical donations over the time period) would be considered to have received “weak altruistic ODA,” a term coined by Civelli et al. (2014) in their examination of donor aid motivation. The concept of “altruistic ODA” and “weak altruistic ODA” is covered more in depth in section 4.3, whereby a visualization of the two types of aid motivations are distinctively reflected onto a map of SSA.

Please note that only 46 countries are included in Figure 3 rather than the entirety of the 49 total SSA nations due to data limitations from 3 countries: South Sudan, Swaziland, and Cape Verde. All 3 omitted countries are smaller nations with limited resources and struggle to capture international attention. South Sudan is a new nation (independent from Sudan in 2011) and struggles with conflict / instability while both Swaziland and Cape Verde are smaller nations that experience difficulty garnering global attention due to geographical and logistical constraints.

4.2 Examination of the Official Languages of Altruistic Aid Recipients

The list of recipient nations consist of countries that are English-speaking, French-speaking, both, or neither. There are 5 English-speaking countries (Gambia, Lesotho, Liberia, Nigeria, and Sierra Leone), 11 French-speaking countries (Benin, Burundi, Central African Republic, Democratic Republic of the Congo, Côte d'Ivoire , Gabon, Guinea-Bissau, Mauritius, Niger, Sao Tome and Principe, and Togo), 4 countries that speak neither English nor French (Mozambique, Tanzania, Zambia, and Zimbabwe), and 1 country that speak both English and French (Cameroon). The categorization of 'English-speaking' or 'French-speaking' for each country stems from the official languages of each nation (Nations Online 2023).

There can be several lines of reasoning for the majority of “altruistic donations” being allocated to French-speaking nations: 1) greater colonial footprint of France in Africa, 2) existing ties to France through shared membership within la Francophonie, 3) deliberate policies driven by Canadian politicians and their domestic agendas, or 4) an alternative explanation. Based on previous research which examined the ties between ODA with former colonial ties, it is the belief of this paper that a combination of greater French colonial footprint in Sub-Saharan Africa along with Canadian policy agendas serve as a mixture of causes behind the greater prevalence of French-speaking “altruistic aid” recipients (Taylor-Leech and Benson 2017; Schmitt 2020; Vitantonio 2022). The correlation between French-speaking recipients and the policy interest of French-Canadian politicians signals self-interested motivations given the substantial role of shared language (and culture) in bilateral trade (Melitz and Toubal 2014; Ebber and Toubal 2016). Future research should confirm this observation via examinations into the British and French neocolonial presence into these recipient nations along with a breakdown of ODA stakeholders from Canada.

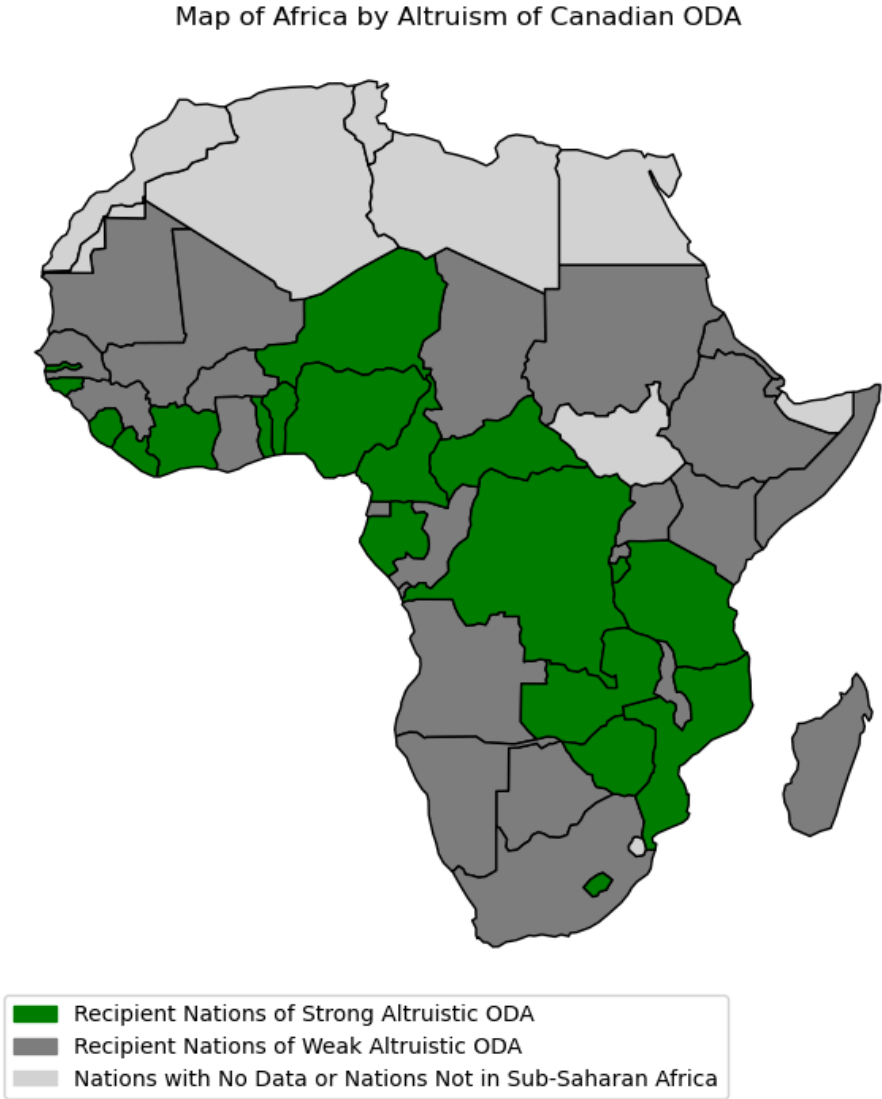
4.3 Geographic Exploration of Altruistic Aid Recipients

A visualization of the 21 African nations that received “altruistic aid” from Canada is seen below in Figure 4. The recipient nations that received “altruistic ODA” are represented in green while the countries that received “weak altruistic ODA” (as defined by exhibiting four or less cases of countercyclical donations stemming from Canada) are displayed in dark gray. The light gray countries either obtained no publicly available data (such as South Sudan) or are not categorized under Sub-Saharan Africa (such as Morocco).

One interesting insight demonstrated by the geovisualization is the concentration of countries that are near coastlines. Approximately 71.4% of the nations that received “altruistic aid” from Canada are coastline countries (15 out of 21) while only 21.6% of the countries are landlocked (6 out of 21). It is important to note that this correlation between Canadian “altruistic ODA” recipients and the large proportion of coastal countries does not necessarily establish a causal relationship. While this observation of coastal countries may be a function of the unbalanced share of coastal countries in Sub-Saharan Africa broadly (67.3% of SSA countries are coastal countries, while only 32.7% are landlocked), there is still a 4.1 percentage point difference between the “altruistic ODA” recipients that are coastal compared to the overall proportion of coastal countries in the SSA region. The paper contends that this observation may be a signal of disproportionate investing in coastal countries, due to higher long-run economic returns via ease of trading and geopolitical significance (and thus suggests more self-interested motivations). Other viable causes for this disproportionate representation of coastal ODA recipients include a) closer historical ties between Canada and coastal SSA nations, b) accessibility and connectivity of coastal countries may be perceived to enable more aid feasibility, and c) security concerns of coastal nations that call for more aid necessity.

However, prior research points to the direction of self-interest as an explanation for this disproportionate representation, which claimed “The economics of aid, therefore, constitutes a part of donor nations’ commercial strategy to secure larger trade benefits” (Younas 2008). In this situation, it appears as though the self-interested school of thought may prevail over the altruistic school given the overwhelming evidence seen by postcolonial ties and long-term trade interests. While this preliminary finding does not constitute conclusive evidence, it does conform to previous frameworks in their claims to ulterior motives besides the explicitly-stated altruism.

Figure 4: Geovisualization of African Nations with Altruistic Canadian ODA (author’s model)



5. Discussion

5.1 Comparison of Outcomes with Other Models

Beyond descriptive analysis of the model generated, a comparison against other measures of “altruistic donations” to recipient countries can be evaluated. In a study examining global ODA into SSA, Canada exhibited 24 cases of annualized “altruistic ODA” over the period of 1960 to 2010 (Civelli et al. 2014). My paper’s model shows that the number of “altruistic cases” decreased by 3 in the years of 2010 to 2020. There could be a variety of reasons for the cause of the decline: effects of the pandemic, downturn of international macroeconomic conditions, deterioration of the domestic Canadian economy, political conditions of recipient nations, etc. However, it is the belief of this paper that the leading explanation behind the decrease in ‘altruistic’ ODA carried out by the Canadian government is mainly due to the everlasting effects of the policies under the Conservative Party of Canada (CPC).

Under the CPC, commonly known as the ‘Tories’, the Harper administration closed down several key funds that Canada had originally established for Sub-Saharan Africa. The Canada Fund for Africa (CFA) initiative was terminated on March 31, 2008 — which at the time represented one of only a handful of ODA initiatives stemming from Canada (Canadian International Development Agency 2010). Despite the holistic and effective approach of the Canada Fund for Africa, which saw research and development, polio eradication, water and sanitation oversight, and research for HIV/AIDS each receiving fifty million dollars, the Fund was shut down because of the rise of its counterpart — the Canada Investment Fund for Africa (CIFA) (Canadian International Development Agency 2010). Instead of funding public projects, the CIFA focused on private investments in Africa and included significantly more leveraged contributions compared to the initial CFA. After the Harper administration was defeated by

Justin Trudeau and the Liberal Party of Canada (LPC) in 2015, the CIFA was shortly shut down on December 30, 2016 (Global Affairs Canada 2019). The Conservative Party's overemphasis on fiscal returns in terms of its foreign aid policies is the key to decreased "altruistic aid" into Sub-Saharan Africa.

However, the mere loss of 3 counts of 'altruistic' ODA is a positive signal behind some of the recent initiatives undertaken by the Trudeau administration. The Africa Renewable Energy Initiative (AREI) started in 2017 has seen a total inflow of \$154 million CAD into "accelerating high-impact renewable energy projects in Sub-Saharan Africa" while the newly-developed 2020 Canada-African Development Bank Climate Fund has already exhibited a \$132.9 million CAD investment into "climate change mitigation and adaptation across Africa" (Government of Canada 2023). These aforementioned initiatives, conditional on their continuation in future administrations, may prove to be a turning point for Canada's return to being one of the top altruistic donors in the world.

5.2 Case Study of Canadian-Ethiopian Bilateral Aid

Moving beyond macro-level analysis of Canadian ODA into Sub-Saharan Africa, an in-depth examination of bilateral aid broken down by sectors generates additional insights to help answer the question of donor motivation. This paper has selected Ethiopia as the country for a case study given its large presence among Canadian ODA recipients. From 2017 to 2023, Ethiopia is the third largest aid recipient (after Ukraine and Afghanistan) — receiving a total of \$736.8M in bilateral aid (Global Affairs Canada 2024). Accounting for ~1.6% of the total bilateral ODA distributed by Canada during the time period, the apparent policy target areas include (in order of listed priority): gender equality, child and youth issues, environmental sustainability, climate change adaptations, climate change mitigation, biodiversity, and

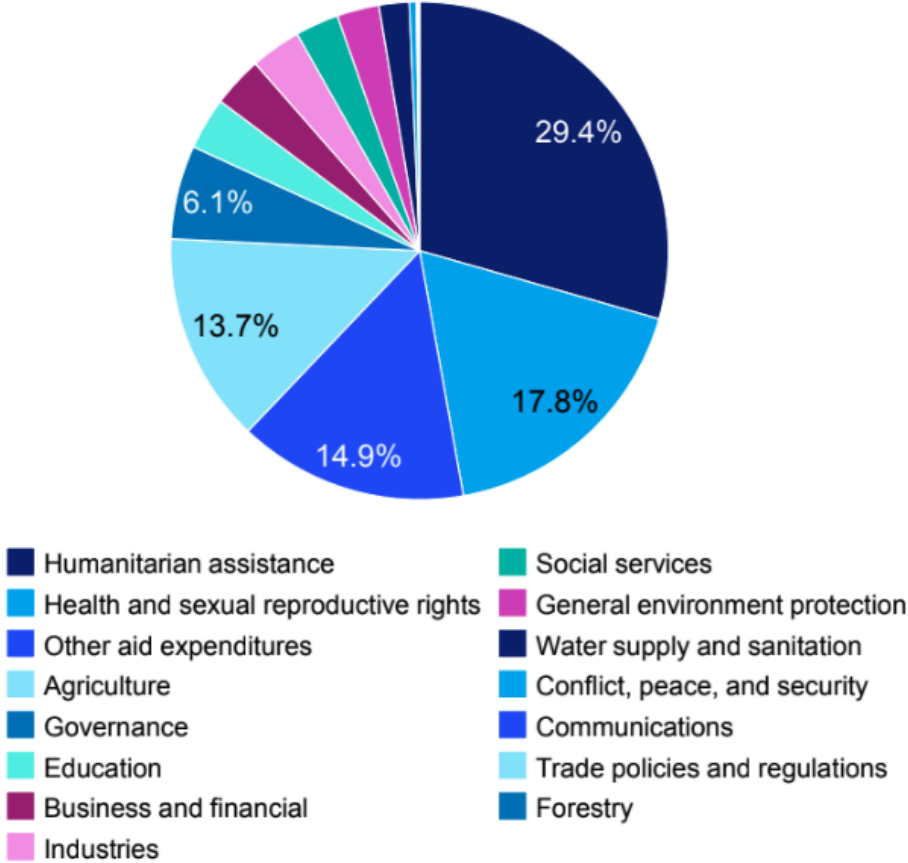
desertification (Global Affairs Canada 2024). While these policy areas are the alleged focus of Canadian aid, the following analysis will reveal concealed target areas that illustrate motivations beyond altruism.

The DevData dashboard from Global Affairs Canada enables the investigation of Canadian bilateral ODA broken down by sector allocation (2024). Of the \$736.8M in aid distributed to Ethiopia from 2017: \$216.8M has gone into humanitarian assistance (~29.4% of distributed aid), \$130.9M into health and sexual reproductive rights (~17.8% of distributed aid), \$110.0M into other aid expenditure (~14.9% of distributed aid), \$100.6M into agriculture (~13.7% of distributed aid) and \$44.9M into governance (~6.1% of distributed aid) (Global Affairs Canada 2024). The other \$133.6M is spread evenly across other sectors: education, business and financial services, industries, social services, general environmental protection, water supply and sanitation, conflict and securities, communications, trade and regulations, and forestry (in total accounting for the rest of the ~18.1% of distributed aid). Only data from 2017 to 2023 are included given the availability of information provided by the source. A detailed breakdown of the total ODA sectoral distribution can be seen in Figure 5 below.

Despite the significant amount of bilateral aid to Ethiopia, the country remains one of the poorest nations in the world — ranking 176 out of 193 countries according to the United Nations HDI (2022). With over 70% of the country’s population under the age of 30, youth unemployment remains a persistent issue in an “underdeveloped private sector” (Global Affairs Canada 2021). Gender inequalities remain perpetual in economic participation, political involvement, education and health (World Economic Forum 2023). Given the poor economic and social outcomes, it is evident that the flow of ODA into Ethiopia has proven to be ineffective.

Utilizing a sectoral breakdown of ODA, this section presents self-interested Canadian motivations as the root cause of ineffective aid in Ethiopia over the past decade.

Figure 5: Total Canadian-Ethiopian ODA by sector (Global Affairs Canada 2024, author’s analysis)



A comprehensive table including the breakdown of the two sectors can be found in Appendix B.

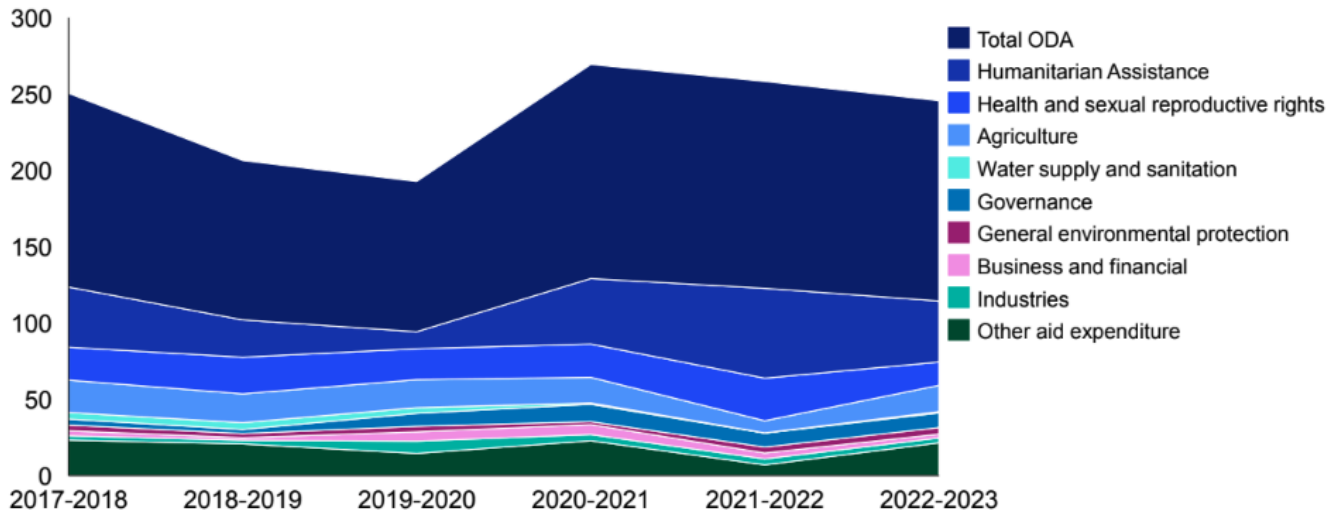
It is important to note that while the majority of sectoral allocation appears to exhibit altruistic motivations, a significant portion of bilateral aid does not accurately distribute towards their intended sectors (especially in nations where local corruption is prevalent). In fact, an audit of similar Canadian ODA efforts in Tanzania (from 2016 to 2020) had over 9% of aid projects missing key documentation — suggesting potential misuse of funding (Global Affairs Canada 2023). Similar cases have also occurred in Ethiopia, with the latest evidence stemming from the

suspension of food aid from the U.S. Agency for International Development (USAID) in 2023 due to an inability to reach the intended population (Reuters 2023). Despite the prevalence of aid corruption, this paper is unable to definitively attribute specific dollar amounts to misallocation in Ethiopia due to data limitations. As expected, the misallocation of aid often goes unreported and is considered to be one of the most prevalent obstacles in the realm of foreign aid (Dreher 2011; Dreher et al. 2016).

While aid corruption has contributed to the ineffectiveness of ODA in Ethiopia, a closer examination of the flow of Canadian aid into the country reveals a concealed level of self-interest at play. From 2017 to 2020, total ODA into Ethiopia experienced a \$28.5M decline (or a ~22% decrease) with the entirety of the reduction stemming from shrinkage in humanitarian assistance (a \$28.3M or ~72% decrease). This decline occurred simultaneously with Ethiopia's worst drought in 50 years, which impacted food security of more than 10 million people — leading to widespread protests and the country's first declared state of emergency in history (Global Affairs Canada 2021). While critics may reference the reallocation of aid from humanitarian assistance towards more relevant aid target areas, such as agriculture, Figure 6 below demonstrates the wide range of budget cuts across all aid target areas from 2017 to 2020 — except for governance, business and financial, and industries.

The evaluation of decreased altruism in Ethiopia up until 2020 lines up with the output of the countercyclical donation model, which yielded 0 instances of Canadian “altruistic donations” to Ethiopia from 2010 to 2020. In fact, the model resulted in negative ODA-GDP growth differences during the time period — indicating overwhelming evidence for self-interested aid motivations. The alignment in results serves as an external validation of the model's accuracy.

Figure 6: Breakdown of Canadian ODA into Ethiopia (Global Affairs Canada 2024, author’s analysis)

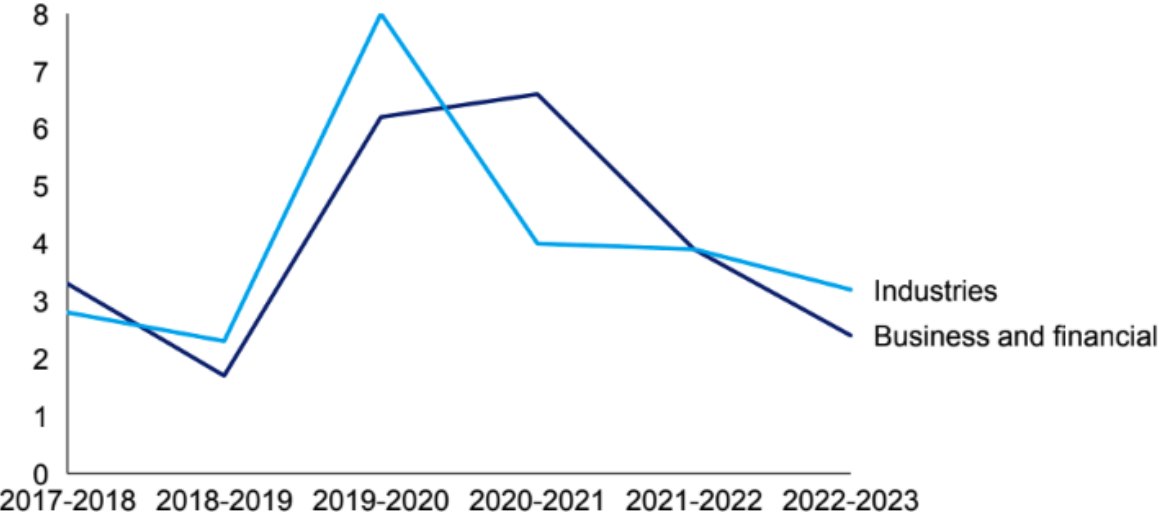


A comprehensive table including the quantitative sectoral breakdown can be found in Appendix C.

Returning to the assessment of the contrarian sectors over the period of 2017 to 2020, the three sectors of ‘governance’, ‘business and financial,’ and ‘industries’ are carefully examined. Governance comprises investments into “government and civil society” while business and financial entails “banking and financial services,” and industries comprises “mineral resources and mining” (Global Affairs Canada 2024). While ‘governance’ ODA can be reasonably categorized as altruistic in nature, it is evident that investments into the two extractive sectors of ‘industries’ and ‘business and financial’ reflect Canada’s “increasingly integrated commercial self-interest into its foreign aid program” (Brown 2023). In fact, the rapid intensification of Canadian investments into extractive sectors, and mining in particular, is displayed across the global ODA portfolio since the early 2010s (Brown 2023). Moreover, it is interesting to see how the two extractive sectors are labeled with particularly vague language while the other sectors obtain much more descriptive labels.

When examining the two extractive sectors of ‘industries’ and ‘business and financial’ separately, it is evident that there is a large increase in ODA investments in both these sectors from 2017 to 2020. For ODA investments into mining (‘industries’), the Canadian government allocated an additional \$5.2M (or a ~186% increase) over the three years. Similarly, investments into banking and financial services (‘business and financial’) jumped by \$2.9M (or ~88%) in the same period. However, the signal for self-interested aid motivations (via rise in extractive ODA) only continued until 2020 — as demonstrated by Figure 7 below.

Figure 7: Extractive ODA investments in Ethiopia (Global Affairs Canada 2024, author’s analysis)



A comprehensive table including the breakdown of the two sectors can be found in Appendix D.

Despite the small (but growing) share of total ODA into these two extractive sectors from up until 2020, their symbolic value is substantial. Canada’s continued investments in the mining and banking sectors in Ethiopia illustrates the direct economic interest Canada obtains in the recipient country — rather than “altruistic aid,” these funding allocations should be more accurately categorized as financial investments. The decision to invest into extractive sectors were “donor-driven” and demonstrated limited potential to fulfill Canada’s stated altruistic

objectives, while simultaneously proving to be beneficial for private Canadian companies (Brown 2023). Rather than contributing to sustainable development in Ethiopia, these investments provide additional evidence of Canada’s pursuit of economic returns — which aligns with the synthesis from section 4.3 on the overrepresentation of coastal ODA recipients.

Aid effectiveness can be undermined when donor priorities are driven by self-interest rather than altruistic objectives. Conforming to the contentions of dependency theorists, conventional ODA models perpetuate reliance by the recipients as donor nations obtain an interest in maintaining its relatively-superior position for economic advantages (Easterly 2006; Moyo 2009). In the case of Canadian-Ethiopian ODA, it is evident that investments into the mining and banking sectors represent a lack of policy coherence between the interests of the donor and the recipient – a framework laid out by Smith – leading to ineffective aid (2013).

From 2020 onwards, the uptrend in altruistic-leaning aid (via both the increase in total ODA along with the decrease in extractive ODA investments) aligns with the analysis of Canadian domestic policy in section 5.1. The upsurge in “altruistic aid” matches with the timing of the Trudeau government’s renewed commitment to sustainable development financing to Sub-Saharan Africa, such as the birth of the Canada-African Development Bank Climate Fund in 2020, the Ethiopian-specific Peace and Stabilization Operations Program (PSOP) that began in 2021, and the renewed Canada Fund for Local Initiatives in 2022 (Government of Canada 2022).

5.3 Case Study of Altruism in Chinese ODA v. World Bank Aid

While measures regarding the morality of aid can easily be generalized into altruistic and self-interested, it is vital to keep in mind the nuances behind apparently-binary evaluations that determine the claims of ‘good’ or ‘bad’. A case that sheds light on the aforementioned nuance can be seen in the comparison between Chinese foreign aid and aid funded by the World Bank in

Sub-Saharan Africa. In recent years, Chinese aid has seen a dramatic increase both in absolute terms and relative to the share of global foreign assistance in general (Dreher and Fuchs 2011). Upon initial comparisons between the aid of Chinese (ODA-like) foreign aid and World Bank development assistance flows, Isaksson and Kotsadam utilizes nighttime light as a measurement to derive outcomes related to economic activity and local corruption (2018). The authors contend that Chinese aid projects contribute to local corruption but exhibit no observable impact on local economic activity, while World Bank aid projects improve local economic activity while demonstrating no evidence of contribution to local corruption (Isaksson and Kotsadam 2018).

Though it might be easy to jump to the conclusion that Chinese aid should be considered as purely self-interested and World Bank aid projects are considered to be more altruistic, further examination reveals that African recipient nations often prefer Chinese aid for its lack of conditionality and the absence of restrictions placed on the strained bureaucracies of the developing nations (Dreher et al. 2016). Scholars have also praised China for its speediness in executing development initiatives and its responsiveness to the needs of recipient nations, allowing African countries to escape the cycle of dependency on Western donors (Brautigam 2011). This is not to mention the initial measures of corruption exhibited from Chinese aid mainly stem from the transmission of local norms, in which the authors fail to fully consider the cultural context of Chinese economic transactions. The concept of 关系 (“guanxi”) dictates an implied “dyadic relationship between individuals in which each can make unlimited demands on the other” and plays a key role in Chinese business dealings (Winters 2013). As such, Western perspectives often misconstrue “guanxi” as a form of corruption, favoritism, or nepotism. While this may not necessarily serve as the primary explanation behind the increased ‘bribery’ of local officials seen in SSA regions with Chinese development projects, this line of reasoning does

offer an explanation behind the authors' evidence regarding how Chinese presence impacts local norms (Isaksson and Kotsadam 2018).

While the intention of this section is not to defend the positioning of Chinese aid projects but rather to illuminate the nuances behind understandings of altruistic behavior and self-interested behavior in the context of development assistance. Moreover, the segment seeks to reveal Western biases pertaining to notions of 'right' and 'wrong' as the analysis conducted in this paper seeks to deviate away from conventional Western understandings of altruism.

6. Conclusion

6.1 Limitations and Future Research

There are three main limitations to this study. Firstly, the countercyclical model exhibits limitations since any delayed impact (or "stickiness") of aid that fails to adjust in real time to economic performance was unable to be accounted for due to data availability. Future research should aim to collect first-hand data on aid disbursements to better capture any delayed impacts or "stickiness" of aid in countercyclical models. Additionally, employing advanced econometric techniques, such as vector autoregression models, could help account for the dynamic relationship between aid flows and economic variables over time.

Secondly, the decline in "altruistic aid" can be reasonably attributed to several other reasons — including macroeconomic downturn and the political conditions of both the recipient nations and Canada domestically. In other words, the countercyclical model suffers from endogeneity concerns as other possibilities may have also contributed to the decline in "altruism." To address the endogeneity concern stemming from multiple factors, future research should employ an instrumental variable analysis or propensity score matching to isolate the

causal effect of macroeconomic downturns, political conditions, and domestic factors in Canada on the observed decline in “altruistic aid.”

Lastly, while a sectoral breakdown of aid was conducted for the case study of Ethiopia, the analysis is still impacted by data consistency and availability concerns. The available data only covers the period from 2017 to 2023 while the proposed timeline began in 2010. Future research can work around this issue by either a) limiting the scope of research to only the period in which data is made available by Global Affairs Canada or b) exploring alternative data sources, such as reports from recipient governments, to create a comprehensive dataset of aid allocation over time. Additionally, the research would also prove to be more accurate with the utilization of multiple case studies (or perhaps the macro investigation of aid allocation breakdown by sector for the SSA region broadly).

The author also believes that it will be of tremendous value to explore the official documents publishing the Canadian ODA efforts, especially over the time period of 2010 to 2020 (whereby the Conservative-majority parliament transitioned into a Liberal-majority parliament in 2015). A more qualitative analysis inspecting the foreign aid language and linguistics utilized by the Canadian government will allow for a more holistic evaluation regarding the “altruism” of Canadian ODA. More specifically, the rhetorical analysis will shed light on the nuanced understandings of altruistic and self-interested behavior as laid out in the case study on Chinese v. World Bank aid in section 5.3.

6.2 Key Takeaways and Implications

Utilizing GDP and ODA data accessed from the World Bank, this paper develops a countercyclical donation model that measures the number of occurrences whereby Canadian ODA growth is positive despite negative GDP in the recipient nation — these instances are

labeled as “altruistic ODA” behavior. My analysis demonstrates 21 separate countries in Sub-Saharan Africa that received “altruistic bilateral ODA” from the government of Canada over the period of 2010 to 2020. With this finding, I derive four main takeaways:

- 1) The majority of the “altruistic aid” recipients (11 out of 21) were French-speaking countries. While a variety of reasons may exist to explain this phenomenon, previous research findings indicate this observation to signal self-interested motivations on the part of French-Canadian politicians, who may be utilizing trade advantages with recipient nations (via a common language) to promote domestic policy agendas.
- 2) 71.4% of the “altruistic aid” recipient nations are coastline countries, compared to the baseline of 67.3% of coastal nations in Sub-Saharan Africa. While this 4.1 percentage point difference correlated between “altruistic ODA” recipient countries and coastal countries is not causal, it does raise questions regarding Canada’s proclaimed objectives of “altruism.” The author believes that this finding serves as a secondary support for Canada’s self-interested “trade benefits motive” that exploits coastal nations’ accessibility to ports and transportation (Younas 2008).
- 3) When compared to “altruistic aid” donations from previous decades, the period examined in this paper saw a 12.5% decline in Canadian “altruistic bilateral ODA.” The depreciation of “altruistic aid” recipients is interpreted as the result of the divestments of foreign aid initiatives pursued by the Harper administration since the early 2000s. With the replacement of the Canada Fund for Africa (CFA) with the private-sector-driven Canadian Investment Fund for Africa (CIFA), the Conservative Party of Canada’s excessive emphasis on fiscal returns led to the decline of “altruistic donations”. Since the

Trudeau administration's wholesale resumption of mission-oriented initiatives in 2020, the level of "altruistic aid" donations have exhibited significant uptrends (Figure 6).

- 4) The culmination of Canada's self-interested aid motivations in Sub-Saharan Africa are exhibited through growing investments into extractive sectors in Ethiopia up until 2020, the start of Canada's focused sustainable ODA initiatives. Along with increased foreign aid into the mining sector by ~186% and the banking sector by ~88%, Canadian ODA divested from humanitarian assistance in Ethiopia by ~72% from 2017 to 2020 (Figure 7). The resulting ineffective aid serves as an antithesis to Canada's proclaimed objectives of altruism and poverty alleviation.

While the adoption of sustainable initiatives in 2020, such as the Canada-African Development Bank Climate Fund, have yielded positive results thus far (Figure 6), future policies must go beyond investments in "altruistic" sectors but also *divestments from self-interested (or extractive) sectors*. Recommendations such as the one proposed by Brown (2023), on the withdrawal of investments in mining to reduce dependency, should serve as a blueprint for future policies. The survival of "altruism" on the international stage hinges solely on the action (and inaction) we take today.

7. Appendix

Appendix A: Table of Countercyclical Donations from Canada from 2010 to 2020

Country Name	Diff_2011	Diff_2012	Diff_2013	Diff_2014	Diff_2015	Diff_2016	Diff_2017	Diff_2018	Diff_2019	Diff_2020	countercyclical	altruism
Angola	0.2059485	-0.9461130	1.6327670	-0.4917632	-0.4630016	16.0286606	-1.3597738	NA	NA	12.2263775	4	no
Benin	0.0936302	-0.3209685	-0.2633324	0.0700027	0.3637446	0.1656063	0.7450556	0.1229899	-0.0698714	0.1508348	7	yes
Botswana	-0.4037753	-0.1152892	0.4053886	-0.3045518	-0.2897547	-0.4211416	0.1182462	-0.5869534	-0.0219405	1.1927221	3	no
Burkina Faso	-0.3457581	0.0178839	-0.0168707	0.2501865	-0.2012048	-0.3441811	0.6624258	0.2592835	-0.1143983	-0.1890840	4	no
Burundi	-0.4989530	0.1195033	-0.0354411	0.4218480	-0.3184336	0.1378277	0.5444557	-0.2055249	-0.3965790	0.4647111	5	yes
Cameroon	0.5850634	-0.5739990	-0.5906176	-0.1240863	0.6562784	1.1066091	0.0715685	0.3717702	-0.4546677	0.8186715	6	yes
Central African Republic	3.0121336	-0.2876772	0.7275041	1.5569844	0.1928340	-0.2689058	-0.3087523	0.2349239	-0.3852039	-0.0762059	5	yes
Chad	-0.3362059	1.0637628	-0.3363992	-0.5582278	-0.0396608	0.1933177	0.8560548	0.1998167	-0.2649396	-0.0565885	4	no
Comoros	1.6648935	NA	NA	NA	NA	NA	NA	0.0841458	0.4158189	0.5304348	4	no
Congo, Dem. Rep.	0.1868062	1.6153703	-0.6516011	-0.2462208	-0.1819711	0.2781016	-0.1610726	0.5257949	-0.2533860	0.2793818	5	yes
Congo, Rep.	-1.1163753	-0.6761610	0.5795710	NA	NA	-0.5157217	1.0961491	-0.3571096	0.5434689	1.7262011	4	no
Cote d'Ivoire	0.4186724	12.6884666	-1.1523976	0.4661978	-0.3092763	0.1007129	-0.1216712	2.8856668	-0.3777558	0.2927162	6	yes
Djibouti	17.9687282	-0.2112742	4.5861013	-0.9825674	-0.5946921	0.0152658	0.6336076	-0.1935065	-0.1085858	-0.1484990	4	no
Equatorial Guinea	30.0908939	-1.0419044	NA	NA	1.3942007	-0.5525131	4.9145880	-0.0178897	0.7638899	-0.3080418	4	no
Eritrea	73.7008626	NA	NA	NA	NA	NA	NA	NA	NA	NA	1	no
Ethiopia	-0.2223133	-0.3155924	-0.0314930	-0.3470570	-0.2065583	-0.2720475	-0.1154882	-0.0166730	-0.2607376	-0.2041358	0	no
Gabon	21.3044128	-0.9115252	0.3752319	1.2511478	-0.1026084	-0.5204796	4.7354244	-0.2332476	0.6534266	0.0459259	6	yes
Gambia, The	5.5213493	-0.8488626	1.7017555	-0.7230256	-0.9304844	-0.0772056	0.2363060	0.8898533	1.3144429	4.9591266	6	yes
Ghana	-0.6024947	0.3771738	-0.5336104	-0.0843128	0.0493792	-0.5182196	-0.1378239	0.4943361	-0.3932786	0.1099266	4	no
Guinea	0.1586188	-0.4158985	-0.4447623	9.5028737	0.2431882	-0.7864894	-0.2821888	-0.1410646	-0.6884906	2.2158178	4	no
Guinea-Bissau	0.4201962	-0.8399620	3.7425675	-0.7584393	NA	NA	Inf	0.1797230	0.4068309	2.4054735	6	yes
Kenya	0.5720794	-0.0958201	-0.0789857	-0.1232976	-0.2677891	0.0138271	-0.2189626	-0.0227577	-0.0568696	-0.1012111	2	no
Lesotho	2.2360018	-0.8094859	0.3303481	-0.5127179	-0.8238403	72.1039683	-1.0567065	-1.1069708	Inf	0.3907774	5	yes
Liberia	5.8723271	-0.8363791	0.0775640	2.7266852	-0.4254414	-0.9706369	5.2931795	-0.6597417	-0.6971338	6.6599886	5	yes
Madagascar	-0.1414757	-0.4817322	-0.2214557	4.0966498	-0.0727459	-0.3779249	-0.1325471	0.0603018	-0.1765610	0.4006649	3	no
Malawi	-0.3967318	1.6866230	-0.1197431	-0.5439596	-0.4073625	0.9968821	-1.0859895	0.0965592	-0.2406192	-0.1145121	3	no
Mali	-0.0061273	-0.1495718	-0.3736742	0.4564464	-0.0318940	-0.0764413	-0.0149726	-0.1985309	-0.1749483	-0.1674492	1	no
Mauritania	-0.1233410	5.9508392	-0.9374235	-0.1434758	0.9805699	-0.9696791	15.4337289	2.7292541	-0.8497383	-0.4673602	4	no
Mauritius	NA	NA	0.2322146	0.0475641	0.5184003	0.4511248	2.7444541	-0.2484517	1.1782088	0.0296225	6	yes
Mozambique	0.2879558	-0.1860778	-0.1652503	-0.3412674	-0.3398486	-0.1618282	-0.0883173	0.1470782	0.0841809	0.0085055	5	yes
Namibia	1.5644672	-0.9662229	5.3765779	-0.7627196	-1.0291710	-24.4459047	-0.7984270	0.6231869	-0.1041694	0.5793801	4	no
Niger	-0.9088376	1.4808143	-0.3613792	-0.7078119	0.5431460	-0.0757328	0.1946106	0.2353707	0.0387898	-0.2458478	5	yes
Nigeria	1.1069549	0.2812690	-0.1827840	-0.5448583	0.5298568	0.3971913	0.6830141	-0.3230420	-0.1332219	-0.0104787	5	yes
Rwanda	-0.9222336	0.3261815	-0.6372168	-0.2612145	-0.4403286	1.2478380	-0.1558326	0.2747723	0.2282616	-0.1820937	4	no
Sao Tome and Principe	NA	-1.0629048	-0.1989527	3.8470368	1.0879070	-0.7931120	4.9128256	-0.0419906	0.5944783	0.0557140	5	yes
Senegal	-0.0147304	-0.2183007	0.2620442	0.1078043	-0.1126306	-0.2363652	-0.2315274	0.6081323	-0.6027244	0.7100335	4	no
Seychelles	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0	no
Sierra Leone	-0.9387907	-0.4654244	-0.3688339	0.9182301	0.4733618	-0.7465453	-0.1593691	0.3764847	0.3386750	1.0105591	5	yes
Somalia	NA	NA	NA	0.2429482	-0.3766791	0.1083115	0.1101848	-0.1751225	-0.3272388	0.2231580	4	no
South Africa	-0.3836457	0.0510947	-0.0648546	-0.2809210	-0.2763888	0.5339852	-0.3348689	-0.2029350	0.2743507	0.6782739	4	no
Sudan	-0.5739243	-0.2456554	-0.3131251	-0.4896334	-0.2314862	-0.1330568	-0.4177078	0.8203637	-0.0489532	0.8534795	2	no
Tanzania	-0.2337863	0.0473021	0.2989848	-0.5696557	0.0160924	-0.4411063	0.7193044	-0.3627154	0.1779238	-0.1728134	5	yes
Togo	-1.0680028	3.0210575	-0.7806561	-0.8165137	-0.2399402	3.0088936	0.2657649	-0.1175325	0.5836886	0.1946249	5	yes
Uganda	0.0720042	1.1437380	-0.1494646	-0.5356075	0.1967965	-0.2162933	2.0745542	-0.2386387	-0.1695607	-0.0201512	4	no
Zambia	-0.2910918	-0.2438160	-0.2033046	0.4098211	-0.4258496	-0.5183646	0.2387614	1.1851446	0.0505999	0.4918530	5	yes
Zimbabwe	0.3207971	0.3530129	-0.5710619	-0.4230571	-0.3790987	0.2195667	-0.7040920	-0.8028184	3.1771360	0.2340247	5	yes

Appendix B: Total bilateral ODA from Canada to Ethiopia from 2017 to 2023

	Total ODA from 2017-2023	
Humanitarian assistance	\$	216.8
Health and sexual reproductive rights	\$	130.9
Other aid expenditures	\$	110.0
Agriculture	\$	100.6
Governance	\$	44.9
Education	\$	25.0
Business and financial	\$	24.2
Industries	\$	24.2
Social services	\$	20.8
General environment protection	\$	20.2
Water supply and sanitation	\$	14.4
Conflict, peace, and security	\$	3.4
Communications	\$	0.8
Trade policies and regulations	\$	0.6
Forestry	\$	0.1
Total	\$	736.9

Units are in \$M

Appendix C: Sectoral Breakdown of Canadian ODA into Ethiopia from 2017 to 2023

	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Humanitarian Assistance	\$ 39.4	\$ 24.4	\$ 11.1	\$ 43.0	\$ 58.9	\$ 40.0
Health and sexual reproductive rights	\$ 21.5	\$ 24.1	\$ 20.3	\$ 21.8	\$ 27.8	\$ 15.3
Agriculture	\$ 21.3	\$ 18.9	\$ 18.3	\$ 16.8	\$ 8.0	\$ 17.2
Water supply and sanitation	\$ 4.3	\$ 4.4	\$ 3.8	\$ 0.8	\$ 0.2	\$ 0.9
Governance	\$ 3.9	\$ 2.7	\$ 8.4	\$ 11.3	\$ 9.1	\$ 9.6
General environmental protection	\$ 3.7	\$ 2.7	\$ 3.6	\$ 2.0	\$ 3.9	\$ 4.3
Business and financial	\$ 3.3	\$ 1.7	\$ 6.2	\$ 6.6	\$ 3.9	\$ 2.4
Industries	\$ 2.8	\$ 2.3	\$ 8.0	\$ 4.0	\$ 3.9	\$ 3.2
Other aid expenditure	\$ 23.3	\$ 20.8	\$ 14.5	\$ 22.8	\$ 7.0	\$ 21.5
Total ODA	\$ 127.0	\$ 104.4	\$ 98.5	\$ 140.2	\$ 135.5	\$ 131.2

Units are in \$M

Appendix D: Extractive Sectoral Breakdown of Canadian into Ethiopia from 2017 to 2023

	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Humanitarian Assistance	\$ 39.4	\$ 24.4	\$ 11.1	\$ 43.0	\$ 58.9	\$ 40.0
Health and sexual reproductive rights	\$ 21.5	\$ 24.1	\$ 20.3	\$ 21.8	\$ 27.8	\$ 15.3
Agriculture	\$ 21.3	\$ 18.9	\$ 18.3	\$ 16.8	\$ 8.0	\$ 17.2
Water supply and sanitation	\$ 4.3	\$ 4.4	\$ 3.8	\$ 0.8	\$ 0.2	\$ 0.9
Governance	\$ 3.9	\$ 2.7	\$ 8.4	\$ 11.3	\$ 9.1	\$ 9.6
General environmental protection	\$ 3.7	\$ 2.7	\$ 3.6	\$ 2.0	\$ 3.9	\$ 4.3
Business and financial Industries	\$ 3.3	\$ 1.7	\$ 6.2	\$ 6.6	\$ 3.9	\$ 2.4
Other aid expenditure	\$ 23.3	\$ 20.8	\$ 14.5	\$ 22.8	\$ 7.0	\$ 21.5
Total ODA	\$ 127.0	\$ 104.4	\$ 98.5	\$ 140.2	\$ 135.5	\$ 131.2

Units are in \$M

8. References

Alesina, Alberto, and David Dollar. *Who gives foreign aid to whom and why?*, June 1998.

<https://doi.org/10.3386/w6612>.

Asmus, Gerda, Andreas Fuchs, and Angelika Müller. "BRICS and Foreign Aid." *SSRN Electronic Journal*, 2017.

<https://doi.org/10.2139/ssrn.3027620>.

Audet, François, Francis Paquette, and Stéphanie Bergeron. "Religious Nongovernmental Organisations and Canadian International Aid, 2001–2010: A Preliminary Study."

Canadian Journal of Development Studies 34, no. 2 (June 2013): 291–320.

<https://doi.org/10.1080/02255189.2013.794721>.

Bates, Robert H. *Markets and states in tropical Africa: The political basis of agricultural policies*. Berkeley, CA: University of California Press, 1984.

Batson, C. Daniel, and Laura L. Shaw. "Evidence for Altruism: Toward a Pluralism of Prosocial Motives." *Psychological Inquiry* 2, no. 2 (April 1991): 107–22.

https://doi.org/10.1207/s15327965pli0202_1.

Bauer, P. T. *Dissent on Development: Studies and debates on Development Economics*. London: Weidenfeld and Nicolson, 1971.

Bearce, David H., and Daniel C. Tirone. "Foreign Aid Effectiveness and the Strategic Goals of Donor Governments." *The Journal of Politics* 72, no. 3 (July 2010): 837–51.

<https://doi.org/10.1017/s0022381610000204>.

- Berthélemy, Jean-Claude, and Ariane Tichit. “Bilateral Donors’ Aid Allocation Decisions—a Three-Dimensional Panel Analysis.” *International Review of Economics & Finance* 13, no. 3 (January 2004): 253–74. <https://doi.org/10.1016/j.iref.2003.11.004>.
- Berthélemy, Jean-Claude. “Bilateral Donors’ Interest vs. Recipients’ Development Motives in Aid Allocation: Do All Donors Behave the Same?” *Review of Development Economics* 10, no. 2 (April 21, 2006): 179–94. <https://doi.org/10.1111/j.1467-9361.2006.00311.x>.
- Black, David R., Molly den Heyer, and Stephen Brown. *Rethinking Canadian aid: Second edition*. University of Ottawa Press, 2016.
- Brautigam, Deborah. *The dragon’s gift: The real story of China in Africa*. Oxford: Oxford University Press, 2011.
- “A Brief History of U.S. Foreign Aid.” Council on Foreign Relations, April 28, 2023. <https://education.cfr.org/learn/reading/brief-history-us-foreign-aid>.
- Brown, Stephen. “Aid Effectiveness and the Framing of New Canadian Aid Initiatives.” *Struggling for Effectiveness*, September 1, 2012, 79–107. <https://doi.org/10.1515/9780773587083-006>.
- Brown, Stephen. “Mining Self-Interest? Canadian Foreign Aid and the Extractive Sector in Mongolia.” *Canadian Journal of Development Studies / Revue canadienne d’études du développement* 44, no. 4 (March 9, 2023): 645–64. <https://doi.org/10.1080/02255189.2023.2184330>.

Bräutigam, Deborah A., and Stephen Knack. “Foreign Aid, Institutions, and Governance in Sub-saharan Africa.” *Economic Development and Cultural Change* 52, no. 2 (January 2004): 255–85. <https://doi.org/10.1086/380592>.

“Canada Development Co-Operation Profile.” OECD iLibrary, 2022.

https://www.oecd-ilibrary.org/sites/aa7e3298-en/index.html?itemId=%2Fcontent%2Fcomponent%2F5e331623-en&_csp_=b14d4f60505d057b456dd1730d8fcea3&itemIGO=oecd&itemContentType=chapter.

“Canada Fund for Africa.” Canadian International Development Agency, 2010.

<http://www.acdi-cida.gc.ca/>.

“Canada-Ethiopia Relations.” Government of Canada, September 22, 2022.

<https://www.international.gc.ca/country-pays/ethiopia-ethiopie/relations.aspx?lang=eng>.

“CIDA Annual Report 2011-12.” Canadian International Development Agency, 2012.

https://publications.gc.ca/collections/collection_2012/acdi-cida/E94-5-2-2012-eng.pdf.

Civelli, Andrea, Andrew W. Horowitz, and Arilton Teixeira. “A Signal of Altruistic Motivation for Foreign Aid: A Theoretical Model and Empirical Test.” *SSRN Electronic Journal*, 2015. <https://doi.org/10.2139/ssrn.2597806>.

Civelli, Andrea, Andrew W. Horowitz, and Arilton Teixeira. “Is Foreign Aid Motivated by Altruism or Self-Interest? A Theoretical Model and Empirical Test.” *SSRN Electronic Journal*, 2014. <https://doi.org/10.2139/ssrn.2390448>.

“Commitment to Development Index.” Center For Global Development, 2023.

<https://www.cgdev.org/cdi/>.

“Countries, Regions, and Languages.” Countries, Regions, and Languages (African & Middle Eastern Reading Room, Library of Congress), 2023.

<https://www.loc.gov/rr/amed/amedctylng.html>.

“Crisis in Ethiopia: Drought and Conflict Put 28 Million in Need.” The IRC. Accessed May 5, 2024.

<https://www.rescue.org/article/crisis-ethiopia-drought-and-conflict-put-28-million-need>.

De Mesquita, Bruce Bueno, and Alastair Smith. “Leader Survival, Revolutions, and the Nature of Government Finance.” *American Journal of Political Science* 54, no. 4 (July 12, 2010): 936–50. <https://doi.org/10.1111/j.1540-5907.2010.00463.x>.

Deaton, Angus. *The great escape: Health, wealth, and the origins of inequality*. Princeton: Princeton University Press, 2015.

DeLong, J. Bradford. *Slouching towards utopia: The economic history of the Twentieth Century*. New York: Basic Books, 2022.

Dreher, Axel, and Andreas Fuchs. “Rogue Aid? The Determinants of China’s Aid Allocation.” *SSRN Electronic Journal*, 2011. <https://doi.org/10.2139/ssrn.1926471>.

Dreher, Axel, Andreas Fuchs, Roland Hodler, Bradley Parks, Paul A. Raschky, and Michael J. Tierney. “Aid on Demand: African Leaders and the Geography of China’s Foreign Assistance.” *SSRN Electronic Journal*, 2016. <https://doi.org/10.2139/ssrn.2900351>.

Dreher, Axel, Peter Nunnenkamp, and Rainer Thiele. “Does Us Aid Buy UN General Assembly Votes? A Disaggregated Analysis.” *SSRN Electronic Journal*, 2006.

<https://doi.org/10.2139/ssrn.910900>.

Easterly, William. *The white mans burden: Why the wests efforts to aid the rest have done so much ill and so little good*. Oxford: Oxford University Press, 2007.

Egger, Peter H, and Farid Toubal. “Common Spoken Languages and International Trade.” Essay. In *The Palgrave Handbook of Economics and Language*, 1st ed., 263–89. Palgrave Macmillan, 2016.

Fan, Victoria Y, Karen A Grépin, Gordon C Shen, and Lucy Chen. “Tracking the Flow of Health Aid from BRICS Countries.” *Bulletin of the World Health Organization* 92, no. 6 (June 1, 2014): 457–58. <https://doi.org/10.2471/blt.13.132472>.

Global Affairs Canada. Audit of International Assistance to Tanzania, September 29, 2023.

<https://www.international.gc.ca/transparency-transparence/audit-evaluation-verification/2023/june-juin-tanzania-tanzanie.aspx?lang=eng#a4>.

Global Affairs Canada. Evaluation of International Assistance Programming in Ethiopia 2013-14 to 2019-20, April 20, 2021.

<https://www.international.gc.ca/gac-amc/publications/evaluation/2021/evaluation-ethiopia.aspx?lang=eng#a2>.

Global Affairs Canada. “Government of Canada.” Project profile - Canada Investment Fund for Africa - Canada.ca, March 1, 2019.

<https://w05.international.gc.ca/projectbrowser-banqueprojets/project-projet/details/a032944001?Lang=eng>.

Global Affairs Canada. “Statistical Report on International Assistance, Fiscal Year 2019-2020.” Government of Canada, May 31, 2021.

<https://www.international.gc.ca/transparency-transparence/international-assistance-report-stat-rapport-aide-internationale/2019-2020.aspx?lang=eng>.

The Global Campaign for Aid Transparency. Rep. *Briefing Paper 1: Why Aid Transparency Matters, and the Global Movement for Aid Transparency*. Publish What You Fund, 2017.

“Global Gender Gap Report 2023.” World Economic Forum, 2023.

<https://www.weforum.org/publications/global-gender-gap-report-2023/>.

Government of Canada. Africa - climate financing - canada.ca. Accessed May 7, 2024.

<https://climate-change.canada.ca/finance/continent.aspx?id=4>.

Isaksson, Ann-Sofie, and Andreas Kotsadam. “Chinese Aid and Local Corruption.” *Journal of Public Economics* 159 (March 2018): 146–59.

<https://doi.org/10.1016/j.jpubeco.2018.01.002>.

Isaksson, Ann-Sofie, and Andreas Kotsadam. “Chinese Aid to Africa: Distinguishing Features and Local Effects.” *SSRN Electronic Journal*, 2020. <https://doi.org/10.2139/ssrn.3643781>.

Kaestle, Klaus. “Official and Spoken Languages of African Countries.” Nations Online Project, 2023. https://www.nationsonline.org/oneworld/african_languages.htm.

Melitz, Jacques, and Farid Toubal. “Native Language, Spoken Language, Translation and Trade.”

Journal of International Economics 93, no. 2 (July 2014): 351–63.

<https://doi.org/10.1016/j.jinteco.2014.04.004>.

Meyer, Courtney. “Aiding Development or Aiding Politics? How Politics in Sub-Saharan Africa Impact the Efficacy of Official Development Assistance in Ethiopia.” JSTOR, 2013.

<https://www.jstor.org/stable/26476125>.

Moyo, Dambisa. *Dead aid: Why aid is not working and how there is another way for Africa*.

London: Penguin Books, 2010.

“NET Bilateral Aid Flows from DAC Donors, Canada (Current US\$).” World Bank Open Data, 2023. <https://data.worldbank.org/indicator/dc.dac.canl.cd>.

Nunn, Nathan. “The Long-Term Effects of Africa’s Slave Trades.” *Quarterly Journal of Economics* 123, no. 1 (February 2008): 139–76.

<https://doi.org/10.1162/qjec.2008.123.1.139>.

Pierre, Andrew J., and David Halloran Lumsdaine. “Moral Vision in International Politics: The Foreign Aid Regime, 1949-89.” *Foreign Affairs* 72, no. 3 (1993): 195.

<https://doi.org/10.2307/20045637>.

“Real GDP Growth.” IMF. Accessed May 6, 2024.

https://www.imf.org/external/datamapper/NGDP_RPCH@WEO/OEMDC/ADVEC/WEO
WORLD.

- Schmitt, Carina. *From colonialism to international aid external actors and social protection in the Global South*. Cham, Switzerland: Palgrave Macmillan, 2020.
- Schraeder, Peter J., Steven W. Hook, and Bruce Taylor. "Clarifying the Foreign Aid Puzzle: A Comparison of American, Japanese, French, and Swedish Aid Flows." *World Politics* 50, no. 2 (January 1998): 294–323. <https://doi.org/10.1017/s0043887100008121>.
- Siraj, Tofik. "Official Development Assistance (ODA), Public Spending and Economic Growth in Ethiopia." *Journal of Economics and International Finance* 4, no. 8 (May 7, 2012). <https://doi.org/10.5897/jeif11.142>.
- Smith, C. "Ineffectiveness of Official Development Assistance in Ethiopia and Sudan." *SSRN Electronic Journal*, 2013. <https://doi.org/10.2139/ssrn.2317463>.
- Strange, Austin, Bradley Park, Michael J. Tierney, Andreas Fuchs, Axel Dreher, and Vijaya Ramachandran. "China's Development Finance to Africa: A Media-Based Approach to Data Collection." *SSRN Electronic Journal*, 2013. <https://doi.org/10.2139/ssrn.2259924>.
- Swiss, Liam. "Gender, Security, and Instrumentalism: Canada's Foreign Aid in Support of National Interest?" *Struggling for Effectiveness*, September 1, 2012, 135–58. <https://doi.org/10.1515/9780773587083-008>.
- Taylor-Leech, Kerry, and Carol Benson. "Language Planning and Development Aid: The (in)Visibility of Language in Development Aid Discourse." *Current Issues in Language Planning* 18, no. 4 (August 11, 2017): 339–55. <https://doi.org/10.1080/14664208.2017.1360690>.

Tomlinson, Brian. “Tracking Change in Canadian Oda : New Directions for Poverty Reduction? Canadian Ngo Reflections.” *International Journal* 56, no. 1 (2000): 54.

<https://doi.org/10.2307/40203531>.

“Trends in Total Canadian Oda Disbursements.” AidWatch Canada, January 22, 2022.

<https://aidwatchcanada.ca/canadian-aid-trends/canadian-oda-disbursements/#history>.

“U.S. Suspends Food Aid to Ethiopia, Says It Is Not Reaching Needy | Reuters.” Reuters, June 8, 2023.

<https://www.reuters.com/world/africa/us-suspends-food-aid-ethiopia-because-diversions-2023-06-08/>.

United Nations. “Human Development Insights.” Human Development Reports, 2022.

<https://hdr.undp.org/data-center/country-insights#/ranks>.

Vitantonio, Carla. “The Relationship between Language and Neo-Colonialism in the Aid Industry.” *The Humanitarian Leader*, October 24, 2022.

<https://doi.org/10.21153/thl2022art1661>.

Winter, Timothy. “Cultural Attitudes to Corruption : A Perspective on the Interplay between Cultural and Legal Norms for Western Businesses Operating in China.” MIT Libraries, 2013. <https://dspace.mit.edu/handle/1721.1/80673>.

World Bank. *A Changing Landscape: Trends in Official Financial Flows and the Aid Architecture*, November 2021.

<https://thedocs.worldbank.org/en/doc/9eb18daf0e574a0f106a6c74d7a1439e-0060012021/a-changing-landscape-trends-in-official-financial-flows-and-the-aid-architecture>.

Younas, Javed. "Motivation for Bilateral Aid Allocation: Altruism or Trade Benefits." *European Journal of Political Economy* 24, no. 3 (September 2008): 661–74.

<https://doi.org/10.1016/j.ejpoleco.2008.05.003>.

Zewide, Firehiwot. "The Impact of Official Development Assistance on Agricultural Growth of Ethiopia." St. Mary's University Institutional Repository, June 1, 2017.

<http://repository.smuc.edu.et/handle/123456789/3637>.