

FACILITIES MANAGEMENT FOR AFRICAN URBAN MARKETPLACES: ATTITUDES TOWARD WASTE MANAGEMENT

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Facilities Management (FM) entails enhancing the performance of users in a set environment by optimising organisational targets. It involves managing user behaviour, provision of pleasant user experience and an aim to improve facilities performance by the operators. This paper focuses on the African urban marketplace environment (MPE) as a facility, chosen due to its cultural significance within the African setting and its effect on the behaviour of the society in which it exists. The environmental management theme is a reoccurring issue in this facility, with solid waste management of concern. There is evidence to suggest that the performance of the facility hinges on attitudinal actions of the stakeholders towards waste. This paper therefore aims to provide an understanding of the dynamics of marketplaces in order to identify key underlying issues that affect attitudes of direct users of the marketplace. The study adopted the use of literature searches, observation and semi-structured interviews. As furtherance to this study, the findings will be used to develop a model for facilities managers to enhance the quality of the facility in order to improve their performance. As an added benefit, it is anticipated that the change in attitudes of the users of MPE could have a significant effect on their general attitude towards waste beyond the African marketplace environment.

Keywords: African marketplace, attitude, facilities management, solid waste management, stakeholders

INTRODUCTION

The African marketplace is a space with deep cultural significance. It possesses a unique heritage and is considered to be the focal point of economic and social life in African societies (Wambugu, 1995). Everyone irrespective of their social status has contact with the marketplace in one way or the other (Ladipo et al., 1990). Apart from trading activities, people meet at the marketplace in Africa for various reasons, which include; settling of disputes, meeting friends and next of kin, catching up on the latest news, exchanging of ideas, learning, religious activities, traditional

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festivals, political activities and social gatherings (Nelson, 1998, Henrich, 2006). Based on its configuration, it provides an opportunity for most organisations and government programmes such as immunisation programmes, family life education, political campaigns aimed at educating and reaching out to the public to be carried out at the marketplace (Wambugu, 1995).

One significant challenge faced in the management of the marketplace is solid waste management. The market managers are faced with a challenge that is a matter of public concern that calls for government intervention, which is how best to manage solid waste in marketplaces in order to provide a safe and clean environment.

In Nigeria, municipal solid waste management (MSWM) is a challenge faced by all stakeholders and tiers of government (Ogwueleka, 2009, Olanrewaju and Ilemobade, 2009, Abila and Kantola, 2013). Waste is usually not segregated and is littered, dumped and heaped indiscriminately along major roads (as illustrated in Figure 1), in open spaces, stream channels and river banks (Ogbonna et al., 2007). The practice is no different in the marketplace environment (MPE) as markets are characterised by littering and fly dumping as illustrated in the image on the right hand side in Figure 1.



Figure 1: Indiscriminate Dumping along Roads and Marketplaces (Source: Author)

This causes environmental pollution, poses a risk to public health and defaces the physical environment. Usually, when it rains, most of the waste is washed away thereby causing blockage to drains and culverts and also pollution to ground and surface water (Ayotamuno and Gobo, 2004).

Research into marketplaces has tended to focus on social and economic impacts (Hill, 1966, Good, 1973, Smith, 1979, Jerome and Ogunkola,

2000). Some researchers have also discussed the opportunities the marketplace presents as a vehicle for developmental strategies and interventions (Ladipo et al., 1990, Nezcic and Kerr, 1996, Morales, 2011). However, there is a paucity of research that analyses the marketplace as a facility needing adequate management, especially with regards to the management of solid waste. Where research has been offered on solid waste management of marketplaces, it has focused on the composition of market waste (Bammeke and Sridhar, 1989), the introduction of sustainable waste management practices for markets (Olaseha et al., 2005) and waste from related facilities such as abattoirs (Emeka et al., 2009, WorldBank, 2009). This paper argues that in MPEs, effective facilities management is essential to the mitigation of solid waste pollution and its associated health risks.

Facilities Management (FM) is defined by the British Institution of Facilities Management (BIFM) as “the integration of processes within an organisation to maintain and develop the agreed services which support and improve the effectiveness of its primary activities”. In other words, FM entails the appropriate integration and maintenance of systems that form part of an organisation and will result in the provision of the right environment that aids the efficiency of the organisation and at the same time provide a pleasant environment for the users/occupants of the facility in order to improve their performance. Thus, the aim of FM essentially is to provide services that support the organisation to achieve its primary objectives.

The practice of FM is dynamic and requires the facilities manager to have a clear understanding of the core business or primary objective of the organisation taking into consideration the environment in which the organisation exist in order to develop an appropriate FM strategy. Waste management is a key component of FM. Waste not properly managed in facilities could result in environmental pollution with direct consequence to the performance of the user with detrimental effect to achieving the objectives set or the purpose of the facility.

In the management of marketplaces, literature suggests that the lack of adequate solid waste infrastructure and the attitude of the users are key contributory factors to inadequate solid waste management (Adekunle, 2012). It is argued that the absence of the necessary infrastructure for effective waste management practice is a major barrier that has encouraged poor attitudes toward waste (Babayemi and Dauda, 2010, Achi et al., 2012, Stanley et al., 2012). Other researchers have argued that, even with the provision of the necessary infrastructure, such poor attitudes still exist amongst most urban dwellers (Agwu, 2012). Barr (2007) argues that in as much as the presence of an effective economic, technical, legal and environmental infrastructure is important, in order to have an effective waste management strategy, it is also fundamental to identify and clearly have an understanding of factors that influence the stakeholders' attitudes and behaviour toward solid waste. However, a fairly technocratic approach to the issues of solid waste management

which dominates the literature envisages that generally for every problem there is a technical fix (Schubeler et al., 1996, Barton et al., 2008, Asase et al., 2009, Achi et al., 2012). To affect better waste management practices, a number of fixes are suggested, including: improving infrastructure and access (Ezeah and Roberts, 2012), adopting new technologies (Kyessi and Mwakalinga, 2009), the sharpening and enforcement of regulations (Asase et al., 2009, Momodu et al., 2011), and the implementation of new financial models and incentives (Stanley et al., 2012). However, Barr (2007) has noted that there is still a pressing need to have an understanding of the underlying factors that influence people's attitudes toward waste management. Based upon in-depth research, this paper will bridge this gap of knowledge identified by Barr (2007).

RESEARCH QUESTIONS

As a result of the existing gap in knowledge regarding an understanding of the factors that underpin people's attitudes towards waste management in MPEs, this paper seeks to answer as to:

- Why do we still have markets where waste is a problem? It seeks to identify the key underlying issues that affect attitudes of the key stakeholders towards waste.

RESEARCH METHODOLOGY AND CONTEXTS

Existing research relating to solid waste management in marketplaces or related facilities have mainly utilised qualitative or quantitative or both research designs: The World Bank (2009) study relied on a qualitative design, utilising observation as the data collection technique. It was argued that this method was most appropriate for this study because the research area was under-studied and lacked data.

Olaseha et al. (2005) adopted a quasi-experimental survey including interventions. The study utilised a mixed data collection technique that utilised observation, interviews and questionnaires as the primary data collection technique. Research by Bammeke and Sridhar (1989) utilised a quantitative design using base line data and experiments in order to determine the characteristics of waste in twelve markets in Ibadan, Nigeria.

The study described in this paper adopted the qualitative research design, adopting a single case study design with multiple cases. The essence of using multiple cases is to collect data that will provide an in-depth understanding of the dynamics of urban marketplaces with particular reference to solid waste management given that the research area has not been given considerable attention. The study utilised the use of observation and semi-structured face-to-face interviews as data collection techniques. The data collection technique was most suitable in collecting

data that will provide contemporary data on the dynamics of the MPE and waste management practice in MPEs.

The study area Port Harcourt, usually referred to as the “garden city” is the capital of Rivers State and located in the Niger Delta region of Nigeria. It is the third largest city in the southern part of Nigeria and is regarded as one of Nigeria’s most important industrial and commercial cities (Ayotamuno et al., 2010). Port Harcourt has an annual mean temperature of 29°C (Ideriah et al., 2006), and is bounded mainly in the eastern, western and southern sides by swamps, creeks and rivers (Ayotamuno and Gobo, 2004). Port Harcourt city is formed of two Local Government Areas; Port Harcourt city and Obio/Akpor Local Government Areas (Agwu, 2012) and has an estimated population of 2,340,000 (Demographia, 2015).

Port Harcourt is the operational base for multinational oil and gas businesses. The finding and extraction of oil in the Niger Delta in 1950’s led to rapid influx of migrants (UN-Habitat, 2009). With a heavy concentration of human population as well as industrial and commercial activities, land use became complex and the solid waste generated increased in volume and variety (Ayotamuno and Gobo, 2004).

A World Bank (2009) global report on livestock markets, slaughterhouses and related waste management practices identified a number of challenges developing countries face in the management of solid waste pollution. The study focussed on the generation, treatment and disposal of livestock and slaughter waste with the aim of developing global guidelines for potential World Bank interventions in the livestock market and slaughter sector. The study established that research on waste management in African marketplaces is an area that has been neglected despite the high risk to public health and environmental problems posed by waste in this facility. This paper thus seeks to develop an understanding of how the market culture influences the attitude of market users towards solid waste management.

Upon preliminary enquiries from the Local Government Council, the number of authorised markets in Port Harcourt was established. Four cases that met the study criteria – market frequency, location, and market type were selected. The markets were selected because they were mixed markets that operated at least six days a week and they are located in the core areas of the city. The locations of the cases are illustrated on the map in Figure 2.

The selected cases comprised of two old markets and two remodelled markets. For the purpose of this study they will be referred to as; old market (South), old market (North), remodelled market (South) and remodelled market (North).

This paper reports the preliminary findings from the qualitative data obtained of MPEs in Port Harcourt, Nigeria. It adopts a combined pragmatist and critical realist approach, thus providing a new perspective to analysing marketplaces (as facilities) and also providing an understanding as to how social structures determine the attitudes of users

toward solid waste management. The philosophy of the pragmatist is that the world can be viewed in different ways and research can be undertaken via whatever method or strategy that enables valid research findings (Creswell, 2009). While the critical realist recognises the position of social structures and are of the opinion that we can only understand the world if we first understand these social structures (Bryman, 2012).

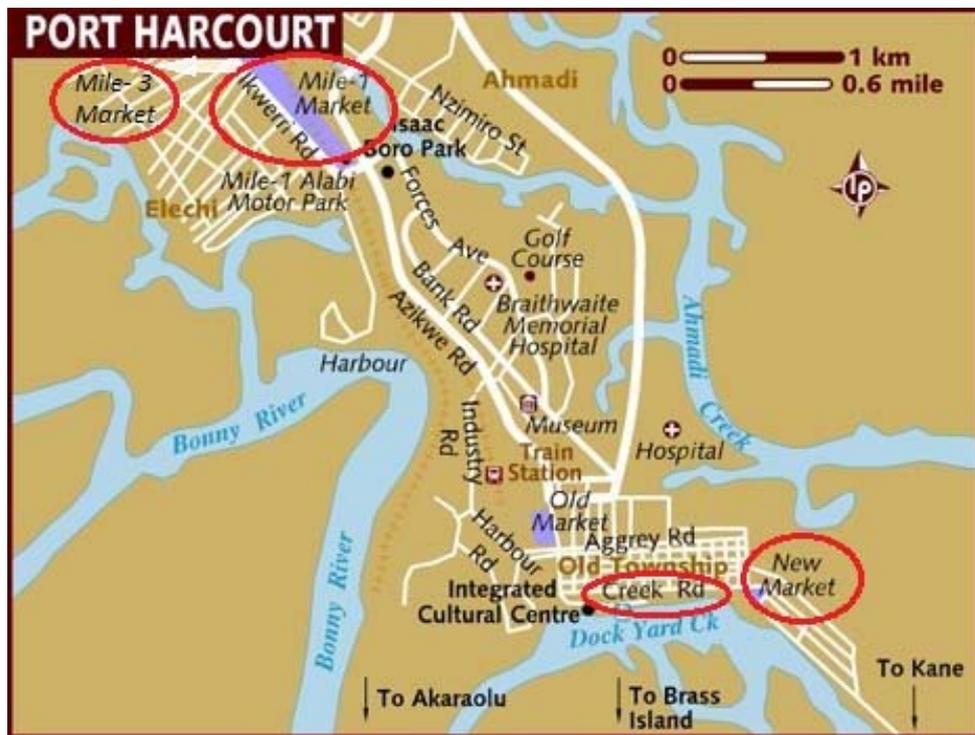


Figure 2: Map of Port Harcourt City indicating Case Study Areas.

The research was conducted over a period of eight weeks, and included observations of MPEs and series of semi-structured face-to-face interviews with key stakeholders in order to provide an in-depth understanding of the dynamics and the settings of MPEs with particular reference to solid waste management practices. The data collection process began with preliminary enquiry so as to select cases that met the study criteria and determine the structure of market management.

After initial enquiries, primary data collection began with observation, which was divided into two phases. Phase 1 was the fact-finding phase which entails collating information or intelligence gathering such as the physical settings of the MPE, the facilities, and management operations etc. This enabled the researcher to map out the strategy and activities for the next phase. Phase 2 was the actual observation aimed at gaining insights into the settings and dynamics of the MPE and to determine the current solid waste management practices at MPE. A total of thirty six days were spent undertaking this phase.

Face-to-face interviews were conducted after data from the observation was collated. The essence of this was to incorporate queries that evolved in the course of carrying out the observations. The interviewees were categorised into five (5) groups: (a) buyers and visitors (n=12), (b) traders (n=15), (c) regulators, including market superintendents, chairmen of market management committee and associations, and State sanitation authority officers (n=6), (d) waste handlers and contractors (n=3), and sensitisation groups, including health organisations, banks, and political parties (n=6). A total of forty three interviews were recorded of which thirty nine were useful for analysis. The interviews were transcribed and further organised and analysed with the application of thematic coding, a qualitative analytical tool in order to identify themes, concepts and relationships within the data and also between the data and literature. The process was enhanced with the use of computer-assisted qualitative data analysis software – NVivo.

SUMMARY OF FINDINGS

MPE Infrastructure and Services

In the urban areas, the State Government builds markets and transfers its ownership to the Local Government Council (LGC). In managing markets, the LGC deploys their staff referred to as market superintendents to markets and their duties includes; the allocation of stores/sheds, record keeping, collection of revenue (this includes monthly store rentage, sanitation and security fee), provision of a conducive trade environment, and addressing complaints arising in the marketplace.

The MPE has an association made of a chairman and executive members. The chairman and members of the executive are elected by the traders to oversee their welfare and also act as representative of the traders in dealing with the Local Government Council. The MPE also has a market council made of elderly and long standing traders. They assist in decision making regarding market welfare.

Old Markets

The old markets comprise of a combination of lock-up shops and open sheds and are predominantly dominated by women. A section of the market is represented in Figure 3.

The old markets are not connected to the national grid supplying electricity nor to the public mains of water supply or independent water supply (borehole). Most traders that can afford it, have generator plants for the supply of electricity and traders who stay until dark (late evenings) rely on torchlights or “*bush lanterns*” (Lanterns with exposed flames fuelled with kerosene - paraffin). The traders rely on “*mai ruwa*” (People who move around with water for sale mostly in 20 litres jerry cans transported in hand pushed trucks) or pure water (Sachet water which is usually 500 millilitres per sachet) for their daily water supply. The

markets are serviced with open drainage and there are no car parks for shoppers or solid waste receptacles.



Figure 3: A Section of Old Market South and North Respectively.

The old markets are in poor condition as they are characterised by very old and shabby sheds, congested space, uneven and muddy paths and external roads, open and filthy drainages, waste litters and fly dumping at various corners of the market. As a result of the deplorable state of the external road, traders display their goods on the road thereby obstructing vehicular movements.

New Markets

The remodelled markets comprises of a combination of lock-up shops and open sheds as shown in Figure 4.



Figure 4: Remodelled Market South and North respectively.

The new markets are serviced with; toilets, water (internal borehole installed on premises), electricity from national grid, covered drains, car park, fire hose and extinguishers, banks, cafeteria and refuse dump areas.

Generally, they are in good condition and offer a convenient environment for trading activities.

WASTE HANDLING PRACTICES

Data from interviews reveal that waste collection approach in marketplaces as described by the waste handlers is in the evenings either by truck placement or the evacuation of waste at authorised areas. However, findings and observation reveal that marketplaces are busy and are at the peak of transactions and other non-trade activities between the hours of 9:00am till 5:00pm. It is thus marketplace custom that waste is disposed of in the mornings or/and evenings. Traders do not attend to their waste till they close for the day or more often before the start of trade activities the following morning. This is contrary to waste collection times and has an implication on solid waste management practices in marketplaces as the resulting effect is indiscriminate dumping and littering.

Convenience and collection times are key issues raised by the stakeholders regarding their waste management practice. Extract from interviews reveal that the timing for waste disposal is inconveniencing as a result of the busy nature of market activities. These are significant factors responsible for the act of indiscriminate disposal and the poor handling of waste by traders. These factors were also established in studies by Ogwueleka (2009), Regassa et al. (2011) and Ayuba et al. (2013) as one of the factors responsible for the inefficient solid waste management practices in African cities.

Further investigation also revealed the practice of re-use and recycling by traders within the marketplaces. Materials such as cartons, polythene, shells of seafood, remnant from dried seafood, plastic buckets and bottles are the common materials re-used or recycled in old markets. Discussions with traders revealed that, the traders do not necessarily have knowledge of these elements of waste management or understand the implication of their actions regarding waste management. But further discussions with traders revealed that these practices are based on economic benefits and it aids their trade activities as materials such as cartons can be reused to display or package goods purchased by buyers.

Consultation

Communication and consultation between waste handlers and market stakeholders is a key contributory factor to the problem of solid waste pollution in MPEs. Waste handlers disclosed that the market users are not always consulted before decisions are made regarding waste collection services. However, decisions to aid waste management practices, such as bagging of waste, are passed on to the market users via the market leaders. One of the waste handlers gave an example of closing unauthorised dump areas; a decision that did not require consultation with the stakeholders. This presents a classic problem of implementation.

It depicts how much consideration is given to stakeholders before decisions are made regarding waste at marketplaces. Extracts from interviews with the waste handlers reveals proper consideration is not taken into account as to why and what is responsible for the actions of the waste generators. This also suggests the use of discretionary power; a decision based on the waste handler's perception as to what is "right" for effective management of waste at the marketplace.

Although Guerrero et al. (2013), in a study of effective waste management in cities in developing countries recommend that in order to have a well-functioning waste management system, communication transfer between the various stakeholders is of high importance. What this research has shown is that 'policy-making community' is wider and communication flows between parties in different directions and is asymmetric. Waste handlers exercise power in the disposal of solid waste materials. This means we need to understand the everyday practices of those who implement waste handling procedures as part of the customary practices and social structures of the MPE. They are a part of the problem and part of the solution. The actions of the waste handlers reveals the problematic use of top-to-bottom approach in the management of waste in marketplaces and confirms the findings of Palczynski (2009) that the involvement of stakeholders during the decision making and throughout the waste management process is an important element that is lacking in African societies.

CONCLUSIONS

This paper has provided insights to the setting and dynamics on a selection of marketplaces in Africa with emphasis on solid waste management. The study identified the understanding of marketplace custom as regards the disposal of waste as a significant factor in enhancing waste management practices in marketplaces. The research reveals that addressing waste management concerns in marketplaces requires an in-depth understanding of market custom and operations. It also reveals that the concerns of inappropriate handling of waste in markets are highly associated with non-consultation of market users regarding waste management approaches.

The implication of the current approach to solid waste management in markets indicates that, we will continue to have markets in which waste is a problem which raises concerns regarding hygiene and risk to public health.

Findings from data indicates that currently, marketplace customs are not duly considered while developing waste management strategies and makes a case for the introduction of FM approach in the management of markets.

The FM approach provides that in developing strategies for organisations, the facilities manager requires a clear understanding of the nature of the business, culture and environment in which the business exist in order to

develop appropriate strategies. This in turn will enhance the use of the facility and provide a pleasant user experience.

Furtherance to this study is the identification of the factors that could bring about a shift in the attitudes of the market stakeholders and those factors that should be prioritised by the facilities manager in the management of waste in marketplaces.

Interestingly, the data collection for the study went seamlessly except for the insecurity issues surrounding the study area. Care had to be taken and strategies put in place to address the insecurity concerns. Also, as identified by Hill (1963), gaining the attention of the direct market users (especially the traders) is one of the major challenges faced in the data collection phase. When they (traders) are not negotiating or concluding transactions, they are either chatting or having heated conversations with fellow traders and their hands are not idle as they could be seen either peeling off the husk of their goods, sieving their goods, washing their goods or putting a perfect touch to their goods on display. It thus seem inconveniencing for them to attend to any other duty not related to trade.

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