

AN ASSESSMENT OF WASTE MANAGEMENT AND PRIVATE SECTOR PARTICIPATION (PSP): A CASE OF LAGOS MAINLAND LOCAL GOVERNMENT OF LAGOS STATE

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Abstract

Waste materials are contaminants, which are highly injurious to the environment. The damage done by waste materials could not be overemphasized, hence, must be properly managed. Government alone could not -achieve much in its waste management. Consequently, this work looks into the activities of the private sector in the management of waste. It employs data from both primary and secondary sources and considered six research questions. Results from the study show that private sector participation (PSP) scheme has contributed immensely to the management of waste in the area. However, it is confronted with some problems, which, if given the necessary encouragements, will be of great help in the management of waste system in the area. The study will be of great help to the environmentalists, planners, researchers and policy makers.

Introduction

A characteristic feature of a rapidly growing metropolis in developing country such as Lagos is the problem of sustaining solid waste management. In recent years, solid waste generation in metropolitan Lagos has increased prodigiously. Major high-ways have suddenly become the dunghill for many citizens. The state seems to have acquired the unenviable status of being one of the dirtiest cities in world. It is a development that has malevolently aided the environmental problems of the mega-city.

Adegoke (1990), defined waste as substance and materials, which are disposed of, or required to be disposed of, according to the provision of national law. In the same vein, Oxford Dictionary (1980) defined waste as that which is not or cannot be used, no longer of use. Consequently, if these waste materials were not well managed, they could result to serious health hazards.

In Nigeria, Solid Waste Management is constitutionally a local government function. This is not exactly the position in Lagos State, where the Lagos State Waste Management Authority (LAWMA) exists as the sole public agency responsible for waste management in the state. The Lagos State Waste Management Authority came into being because, it was assumed that individual local government authorities were incapable of performing the function of waste management. Moreover, at the time of its establishment (LAWMA) in the 1980's, solid waste management situation in metropolitan Lagos was chaotic and embarrassing to most Nigerians. In an attempt to solve the chaotic solid waste problem, huge amount was expended on Lagos State Waste Management Authority (LAWMA) particularly, in the procurement of equipment and in training of staff. Unfortunately, corruption among other problems, made the efforts abortive. The government under the leadership of Asiwaju 'Sola Tinubu* recognized this problem of waste management in metropolitan Lagos and Private Sector Participating Scheme was introduced in December, 1999.

Private Sector Participation (PSP) as the name implies, is a way or system, whereby refuse is moved from the doorstep of the waste generators to land-fill sites. Private Sector Participation is an innovative programme in refuse collection and clearing whereby stakeholder participation was introduced in accordance with the solid waste municipal management policy. The scheme commenced with the appointment of 20 (PSP) programme managers. In this, Lagos State Waste Management Authority (LAWMA) waste assumes a subsidiary role. Commercial refuse depots and illegal dumpsites were cancelled and further dumping of refuse at such sites were prohibited.

Also, the Environmental Sanitation Corps and Neighbourhood were empowered to monitor and report illegal dumpsites to the local government. The Private Operators were expected to be patronized by tenements, markets and motor parks cart pushers were encouraged to register with the Private Operators. Any unregistered cart pusher caught operating in the state shall be apprehended and prosecuted by environmental health officers in accordance with the provision of the environment sanitation law.

Aim and Objectives

The aim of the study is to analyse the activities of the Lagos State Private Sector Participate r. (PSP) in refuse collection and disposal. In order to achieve the aim, the following objectives are set:

- > To examine how effective the programme is since its commencement;
- > To evaluate how far the programme has been able to achieve its stated objectives;

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- > investigate the extent the Lagos State Environmental Sanitation Edict has been enforce- since the inception of the programme;
- > To determine the extent to which the guidelines are being implemented;
- > To identify the problems faced by the Private Sector Participation operators; and
- >> To proffer solutions to the problems affecting the operators.

Research Questions

The following research questions were examined:

Has the private sector participation scheme been successful since its commencement?

What are the assessments of the private sector participation operators by the citizens?

Are the edicts guiding the operation of the scheme strictly adhered to? What steps could be taken to ensure effective implementation of the programmes? What are the problems facing the scheme? What steps could be taken to address the problems of the scheme?

Theoretical Issues

The theoretical framework for the study emanates from different models in geographical studies. The diffusion model by Haggerstrand (1967) and nearest neighbour analysis by Evans and Clark (1954) were employed in the study. The hierarchical diffusion which describes transmission through a regular sequence or order of lease. This process is typified by the diffusion of innovations. For example, new methods of waste management trickle down from advanced societies to less developed societies.

The developed countries have efficient waste management policies, which are gradually being adapted, in other countries of the world (expansion diffusion). With the present technological advancement and the trend toward globalization, waste management has improved over time.

The diffusion model could be applied to a non-linear function as "S-shaped" curve that characterizes any diffusion process. This could be represented with the equation shown as;

$$P = \frac{U}{1 + e^{-b(T-a)}}$$

Where:

P = proportion of people accepting a new innovation . T = the time since the process of innovation diffusion started

the two variables are linked by three parameters U

= the upper limit

a = which determines the values of P when T is zero b =

a mathematical constant with a value 2.7183.

The conceptual factor, which affects the operations of the PSP scheme mostly, is the distance factor to the landfill sites. Its location will determine trip frequency time of haulage and invariably cost of transportation of the waste. Having realized this factor, government had decentralized the location of landfill sites. As at present there are three landfill sites and PSP operators were encouraged to make use of the nearest landfill sites so as to reduce time and cost and consequently, enhance, efficiency.

The mode of operation is in line with the distance decay concept ,which according to Ayeni (2000), was based on a straight-line measurement of distance separating a phenomenon and the nearest neighbour space.

Solid Waste Management

Oxford Dictionary (1980), defines waste as that which is not or cannot be used, no longer of use. It refers to any useless, unwanted or discarded material with insufficient liquid content to be free

flowing and have no market or other value at the place where it is located.

On the other hand, Adegoke (1990), defines waste as substance and materials, which are disposed of or require to be disposed of, according to the provision of national law.

Waste could be classified according to their source as domestic, commercial, industrial, agricultural and institutional. Berry et. al (1994) classified solid waste according to their physical properties as garbage, rubbish, trash, junks and ashes. Waste management embraces several unit operations and processes, which must be carried out in order to have sanitary disposal of the waste. It starts from generation and storage, collection, transportation, processing and culminate in the disposal of the residue.

Solid waste generation is an essential part of human activities, Olokesusi (1996) opined that all types of land-use, whether residential, commercial, industrial, recreational or institutional generate their own type, amount and composition of solid waste. No matter what men's activities are, by-products of their effluent society will be found. The question is how much of what limit arises and under what circumstances.

Generation of solid waste varies in patterns and forms. These patterns are :

- (1) Point source: There are two kinds of the points:
 - * Generation centres where an usually large or uniquely different solid waste is generated.
 - * All points which contribute to the total solid waste volume (house, stores, industries and office).
- (2) Line source: Each mode and artery of a transportation system is a line source of solid waste (residential, street, rail lines and express ways).
- (3) Area source: Area sources of solid waste are those land-use types, which are of similar character throughout space and have similar generation characteristics. Example would be single family apartment areas, commercial areas and recreational areas.

Berry et. al (1974) also indicated that solid waste generation varies by population type density and class. Since high-income earners buy more heavily, packaged commodities than the low-income group.

On waste management, Hagerty et. al, suggested that it could be divided into two main areas:

- (1) Collection, including storage transfer and transport
- (2) Disposal, including any accompanying treatment.

Ogunjobi (2002), on the other hand, conceived three methods of waste treatment. These are by composting, incinerating and sanitary landfill. In this study, an attempt is made at examining a private sector participation (PSP) in the management of waste in the Lagos mainland of Lagos State; a scheme which was introduced in December 1999.

Participants and Procedures

The study area is Lagos Mainland Local Government of Lagos State. It is one of the oldest Local Governments in the State. It is northwards from Shiro Street to Morocco Road to Abule-Oja, then southwards to Carter-Bridge (Lagos Lagoon) and bounded in the west by Ipinrin stretching to Alaka-Estate.

It was carved out of the defunct Lagos City Council in 1977. It maintains a large population of about one million inhabitants with ethnic groups mainly Yorubas, Hausas, Ibos, Ijaws, Fulanis, Aworis and an influx from neighbouring ECOWAS countries. The major settlements in the local government are: Iddo, Ijora, Otto, Ebule-metta, Abule-Oja, Abule-Ijesha, Yaba, Onike, Akoka, Iv., and Makoko.

For this study, data were gathered from the primary and secondary sources. The primary sources of data include field observation, oral interviews and the use of questionnaire. The secondary sources of data include published works such as newspapers, official compilations, and other relevant literatures.

Two sets of questionnaires were designed for the research. The first set of questionnaires were administered on the thirty five (35) selected PSP operators in the local government with the intention of obtaining information on the categories of operators, the number of operational staff, the equipment used, their assessment of the performance of the Mainland Local Government in their role and the problems faced by the operators.

On the other hand, a set of questionnaires were administered on the one hundred and twenty (120) patronizers of the PSP operators. These questionnaires were aimed at gathering information on generation, accumulation and disposal of household solid waste as well as the socio - economic

background of the patrons. A random sampling method was used in the selection of the patrons.

Results and Discussion

Six research questions were examined in the study. The first one states: Has the PSP schema been successful since its commencement? The research reveals that the introduction of the PS? Scheme is quite good. The greater threat to the scheme is the issues of cart pushers, which create illegal dumpsites on any available vacant piece of land especially at Onike and Yaba areas. Though, there are some teething problems associated with the scheme, it has however been very successful in some areas especially in the low residential areas.

Moreover, on steps taken to ensure effective implementation of the programme, the research reveals that legislation and enforcement of the Environmental Sanitation Laws must be put in place and local government should embark on a house - to - house campaign to increase people's awareness on the programmes,

On the problems faced by the PSP operators, the study reveals that some of the PSP operators are finding it difficult to collect the negotiated amount at the end of the month after collecting refuse from the tenements. This has led to the situation in which operators are running the business at a huge loss. Lack of enabling law to back up their activities coupled with inadequate vehicles and high charge on rentage as well as inability of the clients to pay as scheduled, partial compliance and stoppage of patronage are other problems.

However, on steps that have been taken in the past to address the problems of the PSP operators and the extent of their successfulness. The study reveals that the local government organized enlightenment campaigns with the traditional rulers, Baales, market leaders, community leaders. transport unions, landlords and residents associations on ways of managing waste in their various domain.

The study reveals that the supervisor for health and sometimes, the local government: chairman with the medical officers of the local government do hold weekly meetings with the PSP operators. The Apex Chief Environment Health Officer attends the meetings where the problems and difficulties encountered by the operators are discussed. Also, it reveals that the PSP operators were assigned to Environmental Health Officer who monitors, evaluates the weekly activities of the operators and writes reports. The reports serve as an assessment guide to the activities of the operators.

Furthermore, on how the guidelines monitoring the operations of the PSP scheme being adhere to, the research reveals that the guidelines are adhered to as much as possible. For instance, clients were provided with bags for the storage of refuse, also regular weekly meetings were held with the Health Officers at the local government to discuss modalities, the government approved rates and cart pushers integrated into the scheme.

On the assessment of the PSP operators by the citizenry, the study reveals that the citizens rate the assessment of the PSP operators as fair in terms of their operation in the local government area.

Generally, since the introduction of the scheme, its benefits have been seen in these areas. They include ensuring quality environment; transferring the responsibility for clean environment to *the citizens at little or no cost to the state government; saving tax payers money that would have been used for the collection, enhancement of the development of other sectors through the use of money saved and creation of employment opportunities especially for the operators.*

Concluding Remarks

A healthy environment cannot be compromised. The abuse of the society by the waste generated by the society and individuals is becoming a threat to the environment. There are a lot of communicable diseases associated with solid waste, which have adversely, affected the health status of the society. Among such communicable diseases associated with solid waste are; cholera, dysentery, diarrhea, typhoid tularemia, conjunctivitis, histoplasrnasis, among others. These communicable diseases are dangerous and shorten lifespan but could be avoided if wastes are effectively managed.

Government alone cannot be saddled with the management of waste, it is on this note that the activities of the private sector in the management of waste in the Lagos Mainland local government areas of Lagos State are assessed. The findings will be of great importance to stakeholders in waste management.

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