

ASSESSMENT OF STRATEGIC MECHANISM FOR SOLID WASTE MANAGEMENT POLICY IN LAGOS STATE

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Abstract

This study evaluates the factors that affected the strategic implementation of solid waste management in Lagos State and in the process of achieving this objective qualitative and quantitative research methods were adopted for data collection and presentation. The findings of the study show that the poor working environment of the Private Sector Partner operators with Lagos State Government waste agent affected the implementation of the policy, change in administration and non-compliance of the residents are some of the factors that affected the strategic mechanism of solid waste management policy implementation in Lagos State. In addition, cultural factors are also responsible for the inability to accomplish the implementation of the policy in the study areas. The study recommended that LAWMA Academy and other waste management agencies should be provided with adequate finance and skilled labour, undue political interference should be resisted and to create good working relations PSP, also to develop a policy of transparency and accountability of PSP operators with a clear channel of communication between the residents. A good cultural factor, such as public awareness, provision of dust-being, and implementation of waste management laws should be established.

Keywords: Waste Management, Policy Implementation, Management Policy

Introduction

The increasing human population has brought about an increase in waste due to rapid population growth and urbanization, annual waste generation is expected to increase by 73% from 2020 levels to 3.88 billion tonnes in 2050 (World Bank, 2022) every household, and organization, industries generate all sorts of waste ranging from industrial waste, household or municipal waste, chemical waste, agriculture and animal waste, hazardous waste, mining waste, construction waste and medical waste. The amount of waste that is generated can be attributed to economic activities,

population growth, consumption, ineffective use of materials, and poor storage facilities (USEPA,2022).

Some of the mechanisms that were put in place by the government to implement solid waste management policy in the state were the Lagos State Waste Management (LAWMA) Academy and, the Public-Private Partnership (PPP) among others. The change in the administration in Lagos State in 2015 led to the withdrawal of the Private Sector Partnership (PSP) in waste collection and transportation, the PSP was then replaced with the Cleaner Lagos Initiative; the transition caused

much ado for the residents and subsequently led to the surge of about 13, 000 metric tonnes of solid waste on the street, drainage system, roads, parks and other strategic locations in the state (Bertram, 2017).

Statement of the Problem

The challenges of the strategic mechanism of solid waste management policy implementation in Lagos State were traced to what was observed to be a shortage of manpower, and inadequate training which affected the operation. The data were not enough to carry effective implementation of the waste management policies

Research Objectives

The objectives of this study are to evaluate the factors that affect the strategic mechanism of solid waste management policy implementation in Lagos State

Conceptual Clarification of Solid Waste

Pongrácz (2002) also defined waste as any unwanted material intentionally thrown away for disposal. However, after the sorting of waste, some wastes might become a valuable resource to others. Solid waste means useless and unwanted products in the solid state derived from various activities and discarded by society. Solid wastes are generated as a result of production processes or arise from the domestic or commercial sector or when objects or materials are discarded after use. Sharma (2019), his work, defined solid waste as unwanted or undesired material generated by the normal activities of households including, but not limited to, food waste, food packaging, glass bottles, plastics, clothing, newspapers, and magazines.

Solid Waste Management

When waste is not properly managed, it becomes harmful and toxic to society and it wreaks havoc such as flood, erosion, climate change, pollution,

and other environmental and health issues when it is properly managed it becomes a source of income, employment, source of energy among other benefits; the effect of waste on the society depends on the effectiveness and efficiency of waste management.

Solid waste management is the collecting, treating, and disposing of solid material that is discarded because it has served its purpose or is no longer useful (Nathanson, 2022). For wastes to be properly managed there is a need to ensure that they are properly collected from the source and transported to the dumpsite. In some cases, solid waste like medical waste is treated before they are being disposed of to ensure that such waste has been properly detoxified. In some cases, the waste generators separate the waste into various materials from where they are collected for recycling by the recycling industries (Amasuomo & Baird, 2016).

(Howlett & Cashore, 2014). describe solid waste management as the effective supervision, handling, keeping, collection, conveying, treatment, and disposal of solid waste in a manner that safeguards the environment and the public. Solid waste management should not be seen as a process that involves the waste management authority alone but as a process that involves every individual from the source to the final stage of its disposal.

Public Policy and Policy Implementation

When issues arise in society, various actors are involved in other to checkmate the issue. The magnitude and nature of the issue will determine the type of actor that will be involved in the techno-political process of articulating and matching their various goalsto achieve a purpose (Howlett & Cashore, 2014). In the aspect of waste management, the actors involved include the government, private sector, residents, and civil society; they will all come together to proffer a lasting and sustainable solution to the issue of

waste management and the policy will make provision for the role that is meant to be played by each actor.

One thing is to formulate policy and the other is to implement the policy. When policies are being formulated, various elements like leadership, awareness, resources, structures, and mechanisms need to be put in place for the policy to achieve its purpose. Policy implementation is the process by which the government and others carry out the goals and objectives outlined in policy pronouncements (Van Meter & Van Horn, 1975). The others in this aspect, involve the relevant stakeholders such as private investors and the people that the policy will affect.

According to Khan (2016), Policy implementation involves translating the goals and objectives of a policy into action. The goal of solid waste management policy is to ensure that solid waste is properly managed, becomes a source of revenue and that waste within the society is reduced to the barest minimum. Buse et al. 2005, also define policy implementation as the process of turning policy into practice. However, it is common to observe a 'gap' between what was planned and what occurs as a result of policy implementation.

Solid Waste Management Policy

Waste is generated in all sectors of society and for the policy to be effective, there has to be a partnership of waste management agencies with other ministries or agencies but the policy should be designed carefully so that it does not impact the policy of another public domain (Tripathi et al., 2022). Solid waste management policy may influence the policy in other public sector such as transport, environment, and public health; a careful assessment should be made on a priority basis to avoid policy impingement, rather a path should be created for a collaborative policy (Tripathi et al., 2022). Some of the challenges faced by waste management in Lagos are the availability of land for the creation of more

dumpsites, transportation of waste to the dumpsite, awareness programs among other challenges; a collaboration among sectors such as transportation, education, environment, land, and other relevant sector will give credence to solid waste management policy.

Strategic Mechanism

Demartini (2013) defined Strategic mechanism as the channel responsible for the efficient and effective translation of policy into action. The policy is more often than not in the form of law or written agreement that needs to be put into action for it to affect the society; the strategic mechanism is what convey the policy into action. Strategic mechanisms are the tools used to carry out policy enforcement (Dewan, 2004). Solid waste management policy focuses on what to be done to ensure proper solid waste management and to curb the menace of waste in society; in other to achieve this, there has to be a process, technique, or system for achieving a result called strategic mechanism which will focus more on how solid waste management policy is being implemented (Sravan, n.d.). A policy without a mechanism is like a university without students; hence, for policy to be effective and efficient, it requires an effective and efficient mechanism. Solid waste management policy is not an exception; it requires a mechanism that ensures the policy triumphs. The strategic mechanisms that are identified for the course of this study are environmental sanitation, LAWMA academy, Trust Fund, and Public Sector Partnership (PSP).

LAWMA Academy

Some of the core objectives of solid waste management policy are to provide new avenues for an elite waste education program that will alter the social structure, 28encourage environmental stewardship, and open people's eyes to the financial potential of solid waste management (Oluchi, 2020); this birthed LAWMA Academy.

LAWMA Academy is an educational arm of LAWMA that is saddled with the responsibility to educate members of the public on ways to manage their waste and give them access to rich information on solid waste in Lagos State. LAWMA Academy also provides certification courses, lectures, internships, conferences, summits, specialty training, summer schools, and seminars and also partners with both private and public institutions in order to educate their members on waste management. The purpose of LAWMA Academy is to ensure that there is effective and efficient solid waste education for both young and adults, waste management innovations, encourage research on solid waste management, build solid waste entrepreneurs, encourage investment in solid waste, enhance awareness and understanding about waste management, establish a hub where individual can connect and exchange ideas, and promote practices.

Concession and Licensing

One of the major problems of waste management in Lagos is the indiscriminate disposal of waste to the residents of Lagos give their waste to cart pushers and illegal waste collectors who in turn dump the waste at roadsides, streets, and drainage channels. As part of the effort to curb the menace of indiscriminate disposal of waste in Lagos, the policy made it compulsory that "no waste collection without a license" and that anyone willing to collect waste, manage drainage, recycle, operate landfills, street cleaning among other waste related activities must apply for the license.

A concession agreement is a contract that gives a company the right to operate a solid waste-related business within the jurisdiction of Lagos State subject to particular terms as stipulated by law (Kenton, 2020). OECD in 2006 also defined a concession as a grant to a private firm of the right to operate a defined infrastructure service and to receive revenues deriving from it (OECD, 2006). Government at times is also constrained by

resources, and considering the cost of solid waste management, it is considered necessary to concede or license some of these operations to the private sector while the government provides modality for operations to ensure that the purpose of service delivery is not jeopardized for exclusive profit making.

A concession is an agreement that gives the right of operation to the private sector in order to ensure that governance is not curtailed by resources. After the concession is awarded, a license will be issued to the private organization to certify that the government has given the organization the right to engage in waste business within the state. Concession and licensing are mechanisms that are used to control illegal waste managers within the state and also to ensure that the activity of waste management is effectively and efficiently managed within the state.

Private Sector Partnership (PSP)

The purpose of concession and licensing is to ensure that the activities of the private sector are backed and regulated by law. Public Sector Partnership (PSP) is a partnership between LAWMA and the private sector in the delivery of goods or services related to waste to the public (Sadran, 2017). The PSP engages in solid waste activities such as recycling, collection, and transportation of waste, sweeping of streets and roads, cleaning of canals and drainage, and management of solid waste management facilities.

Private-sector partnerships involve collaboration between LAWMA and a private-sector company that can be used to finance, build, and operate projects, such as collection and transportation of waste, dumpsite management, facilities rehabilitation, recycling and solid waste management awareness and education (Brock & Kazel, 2022). Lagos State as the commercial centre and the most populated state is presumed to generate the highest amount of waste in Nigeria and it will be difficult for the government to

collect and transport waste itself without the support of the private sector.

PSPs are mechanisms for the government to implement solid waste management policy by using the resources and expertise of the private sector (World Bank, 2020). The private sectors are encouraged to get trucks for waste collection and transportation and they are also encouraged to invest in another aspect of solid waste management such as recycling which will make solid waste management more efficient and effective.

Review of Lagos State Solid Waste Management Policy

The Lagos State Solid Waste Management Policy is one of the policies that are enclosed in the Environmental Management and Protection Policy of 2017. Lagos State Solid Waste Management Policy was signed into law in 2017 and it is the latest policy of solid waste management policy in Lagos State.

Section 41 of the policy defines the basic terms that were used by the police and it also discusses the terrain the policy will cover. The policy covers solid waste from domestic property, residential homes, a mobile home or caravans, and educational institutions like universities, colleges of education, and polytechnics. The policy also covers industrial and commercial waste in the form of solid form that emanates from any factory, transportation hub, communication hub, public institution, medical facility, and the like.

Section 42 of the policy makes provision for the establishment of Lagos State Waste Management Authority (LAWMA); section 43 of the policy entails the appointment and composition of members of the board; section 44 of the policy makes provision for the composition of members of the board. The board shall consist of a chairman, a representative of the office of the Governor, a representative of a community-based organization, one local government area chairman,

each from the 3 senatorial districts, a representative of the commissioner of environment and Local Government and Community Affairs, a representative of the private sector and representative of the department of civil engineering from Lagos State University; the government shall appoint the chairman from the member of the board.

Section 45 of the policy makes provision for the tenure office of the board member. The member of the board shall hold office for a term of four years and may be reappointed for another term of four years and the board member shall serve on a part-time basis except for General Manager who shall serve on a full-time basis. Section 46 makes provision for the cessation office of the board members. Section 47 discusses the remuneration of the board member while section 48 makes provision for the power of the board. Sections 49 to 54 of the policy discuss the meeting, quorum of the meeting, and other meeting-related issues. Section 55 discusses the common seal to be used and it is the role of the General Manager and the board to determine the seal to be used.

The function of LAWMA was discussed in sections 56 to 57 of the policy and the function includes collaboration with relevant ministries and organizations, collection and disposal of waste, monitoring the impact of waste on the environment, inspection of waste management facilities, removal and disposal of animal carcass from public space, collation of data related to waste in the state, promotion of research in solid waste and promotion of private investment in waste management among others.

Sections 58 and 59 of the policy make provision for the appointment of tenure of offices and the function of the General Manager and Secretary of the Authority. Section 60 reveals that the authority shall have the power to maintain a sustainable staff pension and lastly section 61 discusses the power of the authority at the public utilities levy (Oluchi, 2020)

Theoretical framework Process theory

According to Sabatier & Weible (2017), various scholars have contributed to the development of process theory, among which are Robinson (1963), Dye (1966), Sharkansky (1970), and Hofferbert (1974).

Process theory opined that the processes by which public policy is created, carried out, and modified should be researched and studied rather than the content of the policy itself. The process theory advocates think that the content of the policy is an implication of the policy-making process and rather than dwell so much on the content we should instead focus on the process that birthed the policy as this will ensure that quality policy is formulated and implemented.

Even when it is impossible to prove that the causal agents are sufficient to cause the outcome, process theories can nonetheless offer compelling explanations because process theory accommodates empirical situations in which the outcome of interest is not the inevitable outcome of conditions that are necessary for it to occur (Soh & Markus, n.d.). Process theory also addresses the issue of policy change, policy shouldn't be changed because there is a change of administration or change in government, policy change should involve an agreed process backed by law that will ensure quality rather than mediocrity as a result of change in government or administration. Process theory is primarily concerned with describing and comprehending how specific outcomes are produced from a series of events while taking specific inputs into account (Niederman et al., 2018). In other to achieve a quality policy that will accommodate change and also ensure quality service delivery, the making process should involve agenda setting, formulation of proposals, policy legitimization, implementing policy, and evaluating policy (Ayamba, 2021).

Waste Management Theory

The premise behind waste management theory is a unified body of knowledge about waste and waste management that buttresses how waste management should prevent waste from harming human health and the environment and encourages resource optimization (Pongrácz et al., 2004). The waste management theory focuses on the entirety of waste, the concept of waste, and the process through which waste should be collected, processed, and recycled and also ensures that waste becomes a wealth rather than a source of harm and hazards. This study adopts waste management theory as one of the theories for this study because it will help to analyze how waste can be managed based on their categories and also ensures that waste brings about economic benefit rather than erosion, pollution, flood, health issues, and other environmental issues.

Waste management theory contributes to the redefinition of waste management as strategic planning, recommending alternatives, preventing environmental contamination and resource depletion, reducing the quantity and toxicity of waste creation by selecting the best treatment while taking legal and legislative considerations into account and also assessing the effects and implications of environmental policy (Pongrácz, 2002).

The theory does not only give credence to waste but also gives consideration to the laws and policies and how they affect waste management. This theory also provides the framework that unifies essential knowledge such as engineering, policy-making, administrators, environmental science, ecology, and other essential knowledge that is related to waste and waste management. This will improve the quality of waste management and give all relevant fields an input to contribute to the issue of waste management.

Justification for Adopting Process Theory and Waste Management Theory

Various policies are being made by successive governments towards waste management but the policies are riddled with a lack of continuity and faulty policy processes which will affect the quality of the policy. More so, solid waste management is not being done in its entirety, solid waste management is beyond picking up waste and dumping it at landfills or dumping sites, it should be seen as a tool for economic development and as a menace that needs to be curtailed to reduced its environmental and socioeconomic damage.

Process policy will give preference to all relevant stakeholders to participate in the policy formulation down to the last stage of evaluation and also there will be a modality for policy change. Process policy prescribes that policy be changed based on needs and not based on political affiliations or aspirations. While waste management theory will help us to identify the best type of waste management option for various waste that is being generated, it predicts the outcome of the waste management option that is in use and also helps us to know how and when to select and integrate waste management options.

Hence, this study will adopt both process theory and waste management theory. The process theory will ensure that a due potent process with an input of waste

management practicality and knowledge is followed before a policy is being formulated and implemented which will bring about quality policy. The purpose of using both theories (process and waste management) is to ensure that

Presentation of Results

a quality waste management system is achieved with legitimacy which will metamorphose into a quality service delivery in waste management.

Research Methodology

Kothari (2004) defined methodology as the theoretical groundwork for figuring out which technique or collection of processes can be used in a particular circumstance. Research methodology is the systematic, theoretical analysis of the procedures applied to a field of study (Kothari, 2004). This study considers the use of both quantitative and qualitative data and will adopt a descriptive survey design. The descriptive survey is being considered for this study because the researcher will be able to make use of the key important instruments for the study which are the questionnaire and interview through the field survey.

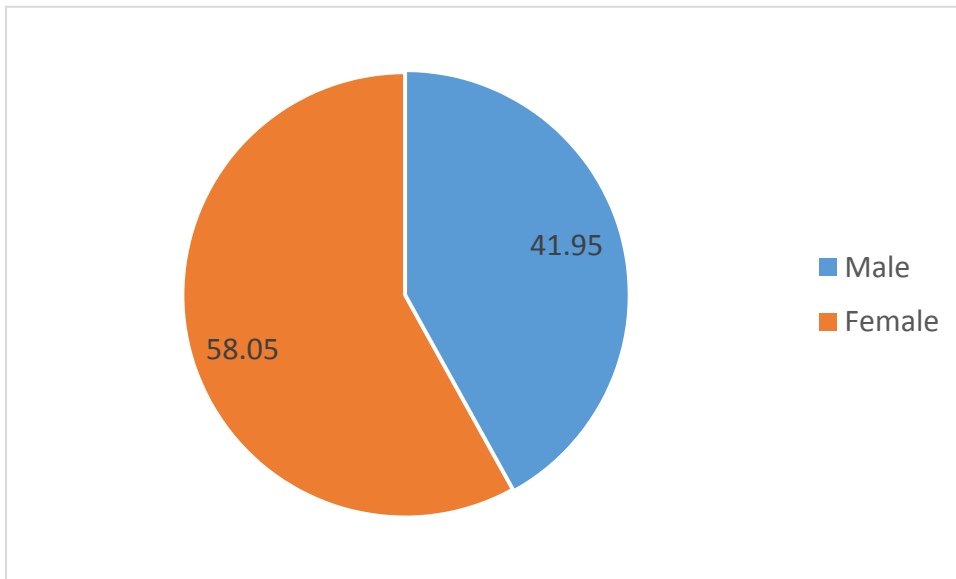
The population of LAWMA is Four Hundred and Sixty-Eight (468) staff and the sampling size that was determined is Two Hundred and Fourteen (214) using the Krejcie and Morgan (1970) sampling table. While selected interviewees will be comprised of LAWMA Management Staff, Private Sector Partners, Lagos State Residents, and Civil Society.

The data collected from the respondents through a questionnaire will be presented in a pie-chart format using simple percentages. The data collected from the respondents through interviews will be presented through a thematic analysis under each pie chart used to present the quantitative data.

Section A: Demographic Variables

Pie-chart 1.1

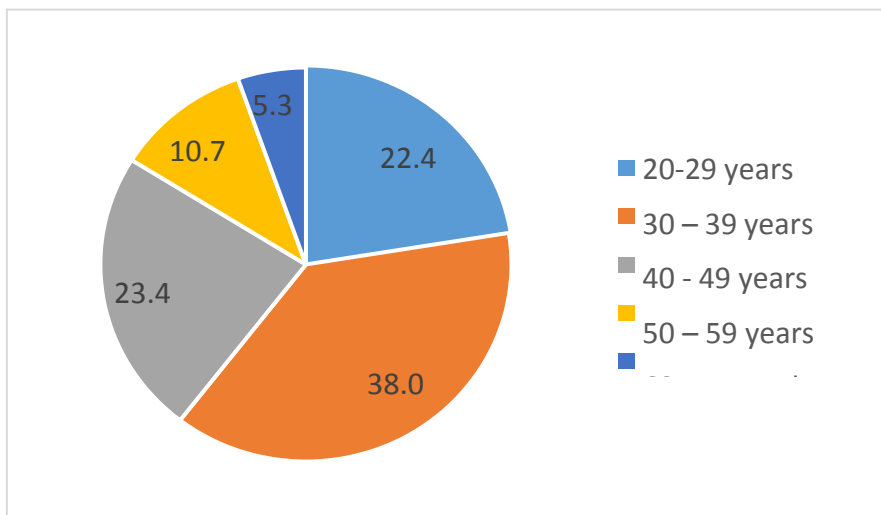
Gender



Source: Field Reports, 2024

The pie chart above reveals that 41.95% of the respondents are male, while 58.05% of the respondents are female.

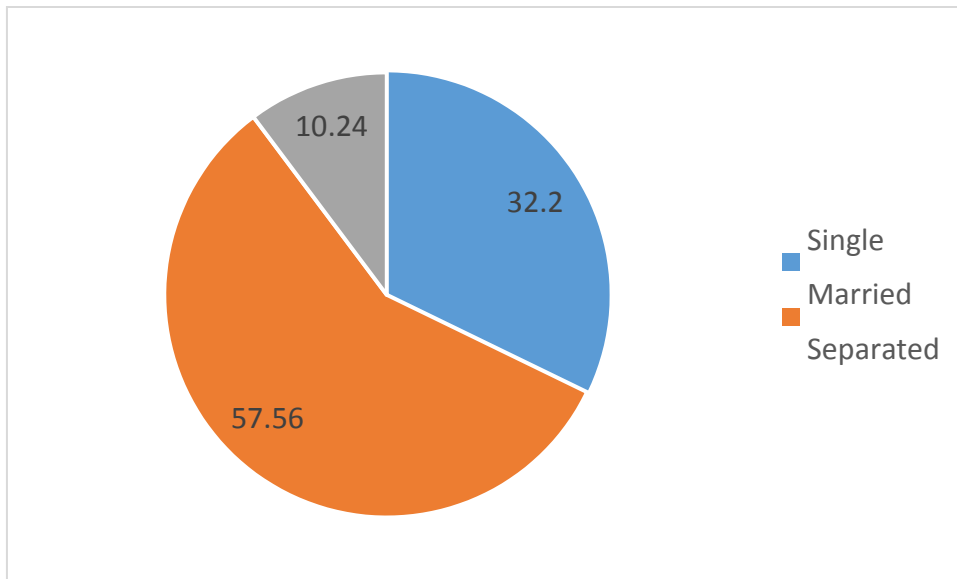
Pie-chart 1.2 Age



Source: Field Reports, 2024
Pie-chart 1.2 shows that 22.44% of the respondents are within the age of 20-29 years, 38.05% of the respondents are within the age of 30-39 years, 23.41% of the respondents are within the age 40 - 49 years,

10.73% of the respondents are with the age of 50-59 years while 5.37% are within the age of 60 years and above. The majority of the respondents are between the age of 30-39 years.

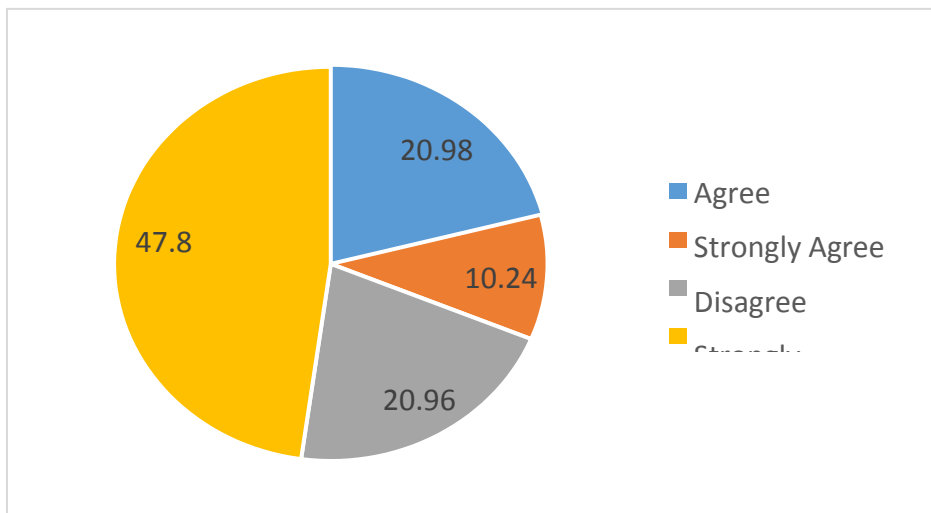
Pie-chart 1.3 Marital Status



Source: Field Reports, 2024

Pie-chart 1.3 reveals that 32.20% of the respondents are single, 57.56% of the respondents are married and 10.24 respondents are separated.

Pie-chart 2.1 Change in administration affect the operations of LAWMA Academy

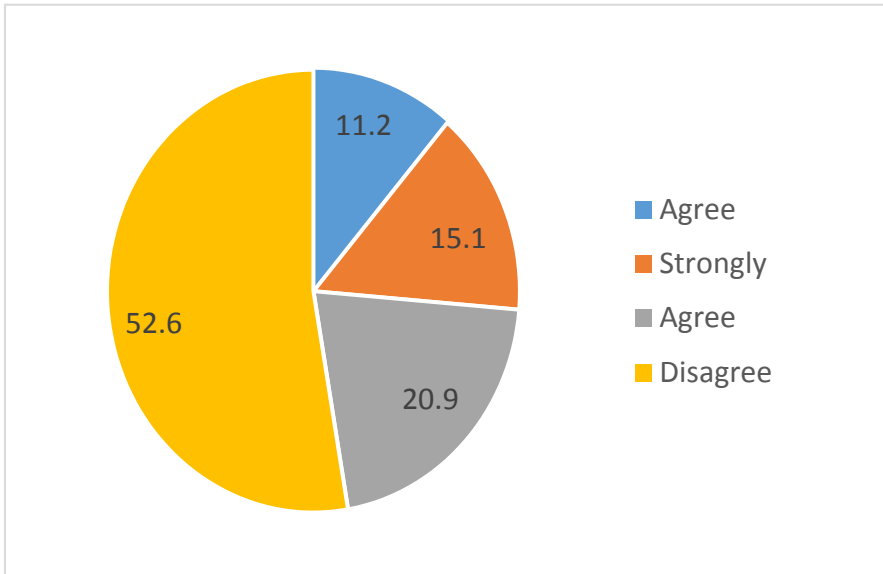


Source: Field Reports, 2024

Pie-chart 2.1 reveals that 20.98% of the respondents agree, 10.24% strongly agree, 20.96% disagree and 47.80% strongly disagree. The figure above clearly reveals that the majority of the respondents strongly disagree that change in administration affects the operations of LAWMA Academy.

One of the respondents who is a staff of LAWMA reveals that "since the establishment of LAWMA Academy, the academy has not witnessed a change in administration and so far, the current administration support LAWMA Academy" (Interview Respondent 5, November 15, 2023).

Pie-chart 2.2 LAWMA Academy has adequate trained and skilled personnel



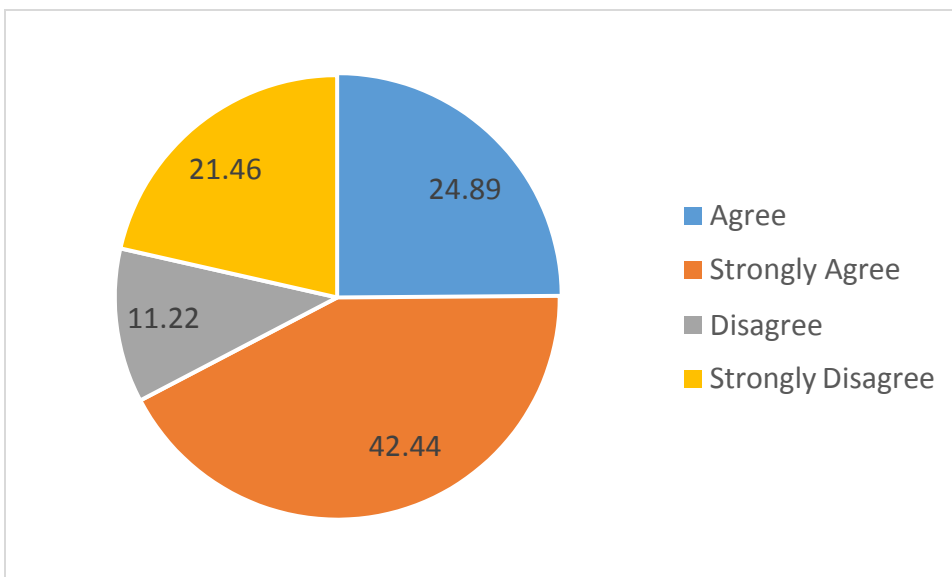
Source: Field Reports, 2024

Pie-chart 4.2 shows that 11.22% of the respondents agree, 15.12% strongly agree, 20.98% disagree and 52.68% strongly disagree. The figure above clearly reveals that the majority of respondents strongly disagree that LAWMA Academy has adequately trained and skilled personnel.

"LAWMA Academy does not have adequate staff. Considering the task that LAWMA Academy needs to complete; it needs adequate skilled staff to operate optimally". (Interview Respondent 3, November 14, 2023).

According to the interview that was conducted with one of the respondents, it was revealed that

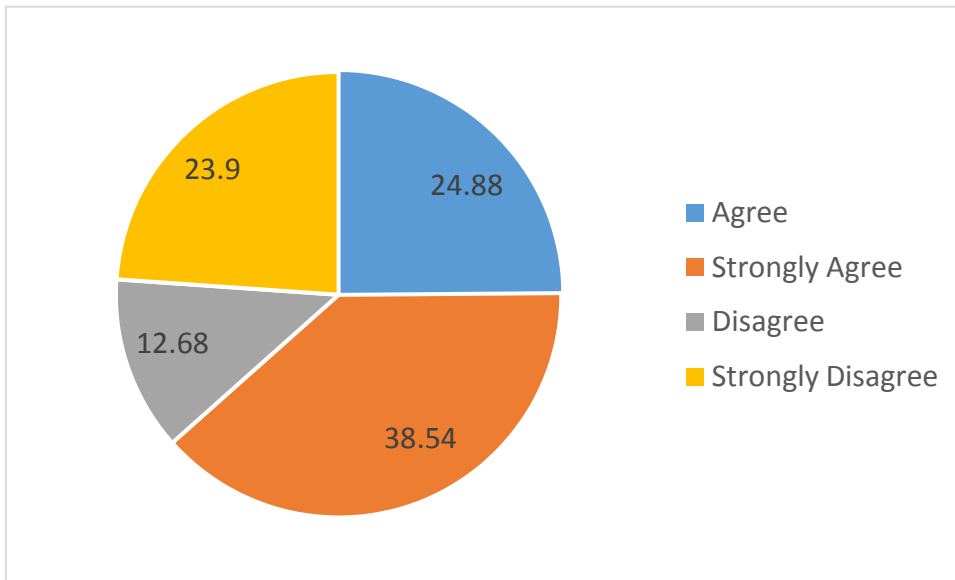
Pie-chart 2.3 LAWMA Academy is constrained by finance



Source: Field Reports, 2024

Pie-chart 2.3 discloses that 24.89% of the respondents agree, 42.44% strongly agree, 11.22% disagree and 21.446% strongly disagree. From the figure above, the majority of the respondents strongly agree that LAWMA Academy is hindered by finance.

Pie-chart 2.5 Application for concession and license is seamless



Source: Field Reports, 2024

The pie chart above reveals that 23.90% of the respondents agree, 34.63% strongly agree, 15.61% disagree and 25.85% strongly disagree. From the figure above, the majority of the respondents agree that there is transparency in the concession and licensing process.

According to one of the PSP operators that were interviewed, he said, "The process of licensing involves a clear process and when he followed the process, he got the required approval for the license" (Interview Respondent 12, November 17, 2024)

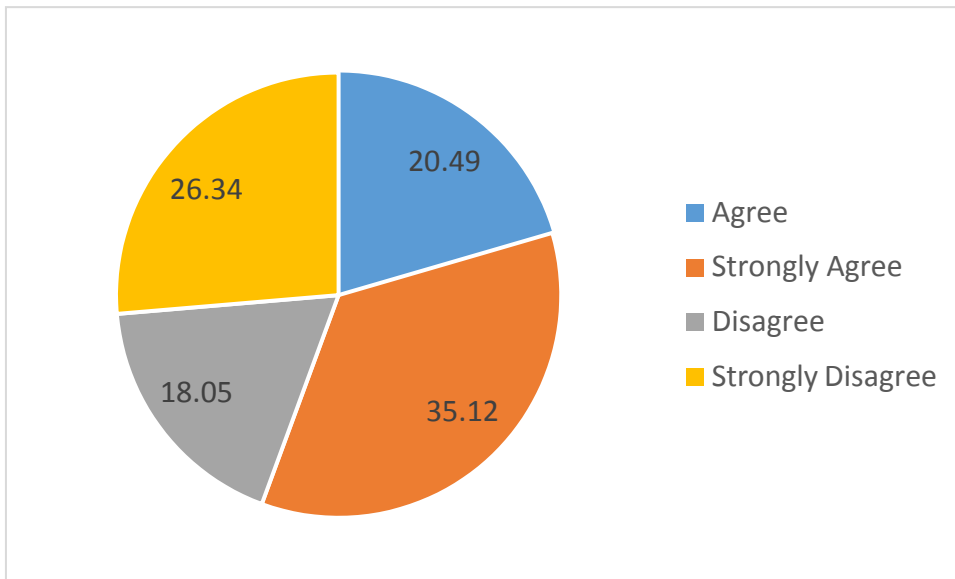
).

Pie-chart 2.5 discloses that 24.88% of the respondents agree, 38.54% strongly agree, 12.68% disagree and 23.90% strongly disagree. From the table above,

majority of the respondents strongly agree that the application for concession and license is seamless.

According to one of the PSP operators that were interviewed, he said, "The process of licensing involves a clear process, which made the licensing process seamless and when he followed the process, he got the required approval to get the license without a glitch" (Interview Respondent 12, November 17, 2023

Pie-chart 2.6 Political affiliation influence approval of concession and license



Source: Field Reports, 2024

Source: Field Reports, 2024

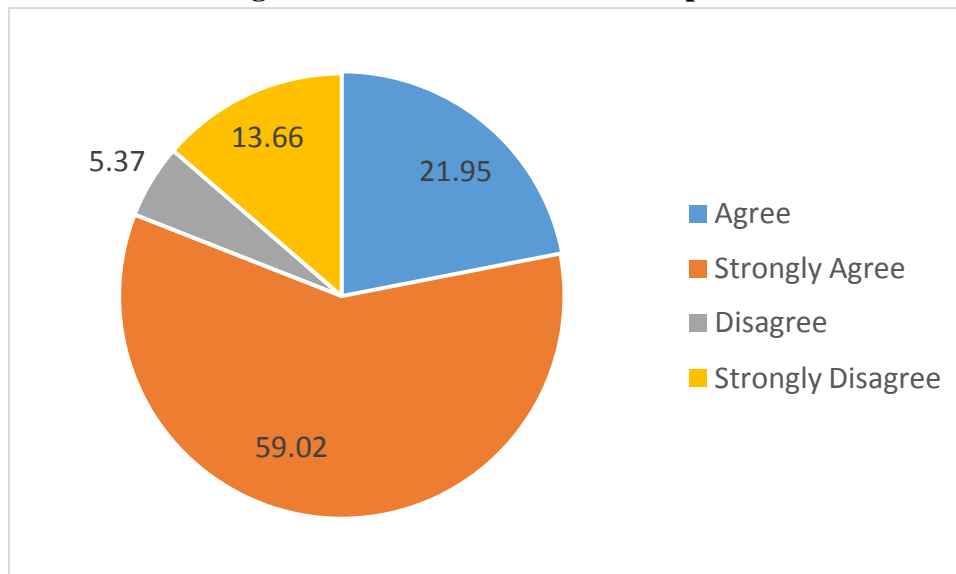
Pie-chart 4.6 reveals that 20.49% of the respondents agree, 35.12% strongly agree, 18.05% disagree and 26.34% strongly disagree. The figure above clearly reveals that the majority of the respondents strongly agree that political affiliation influences approval of concession and license.

One of the respondents revealed that when he was having issues getting the license; he had to involve his political allies who helped him to influence the

process. When the researcher pressed further, the respondents refused to disclose the type of issue they encountered during the licensing process. (Interview Respondent 13, November 17, 2023).

Another respondent was quizzed, and the respondents said 'the political affiliation may influence the process because it is hard to separate administration from politics and people will always find every possible means to manipulate the system in order to evade doing the right thing' (Interview Respondent 5, November 14, 2023).

Pie-chart 2.7 Change in administration affect the operations of Private Sector Partnership (PSP)

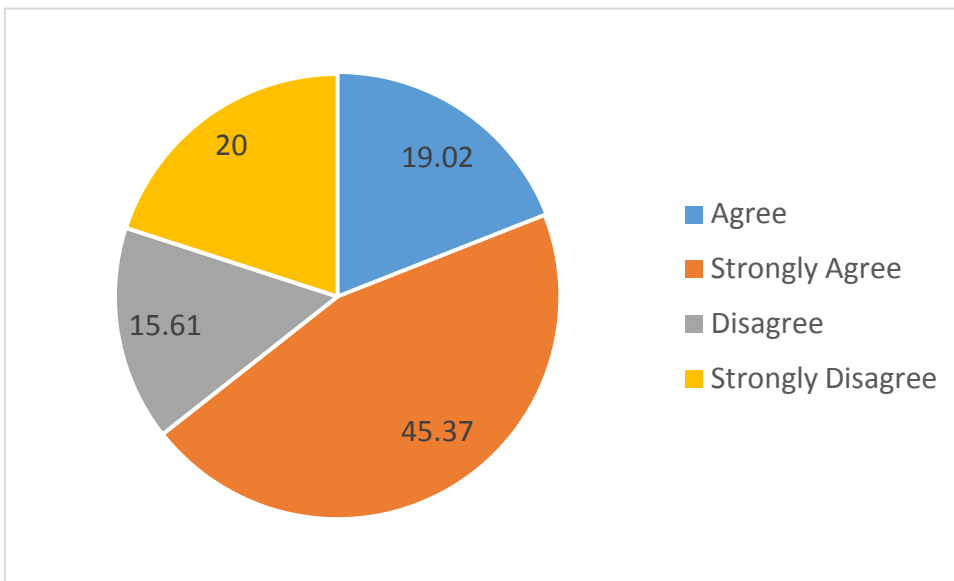


Source: Field Reports, 2024

The pie chart above reveals that 21.95% of the respondents agree, 59.02% strongly agree, 5.37% disagree and 13.66% strongly disagree. The table above clearly reveals that changes in administration affect the operations of Private Sector Partnership (PSP).

One of the respondents who is a staff of one of the PSP operators discloses that "the change in administration in 2015 affected them and it almost rendered them bankrupt before they were reinstated back by the present administration in 2019" (Interview Respondent 14, November 17, 2022).

Pie-chart 2.8 Poor work environment affect the operations of the Private Sector Partnership (PSP)

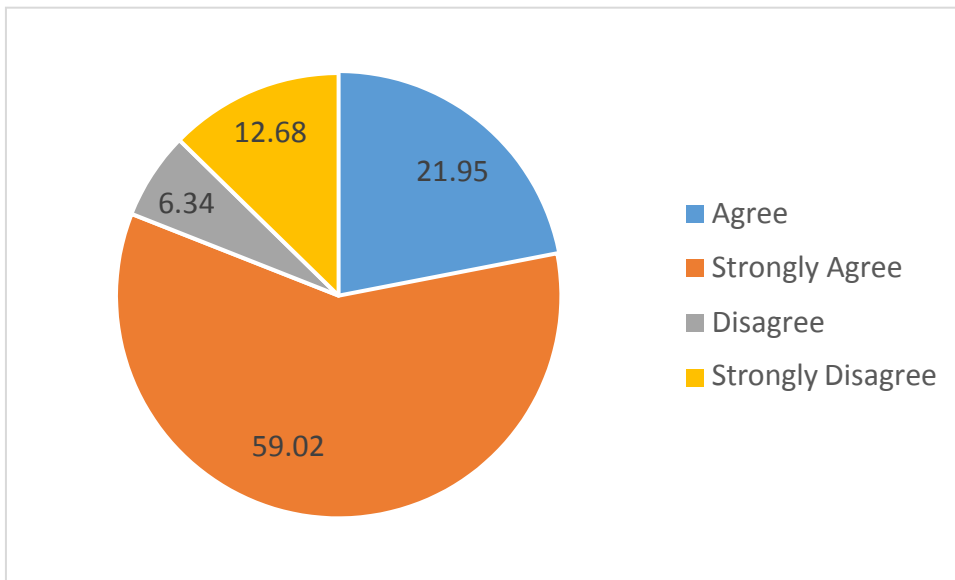


Source: Field Reports, 2024

The pie chart above reveals that 19.02% of the respondents agree, 45.37% strongly agree, 15.61% disagree and 20% strongly disagree. From the table above, the majority of the respondents strongly agree that a poor work environment affects the operations of the Private Sector Partnership (PSP).

One of the respondents in her interview said, "Their work environment is not conducive and they ought to have good and conducive facilities like restaurant, quality health insurance, shower stand, comfortable and vented office for the truck drivers and workers picking up waste to relax" (Interview Respondent 15, November 17, 2022).

Pie-chart 2.9 Non-compliance of the resident affect the operations of Private Sector Partnership (PSP)



Source: Field Reports, 2024

Pie-chart 4.9 clearly shows that 21.95% of the respondents agree, 59.02% strongly agree, 6.34% disagree and 12.68% strongly disagree. From the figure above, the majority of the respondents strongly agree that Non-compliance of the residents affects the operations of Private Sector Partnership (PSP).

A respondent during the interview revealed that "when residents refuse to pay their waste bill, it will affect the PSP because they need the money for running costs, maintain their trucks, and pay their workers. The respondents furthered that when residents do not pay their bills, it doesn't motivate such operators to operate in such areas" (Interview Respondent 15, November 17, 2023).

Findings and Recommendations

The findings clearly show that change in administration affects PSP operation but does not affect LAWMA Academy the findings show that LAWMA Academy does not have adequate manpower to carry out their task and they are also constrained by inadequate finances. The findings further reveal that concession and licensing are

transparent and seamless processes but can be influenced by political affiliation. Hence, poor working environment of the PSP operators, undue political interference, change

in administration and non-compliance of the residents are factors that affect the strategic mechanism of solid waste management policy implementation in Lagos State.

Recommendations

This study recommends the following for the improvement of waste management in Lagos State.

The state government should ensure that LAWMA Academy is provided with adequate finance and skilled labourers

There should not be political interference in the implementation of waste management policies in the state.

Transparency and accountability of PSP operators should be enhanced in the process of discharging the responsibility.

Subventions should be given to PSP operators that are affected by the non-compliance of resident they service

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