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Local Government Financing of Climate Change in Ghana: Politics of Aid and Central Government Dependency Syndrome

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Abstract

Uncertainties about the amount of resources needed to combat climate change, dwindling local resources, limited local autonomy and limited expertise constrain local governments (LGs) in their response to the effects of climate change. As a result, financing climate change remains a major nightmare for LG actors across diverse nested territorial containers. It certainly requires the embracing of a multifaceted approach – the use of system thinking where local governments' resource husbandry is optimised to support external *aid* and central government *transfer*. A multifaceted approach brings onboard blended resources, diverse stakeholders, diverse resource mobilisation skills and schemes, and accountability measures. Also, given projected increases in future climate-induced public expenditure, albeit with uncertainties, reliance on a single resource mobilisation approach will be a recipe for inefficiency. This article argues that developmental aid and central government's transfer remains inadequate to meet the increasing demand for adaptation cost at the local level in Ghana. In the face of the unequivocal impact of climate change risk, we contend that local resource husbandry must be optimised through different innovations to complement other major sources of financing. Our contention resonates with the school of thought that argues local level resources are more resilient to politicisation, are stable, and are predictable compared to international aid and central government transfer. Through qualitative in-depth interviews, empirical data has been drawn from local governments in Ghana to justify our claims.

Keywords

Climate change, adaptation, financing, local government, inter-governmental transfer, donor

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Introduction

Local government (LG) response to climate risk and its related cost became exceptionally topical across most of the recent Conference of Parties (COPs): Paris-2015, Marrakesh-2016 and Bonn-2017. The current cost of climate change adaptation has been noted as the most significant constraint facing most LGs across developing countries (Cook and Chu, 2018; Musah-Surugu et al., 2018). Although the cost of adaptation has been identified as a significant obstacle, an exhaustive estimate of local level responses has yet to be made. Various global and local cost estimates, however, envisage huge financial requirements. For example, triangulating big data and studies from various sources, the African Development Bank (2011) concluded that adaptation costs in Africa would peak in the region of US$20–30 billion per annum over the next 10–20 years, with the United Nations Environment Program estimating US$50 billion per year by 2050. Similarly, Morales (2013) had this to say: 'Africa faces costs to adapt to the effects of climate change that will rise to $350 billion a year by the 2070s if governments fail to rein in runaway emissions'. Although there are variations across the various estimates, reflecting the uncertainty and complexity of future climatic risk, they provide a flawless picture of the colossal financial resources needed to face this threat (Ayers, 2009; Müller, 2008).

The various estimates therefore show that the existing financial constraints upon LGs would escalate, since climate change presents an added responsibility, increasing the 'cost and investment needs' of local government. Arguing from this perspective, some scholars conclude that with pocket-sized financial resources, non-existant borrowing capacity, and no access to the capital markets, LGs are at the crossroads of ineptitude in the face of adaptation governance (Cook and Chu, 2018; Musah-Surugu et al, 2018; Ryan, 2015). Indeed, amidst these constraints, LG-led adaptation interventions such as awareness creation, retrofitting, city redesign, afforestation, coastal management, etc., have been growing over the years. These initiatives are financed from diverse sources: there is hardly, however, any discussion on how these interventions are financed, and the significance of each funding stream for projected future growth in climate change-induced public expenditure, within the academic literature. As a result, there is no current understanding of the cost of adaptation at LG level, which is the medium through which interventions are financed (either entirely through aid, central government transfers or internally generated funds (IGFs)), current and future local level adaptation needs and funds availability gaps, and so forth. Meanwhile, scientific reports indicate that climate change-related responsibilities would accentuate the gap between the revenues that local governments are able to raise and their spending responsibilities (Cook and Chu, 2018). Further, they argue that even with additional funds through inter-governmental transfers, LGs may not have sufficient resources to address urgent adaptation needs, given the politics of local government financing.

Therefore, taking stock of these few, important research issues can provide an indication of how far local responses to climate change have been financed. This study attempts to identify the governance and management challenges related to the existing and potential sources for financing local governance. This study, therefore, asks the following research questions: (a) how are Ghanaian local governments financing climate change-induced expenditure and investment needs; (b) why is local resource husbandry vital as a complementary window for financing local government responses to adaptation? (c) What is institutional reform, and why is it necessary for the enhancement of mobilisation and the management of resources for adaptation?

The paper is structured into five parts. The first part is an introduction, which captures the rationale and study research questions. The second part presents the conceptual literature on climate change financing. The third section then presents the study methodology, while the fourth section presents the data analysis and a discussion. The last section presents the conclusions and policy implications.

Literature review

Financing climate change from the global perspective

There is a lack of consensus on the definition of adaptation to climate change. In this study, adaptation is conceptualised from a variety of perspectives to mean the process by which local government initiates, develops and implements proactive strategies to restrain, moderate, cope with and take advantage of the risk of climatic events (Intergovernmental Panel on Climate Change (IPCC), 2001; United Nations Development Programme (UNDP), 2005). Consequently, adaptation financing is the financial resources needed to cover the cost and investment needs of an institution due to climate change and variability. Adaptation comes along with social cost and benefits. The social cost is the costs of planning, preparing for, facilitating and implementing adaptation measures, including transition costs; while the social benefit is the damage costs avoided or the accrued benefits following the adoption and implementation of adaptation measures. There are calls for multilateral and regional organisations, the private sector, civil society and other relevant stakeholders to support adaptation actions at all levels of government (Cancun Adaptation Framework, 2010). Arguably, climate change adaptation financing schemes can be categorised into three major sources: (a) the United Nations Framework Convention on Climate Change (UNFCCC), bilateral and multilateral funding; (b) public/central government expenditure; and (c) private sector funds including foreign direct investments (FDIs). To ensure clarity and precision, these sources are categorised and succinctly discussed under two broad streams to reflect how LGs' adaptation intentions can be or are financed theoretically: the top-down supply-driven (TDSD) stream and the bottom-up and demand-driven (BUDD) stream. Both financing approaches consist of different financing mechanisms. Each of these is systematically discussed below.

Top-down and supply-driven financing

The financing of the development agenda in developing nations predates climate change. In most cases, since developing countries are unable to meet their urgent developmental needs, developed economies have often come to their rescue with financial handouts. Within the landscape of climate change, a similar top-down financing system is noticeable. 'Top-down and supply-driven financing (TDSD)' as used in this paper refers to the kind of global financial mechanism developed and administered by a developed country or a multilateral agency to support poorer countries in need of financial resources to adapt to climate change risk (Ayers and Huq, 2009; Basak, 2017; Birdsall, 2012; Eguavoen and Wahren, 2015). Such forms of financing mechanism come with strict regulations from their trustees, creating principal-agent related challenges (Basak, 2017; Birdsall, 2012). Top-down financing mechanisms are usually governed by an authoritative core (e.g. the World Bank or the African Development Bank) at global or regional levels, where beneficiaries have limited say in the governance structure. There are four dominant forms of TDSD financing mechanisms.

First are the UNFCCC and the Kyoto protocol, which currently provide official global financial infrastructure aimed at supporting the adaptation of developing and low-income economies. As noted by Pauw (2015), the UNFCCC has endorsed the 'polluter pays' principle and, as a result, developed countries are supposed to bail out developing countries so that they are able to adapt to climate threats, due to their historical emissions. Pursuant to article 11 of UNFCCC, five major funding schemes have been established: the Green Climate Fund, the Least Developed Countries Fund (LDCF), the Special Climate Change Fund (SCCF), the Global Environment Facility (GEF) Trust Fund, and the Adaptation Fund (Ayers and Huq, 2009). Although the goal of some of these funds includes mitigation, they all have adaptation as part of their priority areas for funding. For

example, the LDCF was established under the UNFCCC to help developing countries prepare and implement their National Adaptation Programs of Action (NAPAs) (Ayers and Huq, 2009).

The second type of TDSD financing mechanism includes funds flowing from bilateral and multilateral donors. These donors are increasing their investment portfolios and integrating adaptation into their programmes (Eguavoen and Wahren, 2015). Their direct investments in both infrastructural and institutional capacity building in developing countries significantly reduce adaptation financing gaps. For example, the UNDP, the Department for International Development (DFID) and the European Union (EU) donor assistance, the Red Cross/Red Crescent and NGOs, etc., are massively redefining their investment portfolios in Africa to reflect adaptation. For example, the Africa Adaptation Programme (AAP) is funded by Japan, the UNDP, the UN Industrial Development Organization, the UN Children Fund and the World Food Programme (Kumamoto and Mills, 2012). In Burkina Faso, the NAPA was solely financed by donor agencies such as the Danish International Development Agency (DANIDA), the International Union for Conservation of Nature (IUCN) and UNDP, and by Japan. Similarly, Ghana's Third National Communications report to the UNFCCC indicates that, during the period 2011–2014, external support in the form of grants and loans comprised about 80% of total climate-related inflows. Aid dependency syndrome has therefore characterised the financing of adaptation initiatives in Africa (Eguavoen and Wahren, 2015).

The third type of TDSD funding mechanism includes public expenditure and nationally established adaptation funds. According to this study, public spending includes specific national budgets that affect adaptation domains such as wetlands, infrastructure, agriculture, health, capacity building, awareness creation, etc. Rahman and Ahmad (2014) noted that many developing countries' governments have taken initiatives to budget for climate change and not rely entirely on donors.

The last TDSD funding mechanisms include FDIs. FDIs and remittance flows can potentially contribute significantly to adaptation financing. With increasing democratisation in Africa, FDIs are projected to increase. Through proper national policy prioritisation, FDIs can stimulate development and become relevant for adaptation. Thus, climate risk can be reduced if building codes and land-use regulations for real estate, including hotel resorts in the coastal zone, are applied (Adams and Cuecuecha, 2010; Maimbo and Ratha 2005).

The TDSD mechanism has received a barrage of criticism. For example, the multilateral adaptation financing mechanisms have not paid much attention to extreme variability, partly due to a lack of scientific clarity on the attribution of changes in extremes to anthropogenic climate change. Similarly, these funding windows are supposed to provide incremental funding opportunities for developing countries: experience shows, however, that commitments have lagged behind pledges (Ayers and Huq, 2009; Möhner and Klein, 2007). Indeed, the availability, accessibility and adequacy of these funds have been limited and, as a result, many African countries continue to grapple with the ravaging havoc of climate change. Also, the amounts that were pledged by the various funds before the Green Climate Fund remains highly inadequate in the face of the colossal estimate that has so far been indicated. Additional challenges include high transaction costs for accessing existing funding and unclear guidelines for the various funds (Ahenkan and Musah-Surugu, 2015; Ayers and Huq, 2009). The bottom line is that most TDSD adaptation funding sources are complicated and rule-bound: they demand high technical know-how that most LGs lack, requiring extensive fiduciary responsibilities and accountability mechanisms that deter LGs from accessing them (Eguavoen and Wahren, 2015). To close the climate change financing gaps due to the challenges with the TDSD mechanism a BUDD mechanism has emerged.

Bottom-up and demand-driven financing

According to Smith et al. (2014), a growing number of highly structured, pro-poor and locally managed funds are springing up, developed, pioneered or advocated across a number of

developing countries. Accordingly, they argued that a BUDD financing mechanism is emerging as a potential complementary window to the TDSD mechanism. BUDD financing refers to locally created financial schemes with the aim of making funds available for specific climate change-driven development interventions. Such funds are governed by local entities and managed according to their constituent legal remits. Bottom-up funds include weather-based insurance, local economic development investment, public–private partnership investments, solidarities, cooperatives and social enterprise investments, etc. Such funds are largely private funds and demand driven; as compared to the top-down schemes, which are largely public funds. As argued by Pauw (2015), governments in developing countries, with the support of the private sector, can design and implement programmes to encourage economic transformation through investment, productivity growth, business expansion and employment. The multiplier effect of such investment can boost local resilience to climate change. The potential of domestic private sector investment to close adaptation financing gaps resonates with the fact that the income of approximately 90% of the most vulnerable groups in such regions comes from the private sector. In effect, domestic private-sector investments such as affordable housing, micro-insurance, water management, commercial banks' low or interest-free loans, etc., can potentially support a central government budget for resilience building (Trabacchi and Stadelmann, 2013).

In parts of some developing countries such as Bangladesh, Thailand, Philippines, Ghana and Pakistan, weather-based insurance is gradually being adopted, thus providing an opportunity to bridge adaptation financing gaps. The vitality of private sector investment in adaptation finance might have influenced Fox (2003) to propose that micro-insurance schemes should be promoted across vulnerable regions. Empirical reports have cited 36 weather index insurance programmes that address the financial needs of most vulnerable groups such as farmers/herders, slum dwellers, villages or where there is a cooperative risk (Hazell et al., 2010). On the other hand, cooperatives/social enterprises have also been described as important BUDD financing schemes where private sector social responsibilities could be tailored towards building local capacity against climate change. Perhaps LG can liaise with local private businesses to shape their corporate social obligation to reflect adaptation financing. In Nepal, agribusiness firms' investments in training programmes for farmers have increased productivity, which demonstrates the impact of domestic investment on adaptation financing (Trabacchi and Stadelmann, 2013). It is a fact that closer links with agribusinesses could ease farmers' access to climate-resistant farm technologies and inputs, such as drought-resistant crops, seed varieties and fertilisers, and markets for their products (Intellecap, 2010).

BUDD financing provides sufficient complementary financing for climate change adaptation at the local level for several reasons. The first reason according to Bendandi and Pauw (2016) is that the private funds that largely constitute BUDD financing meet the 10 international criteria for adaptation finance (see Bendandi and Pauw, 2016 for the 10 criteria). Secondly, such funds are more stable than FDIs (Organisation for Economic Co-operation and Development (OECD), 2012). Thirdly, bottom-up financing straightforwardly penetrates vulnerable communities where the need for adaptation measures has always been high, but which are often hard to reach by large-scale top-down financing (Bendandi and Pauw, 2016). Last but not least, the projected volume of private financing that constitutes bottom-up financing is projected to steadily increase compared to top-down financing schemes (OECD, 2016). These factors undoubtedly make bottom-up financing a promising complementary financing window. Although BUDD funding has a complementary potential, it is riddled with challenges. For example, to mobilise more private investment to support adaptation financing in developing countries, public finance is often needed to fund research and pilot projects (Pierro and Desai, 2011).

Fiscal decentralisation: Implications for adaptation financing in Ghana

Ghana has undertaken numerous governance reforms since independence to deepen the decentralisation of its public administration machinery. Ghana's current decentralisation system, aimed at localising government machinery, evolved from Provisional National Defence Council (PNDC) law 207 in 1988 (Awortwi, 2011; Yeebo, 1985). Consistent with the purpose of decentralisation, the PNDC regime was poised to radically reverse the heavily chastised centralised system of governance, leading to the promulgation of PNDC law 207. Subsequently, Chapter 20 of Ghana's 1992 constitution and Local Governance Act 936, 2016 further consolidated the PNDC's decentralisation system. Functionally, these statutes established a four-tier metropolitan and three-tier municipal/district assembly structure as an administrative structure for the effective running of local self-governance (Ahwoi, 2010). As of April 2018, there were 216 LG bodies (Metropolitan, Municipal and District Assemblies), each having sub-district structures known as the Urban, Zonal, Town and Area Councils. Several other acts and policy instruments including those listed below have been enacted to support LGs to achieve their fiduciary responsibilities. These Acts also influence how a LG finances its mandate, including the mainstreaming of climate change adaptation.

1. National Climate Change Policy, 2013;
2. Ghana National Adaptation Strategy, 2010;
3. Local Government Law 1993 (Act 462);
4. National Development Planning (System) Act 1994 (Act 479);
5. National Development Planning Commission Act 1994 (Act 480);
6. District Assemblies Common Fund Act 1993 (Act 455).

Although there are limitations, Ghana's decentralised LG system includes the transfer of political, administrative and fiscal authority to decentralised units. Since this study examines how LGs in Ghana finance their climate change-induced costs, emphasis is laid on fiscal decentralisation, which refers to the transfer of revenue raising and budgetary authority from central government to the LGs. This paper admits, however, that the nature of both political and administrative decentralisation would have a corresponding effect on the fiscal strength of LGs and in effect how they are able to finance the cost of climate change. The extent to which fiscal power is devolved in a decentralised political system differs substantially across countries (Crawford, 2004; Ma and Mao, 2018). While some countries have given full discretion to local authorities to tax and raise local funds commensurate with their expenditure needs, others have limited fiscal autonomy (Bawole, 2017; Crawford, 2004). For example, LGs in Ghana have limited discretionary powers in setting tax levels and expenditure despite policy directives for fiscal devolution (Yeboah-Assiamah, 2016). Consequently, there are cases reported of enormous expenditure and revenue assignment imbalances in Ghana (Bawole, 2017; Yeboah-Assiamah, 2016). Local government in Ghana depends on four major sources of revenue to finance their expenditure: inter-governmental transfers, aid, grants and IGFs from various sources (Crawford, 2004).

Inter-governmental transfers constitute one of the most important sources of finance for LGs in Ghana (Ayee, 1995). It includes the District Assemblies' Common Fund (DACF), taken from ceded revenue. Based on Ghana's 1992 constitution stipulations, 7.5% of Ghana's revenue is currently reserved and distributed equitably to all 216 LGs, based on an agreed formula. Donor aid, grants and internally generated revenue also support local expenditure. Although these sources of revenue are important for financing climate risk, they have proven to be insufficient in the face of LGs' rising traditional responsibilities. In recent decades, when Ghana has implemented

decentralisation, evidence points to financially distressing circumstances where LGs are barely able to shoulder their responsibilities (Bawole, 2017; Crawford, 2004; Musah-Surugu et al., 2018). The Ghanaian LGs financial system mimics the broader picture in developing countries. Reports show that most LGs face both vertical and horizontal fiscal constraints. Differences in local economic activity, resource endowments, demography and geography tend to influence horizontal fiscal imbalances, while a vertical fiscal imbalance occurs when an inter-governmental transfer falls short of the LGs assigned responsibilities. The conclusion regarding decentralisation in Africa is that fiscal decentralisation has remained only a theory and has yet to be implemented in practice (Ayee, 1995; Crawford, 2004; Livingstone and Charlton, 2001).

Methodology

This study attempts to examine the climate change adaptation financing system at the local government level. As a result, the study adopted qualitative and case study research design for the following reasons: first, to allow in-depth analysis of the nature of adaptation financing at the micro level; second, to gain a deeper understanding of LGs' adaptation financing in a natural setting; third, to unearth micro-factors that are often overlooked by large surveys; fourth, make the study participants partners in knowledge production. Both primary and secondary data were used for the study. The primary data was derived from in-depth interviews with key informants, while the secondary data was derived from district assemblies' composite budgets, medium-term development plans and other programme documents that are related to climate change financing at the LG level. These sources of data are essential for undertaking qualitative research inquiries (Creswell and Creswell, 2017).

The fieldwork for this study took place between November 2015 and December 2017, involving three phases: field familiarisation and study conceptualisation; data gathering; and a follow-up for confirmation or otherwise of the reports. In all, six LGs were selected across three administrative regions of Ghana: Greater Accra, Ashanti and Northern Region. The six selected LGs are the Accra Metropolitan Assembly (AMA) and Shai Osudoku District (SODA), for the Greater Accra administrative region; Ejura-Sekyeredumasi Municipal (ESMA) and Ashanti Akyim South District Assembly (AASDA), for the Ashanti administrative region; and Bole Bamboi District Assembly (BBDA) and Sawla-Tuana-Kalba District Assembly (STKDA) for the Northern Region administrative region. These LGs were selected with the aim of achieving a picture reflecting the various ecological zones of Ghana, which each tend to experience climate change and variability differently, as highlighted by previous researchers (Teye et al., 2015; Waylen and Owusu, 2014). In order to achieve this, the selection criteria of Salon et al. (2014), which priorities socio-economic and institutional variation, was used. As a result, the study considered location (proximity or remoteness), vulnerability to climate risk, size (metropolitan, municipal, district), and the human and material resources capacity (old or newly created) as relevant variables in the selection of cases for this study.

The six LGs selected for this study have different socio-economic and political characteristics as well as differences in vulnerability to climate change. For example, the two LGs selected from the Greater Accra region are arguably very close to the central government, with more erudite voters, vibrant media, higher revenues, more elite members of the population, and higher levels of population compared to the four LGs selected from the other regions (Musah-Surugu et al., 2018). Previous studies also confirm that the Greater Accra region is less vulnerable to climate change impact compared to the Northern Region (Dumenu and Obeng, 2016; Ghana's Third UNFCCC Report, 2015); Taylor, et al., 2017; Wrigley-Asante et al. 2017). These factors suggest that there is an apparent diversity across political and socio-economic characteristics, geographical location,

population diversity and growth rate, which could influence the way that adaptation is financed, sources of financing and how each source is likely to perform in the expectation of higher climatic risk in the future (Salon et al., 2014).

A total of 43 key informants were selected. Thirty respondents were drawn from six LGs. Specifically, respondents came largely from the following departments: Finance and Budgeting; National Disaster Management Organisation (NADMO); District Agricultural Units; District Management Information Unit; and District Planning Unit. In addition, five respondents were interviewed from the Ministry of Finance, the Ministry of Environment, Science, Technology, and Innovation, the Ministry of Local Government and Rural Development, the Environmental Protection Agency and the National Development Planning Commission. The remaining eight were the staff of non-state actors who were undertaking adaptation interventions in the case districts. The sampling of the interviewees was therefore based on their position and influence on LG decision making. Given the qualitative nature of the study, the selection of 43 respondents provides a scientific basis upon which to draw inferences (Guest et al., 2006). Typically, qualitative studies have a small sample size due to possible data saturation (Creswell and Creswell, 2017; Guest et al., 2006). Each interview lasted not less than 30 minutes and was conducted in the English language. They were audio-taped and later transcribed for immersion, data cleaning and theme identification. To ensure consistency and reliability of this study, the interviews were triangulated with other secondary information. The next section presents a discussion of the data based on thematic analysis procedures.

Results and discussion

How do local government in Ghana finance incremental cost and investment needs for climate change?

Evidence from the interviewees and existing LG documents suggest that all of the 216 LGs in Ghana are required to budget and allocate funds to developmental issues including climate change. Among a range of indicators set to evaluate the performance of LGs to aid them to access donor funds under a functional organisational assessment tool (FOAT) is climate change. As a result, all respondents in this study were unanimous that LGs are required by statute to allocate funds to climate change-related interventions. What appeared surprising from the data is that, while there is a plethora of climate change legislation, most notably in Ghana's 1992 constitution, the Local Governance Act of 2016, Act 936, the 2010 National Climate Change Adaptation Strategy (NCCAS) and the National CC policy 2013, none of them explicitly mentioned sources of finance for climate change and the amount to be devoted annually. Despite the lack of an explicit mention of funding and mobilisation strategies in these statutes, the respondents agreed that they have often used varied means to finance adaptation-related interventions.

The DACF, an inter-governmental transfer, was identified by the study respondents as one of the most important sources of finance for climate change adaptation. Respondents were of the view that climate change adaptation forms part of their responsibilities, and therefore they have no choice other than to utilise their DACF to finance adaptation activities. Others were also with the opinion that DACF was the biggest source of revenue for LGs, hence the most reliable and sufficient source for financing climate risk. A district planning officer of AASDA said,

> In this district, we don't have major economic activities. So we are unable to attract enough internally generated funds [IGFs]. We therefore solely rely on our DACF to finance district-wide development initiative. Since climate change affects poverty and general welfare of the district we have no other choice

> [than] to use our DACF to support capacity building, awareness creation and sensitization, which have been our major adaptation interventions so far.

Other inter-government transfers that support adaptation financing include the funds that LGs receive through the Ghana Social Opportunity Programs (GSOP) and the Local Entrepreneur Skill Development Program (LESDEP). The GSOP, for example, provides some financial support for economic programmes, skill development and the costs associated with scaling up safety net programmes at the micro-level. In the view of some respondents, these programmes help in building the adaptive capacity of local people to withstand the effects of climate change. Some respondents argued that an alternative livelihood system is an important way of reducing local people's vulnerability to climate change. As a result, the support offered by GSOP and LESDEP in terms of skill development in alternative viable livelihoods and paid wages were considered as indirect approaches to financing climate change adaptation. A district budget officer further described the impact of GSOP (donor funded project) on adaptation as follows.

> Through GSOP we have rehabilitated vegetation of degraded lands, planting of mango and acacia/wattles trees. These plantations reduce local dependence on natural forest for charcoal [as a source of energy]. It also creates jobs for those employed for the programme. Those who are also engaged in dugouts/dams rehabilitation get jobs whiles water for irrigation and drinking is made available. Such programmes put human at the centre.

Similarly, donor support has also dominated sources of financing adaptation at the local level. As shown in Burkina Faso, the syndrome of aid dependency has characterised LGs' financing of climate change (see Eguavoen and Wahren, 2015). This situation is not different from Ghana, as a piece of the central government's budget is financed from donor aid. As previously noted by other researchers, beyond weak fiscal decentralisation, LGs in Ghana still depend on donor aid to support some local-level development programmes. Donor funding aims at infrastructural development as well as increasing the income of smallholder farmers. In some of the districts studied, donor agencies like Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), CEDA, the Canadian International Development Agency (CIDA), hunger projects and the International Development Research Center (IDRC) have funded visible stock and flow adaptation actions (e.g. capacity building, awareness creation, infrastructure such as local weather stations, etc.). This field evidence supports the view expressed by Cameron (2011) that funding for climate change in Ghana is mostly provided by multilateral and bi-lateral institutions such as the World Bank and UNDP. To illustrate this, a respondent from STKDA indicated that CIDA is providing about GH₵74,000 (US$18,000) for the Agricultural department to support its adaptation programmes.

Although the respondents also agreed that locally generated revenue was equally important, they claimed it has not been straightforward to increase local revenue to provide a stronger financial stream to cater for adaptation-related responsibilities. This highly supports the views of those who have concluded that LG has not been efficient in raising enough IGFs despite their potential to support the local economy. In very lucid terms, Cook and Chu (2018) posited that decadal reforms towards fiscal decentralisation in developing countries aimed at empowering LGs have stalled, thus affecting their spending capacity. The failure of LG to increase their revenue generating capability despite fiscal reforms as well as central government's limited political will to practically devolve power to local government remain fundamental threats to increasing the capacity of LG to respond to climate risk or emerging complex public problems.

The data clearly confirms that the financing of climate change adaptation at the local level in Ghana has not deviated from the traditional norms of LG financing. The traditional aid dependency

syndrome accompanied by central government transfers continue to permeate LG financing of climate change adaptation actions, with some limited support from IGFs. This situation was put forward by Musah-Surugu et al. (2018) when they studied climate change budgetary and financing compliance in Ghana. They noted that the entire budgetary allocation for climate change-related interventions in Ghana includes local funds emanating from Ghana's consolidated funds and LG's IGFs as well as donor funds that flow principally from multilateral and bilateral sources. A respondent from the Ministry of Environment, Science, Technology and Innovation sums up the nature and sources of financing of LG's adaptation actions.

> The central government has recognised that climate change effects are developmental in nature and so the government is ready to provide extra funding for activities that are geared towards climate change issue. Secondly, the assemblies are also educated to generate some fund for which they can use to address some issue. Thirdly, there are a number of international sources of funds (Green Climate Fund (GCF), GEF, National Appropriate Mitigation Action (NAMA) Facility, etc.) that [from which] they can get support to implement their plans.

Why is local resource husbandry a vital complementary window for financing local government responses to adaptation?

The existing perspective on financing climate change across all scales of government envisions the smooth pooling of blended finance from multiple sources (Ayers and Huq, 2009; Basak, 2017; Birdsall, 2012; Cook and Chu, 2018; Eguavoen and Wahren, 2015). This view reflects the substantial financial resources needed to support climate change action, limited by the capacity of single sources (Cook and Chu, 2018). This perspective further reflected almost all of the respondents' positions on the need to exploit local resources in the face of adaptation financing. Firstly, respondents noted that although aid is an essential adaptation source of finance for LGs, they do not have the capacity to develop an acceptable proposal to raise funds from the donor markets. Currently, central government raises adaptation-based funds on behalf of LGs. The limited ability of LGs to penetrate the international climate change financial market to procure the necessary adaptation funds resonates with the central argument that decentralisation in developing countries has not brought forth the needed institutional strength at the local level. Of the six LGs studied, only one has had direct donor support for massive adaptation intervention. The remaining five reported no direct support, except those facilitated by central government. The capacity needed to develop a business-convincing adaptation, the Project Identification Note (PIN), which meets laid-down standards to attract funding from external sources, barely exists at the LG level in Ghana. As clearly noted by Ayers and Huq (2019), international climate change funds require robust proposals with justifiable reasons for funding, which is quite difficult for some institutions in developing countries to undertake. The limited capacity of LGs in Ghana to enter the global climate change financial market was articulated by a respondent from the Ministry of Environment, Science, Technology and Innovation.

> LGs have limited capacity to developed fundable Project Identification Notes. In view of this, the capacity of local government institutions is being built to help them develop proposals for funding from local and international donors for the implementation of project activities.

Since both central government transfer and donor aid fall short of local government spending needs, local-level resources were cited as a complementary avenue to finance adaptation and other emerging LG responsibilities. The study participants noted that most LGs have huge but untapped

resources that, when well harnessed, can significantly bridge the mismatch between LGs' available resources and their spending obligations. Field interviews demonstrate that significant revenue tributaries that can leverage the implementation of local adaptation actions, such as the local property tax, have not been explored at all. The reasons for not exploring such potential revenue streams include the politics of LGs, recentralisation of power, poor administration, antiquated tax structures, local capture (an entangled corrupt practices), rent seeking and weak enforcement. A 'resilience officer' interviewed in one of the study districts unambiguously argues that if well-endowed LGs developed their property database, procured the support of all stakeholders and launch 'apolitical' IGF strategies, such LGs would definitely be financially viable to tackle the extreme climate variability that required urgent action head-on.

Delays in the release of inter-governmental transfers was also cited as a reasons why IGFs should be vigorously pursued. Some budget officers from the districts indicated that quarterly releases from central government to various devolved departments in the districts (e.g. Agriculture) have not been forthcoming. Respondents noted that delays in the release of funds for departments such as NADMO and Agriculture affect urgent adaptation planning interventions such as early warning education on bushfires, the early/late start of rains, possible pest pandemics and control systems, possible flooding and evacuation plans, etc. One of the budget officers explains their frustrations with central government transfers as follows.

> So far the Agricultural department that is supposed to harmonise climate change activities on agriculture in terms of drought resistance and coping strategies they are not doing anything because the funds are not coming. They rely on central government for funds. Last year out of four quarter releases they received only two. This year we are in the fourth quarter but as we speak the Agric unit has only received only their first quarter releases from the central government.

The rationale for citing local resource husbandry fits well into an adaptation discourse that argues that the unpredictability and non-linear nature of climate change requires institutional backup plans and readily accessible resources that can be exploited in the event of unexpected extreme variability. Given the lengthy processes for accessing donor support for adaptation and the ritual delays in central government transfers, it behoves LGs to look into their local resources menu for re-engineering to offer a vital complementary revenue stream that is free from central government capture and is readily available for urgent interventions. Arguing from this perspective, Cook and Chu (2018) noted that different local revenue instruments, such as property taxes, betterment fees, earmarked and conditional fiscal transfers and user charges could be used to finance municipal adaptation.

Furthermore, fluctuations in donor support and the time-bound nature of donor support require that LGs improve their own resources collection to sustain programmes that were commissioned by donor agencies. Evidence from the field shows that the financial capacity of LGs to continue the monitoring and continuation of donor projects is necessary to ensure that programmes that have been started by donor agencies are not abandoned.

Finally, the evidence that LGs rely heavily on inter-governmental transfers for financing local adaptation has major implications for adaptation. It would further cement central government hegemony and capture over LG institutions. LGs are already under central government control given the central government's power to appoint the political heads of LGs and some legislative members (assembly members). It would also create gaps in adaptation planning since external funding for LG is full of fluctuations and also time-bound. As argued by Cook and Chu (2018), it would lead to a slow pace for improving revenue administration, which would set local revenue systems on a more sustainable path. This finding is in collaboration with previous findings, which

suggest that transfer instruments in developing countries give the national government varying degrees of control over local government finances (Bahl and Linn, 2015). Similarly, the use of fiscal resources and central transfers to enforce obedience to central mandates is a common theme in the fiscal decentralisation literature (Diaz-Cayeros, 2006; Garman et al., 2001; Rodden, 2004).

It appears that some of the major international funding sources such as the Green Climate Fund are not currently engaging with sub-national level government as they largely consider centralised projects for funding (Cook and Chu, 2018). In the views of Dodman and Mitlin (2013), 'aid agencies are designed to work with national governments, as opposed to local urban authorities, and the urban poor face difficulties in accessing this money'. This centralised project financing approach frustrates downward accountability and further cements central government hegemony over local development planning despite LGs being the implementation hubs for adaptation. A respondent explains this situation,

> We don't develop projects ourselves, we don't directly negotiate with Green Climate Fund, Adaptation Fund and other international fund to raise funds for adaptation. It is the central government, donor agencies and national implementing agencies that submit proposal[s] and raise funds from these funds and most often we are barely consulted during the proposal development and developing terms of reference. The project is dumped on us during implementation when it has finally received approval.

Few of the respondents (six) were of the opinion that the use of locally generated revenues for managing LG and adaptation issues would improve downward accountability. They explained that local citizens would hold their elected officials more accountable if local public services were financed to a significant extent from locally imposed taxes, as opposed to the case where financing is primarily by central government transfers. They cautioned, however, that such taxes must be visible to local voters; not a nuisance but large enough to impose a noticeable burden that would awaken their interest to demand accountability from resource trustees. Most of the respondents who subscribe to this idea of raising much local revenue for LG financing were respondents from either metropolitan or municipal assemblies, since most of these LGs have economic classes and large properties that can be taxed. The data showed that, despite the relevance of IGFs for financing, LGs and adaptation issues are often challenging to administer. As a result, respondents provided some mechanisms for reforming the current revenue options of LGs to ensure their buoyancy.

Why is institutional reform necessary to enhance LGs' domestic resources' mobilisation capacity?

Limited institutional capacity to identify and develop bankable adaptation projects. The field data shows that local actors lack the technical expertise to identify climate risk hotspots and are unable to develop bankable projects capable of attracting funding. The human resources needed for LGs to be efficient do not exist in many LGs in Ghana. A respondent expressed his views,

> To be able to raise funds for climate change there is the need for sufficient technical skills, availability of data, sufficient proof of adaptation need, bankable intervention and expected outcomes. Unfortunately, only a few districts appear to have some individuals with expertise in environmental related issues.

The study respondents were unanimous on the need for improved technical capacity to enhance the LGs' ability to undertake activities that make it easier for national implementing entities (NIE) to facilitate processes leading to the award of adaptation funds from international sources. This finding is consistent with Ryan (2015), who concluded that the limited human resources

capacity of LGs has an extreme affect upon local-level adaptation governance. It is also consistent with the general lack of climate expertise across Africa, as identified by Washington et al. (2006).

Limited institutional capacity to attract private sector investment. One major problem for mobilising sufficient domestic resources for adaptation and any other LG fiduciary responsibility is the existence of institutional disincentives that encourage LGs to feed on inter-governmental transfers. The justification for LGs to depend on grants, transfers and aid is extremely limited to the early stages of decentralisation. After decades of decentralisation, LGs are supposed to be financially autonomous, to be able to bring transformational changes to local economy as put forward by adherents of decentralisation. The respondents were certain that for most Ghanaian LGs to have the ability to mobilise sufficient domestic revenue to cater for their responsibilities, institutional reforms that can give LGs autonomy and bureaucratic efficiency must be taken up by central government. The respondents were certain that mobilising domestic resources for adaptation is particularly essential given the anticipated growth in the cost of adaptation against the limited external funding capacity available (e.g. DACF, donor transfer). The respondents' views support long-held views that sustainable development in developing countries cannot be achieved through public spending alone but also through private investment (Kivuitu et al., 2005).

Existing LG legislation in Ghana makes LGs puppets, feeding on meagre inter-governmental transfers. In other advanced economies, LGs have the capacity to enter the capital market and attract investment, raise payable loans and diversify their economies. The situation is the opposite in Ghana. The Ghanaian LGs are stuck to central government support schemes that have not been efficient in financing their responsibilities. The respondents noted that mandatory quarterly releases from central government are often delayed, affecting their fiscal plans. Although the majority of respondents agreed that LGs could attract private sector investment on their own, they blamed their inability to do so on their current subsidiary relationship with central government and their lack of statutory authority to penetrate the capital market without the approval of central government. Institutional reforms necessary to give LGs the autonomy needed to attract private sector investment is crucial given that private sector investment in the local economy can have a trickledown effect on local adaptive capacity.

As explained by one respondent, the presence of some agribusiness firms in their district has enhanced farmers' knowledge of climate-smart agriculture. The respondents argue that climate-smart farming practices provided by private firms help to indirectly reduce LG expenditure on proving that there is a requirement for training and sensitisation for local farmers. The private sector is capable of transferring technologies (e.g. new seed varieties, dams, early-warning systems and irrigation schemes) based on local needs. The private sector can also partner with LGs to introduce weather derivatives and micro-insurance that can pay out to farmers in times of weather triggers (UNFCCC).

Ghana's incoherent and fluid fiscal decentralisation policy. The potential for mobilising domestic resources at the municipal level to complement external funding for adaptation is directly proportional to the degree of fiscal autonomy. A clear deduction from the study respondents confirms that, after decades of decentralisation reforms, the Ghanaian LGs still have a narrow fiscal capacity to transform or diversify their local tax base for buoyancy and independently align its expenditure against its specific needs. The central government continues to dictate to LGs in Ghana despite theoretical fiscal reforms. Respondents are of the opinion that LGs in Ghana are trapped by central government seizure, institutional ambiguity and limited operational strength to mobilise local resources for adaptation.

The fiscal capacity constraints of the Ghanaian LGs exemplify the general constraint upon LGs in developing countries to boost their domestic revenue. For instance, in some jurisdictions, there is apparently outright prevention of the LGs to levy the local economy, while in other places the central elite restricts local tax rates to a predetermined range or require approval for modifications. LGs undeniably face institutional ambiguity and structural, technical and political complexity associated with mobilising domestic resources. In this study, the respondents were clear in their views that until the right reforms anchored on political will are vigorously pursued, LGs would not be able to mobilise enough domestic resources to supplement external adaptation funding despite the call on LGs to improve their revenue mobilisation abilities. One budget officer put his views forward.

> Currently, what we are witnessing and actually practicing is central government devolving expenditure responsibilities to us, and tightly maintains the power to undertake certain activities that can bring the assembly enough revenue. Certain time we attempt to fully undertake some actions that can improve our domestic revenue but due to political correctness, we are forced to stop it.

Reported cases of resource rent/corruption/malfeasance/administrative impropriety. According to a budget officer, there are many resources at the local level that can support LGs, however, resource capture/rent among local powerful actors (chiefs, politicians and other bureaucrats) has done what? Thoughts here are incomplete. From the field data, it appears that powerful actors across different levels of government and sectors through coalitions and rational manipulations find ways to extract domestic resources for their private interest. A study in Uganda shows that the bulk of the school grant was embezzled by local officials (and politicians) (Reinikka and Svensson, 2004). In one of the study districts, there was evidence of massive exploitation of a native tree called the 'rose tree' but the district managers complained of not accessing any resources in the form of rent from the private sector operators that were logging it. There are also reported cases of corruption among LG staff, which further depletes the meagre local resource husbandry. Generally, poor resource accountability and usage in developing countries calls for institutional reforms that would reverse the narrative. Institutional reforms capable of closing all loopholes that provide 'extractive institutions' create and loot resources must be pursued with all necessary urgency.

Conclusions and policy suggestions

The experiences of inter-governmental transfer and aid dependence by LGs in the six LGs studied in Ghana illustrate what happens in most developing countries. At the heart of LG financing is central government transfers and donor support through sector budget support or direct project financing at the local level. The emergence of decentralisation with a weak local economy led to the syndrome of dependency on these sources for finance. Experience gathered over decades of decentralisation in Ghana points, however, to a single fact, that these sources remain insufficient to meet the expenditure needs of LGs. Supported by study interviewees, DACF, which is the largest source of LG finance in Ghana, falls far short of the devolved responsibilities at the local level. Similarly, other transfers such as ceded revenue and the District Development Facility (DDF) as an auxiliary funding option are unable to bridge the revenue and expenditure gaps at the sub-national government level.

In addition to the above, donor support that flows from the international climate change financial market is reported to be insufficient, highly fragmented and not really tailored to local governments. As noted across existing studies, donor funding mechanisms are narrowly sector based and more favourable for central government-led projects. Experience even shows that if LGs were the

main focus of international climate change funding, most LGs in developing countries would not be able to develop the kind of project proposals that can attract funding. It is also instructive to note that, while climate change presents additional costs and investment responsibilities to LGs, little evidence demonstrates that inter-governmental transfers to LGs have correspondingly increased. Given the reported capacity constraints upon LGs to directly access international climate change funding opportunities, limited inter-governmental transfers and the fragmented nature of local auxiliary funds like ceded revenue and DDF, LGs' revenue and expenditure gaps are likely to be accentuated as the public cost of adaptation is projected to grow in coming years. It is in the light of these challenges that local or domestic resources have become very topical.

Domestic resources include LGs' IGFs as well as private sector investment into local economies, which could have a multiplier impact on local adaptive capacity. Domestic private sector investment and IGFs have become topical in finding a complementary window to support the traditional sources of adaptation financing for the following reasons. Firstly, LG has a larger control over the use of local-level resources such as IGFs when compared to inter-governmental transfers and donor support. Certainly, local-level resources are more resilient to politicisation, stable and predictable compared to international 'aid' and central government 'transfer'. Secondly, domestic private sector investment is able to invest in areas that are more critical to local needs and that can support the various adaptation options of local people.

Nevertheless, mobilising sufficient local-level resources to complement traditional funding schemes remains a complex challenge that require the necessary policy and political attention. The following recommendation is made to enhance the management of both traditional sources for funding LG and the potential to leverage domestic resources to support adaptation. Within the political economy of local governance in Ghana, systematic efforts should be made to give LGs the needed autonomy to directly engage the private sector with minimal central-government control. The autonomy for LG to engage the private sector can create opportunities for adaptation financing. Since LGs understand the core problems and the unique opportunities in their locality, they are likely to developed investment guides and attract investors in those areas that are critical to developing their economies. LGs can also incentivise the domestic private sector to mainstream climate risks in their business portfolios since they would be in direct contact with them prior to investing in their district as compared to central government-led negotiations.

While the current potential for most LGs to raise substantial IGFs has been reported, data from the study respondents shows a contradictory account. Metropolitan and some Municipal LGs have the potential for IGF improvement as compared to the small district assemblies that have limited economic activities. In both cases, however, there are huge gaps between the reported and projected revenues. Many political-economy reasons such as poor administrative capacity, local capture, resource rent and political pressure on LGs to relax revenue collection for political correctness account for the reported revenue projections and receipts gaps (Fjeldstad, 2016). In order to improve IGFs to help provide the needed financial support to other major sources of LGs funding, fundamental issues must be addressed in the context of fiscal and institutional reforms to strengthen LGs' financial administration. More importantly, good governance principles anchored on strict adherence to Ghana's financial management laws, procurement laws, bylaws on revenue mobilisation and universal public values should be consecrated and routinised across local governments in Ghana in order to deal with resource rent and local capture antagonising domestic revenue buoyancy.

Reforms aimed at optimising the local resources basket almost always endangers the boundaries set by extractive institutions (the corrupt/renters). It tends to challenge their perceived interests and is often seen as needless. Ideally, reforms should be incorporated into the shared values of society. The challenge that it presents to selfish officialdom will then subside. The way in which this

happens is what Max Weber called *routinisation* (Weber, 1968). Routinisation of shared public values is extremely important to improving resource administration in Ghana because, despite a series of national anti-corruption legislation and fiscal management statutes, yearly reports from LGs' audited accounts depict a worsening rent-seeking behavior of LGs actors. In the view of Bawole (2017), the continuous dissipation of public resources without clear evidence of holding officialdom accountable threatens local governance and, in particular, climate change adaptation mainstreaming in Africa (Obradovich and Zimmerman, 2016). Improving public values to enhance resource management is not a one-day affair and the responsibility of a single individual. Without substantial and consistent political support from the central government, donor agencies and citizenry, less would be achieved.

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