

ASSESSMENT OF COMMUNITY PARTICIPATION IN PRIVATISED DOMESTIC SOLID WASTE MANAGEMENT IN TANZANIA: A CASE OF KINONDONI MUNICIPAL RESIDENTS

Suma Fahamu Kibonde, Ma
Sokoine University Of Agriculture, Tanzania

Abstract

This study aimed at assessing the extent of participation of the Kinondoni Municipal residents in the privatised domestic solid waste management. The study was centred in few selected wards of Kinondoni Municipality which are; Mabibo, Ndugumbi and Sinza. These three wards were represented by three streets which included Jitegemee, Mikoroshini and Sinza “B”. Questionnaires, interviews and physical observations were used as tools for data collection. Considering the matter of residents’ participation on the privatisation of domestic solid waste management, the results indicated that the majority of residents in the Municipality participated though involuntarily. The residents in the study area were paying different amounts of cash as refuse collection charges to the private sector agents dealing with waste collection in their streets. It was further observed that the majority of the inhabitants were not complying with the charges due to various reasons such as charges being high, the poor perception that it is the responsibility of the government to provide such a service free of charge. Not only, that but, the residents were not satisfied with the quality of services provided by the private agents especially in waste collection. This study recommended that the recruitment procedures to get private service providers should be reviewed, also municipality leaders should assume their responsibilities of supervising the performance of the private sector agents, and lastly, political will from the local government leaders is highly urged in the whole process of engaging private firms in all aspects of environmental sanitation.

Keywords: Waste, Solid waste, Solid waste management, Privatisation

Introduction

According to Palczynski & Scotia (2002) reporting for African Development Bank, waste generation, both domestic and industrial, continues to increase world-wide in tandem with the growth in consumption. In the developed countries, the per capita waste generation increased nearly three-fold over the last two decades, reaching a level five to six times higher than that in the developing countries. With increases in populations and living standards, waste generation in the developing countries is also increasing rapidly, and may double in volume in the current decade. If current trends continue, the world may see a five-fold increase in waste generation by the year 2025. A high proportion of the waste could be recycled by the urban poor generating income for themselves and protecting the environment (Palczynski & Scotia, 2002).

The management of solid waste and other environmental infrastructures is a major problem facing developing countries. This is why there is growing concern manifested in Millennium Development Goals (MDGs), calling to address environmental infrastructures in developing countries by 2015. The problem of managing solid waste is caused by poor waste collection, storage and disposal leading to subsequent pollution and environmental degradation (Ramachandra & Bachamanda, 2007). Solid waste generated in urban areas needs to be managed properly in such a way that it minimizes risk to the environment and human health.

Moreover, Schubel *et al.* (1996) put that Municipal Solid Waste Management (MSWM) is a major responsibility of local governments, typically consuming between 20 percent and 50 percent of municipal budgets in developing countries. It is a complex task which depends much upon organization and cooperation between households, communities, private enterprises and municipal authorities as it does upon the selection and application of appropriate technical solutions for waste collection, transfer, recycling and disposal. Since the independence of Tanzania in 1961, solid waste management services in Dar es Salaam were provided by the Dar es Salaam City Council (DCC). The City faced rapid urbanization and economic growth which caused large increases in refuse output and resulted in poor performance of the solid waste management system. Until the early 1990s, the Dar-es-Salaam City Council collected less than 5 percent of the total refuse generated in the city per day. The services were provided in the city center and the wealthier neighborhoods only.

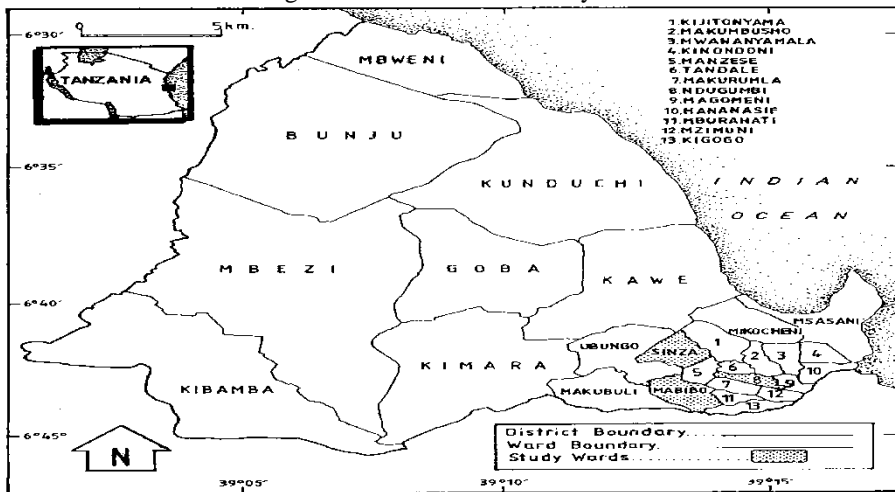
Since 1994 Dar-es Salaam City Council (DCC) became more dependent on private sector to deliver basic waste management services to the community. Repeated calls by the public and private organizations for the shift from government to governance approach were heard in Dar-es-Salaam that waste management should shift to Public- Private Sector

Partnerships or to cooperative ventures between the government authorities and private sector (Kassim & Ali, 2006). The partnerships should composed of Community Based Organizations (CBOs) and private individual registered companies which fill the gap left by government authorities in providing solid waste management services at lower costs.

Methodology of study

This study was conducted in Kinondoni Municipality in Dar es Salaam which lies between Longitudes 39⁰ 00' E and 39⁰ 17' E and between Latitudes 6⁰ 30' S and 6⁰ 45' S. The Municipality is bordered by the Indian Ocean to the East, Coast Region to the North West, and Ilala and Temeke Municipalities to the South East. It has an area of 531 sq. km with a population of 2,497,940. The population growth rate is estimated to be 4.3% per annum and the population density is 1,179 people per square km (Kinondoni Municipal Council, 2011).

Figure 1: Location of the study area



Source: University of Dar-es-Salaam, Geography Department (2011)

The study used both, quantitative and qualitative data. Quantitative data were obtained by using structured questionnaires that were distributed to 114 households to obtain the data about the types of domestic solid waste they generated, the quantities of waste produced, the amount of refuse collection charges they paid and the level of satisfaction by the service providers. To get qualitative data, in-depth interviews were carried out to three (3) street leaders of Jitegemee, Sinza “B” and Mikoroshini and the private sector agents operating in the study area. The interviews were examining the participation of Kinondoni residents in the liberalized domestic solid waste management. In-depth interviews obtained information on people’s perceptions, experiences, attitudes, and opinions from the street

leaders on how the residents in the private sector manage domestic solid waste in Kinondoni Municipality. Qualitative data were also obtained through physical observation on the type of waste generated, quantities of domestic solid waste generated and the ability of private sector in handling domestic solid waste. Special ratings were determined to evaluate the impact of the performance of the private sector.

Results and Discussions

After collecting the data in households from the selected streets and wards quantities of domestic solid wastes for each street and the whole study area were calculated. The quantities were determined by using the amount that each household generated and obtained the average for all waste the households in the streets generated. This quantity was expressed in kilogrammes then converted into tonnage (waste generated) x/d, in which ‘x’ involved households and ‘d’ represented time/duration (i.e. a day, week or month). The total waste per household can, therefore, be multiplied by any projected increase in waste generated by households to determine the anticipated quantities for a predetermined period. The results are shown in table 1 below.

Table 1: Total quantities of generated domestic solid wastes in the study area

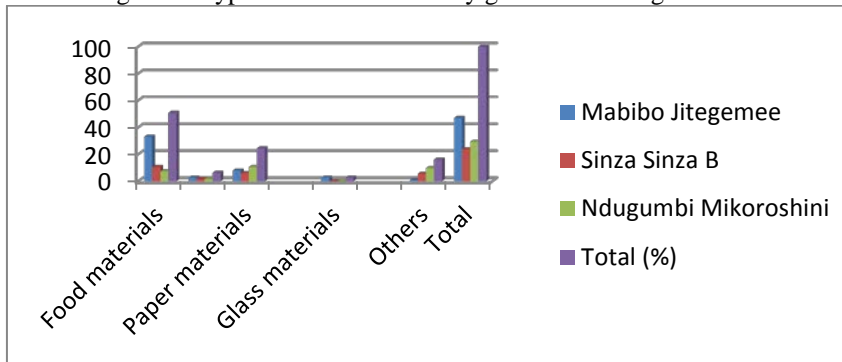
Ward	Street	Time	Quantity (Tonnes)
Mabibo	Jitegeme	Daily-	153.0
		Weekly-	1070.0
Sinza	Sinza B	Daily-	50.0
		Weekly-	350.0
Ndugumbi	Mikoroshini	Daily-	25.0
		Weekly-	177.0
Total			1597.0

Source: Field Survey Data (2011)

Types of Domestic Solid Waste generated

Having knowledge about the types of domestic solid waste generated in the area is of importance in any intervention taken to improve environmental sanitation. In order to assess the participants’ knowledge about the types of domestic solid waste produced in the study area, they were asked to identify them. There was a list of selected kinds of wastes of which they had to show which type is at least produced daily in larger amount comparing to others. The list of kinds of solid waste included food materials, paper materials, glass materials, plastic materials, and others.

Figure 2: Types of solid waste daily generated in large amount



Source: Field Survey Data (2011)

In showing the types of waste that is produced daily in large amounts in the household, food materials which include food remains, fruit peels and others were leading by scoring 58 (50.9%). This finding is bit similar with that of Palczynski & Scotia (2002) which found that the components of solid wastes like food, wood wastes, paper, plastic, glass, metal and other like ceramics, textiles, leather, rubber, bones, ashes, coconut husks, bulky wastes, household goods were predominant.

Participation of Kinondoni Municipality Households in the liberalized Domestic Solid Waste management

One of the objective of the study was to assess the participation of the Kinondoni Municipal households in the liberalized domestic solid waste management. The results of the study area are presented in Table 2.

Table 2: Combined Tables for Solid Waste removal charges in the study area

Ward	Street	Amount in Tanzanian Shillings		
Mabibo	Jitegemee	100.00-500.00		
Sinza	Sinza "B"	1600.00-2000.00		
Ndugumbi	Mikoroshini	600.00-1000.00		
Study area				
Would you be ready to pay more collection charges in order to get better service?	Mabibo (Jitegemee)	Sinza (Sinza "B")	Ndugumbi (Mikoroshini)	Total
	Percent (n=53)	Percent (n=28)	Percent (n=33)	Percent (n=114)
Yes	34.0	32.0	18.2	29.0
No	66.0	68.0	81.8	71.0

Source: Field Survey Data (2011) Payments were made on monthly basis

It is observed that there was hesitation in complying with payment indicated by the Municipality for the services because they saw it was the

responsibility of Government. According to the information collected from the contractors given to collect solid wastes the households were not paying Refuse Collection Charges because *inter alia*, too much service-charges such as for water, energy, transport, education and health care. With that long list of charges for services, paying for RCCs was not a priority for most households. On the other hand, the inability and lack of willingness among city residents to pay for RCCs led to failure on the part of waste collection contractors to perform to the required standard as it was also observed by International Ocean International (IOI, 2009). As indicated in Table 2 the households were reluctant to pay more charges by 71% while only 29% seemed to be ready to pay more charges in order for the promise of better service.

Level of performance by the private sector

The agents that were operating in the study area could not collect all the solid wastes that were generated in their areas of operations. For example; UKUMWE Group operating at Jitegemee street and other areas in Mabibo ward collected only 85%. At Sinza “B” street of Sinza ward 80% of wastes were removed at every visit while at Mikoroshini street of Ndugumbi ward 66% of the wastes were collected at every visit. Overall, the private sector was able to collect 78% of the generated wastes. The frequency of waste removal was inadequate to indicate that the agents were inefficient because the inefficiency was also a result of the collection equipments that were used. For example, the observations indicated that most collection vehicles used by the organizations were in poor condition, trucks are poorly maintained most of them are worn out. People normally call these vehicles as wastes by themselves. Post *et al.*, in Kassim (2009) also found similar results in the urban solid waste collection in Accra (Ghana). They stated that the most vehicles used for solid waste collection were not in a good condition for the service, the private sector often used second-hand vehicles.

Table 4: Frequencies of wastes collection visits per week

Ward	Street	Daily Percent (n=0)	Once Percent (n=51)	Twice Percent (n=0)	No proper order Percent (n=63)	Total Percent (n=114)
					43.0	
Sinza	Sinza “B”		2.0	0.0		24.6
Ndugumbi	Mikoroshini	0.0	0.0	0.0	52.2	28.9
Mabibo	Jitegemee	0.0	98.0	0.0	4.8	46.5

Source: Field Survey Data (2011)

As far as solid waste collection schedule is concerned more than half of the households said that the service was unpredictable. About 52.2% percent of the of households at Mikoroshini street of Ndugumbi ward and 43% percent of households at Sinza “B” indicated that the schedules had no proper order. It was only in Jitegemee street which had a proper schudule of waste collection that is every Tuesdays. At Jitegemee street of Mabibo ward, 98.0 percent of households said that the wastes were collected once a week.

Conclusion

The study indicates that privatisation of domestic solid waste management has not been well implemented in Kinondoni Municipality for there was dissatisfaction of the service users due to many factors such as low financial capacities of the private wastes collectors that hindered the service providers fail to invest in equipments suitable for the work such as waste hauling vehicles, tractors, and compact loaders. Also, there was weak, selfishness, and lack of political will by the ward and street government leadership because they did not want to lose voters so that they maintain their posts which was contrary to the executives who wanted to perform their duties. This weakened the enforcement of by-laws and supervisions of user charges. Another problem was the long term culture of the community relying on free government centralized services As result of this study it is recommended that the private sector agents should secure financial loans in order to increase their capital for the work and leaders should be more committed to solid waste management instead of relying on the government.

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