

The Role of Non-State Providers in Urban Solid Waste Management: A Conceptual Paper

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ABSTRACT

The phenomenon of higher urban populations and increasing levels of industrialization in urban cities of the developing world has increased the volumes of solid wastes generated on daily basis. The increasing volumes have largely overwhelmed the containment capacities of city authorities which, hitherto, wielded the exclusive right and responsibility. There has, therefore, been a paradigm shift which has seen the “institutional field” opened up to allow for other non-state providers to augment the efforts of the public sector. Using the Public Choice Theory as a theoretical lens, this paper discusses the main arguments for non-state intervention in the provision of urban sanitation services as a complementary arrangement to that of the public sector. The tripartite stakeholders – state, private sector and non-governmental organizations – have been discussed in this paper with the help of a framework. The paper further discusses in detail, the role of non-governmental organizations and community-based organizations in urban sanitation service provisions as well as the key challenges encountered. The study concludes by highlighting the need for a level playing field and the need for providing recognition to and support for all stakeholders which would go a long way to enhance urban sanitation service provision.

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1.0 Introduction

The quest for proper sanitation and prudent solid waste management has become quite topical in less developed countries which are experiencing higher rates of urbanization and industrial developments. The promulgation of the Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs) in the year 2000 and 2015 respectively have proper sanitation provisioning as one of its central pillars. This notwithstanding, the rapid increase in solid waste (SW) generation caused by rapid population growth, unregulated urbanization, presence of manufacturing activities and economic development (United Nations, 2013) far exceeds the containment capacities of the public sector which was in the times past the provider of such services. For instance, Oteng-Ababio et al. (2012) report that the Accra Metropolitan Assembly (AMA) expends close to 91% of its annual municipal budget in attempts to introduce a package of new waste management policies and technology, making waste management the single largest item on the assemblies’ budget. The authors suggest that urban sanitation services in most cases remain the single largest expenditure on the budget of most developing countries.

Meanwhile, cities in African countries are faced with contextual growth indices that add up to the total wastes generated in the urban cities of these countries. For instance, it is estimated that Africa is the second largest urbanizing region with a projection of 56 per cent by the year 2050 (UNDESA, 2014). What is problematic about this trend is that the region in contemporary times faces sanitation challenges with about 54 per cent having access to improved sanitation (AfDB, 2012). For instance, Accra alone harbors

approximately 30% manufacturing activities in Ghana (UN-HABITAT, 2010) which has come with associated waste generation and disposal challenges.

An attempt to address the urban waste menace and to enhance proper sanitation situation in developing countries has reignited the need to overhaul the traditional waste management arrangements to involve different actors in order to improve the system (Tahat, 2014; Yeboah-Assiamah, 2015; Kirama & Mayo, 2016). Conventionally, waste management issues has been the exclusive responsibility of the public sector (Soukopova et al., 2016), largely ceded to city authorities, yet these have experienced resource constraints (Mudzengerere, & Chigwenya, 2012) due to growing urban waste complexities (Gupta (2014); Hurlbert & Gupta (2015).

Since the introduction of the economic liberalization policies in the late 1980s and early 1990s, sanitation and solid waste management systems have undergone significant reforms in many African countries (Tukahirwa et al., 2010). There has been a realization that effective sanitation and solid waste management in African urban centers cannot be accomplished by one single entity but in collaboration with other actors or sectors (Yeboah-Assiamah, 2015). This collaborative paradigm offers a useful prototype to appreciate how various actors work in partnership in delivering solid waste management (Linder & Rosenau 2000; Glasbergen et al., 2007).

There has been a call for an involvement of the private sector through public-private partnerships (PPP) which ideally should complement the resource needs of city authorities in managing solid waste in urban domains

(Johannessen et al., 2014). Aside the involvement of the private sector (market), there has also been a need to involve and recognize the role played by other Non-Governmental Organizations (NGOs) and Community-Based Organizations (CBOs) and other informal actors (Tukahirwa et al, 2010; Aljaradin et al, 2015). There is therefore imperative to formalize and institutionalize their supportive efforts so that their full potential of contributing to good sanitation and solid waste management would come to fruition to improve the efficiency of municipal service delivery.

Using the Public Choice school of thought as a theoretical lens, this paper discusses the arguments for various stakeholders involved in urban solid waste management. This paper is structured in five main sections; the first section is an introduction whilst the second section discusses the theoretical framework that underpins the study whilst section three presents the research methodology. Section four of the study provides discussions on key issues affecting solid waste management in Sub-Saharan Africa whilst the final section provides a conclusion to the study.

2.0 Theoretical Framework

This section conceptualizes the need for opening up the space for diverse actors to get involved in the urban sanitation provisioning. The Public Choice theoretical lens is used to discuss the rationale for opening up the space for myriad of actors in the management of urban waste in the developing world.

The public choice theory

The public choice theory provides a framework for this study. The public choice school contends that a major reason that triggers a need for breaking the public sector monopoly and the need for privatization, especially, in the developing world has been the rate of laxities and wastages in the public sector provision of services (Cointreau-Levine, 1994). Public choice theorists maintain that the public sector in most cases get bedeviled with incompetence largely because policy makers are selfish and are driven by self-interest. According to Dye (2008), the public choice school assumes that all political actors strive to increase their individual benefits in governance as well as economically.

Buchanan & Tullock (1962) avers that every person as a rational being seeks to maximize his or her interest; a calculator, pursuing his or her interests. Government and politics only provide a medium where free individual choices may be exercised. This position has been reiterated by Downs (1966) that, to the public choice theorists, public -officials engage in actions and decisions that would lead to the attainment of income, prestige and power which is associated with the office they occupy and not necessarily to provide for public welfare. To sum it up, public choice theorists, contend that public sector office holders treat policies purely as a means to the realization of their parochial needs which could only be facilitated by being in public office with adequate power and access to public resources (Downs 1966).

From the foregoing, one could argue that the gross laxities in the public provision of waste management services are due to the conflict of interest between the “self-maximization” tendencies of officials and the general public interest. There are structural and institutional weaknesses in the public provision of urban sanitation and waste management services because individual officials would want to use official capacities and resources to advance personal and sectoral interests. Therefore, the unrestricted self-centered desire and the growing complexities associated with public sector provision of urban sanitation services make it

essential to open up the institutional arena to involve other partners including private actors (Frederickson, 1997).

Domfeh (2002) provides three key suggestions that must be taken into consideration so as to maximize the efficiencies associated with private sector participation in urban waste management services. Firstly, there must be enough competition with at least two responsible and responsive independent bidders (but preferably) more are required to produce a basis for competition; this might include exhaustive advertisement, specification of services required and impartiality. Secondly, the actual decision-making process is very fundamental in recruiting and selecting competent private entities. This cautions that government officials or city authorities, in spite of bounded rationality, should do well to make decisions based on well calculated and rational information. They should scrutinize documents and experiences of bidders and select the one with expertise, cost effectiveness and track record. This suggests that public officials should not be motivated by ‘kick backs’ and ‘ill-motives’ but rather rational decisions that provide good for the greater society (based on utilitarian principles).

Finally, Domfeh (2002) indicates that city authorities or state regulatory agencies should provide adequate monitoring and supervisory roles which requires monitoring of the activities and operations of private entities which will be selected finally. Their activities should be regulated and evaluated to ensure that there is compliance with service and quality standards that were agreed upon. Similarly, the state entities should allow customers or individuals to give complaints on services received so that their grievances are addressed (Domfeh, 2002; Anestina, 2014).

3.0 Methodology

This conceptual paper employed the qualitative research approach to extensively review secondary data on public-private partnership and urban waste management. Qualitative research largely relies on interpretive social science (Neuman, 2007). The paper draws on the literature on stakeholders and urban sanitation service provision. To achieve this, the study relied on several secondary sources of data including journal articles, newspaper reports, contract documents, scholarly books, internet sources, and reports to determine solid waste management challenges in developing countries and how the interplay of diverse stakeholders could help enhance urban sanitation service provision.

Content analysis of literature and existing empirical findings on the theme has been carried out to derive useful conclusions and recommendations. Key search phrases were used to obtain a large pool of literature. Some of the phrases included ‘public-private partnership in SWM’; ‘private involvement in SWM’, ‘civil society organizations and SWM’; ‘NGOs and SWM in developing world’. These and many more were put together variously and entered into different search engines. Content analysis of relevant journal articles and other materials was carried out after an initial skimming of their abstracts.

4.0 Discussion

4.1 Challenges facing Municipal Solid Waste Management

In the developing world, increasing urbanization among other factors has exacerbated the sanitation management situation. There are some peculiar constraints that militate against solid waste management in the countries of the global south. In this section, the paper discusses some key challenges which include financial constraints, attitudinal and cultural issues as well as other operational inefficiencies including institutional, technical and social challenges which

ultimately affect the collection rates of solid wastes in urban areas (Amoah & Kosoe, 2014). These factors have been discussed with evidence from selected empirical literature.

4.1.1. Financial constraints

Municipalities have failed to manage solid waste due to financial factors. The huge expenditure needed to provide the service (Sharholly et al., 2007), the absence of financial support, limited resources, the unwillingness of the users to pay for the service (Sujauddin et al., 2008; Song et al., 2016) and lack of proper use of economic instruments have hampered the delivery of proper waste management services. In most cases, obtaining an appropriate waste management system requires a capital intensive approach which overwhelms the containment capacity of most city authorities in developing countries. In Indonesia for instance, budgeting and financing are among the plethora of problems which inhibit effective delivery of sanitation and waste management services. Budgets allocated to the sector are a tiny percentage, for instance, 0.1% (Chong et al., 2016) of the entire annual budget allocated for waste-related activities.

4.1.2. Attitude and culture

According to Songsore (2010), solid waste management has remained one of the intractable problems with the Accra Metropolitan Assembly (AMA). His argument supports the fact that waste producers generate large volumes of wastes but do not dispose of them (wastes) in an acceptable manner. Thus, the control of domestic garbage is directly connected to peoples' perceptions and socio-cultural practices (Navez-Bouchaire, 1993) and determines or influences the success or failure of solid waste management systems (Purcell & Magette, 2010). This is important because people's attitude towards waste management is very poor and questionable, requiring attitudinal change. Thus, if individuals and the communities were to engage in conscious engagements that discourage indiscriminate disposal of refuse in their wide-ranging daily practices, less of time and money would be spent on managing wastes and cleaning activities by individuals, communities and the government (Oluyinka, 2011). With the establishment of the Waste Management Department (WMD) of Metropolitan and Municipal Assemblies, the public tends to have the view that the department should be solely responsible for managing wastes.

Songsore (2010) further observed that indiscriminate disposal of waste has resulted in the clogging of the few built drainage channels and natural watercourses with garbage and silt, which are not removed regularly. This argument is not peculiar to AMA alone; the problem reflects the situation in most urban areas in Ghana. Thus, sustainable environmental management practices necessitates the adoption of appropriately attuned human perceptions and attitudes (Chanda, 1997).

4.1.3. Operational inefficiencies

Operational inefficiencies are due to inefficient institutional structures, inefficient organizational procedures, or deficient management capacity of the institutions involved as well as the use of inappropriate technologies. The operational vehicles are sophisticated, expensive and difficult to operate and maintain, thereby often inadequate for the conditions in developing countries. After a short time of operation, usually, only a few of the vehicle fleet remains in operation. Transportation of solid wastes also relies on operational vehicles but their frequent breakdowns coupled with spare parts shortages can immobilize collection vehicles for extended periods of time. For example, UNEP (1996) estimated that in cities in West Africa, up to 70% of

collection/transfer vehicles may be out of action at any given time.

4.2. Actors or stakeholders in SMW

Given the above challenges affecting SWM in the developing world, there is sufficient evidence to argue that the public sector exclusively address the urban waste management challenges confronting the developing world. A quest for effective solid waste management requires an institutional pluralism which calls for diverse actors and stakeholders partaking in the process. The framework below discusses the tripartite stakeholders in the process.

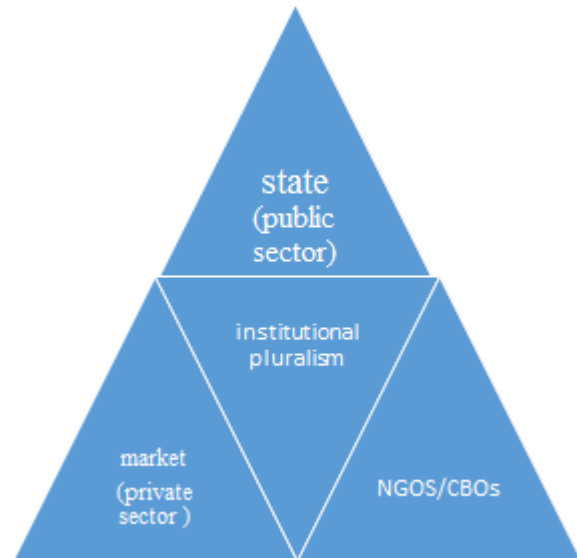


Figure 1. Institutional pluralism and stakeholders

Source. Collignon & Plummer (2005)

Figure 1 above provides a 'tripartite' approach to enhancing solid waste management in the developing world. The framework has three main stakeholders: the public sector, private sector and non-governmental organizations/community based organizations.

4.2.1. State or Public Sector

At the top of the framework is the public sector or state which has traditionally been performing solid waste management roles. Owing to changing complexities, there has been a need to break this traditional monopoly to allow state institutions to be flexible and to allow for different or array of 'plural actors' in order to boost efficiency and competition in the system.

In most cases, the role of the public sector is centralized where contracts are signed at the national level and imposed on local governments. Owing to the centralized nature of Public-Private Partnership (PPP) agreements in many developing countries, autonomy of local government units at the grassroots becomes very difficult to effectively facilitate SWM. This calls for a decentralized process to engage local government agencies at the base. If possible, contractual agreements for PPPs must be signed directly between local government units at the grassroots and willing private sector institutions but not by central governments at the top and pushed on local government institutions. It is believed that a decentralized PPP process will engender a more co-operative system for solid waste management.

In the context of institutional pluralism, the public/state/local government plays a convener, monitoring or supervisory role in order to set a congenial atmosphere for national sanitation policy (NSP) to operate. There is the need therefore to strengthen the capacity of local government units like the Municipalities, Metropolitan and Districts in order to

formulate by-laws and principles for the regulation of PPPs in solid waste management (Kölsch, 2013). Thus, the availability of a robust monitoring and regulatory frameworks helps prevent exorbitant tariffs from private institutions and recalcitrant community members in order to eliminate social unfairness.

4.2.2. Institutional pluralism

The idea of institutional pluralism conceptualizes the need to open up the space for the provision of public goods and services: through the government, through the market, through civil society or through any combination or partnership of these sectors (Glasbergen et al., 2007). There has been argument for a need to adopt institutional reforms that empower the non-state sector so that government would delegate public service provisions to private actors and non-governmental organizations in the developing world (Cohen & Peterson, 1999).

Thus, institutional pluralism on public goods provisioning engenders effectiveness and enhances legitimacy of the state. Scholars contend that by ceding functions to non-state actors, the public sector is able to focus on other core responsibilities. Accordingly, the introduction of other actors shores up competition and effectiveness in service provision (Esman, 1991; Esman & Uphoff, 1984). For instance, Esman & Uphoff (1984) remark that several tiers of establishments with smaller units at the base produces greater solidarity, scale and dedicated services than the higher levels of organizations that act alone. Others perceive institutional pluralism as an alternative to failed decentralized efforts and a means to solve the new economic, social and political problems of the 21st century by adopting a mix of central, non-central, private sector and non-governmental relationships for implementing public sector responsibilities through market approaches that enhance greater accountability (Cohen & Peterson, 1999).

4.2.3. Market or private sector

At the bottom left of the figure 1 is 'market' or private sector which has become very popular module because of the economic and trade liberalization policies (Chaturvedi et al., 2015; Johannessen et al., 2014). For instance, in Ghana the role of Zoomlion company in urban sanitation service provision has been made possible because of institutional pluralism which has opened up the space to allow for private sector participation either through franchise, contracting out, and various forms of public-private partnerships (PPP). Sharholly et al. (2008) contend that involving the private sector could improve the efficiency of waste management system. This suggests that public-private partnership is a way of mitigating the challenges associated with waste management.

Engaging the private sector in solid waste management is a means of injecting competition and efficiency in the process by bringing on board the requisite technology, adequate resources and expertise. It could be in the form of public-private partnership which is defined as a long or medium term arrangement between the public and private sectors whereby the public sector transfers part of its responsibilities to the private sector (World Bank, 2011). It is often believed and proposed that private sector participation in the provision of municipal services could be the best possible way to solve the current waste problems in developing countries and in particular public-private partnership is seen as more potent (UNESCAP, 2011).

By private sector, there is a need to recognize the role of the informal sector in SWM in developing countries. Wilson

et al. (2006) argue that though the informal private sector also plays a role in SWM, they appear to be at the blind side of policy makers, not seen or considered. They are mostly harassed, and at times, hounded by the very city authorities they are assisting to solve their sanitation challenges. The sector's growth is mostly driven by demand forces, socio-economic factors (Ahmed & Ali 2004; Wilson et al., 2006) and increasing networks between formal firms with informal actors (Oteng-Ababio, 2011). They involve informal operators and other community based and non-governmental organizations (Hardoy et al., 2001, cited in Oteng-Ababio, 2010).

The informal sector involves the waste collection and recycling activities of waste pickers and scavengers (Oteng-Ababio, 2011, 2012). *Whilst the dynamism of the private sector is very important; the public sector's supervisory role is equally needed, equally important but mostly neglected is the understanding, cooperation and ability of community members to pay for services.* Any definition of PPP or any PPP arrangement that neglects the effect or the role of the 'third party'- people or the community'- will at best be ineffective and at worst more likely to fail.

4.2.4. Role of NGOs and CBOs

At the bottom right is the role played by non-governmental organizations (NGOs) or community based organizations. There is a wide body of literature on the role of NGOs and CBOs in developing countries, focusing on a variety of sectors and activities, including environmental services (Hulme & Edwards 1997; Mitlin, 2001, Barr et al., 2005). This includes the informal sector (Andrianisa et al., 2016) and small individual waste pickers, organized community groups (Tukahirwa et al., 2010) as well as scavengers (Rockson et al., 2013) who provide sanitation services mostly at the local level (Linzner, & Salhofer, 2014; Matter et al., 2013; Paul et al., 2012).

Coston (1998), among others, has analyzed the role of civil society organizations and institutions in institutional pluralism. Coston identified five possible types of roles performed as contracting, third-party governance, cooperation, complementarity, and collaboration. Blair (2001) emphasizes that the breaking of state monopoly can also introduce competition in the provision of public goods and services, and sees this as a sixth model of institutional pluralism. When civil society institutions are emphasized in urban sanitation and service provision, it is usually related to marginal or peripheral areas and groups: slums and the poor.

Institutional pluralism and liberalization policies have not only brought private sector to the center of sanitation and solid waste management provisioning in the developing world, but it has also increased the role of civil society organizations, especially CBOs and NGOs (Mbah & Nzeadibe, 2016). These organizations have been widely recognized as actors that are benevolent in nature, largely driven by philanthropic ambitions to advance the solid waste management and sanitation conditions of communities through direct service provision or through advocating activities that can improve the situation (Ahmed & Ali, 2006; Rathi, 2006). The role of NGOs and CBOs in the provision of sanitation services to the underserved, marginalized or poor communities is widely acknowledged, as fully public and private schemes are thought to be less capable and willing to serve these areas and groups effectively.

In developing countries NGOs and CBOs are increasingly becoming engaged in community development and environmental management activities, including

sanitation and solid waste management. The success and role of NGOs and CBOs in sanitation and solid waste management differs among various countries in the developing world, depending on the financial, material, and institutional constraints of the organizations and the specific institutional context of the countries they work in.

4.3 Challenges affecting non-state stakeholders in Solid Waste Management

In spite of their role and potentials to contribute to urban sanitation in the developing world, non-state stakeholders mostly are faced with major structural and institutional constraints. This sub-section discusses some of the constraints facing NGOs and CBOs.

4.3.1. Marginalization of NGOs/CBOs

One of the major constraints that affect NGOs and CBOs has to do with the sanitation and solid waste management policies. Although most policies in contemporary times fully recognize the value of NGOs and CBOs and include them formally under the private sector, all the work sanitation services is contracted out to large-scale formal private companies marginalizing NGOs and CBOs.

4.3.2. Politics

Local NGOs and CBOs mostly become victims of political bastardization especially close to and during elections. In some cases, NGOs and CBOs generally get accused by politicians as being political mobilizers, rather than genuinely carrying out sanitation work. Such perception tends to thwart the efforts of local NGOs and CBOs to sustain their activities in sanitation and solid waste management and shifts in their goals in times of financial shortage, thus, contributing to that suspicion by politicians.

5.0 Summary and Conclusion

In this paper, I have discussed the challenges affecting urban sanitation service provision in developing countries. The paper maintains that the growing urban population coupled with growing industrialization calls for appropriate collaborative tendencies to bring on board diverse stakeholders from the public and private sectors as well as non-governmental organizations and community-based organizations in the solid waste management provisioning. Given the appropriate institutional arena and support, the interplay of diverse stakeholders would enhance urban waste collection and management. This paper has used the institutional pluralism framework to discuss the actors involved in urban sanitation service provisioning.

Enhancing the role played by NSPs requires a framework which highlights a number of actions required to enable better government engagement with local informal sanitation providers:

Firstly, there is a need to reconcile informality with conventional procedures. Most small operators are informal and difficult to monitor. It is important to identify mechanisms to overcome the discordancy of informal business practice and formal procedures as essential if providers and city authorities are to work together. This requires effective engagement between metropolitan, municipal and district assemblies (MMDAs) and informal waste management service providers including NGOs and CBOs to mainstream their activities towards overall city goal of waste management.

Secondly, there is a need to adopt a market sharing strategy in order to prevent monopoly of the well-to-do waste management companies (Tukahirwa et al., 2013).

Finally, it is imperative to adopt an attitudinal change with respect to how local or city authorities perceive or regard

NGOs, CBOs and other informal sanitation service providers. In other words, there is a need for a paradigm shift where smaller individuals and groups will be empowered and given the needed support or opportunity in order to thrive well.

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