The Open Agriculture Journal
DOI: 10.2174/0118743315369214250212042849, 2025, 19, e18743315369214

ISSN: 1874-3315
1

RESEARCH ARTICLE
OPEN ACCESS

Agricultural Aid to Ghana and Ethiopia under Different Governance Quality

Hyejin Lee[1,*]

[1]*Institute for International Development Cooperation, Konkuk University, Republic of Korea*

Abstract:

Background: Agricultural development has the potential to strengthen food security, reduce poverty, and accelerate economic growth, especially in the early stages of development. Considering the important roles that agriculture can play in economic development, foreign aid donors have supported agriculture across developing countries.

Method: This study examined agricultural aid practices by bilateral donors in two African countries, Ghana and Ethiopia using official aid data. The two economies rely on agriculture, continue to receive agricultural aid, and have widely different governance qualities, with Ghana being considered better governed than Ethiopia.

Results: The study found that donors to Ghana prioritized agriculture over other aid sectors, whereas donors to Ethiopia did not prioritize agriculture, partly because of urgent humanitarian needs that included direct food assistance. Overall, donors to Ghana appeared to give the country more flexibility with agricultural aid by allocating more budget support, making greater use of the state channel, and partnering more with developing country-based nongovernmental organizations. Donors to Ethiopia, by contrast, appeared to exert stricter control over agricultural aid by providing minimal budget support, making limited use of the state channel, and engaging negligibly with nongovernmental organizations based in developing countries. The largest donor, the US, shaped the overall profile of agricultural aid to Ghana and Ethiopia. While supporting two identical agricultural sub-sectors in both African countries, the US involved different aid agencies, reflecting greater confidence in Ghana.

Conclusion: Effective institutions in recipient governments may encourage donors to loosen their control over foreign aid, granting greater flexibility to recipient countries

Keywords: Africa, Agriculture , Ethiopia , Foreign aid, Ghana , Governance .

Received: November 23, 2024
Revised: December 25, 2024
Accepted: January 07, 2025
Published: March 28, 2025

*Address correspondence to this author at the Institute for International Development Cooperation, Konkuk University, Republic of Korea; E-mail: hyejinlee@konkuk.ac.kr

Cite as: Lee H. Agricultural Aid to Ghana and Ethiopia under Different Governance Quality. Open Agric J, 2025; 19: e18743315369214. http://dx.doi.org/10.2174/0118743315369214250212042849

1. INTRODUCTION

Agricultural development has the potential to enhance food security, reduce poverty, and accelerate economic growth, especially in the early stages of development [1-3]. Agricultural development can contribute more significantly to a country's economic growth when a larger proportion of the population depends on agriculture for their livelihoods when agriculture constitutes a greater share of the country's gross domestic product (GDP), and when those employed in agriculture are poorer than those in non-agricultural sectors. [2, 4, 5]. In Africa, agriculture remains the economic backbone of many countries. The sector accounts for 14% of Sub-Saharan Africa’s GDP, and over 50% of its population derives their livelihood solely from agriculture [2, 6]. Despite the economic dominance of agriculture in Africa, poverty prevails in rural areas where 82% of the poor reside [7]. In addition, the continent has been experiencing serious food insecurity. For instance, in 2022, the proportion of the African population facing moderate or severe food insecurity reached 61%, a stark contrast to 30% of the global average [8].

Considering Africa's heavy reliance on agriculture with sustained food insecurity, foreign aid donors have supported agriculture to help African countries strengthen food security and boost economic growth [9]. Literature indicates that the provision of agricultural aid is not random [10]. Alabi suggests governance quality is an important factor in receiving agricultural aid, showing positive associations between agricultural aid and improved governance in Africa [11]. Ssozi *et al.* indicate that African countries with more effective institutions receive more agricultural aid, and better institutions have a positive influence on the efficacy of agricultural aid [12]. Building upon those findings, this study examines how bilateral donors provided agricultural aid to two African countries, Ghana and Ethiopia. Ghana is a coastal country in Western Africa, and Ethiopia is a landlocked country in the Horn of Africa.

The two countries were selected for comparison for three reasons. First, both economies rely heavily on agriculture, each with a dominant export crop: cocoa for Ghana and coffee for Ethiopia [13]. Second, the two countries have considerably different governance qualities. Ghana is considered to have better governance, including wider political freedom than other African countries, whereas Ethiopia is considered to have weaker governance with limited civil liberties [14, 15]. Third, while Ethiopia receives much larger aid than Ghana, both countries continue to receive sizable amounts of foreign aid, including agricultural aid [16].

For foreign aid research, cross-country studies are useful in identifying trends and associations among factors. In some cases, cross-country studies may face heterogeneity issues across recipient countries and aid sectors. Aid literature recognizes the importance of understanding donor practices in specific settings [17], yet relatively fewer studies have done so especially with agricultural aid. Therefore, the contribution of the study is two-fold. First, the study fills a research gap to better understand bilateral donor behaviors in the contexts of Ghana and Ethiopia. Second, findings from the study can offer meaningful policy insights into the two countries and countries with similar settings for bilateral donors. Against this backdrop, the remainder of the study is structured as follows. Section Two establishes the theoretical background by introducing the relevant contexts of Ghana and Ethiopia. Section Three explains the data and aid profile analysis methods. Section Four presents the results. Section Five discusses the overall findings, and Section Six provides the conclusion.

2. CONTEXTUAL BACKGROUND

2.1. Theoretical Background

Studies highlight the importance of agricultural development in developing countries. However, agriculture's contribution to economic growth in Africa remains inconclusive. Supporters of agriculture argue that African countries and Africa as a whole show a strong correlation between agricultural growth and GDP, highlighting synergies between agricultural development and African economies [18]. Supporters of agriculture also emphasize agriculture is one of the few sectors that can drive collective growth in Africa [19]. For instance, in 2020, sub-Saharan Africa's employment rate in manufacturing was around 10%, the smallest share of any emerging region [20]. By contrast, skeptics of agriculture point the sector tends to have the lowest sector productivity in Africa [21]. They underscore Africa's agriculture faces various challenges, including slow market development, lack of necessary inputs and infrastructure, high vulnerability to climate change, and limited capacity of relevant institutions [18]. Therefore, these challenges can be the major obstacle to agriculture contributing to economic development in Africa.

While the effectiveness of agricultural development is still debatable, Gunasekera *et al.* state that limited investment in Africa's agriculture is a key constraint to its expansion [22]. Continued underinvestment in agriculture by African governments suggests the governments do not fully acknowledge agriculture's economic contribution [4, 9]. The 2003 Maputo Declaration required the African Union member states to allocate 10% of total government budgetary resources to agriculture and rural development. However, the majority of the countries spent only 3-6% by 2008. In 2014, the African Union member states recommitted to the 10% goal under the Malabo Declaration [4, 9]. In 2024 the biennial review of the Malabo Declaration reported 4.6% of the overall achievement, still short of meeting the 10% goal [23].

The inadequate public investment in Africa's agriculture can be supplemented by foreign direct investment (FDI). Studies argue FDI not only provides necessary financing to Africa's agriculture, but serves as a valuable channel to access improved technologies and expertise required for agricultural development [22]. Adom *et al.* show FDI has a direct positive effect on agricultural output in 28 African countries, while cautioning FDI should not substitute domestic public investment [24]. Foreign aid is another important financing resource for Africa's agriculture to supplement the insufficient public funds. Aid, in theory should concentrate where it has the largest competitive advantage with the smallest transaction cost [21, 25]. Whether agriculture is such an aid sector depends on the relevant local conditions of a recipient country.

For the efficacy of agricultural aid, studies show mixed results. Barkat *et al.* find a positive effect of agricultural aid on agricultural production with the main positive effect coming from food production, not from non-food production [26]. Ssozi *et al.* conclude agricultural aid increases export crop production, whereas it decreases food crop production [12]. It is argued agricultural aid goes where it can increase agricultural productivity more likely, such as export or industrial crops. Alabi suggests agricultural aid may not have an immediate impact on agricultural productivity, showing increased agricultural productivity is explained only by two-year lagged agricultural aid [11]. In a similar vein, Gyimah-Brempong *et al.* conclude long-term estimates of agricultural aid seem to be much larger in absolute magnitude than short-term estimates [27].

Studies suggest non-random factors affect the provision of agricultural aid, including the institutional quality of a recipient country. Asiedu *et al.* show a percentage point increase in governance quality is associated with up to 64% increase in agricultural aid [10]. Furthermore, Asiedu *et al.* indicate two factors – rule of law and corruption control – are positively associated with agricultural aid. Alabi finds governance quality has a positive relationship with agricultural aid in Africa, yet does not find corruption control explains agricultural aid [10]. In summary, weakly governed countries with agriculture being their key economic sector can present challenges to donors who stress good governance while prioritizing agriculture with their aid [11].

Continuing aid relations with such recipient countries, donors may need to adjust their aid tactics. For instance, donors can adjust a degree of aid concession (grants and loans), a composition of aid modalities (budget support, projects, *etc.*), or a choice of aid disbursement channels (recipient government agencies, nongovernmental organizations *etc.*). Literature suggests donors modify aid tactics in specific institutional settings. As an example, donors rarely provide general budget support to weakly governed countries. General budget support is considered the most fungible form of aid, making it highly susceptible to aid misuse by ineffective and corrupt institutions of recipient countries [28]. Or donors may bypass the public systems of poorly governed recipient countries when delivering aid to such countries. Studies show donors are more likely to bypass public institutions of recipient countries if the institutional quality of recipient countries is perceived to be low. Instead, donors disburse aid through non-state channels such as multilateral organizations and nongovernmental organizations (NGOs) [29, 30]. NGOs are a particularly important aid delivery channel to donors, providing specialized knowledge, community networks, and secured bases on target demographics [29, 31]. In the context of agriculture, local NGOs can be valuable donor partners to ensure the efficacy of agricultural aid. Local NGOs are generally more familiar with agro-ecological environments, current market situations, and cultural norms and institutions of rural communities. Additionally, local NGOs may have insider information to which donors are unlikely to have access, such as a list of key local influencers.

Several points arise from the literature review. Agriculture's contribution to Africa's economic development may vary depending on local conditions. Multiple factors can decide the provision of agricultural aid, one of which is the institutional quality of recipient governments. Longer-term agricultural aid appears to be more effective under better governance. Donors interacting with weakly governed recipient countries may modify their aid tactics by shifting to different aid modalities or changing aid delivery channels. The following section introduces relevant contexts of Ghana and Ethiopia in which bilateral donors operate.

2.2. Country Contexts of Ghana and Ethiopia

2.2.1. Ghana

Ghana is often considered successful in establishing democracy with active civil societies and free media among African countries [15, 32]. Since 1992, the country has held eight competitive multiparty elections, transferring political power mostly between two parties: the National Democratic Congress and the New Patriotic Party [15, 33]. For governance quality measured by the World Bank Governance Index, Ghana has an average percentile rank of 51.9, with higher numbers indicating better governance quality [14]. In terms of political rights and civil liberties, Ghana performs well within Africa. According to the Freedom Index, the country is classified as free, with an average score of 81.6 out of 100 [15].

For agriculture, the sector engages 45% of the country's active labor force, accounting for an average of 20% of GDP and 75% of foreign exchange revenues [20, 34]. Cocoa is the main crop for Ghana's foreign exchange revenues, and the government of Ghana keeps a monopoly control over the crop through the Ghana Cocoa Board [35, 36]. Ghana's agriculture is dominated by smallholders (defined as having less than 2 ha), limiting commercialized production [20]. Major challenges for Ghana's agriculture include decreasing soil fertility, low use of improved agricultural technologies, pest-disease emergencies, inadequate extension and credit services, lack of relevant infrastructure, and unpredictable climate change [36]. Those challenges have led Ghana to become a net food importer: in 2022 the import bill reached USD 2.6 billion [37]. For Ghana's public support of agriculture, the agriculture orientation index (AOI, an agriculture share of government expenditure divided by an agriculture share of GDP) indicates the country allocates insufficient public funds to agriculture [38, 39]. Ghana's average AOI over the last decade was 0.05, and that of Africa was 0.22. Higher AOIs indicate more public finance goes towards agriculture in proportion to agriculture's economic contribution. Relatedly, the government agriculture expenditure (% of total public expenditure) suggests Ghana allocates a small share of total public expenditure to agriculture: between 2011 and 2022, the annual average share was 3.9% [40].

2.2.2. Ethiopia

Ethiopia is an authoritarian state ruled by the Ethiopian People's Revolutionary Democratic Front (EPRDF), a coalition of ethnic-based parties after the fall of the Derg regime in 1991 [15, 17]. During the 2000s, EPRDF became a key Western security ally, particularly to the United States (US), in counterinsurgency in the Horn of Africa region [41]. With the selection of Abiy Ahmed as Prime Minister in 2018, Ethiopia appeared to be undergoing a political transition. The Prime Minister pledged to reform the country's authoritarian regime by rewriting repressive laws. However, the Ethiopian leadership partly returned to authoritarian tendencies in the wake of the major reorganization of EPRDF in 2019 and growing regional violence. The leadership was criticized for jailing opposition leaders, limiting media freedom, and exacerbating humanitarian crises [15]. In 2021, the US broke security ties with Ethiopia and downgraded development cooperation [42]. Measured by the World Bank Governance Index, Ethiopia is low in governance quality or 22.7 in percentile rank [14]. In political rights and civil liberties, Ethiopia is categorized as not free, with an average aggregate score of 19.1 out of 100 [15]. Overall, Ethiopia remains unstable because of political factionalism, regional violent conflicts, and repressive laws.

For agriculture, the sector engages 85% of Ethiopia's labor force, accounting for 40% of the country's GDP [43]. Coffee is the most important crop that generates an average of 28% of the country's total export earnings while engaging 25% of its population in the coffee industry [44, 45]. Agriculture in Ethiopia is dominated by smallholder farms producing 95% of the main crops and cultivating over 90% of cropland [46]. In addition, about 80% of the population relies on rain-fed agriculture [47]. Other challenges to the country's agriculture include labor-intensive production, low adoption of modern technologies, limited public and private investment, poor rural infrastructure, land degradation, underdeveloped markets, high vulnerability to climate change, and civil conflicts, all of which make commercialized production very difficult [48, 49]. While the two countries have many agricultural challenges in common, Ethiopia faces an additional issue: a farmland governance problem. Studies suggest Ethiopia's farmland tenure insecurity is a cause for its low agricultural productivity [3, 50]. All the land in Ethiopia belongs to the state, and a farmland certificate provides an Ethiopian farmer only with a land use right, not a complete property right [3, 48]. Since the constitution prohibits land mortgaging and sales, Ethiopia's farmland governance makes long-term investment in agriculture hardly viable [3]. For Ethiopia's public expenditure to agriculture, the agriculture orientation index (AOI) indicates Ethiopia spends more public funds on agriculture than Ghana. Ethiopia's average AOI is 0.18 compared to 0.05 of Ghana [38, 39]. Relatedly, the government agriculture expenditure suggests Ethiopia allocates a larger share of its total public spending to agriculture: between 2011 and 2022, the average share was 15.8%, much higher than 3.9% of Ghana [40].

To summarize, Ghana has comparatively better governance quality with a higher level of political liberty than Ethiopia does. As the key economic driver, the agriculture of Ghana and Ethiopia shares many similarities and challenges. Ethiopia appears to invest proportionally larger public funds in agriculture, whereas Ethiopian farmers bear additional burdens: farmland tenure insecurity, and frequent civil conflicts. The following sections investigate how bilateral donors disbursed agricultural aid to the two African countries with such different backdrops.

3. MATERIALS AND METHODS

The study used a summative analysis to examine donor practices in Ghana and Ethiopia. For the analysis of aid allocation profiles, data sets were extracted from the Organisation for Economic Co-operation and Development (OECD) statistics [16]. Bilateral donors subject to data collection were members of the Development Assistance Committee (DAC), who report aid data annually to the Creditor Reporting System (CRS). Non-DAC donors were not included as they do not report aid data on a regular basis.

The timeframe for the analysis was set between 2011 and 2022 based on the data availability to match the study objectives. Earlier than 2011, part of the data for aid types and channels was incomplete. The basic unit of the aid profile analysis was each aid fund actually transferred from a donor to a recipient in a given year. For detailed analyses of aid sectors, aid types and aid channels, aid disbursement data were sorted by CRS codes. For aid sector analyses, CRS purpose codes were used. For aid-type analyses, CRS capital-alphabet aid-type codes were used. For aid channel analyses, CRS numeric channel identification codes were used. The results from the analysis were then compared between Ghana and Ethiopia.

The comparison focused on the aid practices of lead donors. A lead donor group is defined as one that cumulatively accounts for 90% of aid in an aid sector in a recipient country. In agricultural aid, lead donors to Ghana included six donor countries, and lead donors to Ethiopia included 11, having five donor countries in common: Canada, Germany, Japan, the Netherlands, and the US. Before preceding, it should be noted that some specific data were not shown in tables. Instead, they were discussed in relevant contexts to support the main findings or add detailed explanations.

4. RESULTS

During the study period, Ethiopia received approximately three times more total aid than Ghana, amounting to USD 27,524.9 million (in 2021 constant prices) compared to USD 8,760.8 million for Ghana. However, Ghana received higher per-capita aid, with an average net aid of USD 49.2 per capita, compared to USD 38.2 for Ethiopia [39]. Regarding yearly aid trends, donors gradually reduced total aid to Ghana, whereas they sustained or slightly increased total aid to Ethiopia [16]. This difference in yearly trends may be attributed to the distinct economic situations of the two countries. Ghana attained lower-middle-income country status in 2010, while Ethiopia has remained a least developed country since its initial designation in 1971 [51]. Another reason for the different yearly trend may be that Ethiopia experienced frequent civil conflicts during the study period, requiring further humanitarian assistance. Ethiopia received an average of USD 636 million per year as an emergency response, with a sharp increase around 2019 [16].

For sectoral aid, donors in theory would invest in sectors with high potential for socioeconomic development of a recipient country. In that sense, agriculture of Ghana and Ethiopia would receive a larger aid than other sectors, given its contribution to their economies. Ethiopia's agriculture received a larger aid in absolute terms than Ghana's agriculture (Table **1**). Yet Ghana's agriculture received the largest share in total aid(13.9%), whereas Ethiopia's agriculture received 8.5% ranked in sixth among all aid sectors (Table **1**). Ghana's agriculture was supported by six lead donors including the US and Canada that dominated agricultural aid (Table **2**). Ethiopia's agriculture was supported by 11 lead donors with the US dominating agricultural aid. Yet the US' dominance in Ethiopia was not as apparent as in Ghana, allowing the larger number of donors to engage in Ethiopia's agriculture as lead donors (Table **2**).

Donors to Ethiopia probably put less emphasis on agriculture because they prioritized urgent emergency aid, including food assistance (Table **1**). Food security in Ethiopia has long been threatened by low agricultural productivity, political instability, natural disasters, high food prices, and civil conflicts [38]. When donors consider direct food provision a more urgent/effective action to smooth out immediate food shortages, donors may prioritize food assistance over agricultural aid. Both food assistance and agricultural aid intend to strengthen food security. Yet agricultural aid likely takes longer to bring a positive impact on food production, consumption, and nutrition outcomes. Measured by the Global Hunger Index, Ghana has better food security than most African countries, although levels of food security vary across localities, with northern areas of Ghana being less food secure [52, 53]. Considering Ghana's little urgent need for direct food provision and the economic importance of agriculture, donors appeared to prioritize agricultural aid in the country.

Table 1. Top aid sectors to Ghana and Ethiopia [16].

Ghana			Ethiopia		
Sector #	Amount §	% of Total ∫	Sector	Amount	% of Total
31(agriculture)	1216.4	13.9	72	7627.6	27.7
12	1154.5	13.2	13	3567.0	13.0
11	920.7	10.5	52	2628.7	9.6
15	873.2	10.0	12	2585.4	9.4
23	769.6	8.8	11	2392.4	8.7
21	558.0	6.4	31(agriculture)	2347.6	8.5

Note: # 11: education, 12: health, 13: population policies/programmes and reproductive health, 15: government & civil society, 21: transport & storage, 23: energy, 31: agriculture, 52: development food assistance, 72: emergency response, § Measured in constant prices (2021 USD millions), ∫ share of total amount as %.

Table 2. Lead donors in agricultural aid to Ghana and Ethiopia

Ghana			Ethiopia		
Lead donor ※	Amount #	% of Total §	Lead Donor	Amount	% of Total
United States	530.4	43.6	United States	544.0	23.2
Canada	270.9	22.3	Germany	310.9	13.2
Germany	100.4	8.3	Netherlands	310.2	13.2
Netherlands	77.8	6.4	Canada	309.6	13.2
France	69.3	5.7	United Kingdom	138.7	5.9
Japan	61.5	5.1	Norway	131.9	5.6
Total	1110.4 (1216.4)∬	91.3 (100)	Poland	111.4	4.7
-	-	-	Japan	82.3	3.5
-	-	-	Denmark	66.2	2.8
-	-	-	Korea	61.0	2.6
-	-	-	Italy	42.6	1.8
-	-	-	Total	2108.9 (2347.6)	89.8 (100)

Note: ※ lead donors in agricultural aid #: total aid in constant 2021 USD million from 2011 to 2022, §: % share of total aid of each lead donor ∬: total amount of agricultural aid from all donors.

Table 3. Agricultural aid to Ghana and Ethiopia [16].

Ghana			Ethiopia		
Modality ※	Amount §	% of Total ∫	Modality	Amount	% of Total
A	152.2	12.5	A	10.5	0.4
B	113.2	9.3	B	428.2	18.2
C	880.6	72.4	C	1714.0	73.0
D	67.6	5.6	D	193.3	8.2
Sub-sector #	**Amount**	**% of total**	**Sub-sector**	**Amount**	**% of total**
31120	431.2	35.4	31120	1048.8	44.7
31110	296.4	24.4	31110	359.5	15.3
31191	97.6	8.0	31130	328.5	14.0
31161	75.5	6.2	31191	76.1	3.2
31166	61.0	5.0	31182	72.5	3.1

Note: ※ A: budget support, B: core contributions and pooled programmes and funds, C: project-type interventions, D: experts and other technical assistance, § Measured in constant prices (2021 USD millions), ∫ share of total amount as %, # 31110: agricultural policy and administrative management, 31120: agricultural development, 31130: agricultural land resources, 31161: food crop production, 31166: agricultural extension, 31182: agricultural research, 31191: agricultural services.

Table 4. Agricultural aid disbursement channel in Ghana and Ethiopia [16].

Channel #	Ghana		Ethiopia	
	Amount §	% of Total ∫	Amount	% of Total
10000	587.1	48.3	822.4	35.0
20000	317.7	26.1	651.9	27.8
30000	1.9	0.2	0.4	0.0
40000	101.9	8.4	458.0	19.5
50000	55.1	4.5	186.2	7.9
60000	73.6	6.0	166.4	7.1
90000	79.1	6.5	62.2	2.6
Sub-type of channel 20000	**Amount**	**% of total**	**Amount**	**% of total**
Developing country-based NGOs	66.0	20.8	17.9	2.8
Donor country-based NGOs	230.3	72.5	596.2	91.6
International NGOs	21.1	6.6	36.6	5.6

Note: # 10000: public sector institutions, 20000: NGO and civil society, 30000: public-private partnerships and networks, 40000: multilateral organizations, 50000: teaching/research institutions or think-tank, 60000: private sector institutions, 90000: other, § Measured in constant prices (2021 USD millions), ∫ share of total amount as %.

For aid modalities, donors to Ghana and Ethiopia disbursed most agricultural aid as project types (Table **3**). Donors tend to prefer project-type aid, which engages donors directly in project design and implementation. The visibility of project-type aid helps donors mobilize public support in recipient and donor countries [54, 55]. Aid projects in agriculture likely include both visible components (*e.g.*, fertilizer distribution, irrigation systems, and commodity processing facilities) and invisible ones (*e.g.*, technical training, knowledge transfer, and policy-making support). Visible components incorporated into agricultural projects can help donors more easily justify their public funds spending to their taxpayers as well as gain their support. Furthermore, the visibility of agricultural aid reminds beneficiaries of donors' contributions even after aid projects are completed.

Other than project-type aid, donors to Ghana used budget support, while donors to Ethiopia essentially avoided it (Table **3**). Budget support for Ghana's agriculture was not a collective action of donors because the entire budget support came from Canada alone. The donor, however, did not provide budget support for Ethiopia's agriculture. Canada's different stance on the two countries likely reflected its different aid policies toward the two. According to Canada's aid policies, the donor does not provide direct budget support to Ethiopia due to concerns regarding the country's human rights violations, humanitarian crises, and public accountability for domestic conflicts [56].

For sub-sectors of agricultural aid, the largest amount was allocated to two sub-sectors, both in Ghana and Ethiopia, collectively accounting for 60% of total agricultural aid in each country (Table **3**). The two sub-sectors were agricultural development (sub-sector code 31120) and agricultural policy/administrative management (31110), mostly reflecting the US' sub-sector preferences. The US allocated 77% of its agricultural aid to two sub-sectors in Ghana and essentially all, *i.e.*, 96%, in Ethiopia.

Other donors had different sub-sector priorities than the US. For instance, Canada focused primarily on extension services (31166) in Ghana and agricultural services (31191) in Ethiopia. Germany prioritized agricultural land resources (31130) in Ethiopia, while the Netherlands focused on industrial crops/export crops (31162) in Ghana.

The US, while favoring the same agricultural sub-sectors in Ghana and Ethiopia, involved different participating aid agencies in the two countries. The US Agency for International Development (USAID) was the largest executing agency of agricultural aid in both Ghana and Ethiopia, but the Millennium Challenge Corporation (MCC) participated only in Ghana's agricultural aid. The Millennium Challenge Corporation (MCC), established in 2004 as a U.S. foreign aid agency, operates in select developing countries that meet specific criteria for governance quality, economic freedom, and investment in their citizens [57]. During the study period, both Ghana and Ethiopia were candidates for MCC assistance; however, Ethiopia struggled to meet the criteria, particularly regarding democratic rights [58]. The MCC's participation in Ghana and absence in Ethiopia reflected the U.S. perspective on the differing institutional qualities of the two countries in relation to agricultural aid.

For aid disbursement channels, donors utilized the state channel (state-to-state aid transfer) more actively in Ghana (Table **4**). In Ghana, 48.3% of agricultural aid was disbursed through the state channel, compared to 35% in Ethiopia. Generally, central and local governments formulate and implement agricultural policies, regulating farm production to commodity value chains. Accordingly, donors may have a baseline preference for the state channel to disburse agricultural aid, aligning with the relevant policies of recipient governments. Donors' more active use of the state channel in Ghana suggests that Ghana's stronger institutional settings influenced their choice of aid channels. Donors are likely to have greater confidence in the agricultural policies and policy-implementation capacity of recipient governments with stronger institutions. As a result, the donors preferred the state channel. Individual donors to Ghana and Ethiopia, however, showed different aid channel preferences. For instance, Germany and Japan consistently favored the state channel to disburse agricultural aid. By contrast, Canada (66% of its total agricultural aid *via* the state channel in Ghana *vs.* only 6% in Ethiopia) and the US (33% in Ghana *vs.* 7% in Ethiopia) used the state channel actively only in Ghana. Canada's active use of the state channel in Ghana was likely due to its budget support for agriculture, as budget support must be disbursed through the state channel.

Donors' aid channel choices might also be influenced by their aid channel inertia, stemming from fixed costs and multi-year lifespans of agricultural projects (*e.g.*, projects including growing crops and rearing livestock). Once donors establish an aid disbursement channel through complex negotiations with a recipient government, continuing to use the negotiated channel is often more cost-effective. Shifting to other channels would require additional time and administrative efforts. Therefore, donors likely prefer to maintain the same aid disbursement channel once it is established. When donors choose to outsource agricultural aid to non-state actors, they do so for specific reasons. For instance, this may occur when recipient governments lack reliable counterparts due to insufficient administrative capacity or political turmoil. In some cases, donors face significant bureaucratic constraints in recipient countries or have little confidence in their agricultural policies. In other instances, donors simply prefer to collaborate with non-state development actors.

Among the non-state channels, donors to Ghana and Ethiopia mostly preferred using the NGO channel (Table **4**). NGOs can be classified into three categories: donor country-based NGOs, developing country-based NGOs, and international NGOs. In agricultural aid, developing country-based NGOs could be more effective donor partners because they are often more familiar with local agricultural environments and rural communities with some insider information that other types of NGOs are probably unable to obtain. Nonetheless, donors to Ghana and Ethiopia partnered mainly with donor country-based NGOs to deliver their agricultural aid (Table **4**).

Donors to Ghana allocated 20.8% of their NGO-channel aid to developing country-based NGOs (Table **4**). It was a stark contrast to 2.8% in Ethiopia. This difference might be from different levels of the two countries' civil society freedom and capacity. According to the Civil Society Organization (CSO) sustainability index, the overall CSO sustainability of Ghana was assessed as sustainable, whereas that of Ethiopia was unsustainable. Ghana's CSO sustainability score ranged around 4.2 between 2011 and 2022, and that of Ethiopia from 5.3 to 5.7. Higher scores on a 1-7 scale correspond to lower CSO sustainability [59]. Additionally, over 10,000 CSOs were registered in Ghana in 2020, compared to 2,800 CSOs registered in Ethiopia.

Political environments and relevant institutions can influence the capacity of NGOs. Under a poor institutional setting with limited freedom, NGOs can be a subject of politically motivated scrutiny, severely restricting NGO activities. In 2009, Ethiopia adopted the Charity and Society Proclamation with an aim to limit civil organizations' activities and fund raising [60]. Later, in 2019, Ethiopia passed a new law on NGOs, lifting some restrictions imposed by the previous law. However, the new law still retains restrictive provisions on NGO activities [15]. Given the hostile environment for NGOs in Ethiopia, donors would least likely partner with developing country-based NGOs.

5. DISCUSSIONS

Ghana and Ethiopia are interesting contexts to examine bilateral donor practices with agricultural aid. Although there is a similar study in African contexts [61], more studies are needed for better insights into this field. The economies of the two countries rely on agriculture with dominant export crops and face similar challenges for agricultural development, although Ghana is more food-secure than Ethiopia. Additionally, the two countries have different institutional environments and domestic policies. Ghana's governance quality is considered better with relatively stable democracy in Africa, whereas Ethiopia is ruled by authoritarian leadership often experiencing political turmoil and civil conflicts.

During the last decade, donors to Ghana invested the largest aid in agriculture, being somewhat proportional to the importance of agriculture to Ghana's economy. Donors to Ethiopia, on the other hand, prioritized other aid sectors over agriculture, probably due to urgent humanitarian needs, including severe food shortages. Overall, donors to Ghana appeared to provide greater flexibility in agricultural aid by allocating more budget support, making greater use of the state channel, and partnering more with developing country-based NGOs. Donors to Ethiopia, by contrast, appeared to exert stricter control over agricultural aid by providing minimal budget support, making limited use of the state channel, and engaging negligibly with NGOs based in developing countries.

The largest donor, the US, appeared to shape the overall profiles of agricultural aid in Ghana and Ethiopia. While supporting the two identical agricultural sub-sectors in both African countries, the US involved different aid agencies, reflecting greater confidence in Ghana. In Ethiopia, the US focused on providing food directly due to the sustained food insecurity. The US contributed to 60% of the total development food assistance that Ethiopia received in the past decade [16]. Ethiopia's agriculture, the economic backbone of the country, may receive more donor attention if the country's political environments become more stable with a considerable decrease in urgent food needs.

CONCLUSION

Agricultural aid is likely to have a greater impact on developing countries where agriculture has larger economic contributions. Even so, donors may not necessarily prioritize agriculture when recipient countries have insufficient institutional capacity to implement agricultural aid effectively or have other urgent aid needs, such as severe food shortages. This study aimed to examine how bilateral donors supported agriculture in two African countries under different domestic political conditions. The findings indicate that donors to Ethiopia did not prioritize agriculture, even though agriculture contributes to 40% of the country's GDP and 80% of exports with substantial potential to strengthen Ethiopia's food security and overall development. Instead, donors to Ethiopia prioritized direct food provision to mitigate urgent food crises.

Since this article did not examine non-DAC bilateral donors such as China, it may be necessary to examine emerging non-DAC bilateral donors for fuller understanding about bilateral donor practices with agricultural aid. Finally, future research could examine how bilateral donors with weak governance provided agricultural aid to recipient countries also with weak governance. Findings from such research may shed more light on donor-recipient dynamics in agricultural aid.

AUTHORS' CONTRIBUTION

The author confirms sole responsibility for the following: study conception and design, data collection, analysis and interpretation of results, and manuscript preparation.

LIST OF ABBREVIATIONS

DAC	=	Development Assistance Committee
OECD	=	Organisation for Economic Co-operation and Development
NGOs	=	Nongovernmental organizations
GDP	=	Gross domestic product
USAID	=	US Agency for International Development
MCC	=	Millennium Challenge Corporation

CONSENT FOR PUBLICATION

Not applicable.

AVAILABILITY OF DATA AND MATERIALS

The data and supportive information are available within the article.

FUNDING

None.

CONFLICT OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

ACKNOWLEDGEMENTS

Declared none.

REFERENCES

[1] Maruta AA, Banerjee R, Cavoli T. Foreign aid, institutional quality and economic growth: Evidence from the developing world. Econ Model 2020; 89: 444-63.
http://dx.doi.org/10.1016/j.econmod.2019.11.008

[2] Mary S, Shaw K, Colen L, Gomez y Paloma S. Does agricultural aid reduce child stunting? World Dev 2020; 130: 104951.
http://dx.doi.org/10.1016/j.worlddev.2020.104951

[3] Abesha N, Assefa E, Petrova MA. Large-scale agricultural investment in Ethiopia: Development, challenges and policy responses. Land Use Policy 2022; 117: 106091.
http://dx.doi.org/10.1016/j.landusepol.2022.106091

[4] Dhahri S, Omri A. Does foreign capital really matter for the host country agricultural production? Evidence from developing countries. Rev World Econ 2020; 156(1): 153-81.
http://dx.doi.org/10.1007/s10290-019-00361-2

[5] de Janvry A, Sadoulet E. Using agriculture for development: Supply- and demand-side approaches. World Dev 2020; 133: 105003.
http://dx.doi.org/10.1016/j.worlddev.2020.105003

[6] Agriculture in Africa. London: Oxford Business Group 2021; pp. 1-6.

[7] Rural poverty reduction: Highlights of fao support in africa 2018-2020. Rome, Italy: Food and Agriculture Organization 2021; pp. 1-6.

[8] East N, Africa N. Regional overview of food security and nutrition.

Accra, Ghana.: Food and Agriculture Organization. 2021; pp. 1-73. http://dx.doi.org/10.4060/cb7496en
[9] Quartey P. How do we increase the share of aid to agriculture in Africa?. Helsinki.: The united nations university world institute for development economics research (unu-wider) 2014; pp. 1-18. http://dx.doi.org/10.35188/UNU-WIDER/2014/743-1
[10] Asiedu E, Sadekla SS, Bokpin GA. Aid to Africa's agriculture towards building physical capital: Empirical evidence and implications for post-COVID-19 food insecurity World Dev Perspect 2014; 100269. http://dx.doi.org/10.1016/j.wdp.2020.100269 PMID: 33043171
[11] Alabi RA. Impact of agricultural foreign aid on agricultural growth in sub-saharan africa. Edo, Nigeria: Ambrose Alli University 2014; pp. 1-6.
[12] Ssozi J, Asongu S, Amavilah VH. The effectiveness of development aid for agriculture in sub-saharan africa. J Econ Stud 2019; 46(2): 284-305. http://dx.doi.org/10.1108/JES-11-2017-0324
[13] Wainaina P, Minang P, Duguma L. Application of the TEEB for Agriculture and Food (TEEBAgriFood) Framework; Case of cocoa and coffee agroforestry value chains in Ghana and Ethiopia. Nairobi, Kenya.: World Agroforestry Centre. 2020; pp. 1-6.
[14] Worldbank. World bank worldwide governance indicators. 2024. Available from: https://www.worldbank.org/en/publication/worldwide-governance-indicators
[15] Freedomhouse. Countries and territories. 2023. Available from: https://freedomhouse.org/
[16] OECD data Explorer. 2023. Available from: https://www.oecd.org/en/data/datasets/oecd-DE.html
[17] Mascagni G. Aid and taxation in ethiopia. J Dev Stud 2016; 52(12): 1744-58. http://dx.doi.org/10.1080/00220388.2016.1153070
[18] Jayne TS, Sanchez PA. Agricultural productivity must improve in sub-saharan africa. Science 2021; 372(6546): 1045-7. http://dx.doi.org/10.1126/science.abf5413 PMID: 34083478
[19] Diao X, Hazell P, Thurlow J. The role of agriculture in african development. World Dev 2010; 38(10): 1375-83. http://dx.doi.org/10.1016/j.worlddev.2009.06.011
[20] WorldBank. world bank open data. 2023. Available from: https://data.worldbank.org/
[21] Nchofoung TN, Njamen Kengdo AA, Mouchili Moumie E, Fonsoh TT. Teach me to fish instead of giving me fish: Foreign development aid and employment in africa. World Develop Sustain 2022; 1: 100032. http://dx.doi.org/10.1016/j.wds.2022.100032
[22] Gunasekera D, Cai Y, Newth D. Effects of foreign direct investment in african agriculture. China Agric Econ Rev 2015; 7(2): 167-84. http://dx.doi.org/10.1108/CAER-08-2014-0080
[23] Biennial report to the au assembly on implementing the june 2014 caadp-malabo declaration: The fourth br report to the february 2024 assembly. Addis Ababa, Ethiopia: AfricanUnion 2024; pp. 1-6.
[24] Adom PK, Djahini-Afawoubo DM, Mustapha SA, Fankem SG, Rifkatu N. Does FDI moderate the role of public R&D in accelerating agricultural production in africa? Afr J Econ Manag Stud 2018; 9(3): 290-304. http://dx.doi.org/10.1108/AJEMS-07-2017-0153
[25] USAID. ethiopia country development cooperation strategy 2011-2018. 2018. Available from: https://2012-2017.usaid.gov/documents/1860/ethiopia-country-development-cooperation-strategy-2011-2015
[26] Barkat K, Alsamara M. The impact of foreign agricultural aid and total foreign aid on agricultural output in african countries: New evidence from panel data analysis. S Afr J Econ 2019; 87(3): 354-75. http://dx.doi.org/10.1111/saje.12224
[27] Gyimah-Brempong K, Gentry M. Agricultural aid and agricultural production in africa. J Afri Devel 2020; 21(2): 139-73. http://dx.doi.org/10.5325/jafrideve.21.2.0139
[28] Molenaers N, Gagiano A, Smets L. Introducing a new data set: Budget support suspensions as a sanctioning device: An overview from 1999 to 2014. Governance (Oxford) 2017; 30(1): 143-52. http://dx.doi.org/10.1111/gove.12221
[29] Dietrich S. Bypass or engage? explaining donor delivery tactics in foreign aid allocation. Int Stud Q 2013; 57(4): 698-712. http://dx.doi.org/10.1111/isqu.12041
[30] Acht M, Mahmoud TO, Thiele R. Corrupt governments do not receive more state-to-state aid: Governance and the delivery of foreign aid through non-state actors. J Dev Econ 2015; 114: 20-33. http://dx.doi.org/10.1016/j.jdeveco.2014.11.005
[31] Allen SH, Flynn ME. Donor government ideology and aid bypass. Fore Poli Anal 2018; 14(4): 449-68. http://dx.doi.org/10.1093/fpa/orx005
[32] Agbele F. Political economy analysis of corruption in ghana. Ghana: Fortune Agbele 2011; pp. 1-58.
[33] USAID Ghana. 2024. Available from: https://www.usaid.gov/GHANA
[34] McArthur JW, Sachs JD. Agriculture, aid, and economic growth in africa. World Bank Econ Rev 2019; 33(1): 1-20. http://dx.doi.org/10.1093/wber/lhx029 PMID: 33551535
[35] Ali EB, Agyekum EB, Adadi P. Agriculture for sustainable development: A swot-ahp assessment of ghana’s planting for food and jobs initiative. Sustainability (Basel) 2021; 13(2): 628. http://dx.doi.org/10.3390/su13020628
[36] Ferreira V, Almazán-Gómez MÁ, Nechifor V, Ferrari E. The role of the agricultural sector in ghanaian development: A multiregional SAM-based analysis. J Econ Struct 2022; 11(1): 6. http://dx.doi.org/10.1186/s40008-022-00265-9 PMID: 35757163
[37] International Trade Administration. 2024. Available from: https://www.usa.gov/agencies/international-trade-administration
[38] FAO.Food and agriculture organization. 2024. Available from: https://www.fao.org/home/en
[39] OurWorldinData. Our world in data. 2024. Available from: https://ourworldindata.org/
[40] ReSAKSS. Regional strategic analysis and knowledge support system. 2024. Available from: https://www.resakss.org/
[41] Brown S, Fisher J. Aid donors, democracy and the developmental state in ethiopia. Democratization 2020; 27(2): 185-203. http://dx.doi.org/10.1080/13510347.2019.1670642
[42] Verhoeven H, Woldemariam M. Who lost ethiopia? the unmaking of an african anchor state and U.S. foreign policy. Contemp Secur Policy 2022; 43(4): 622-50. http://dx.doi.org/10.1080/13523260.2022.2091580
[43] Tsehay S, Adane Z, Feto A. Agriculture-industry linkages for employment and economic transformation in Ethiopia. Ethiopia: Ethiopian Economic Association (EEA) 2022; 2022: pp. (09): 1-6.
[44] OEC. Ethiopia. 2021. Available from: https://oec.world/en/profile/country/eth?yearSelector1=2021
[45] USDA. Foreign agricultural service: Ethiopia. 2024. Available from: https://fas.usda.gov/data/ethiopia-coffee-annual-8
[46] Zerssa G, Feyssa D, Kim DG, Eichler-Löbermann B. Challenges of smallholder farming in Ethiopia and opportunities by adopting climate-smart agriculture. Agriculture 2021; 11(3): 192. http://dx.doi.org/10.3390/agriculture11030192
[47] Alemu T, Mengistu A. Impacts of climate change on food security in ethiopia: Adaptation and mitigation options: A review. Clim Chan Manag 2019; 397-412. http://dx.doi.org/10.1007/978-3-319-75004-0_23
[48] Adamie BA. Land property rights and household take-up of development programs: Evidence from land certification program in Ethiopia. World Dev 2021; 147: 105626. http://dx.doi.org/10.1016/j.worlddev.2021.105626
[49] Tigistu S, Hegena B. Determinants of food insecurity in food aid receiving communities in ethiopia. J Agricu Food Res 2022; 10: 100391. http://dx.doi.org/10.1016/j.jafr.2022.100391
[50] Ch A, Alemu Y. Agricultural development-led industrialization strategy in ethiopia: An overview. Afr J Polit Sci Int Relat 2013;

7(5): 237-46.
http://dx.doi.org/10.5897/AJPSIR10.042

[51] UN. Department of economic and social affairs economic analysis: least developed country category: Ethiopia profile. 2024. Available from: https://www.un.org/development/desa/dpad/least-developed-country-category-ethiopia.html

[52] Global Hunger Index. 2024. Available from: https://www.globalhungerindex.org/

[53] World Food Programme Ghana. 2024. Available from: https://www.wfpusa.org/countries/ghana/

[54] Jelovac I, Vandeninden F. How should donors give foreign aid? World Develop 2008; 94: 08-13.

[55] CEPR. Budget versus project aid: A tradeoff between control and efficiency. 2024. Available from: https://cepr.org/voxeu/columns/budget-versus-project-aid-tradeoff-between-control-and-efficiency

[56] GoC. Government of canada: Canada-ethiopia relations. 2024. Available from: https://www.international.gc.ca/country-pays/ethiopia-ethiopie/relations.aspx?lang=eng

[57] Sturdy J, Aquino S, Molyneaux J. Learning from evaluation at the millennium challenge corporation. J Dev Effect 2014; 6(4): 436-50.
http://dx.doi.org/10.1080/19439342.2014.975424

[58] MCC. Millennium challenge corporation: Country scorecards. 2024. Available from: https://www.mcc.gov/who-we-select/scorecards/

[59] USAID: CSO Sustainability index explorer. 2024. Available from: https://csosi.org/

[60] Nigussie T. An overview of the charities and societies proclamation of Ethiopia: Challenges and prospects. SSRN 2017; 4134423.
http://dx.doi.org/10.2139/ssrn.4134423

[61] Lee H. Bilateral agricultural aid to Ghana and Uganda: Donor practices under different institutional quality. Afr J Food Agric Nutr Dev 2024; 24(7): 24034-52.
http://dx.doi.org/10.18697/ajfand.132.24830