

THE ROLE OF INFORMAL PRIVATE SECTOR IN INTEGRATED SOLID WASTE MANAGEMENT (ISWM) IN LAGOS, NIGERIA - A DEVELOPING COUNTRY.

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Abstract: Lagos the commercial nerve center of Nigeria is the smallest in size with a land area of 3,600 square km, with an approximated population of about 15 million people. The state presently has a very high population density of over 4,000 persons per square kilometer. According to U.N estimation by year 2015, going by 6% growth rate, Lagos will be the 3rd largest mega city in the whole world.

As expected the above statistical data and realities of population explosion, serious urbanization and rapid industrial growth will have direct effect on general waste management systems in the state. The volume of waste being generated by this large population and the industrial sector (it was postulated that over 70% of total industries in Nigeria are based in Lagos State alone) was so enormous and overwhelming to all government agencies involved in the collection, transportation and disposal of solid waste in the state.

The inability of government owned agencies to adequately cope with the upsurge in the volume of municipal solid waste generated led to the creation of a “**vacuum**” in the collection, transportation, recovery, recycling and disposal of solid waste in the state. The vacuum that was created by selective services and irregular management of solid waste was filled by both the formal and informal private sector in solid waste management, while the formal private sector is made up of Registered Companies / enterprises who have the financial strength, some level of technical know-how/experience and are generally mechanized, the informal private sector on the other hand is made up of the **locals** (who constructs carts in large quantities for rentals), **the cart pushers** (who are involved in House-to-House waste collection transportation and recovery), **the scavengers** (This group is involved in the on-site waste recovery or scavenging), **the resource merchants** (This group is involved in the purchase of all recovered recyclables and re-usable waste materials) and **the recyclers** (This are micro and small scale recyclers that converts recovered materials like paper, aluminum, animal by-products, plastic, metal etc to valuable materials and raw materials for the consumption of the industrial sector).

In 1996/1997, the state government attempted to recognize the activities of the formal private sector when it introduced a **pilot private sector participation (PSP) scheme in solid waste management in Somolu and Kosofe Local Government Areas of the state.**

Unfortunately, nothing has so far been done by government to recognize the activities/roles of the informal private sector who are now a major stakeholder in solid waste management in Lagos – Nigeria.

This paper therefore, highlights the all important role of the informal private sector in integrated solid waste management (ISWM) vis-à-vis waste collection, transportation, recovery, recycling, job creation and poverty alleviation and reduction in line with Millennium Development Goals (MDGs) of sustainable development of the environment and reduce to half the world poverty level by year 2015.

Keywords: Cart pushers, Scavengers, Recyclers, Cart builders, Resource merchants, Informal private sector, Integrated solid waste management.

Introduction:

Lagos state is one of the 36 states of Nigeria, though the smallest in size, it is the commercial nerve center of the country and by extension the entire West African sub-region.

As earlier stated in the abstract, the population of this small state is put to about 15 million people, while the United Nations' estimated that by year 2015 based on 6% growth rate the state may be the 3rd largest mega city in the world.

The state is presently divided into 57 local government areas (municipalities). It is pertinent to mention here that, under the present constitution of Federal Republic of Nigeria it is the function /responsibility of the local (municipal) government to manage the waste generated within their respective localities. However, the peculiarity of the metropolitan status of Lagos could not allow this constitutional framework to operate.

At the local government level, as the third tier of government, solid waste management is handled by waste / environmental monitoring unit, with a chief environmental health officer (CEHO) *a.k.a* *WOLE-WOLE* at the helms of affairs under the direct supervision of the executive chairman or head of the local government. An environmental health officer is responsible for policy formulation, implementation, inspection, monitoring and prosecution of defaulters of any environmental offences at that level.

THE STATE GOVERNMENT: MINISTRY OF THE ENVIRONMENT.

The state government through the ministry of the Environment has been overseeing the overall cleanliness and the entire sanitation of the state. It has several departments (like Environmental services, Drainage, Signage and advertisement, Finance, Waste monitoring unit etc) through which it carries out her statutory responsibilities. The ministry is responsible for overall policy formulation, implementation, monitoring, inspection and prosecution of defaulters of all environmental offences throughout the state.

The ministry is also directly involved in the policy implementation through her various dedicated parastatals like Drain ducks- *responsible for the clearance and maintenance of all drainage network in the state*, Lagos state waste management authority (LAWMA) – *Initially responsible for general waste management like waste collection, transportation, storage, disposal and the management of all government owned disposal facilities.*

In the last few years, management of waste has been oscillating among some state government agencies and the local governments. Table 1 shows that solid waste management in the state has oscillated from the local governments to one ministry or the other, even to the office of the Deputy Governor of the state.

These changes could be attributed to incessant political interferences in the past which resulted in solid waste management functions been moved around several ministries and agencies over time. As expected the changes bring about imposition of different institutional solutions to waste management problems. The operational and institutional instability denied the relevant management agencies the benefit of accumulated experience in the management system, which equally dampens staff morals.

Table 1: Institutional changes in the state solid waste management

Years	Name of institution	Supervising Authority
1977 -	Lagos State Refuse Disposal Board (LSRDB)	Ministry of works and Transport
1980 -	Lagos State Waste Disposal Board (LSWDB)	Ministry of works and Transport
1991 -	Lagos State Waste Management Authority (LAWMA)	Ministry of the Environment and Physical Planning (MEPP)
1994 -	Local Government Councils and LAWMA	Local Government and MEPP
1997 -	LAWMA and PSP pilot scheme in Somolu & Kosofe Local government areas	Ministry of the Environment and Physical Planning (MEPP)
1998	Private Sector Participation (PSP) in domestic waste management state-wide and LAWMA handling Industrial Waste	Ministry of the Environment and Physical Planning (MEPP) / Local Governments

1999	Private Sector Participation (PSP) in waste management	All local Governments/ Ministry of the Environment/ Office of the Deputy Governor.
2004	Mega/ major PSP in waste management	Ministry of the Environment/ Office of the Deputy Governor

LAWMA AS AN INSTITUTION

This institution was created around 1977 as Lagos State Refuse Disposal Board [LSRDB] with responsibility of collection and disposal of refuse generated in the State. However, between 1977 and 1991, the agency had undergone several changes both in the name and the functions, it then metamorphosed into what is now known as Lagos State Waste Management Authority [LAWMA]. The change in name and status brought more responsibilities/functions to the organization, these include; collection, transportation and disposal of all waste vis-à-vis the Industrial and domestic waste, garden and agricultural waste, construction waste, clinical and commercial waste etc. Above all the organization has the responsibility of managing all government approved landfill sites throughout the state.

However, as Lagos became urbanized and Industrialized with serious population explosion expected of a commercial nerve center of the largest black African nation. The volume of waste generated on daily basis by this high population, the Industrial sector, etc was so enormous and overwhelming to this agency alone to cope with.

The upsurge in the volume of solid waste generated in the State led to the adoption of selective services by the agency and after which the services became epileptic. As such a vacuum was created.

CONSTRAINTS OF LAWMA AS INSTITUTION OF GOVERNMENT

- Incessant political interferences
- Operational and Institutional instability
- Inadequate funding and equipment
- Non-challant attitudes of staff
- Usage of highly sophisticated equipment, without adequate technical know-how for its maintenance.
- Waste generators (public) not willing to pay for the services, especially when services became epileptic.

PUBLIC AS A FACTOR

The general public who are the waste generators are the first casualty of irregular and epileptic services of government owned agency responsible for waste management in the state. When the waste they generated was not evacuated for a very long time, this act left the various neighborhoods with huge mounds of uncleared garbage and trash.

The nuisance caused by the uncleared waste within the communities led to the public themselves seeking for alternative waste disposal system, hence the entrance of the private sector into solid waste management stream in Lagos State “*necessity they say is the mother of invention*”.

At the early stage of private sector involvement in solid waste management in Lagos State, the neighborhood structure determines the type of private sector involved in the collection, transportation and disposal of their waste. For instance, the formal private sector operated in high-income low population density areas, while the informal private sector like cart pushers operates in low-income high population density areas. This was attributed to the social stratification and wealth distribution of the society. While the high-income neighborhoods can afford to pay the high cost of the formal private sector whose operation is mechanized, the low-income neighborhoods can only afford to pay the cart pushers whose operation is manual and very cheap.

However, with time all that has changed now, as both the formal and informal private sectors operate in both areas now.

The tenements initially accepted the program of solid waste collection, transportation and disposal of government. However, when the services became epileptic and irregular they became disenchanted and prefer to use the cart pushers who are more available than government agencies.

THE ROLES OF INFORMAL PRIVATE SECTOR.

The activities of informal private sector in solid waste management streams in Lagos State have been very vital and overwhelmingly significant in the overall integrated solid waste management practice in the State and the Country at large.

The sector, which encompasses all aspects of, integrated solid waste management practice vis-à-vis collection, transportation, recovery, recycling and merchandise of both recovered and recycled materials is an Institution on it’s own right. They have established a very high network of operation and distribution of their valuables both within and outside the country.

THE CART PUSHERS.

These are the group of informal private sector involved in the house-house waste collection at a fee, using specially built carts.

They were brought into the industry by the ineffectiveness of the government owned agencies responsible for the collection, transportation, and the disposal of waste.

At a stage, they were collecting over 70% of the total waste generated in the State, this they do by house-house collection and transportation of the collected waste to transfer bins strategically placed by government agency.

Figures 1 and 2, shows typical carts when empty and when filled with waste respectively.

This group is also involved in waste recovery; as they go from house-to-house collecting waste at an agreed fee, they also sort and recover reusable and recyclable materials from the waste before disposing the residue.

The non-formalization of the activities of the group has made it almost impossible to have accurate data/records of their activities within the waste management industry. However, they cart away several hundred tons of waste per day and make an average of two thousand six hundred naira (US \$20.00) per day, where as the average basic salary of government staff is about seven thousand five hundred naira (US \$ 57.69) per month. In Lagos State alone, it is estimated that over five thousand (5,000) cart pushers are operating within the industry.



Figure: 1
A typical cart pusher
Pushing an empty cart.



Figure: 2
A typical pusher on his way
to the disposal site.

CART BUILDERS

This is another group of locals who are also playing a major role in the operations of informal private sector in integrated solid waste management. Though very small in number, they are the one that invest their money in the construction of the carts being used by the cart pushers. The number of carts constructed and put for lease/ hire to the cart pusher by individuals ranges from 5 to 50 depending on the financial capacity of each individual involved in the business. The business venture is a very lucrative one with very high return on investment; the cost of renting each cart is between N150.00 (\$1.15) and N250.00 (\$1.92) per day, depending on the area and locality, whereas the cost of constructing a standard cart is put to between N15, 000 and N20, 000.00 (\$115.38 and \$153.84 respectively). Within six months of construction, each cart would have repaid the investment cost with reasonable profit with little or no overhead.

THE SCAVENGERS.

This is the only group /organization so far identified in Lagos State that is involved in both on-site and off-site waste/ resource recovery, they recover re-usable and recyclables materials like plastics, Aluminum, glass, paper, scraps metal, animal wastes like horn, bones etc.

Some of them go from door-to- door to recover re-usable and recyclable materials, while majority limit their operation to the waste brought to the disposal sites.

In some cases, the scavengers also process some of the recovered waste before selling either to the resource merchants or directly to the recycling industries. The processes include washing, burning, etc. Figure 3 shows a scavenger burning recovered electrical cables/ wires to retrieve copper.

Majority of the scavengers live in a shanties or makeshift houses built on and around the disposal sites. Figure 4 shows an aerial view of the houses of the scavengers at one of the government disposal site Olusosun in Lagos state.



Figure: 3

Waste processing (burning) by scavenger to add more value before sales



Figure: 4

Aerial view of the houses of scavengers at Olusosun disposal site in Lagos.

It is a common sight within this community/ neighborhood to see heaps and mountains of recovered materials waiting to be purchased or transported to the recycling companies.

Several million-naira worth's of materials are recovered yearly by over four thousand scavengers within this constituent of informal private sector in integrated solid waste management in Lagos state.

An investigation show that only about 50% of the recovered items serves as raw materials to the industries within Lagos state and the entire country, the remaining 50% is exported to some other countries in Africa like; Ghana Togo, Cameron, Mali, Republic of Niger, Sudan etc, for both industrial and personal use. (Recycling and Re-use)

THE RESOURCE MERCHANTS

This group is made up of traders (merchants) involved in the purchase of all recovered recyclable and re-usable materials from the scavengers. Some members of this group are retired scavengers who cannot scout for materials on the site again due to either age or advancement in financial capability.

They are so wealthy that some of them are involved in the exportation of some of the recovered resources to other countries thereby earning foreign exchange; they are also very influential that they get Local Purchasing Orders (LPOs) from companies to supply recovered materials.

Figures 5 & 6 show tons of recovered materials ready to be supplied by the resource merchants for industrial consumption.



Figure: 5
A merchant sorting heaps of shredded paper waste before supply.



Figure: 6
Tons of plastic waste recovered
Waiting to be transported.

THE RECYCLERS

This is another component of informal private sector that include both the micro and the small scale recycling companies, they convert recovered waste materials like paper, aluminum, animal by-products, plastics scrap metals etc, to valuable materials and raw materials for the consumption of the industrial sector.

The recycling sector is a multi-million-naira investment, where some specialized equipment and machines are used for the conversion of the recovered items to finished products or raw materials that are also used in several other applications. For instance a company in Ikeja area of the state uses the materials in Fig. 5 to produce tissue papers and exercise books as finished products, while another company utilizes the materials in Fig. 6 to produce recycled plastic pellets used in further production of new plastic product like; hangers, toys, plastic hose etc.

Some of these recycled products and raw materials are exportable products through which foreign exchange is obtained.

These industries provide more than Two thousand job opportunities for different cadre of work force.

UNIQUE FEATURES OF THE INFORMAL PRIVATE SECTOR IN ISWM IN LAGOS

- The operators cut across every known nationalities in Nigeria, unlike in some other countries where the entire operatives of the informal private sector in waste management industry is made up of people with the same cultural and religious background.
- About 20% of this group went into the venture to raise some start-up capital for other businesses. Some even sponsor themselves through secondary and tertiary schools.

CONSTRAINTS / PROBLEMS OF THE INFORMAL PRIVATE SECTOR IN ISWM IN LAGOS

- ✓ Non-formalization of the entire activities of the informal private sector in ISWM, which resulted into non-regulation and coordination by government and her agencies.
- ✓ No good accommodation system with good portable water and at least basic sanitation system. The buildings are all makeshift tents.
- ✓ Exposure to several hazards and health risks, due to their mode of operation, which is more of manual than mechanical.
- ✓ No access to adequate medical facility or first aid treatment for any injury sustained during operation.

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I will like to use this medium to acknowledge the efforts of NGOs like **Development Initiatives Network (DIN)** and **Civil Liberties Organization (CLO)** at championing advocacy programs for integrated private sector participation which seeks to create roles for both the formal and informal players in integrated solid waste management in Lagos, Nigeria.

CONCLUSIONS

Having highlighted the all important roles being played by all the components that is involved in effective and efficient integrated solid waste management in Lagos, Nigeria, it is equally pertinent to indicate that all the identified components of informal private sector are all sources of employment, job creation, wealth creation, and distribution, foreign exchange earnings, poverty alleviation and reduction and environmental sustenance through reduction in the quantity of waste to be landfill. Inline with United Nation's Millennium Development Goals (MDGs) of sustainable development of the

environment and reduction of world poverty level to half by year 2015, the same year that Lagos may become the 3rd largest mega city in the world.

Lastly, it is equally important to state that in an attempt to solve environmental problems, adequate efforts should be made to prevent the creation of social problems like; unemployment etc, that could lead to stealing, robbery, terrorism and other vices that can be created when this large and very important informal sector is not formalized.

I will therefore be happy to see the international communities, donor agencies and other organization / foundations supporting advocacy programs on the integrated private sector participation in integrated solid waste management in Lagos, Nigeria, as we all know that the whole world is now a global village.

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