



Earning Income from Waste in Low-Income Countries: A Case of Scavengers in Mzuzu City, Malawi.

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ABSTRACT

Rapid population growth and urbanisation have led to an increase in demand for products in developing countries and this has eventually resulted into an increase in solid waste, such as paper, plastics, bottles, glass and metals. Poor management of solid waste poses a risk of causing harm to human health and the environment. Despite being risky, some people have found dumped solid waste as a source of income. This paper explores how scavengers earn income from solid waste, in Mzuzu city, Malawi. The study employed a qualitative case study design. The study was conducted in Mzuzu city, Malawi. Homogenous and expert purposive sampling techniques were applied to select participants and the sample size was eighteen. The data was generated using interviews, focus group discussions and observations. Data was analysed thematically. The study found that solid waste in Mzuzu city is generated due to commercial activities taking place in the city and some of the solid waste comes from residential homes. It was also established that people known as scavengers earn income from selling metals retrieved from dumped solid waste. Despite not being recognized formally, the scavengers have turned the practice of selling metals as a business and are able to earn a living out of it. The study recommends that, scavengers should be considered as part of stakeholders in the waste management programme, in that they help in enabling solid waste to be recycled thereby, reducing solid waste that could cause harm to the environment.

Keywords: Income, Solid Waste, Scavenger, Mzuzu City

1.0 Introduction

Globally, there is an increase in waste production due to an increase in population and urbanisation and this has brought about poor waste management (Nwosu and Chukwueloka, 2020; Holm, Chunga, Mallory, Hutching and Parker, 2021; US.EPA, 2020; UNEP, 2015). It is projected that by 2025, 4.3 billion urban residents will generate about 1.42kg of waste per capita per day (Maskey, 2018). Further, Wasteaid and ICCM (2020) predict that global production of municipal solid waste will increase by an average 70% by 2050, and this will have a great effect on the ecosystem and human health.

Waste management is a global problem in that it affects all countries in one way or another. For instance, South Africa is one of the major contributors of solid waste. South Africa generates about 108 million tonnes of waste (Kubanza and Simatele, (2019). Similarly, Nigeria is considered as one of the largest producers of waste in Africa. With a population of more than 180 million, Nigeria generates more waste resulting into a big challenge in managing the waste, despite having sound policies and regulations of solid waste management.

Solid waste brings a lot of problems to human as well as the environment if not properly managed. Chireshe (2020) established that some of the problems associated with poor solid waste management in Harare city included diseases such as diarrhoea, malaria, typhoid, dysentery, skin infections, fever, ground water pollution, bad odours and distortion of aesthetic value of suburbs. Poor management of solid waste in cities, may also act as a breeding ground for disease causing organisms (Wasteaid and ICCM, 2020; Tsai *et al.*, 2020; Tausova *et al.*, 2020; Kubanza and Simatele, 2019; Maskey, 2018).

Despite the health risks associated with solid waste, some people earn income from solid waste. For instance, in South Africa there are 18,000 to 20,000 people, who rely on solid waste as a source of income. People who manage waste are known by different names such as waste collectors, waste pickers, garbage handlers and scavenger (Chireshe, 2020; Marelo and Helwege).

Despite playing an important role in solid waste management, waste pickers are not formally recognized and at times get victimized. There is need to embrace the informal waste pickers and integrate them as part of stakeholders in solid waste management (Parishwad, Shukla and Mitkari, 2016). This paper explores how people earn income from solid waste in Mzuzu city, Malawi, which is a low-income country.

1.1 Theoretical Framework

This study was anchored by the Waste Management Theory. The theory was founded in 2004 by three scholars Eva Pongrácz, Paul Phillips and Riitta Keiski (Pongrácz, 2006). The Waste Management Theory was founded on the premise that waste management must be aimed at preventing waste from causing harm to human health and the environment by promoting resource use optimisation (Pongrácz, Phillips and Keiski, 2006). This theory was chosen to be applied in this study due to the fact that, the theory provides practical approaches to the problem of solid waste management.

The Waste Management Theory underscores that solid waste need to be managed properly, in such a way that it does not cause harm to both humans and the environment. One way of preventing harm is to reduce production of waste and by creating useful products (non-wastes) and also turning waste into non-waste (Prongracz, 2006; Beleya, Xin-Ci, Ling-Wen, 2019). It has been observed that, if the waste disposal site is not carefully managed, it results into environmental and socioeconomic problems (Asefa and Mindahun, 2009; Akmal and Jamil, 2021). Therefore, people who earn a living from waste should ensure that they take precautionary measures that would enable them to be safe from being harmed with the very waste which gives them income.

2. Research Methodology

The study employed a qualitative case study research design. The case study design allowed the researcher get in-depth data from the participants, in their own setting (Ndengu, 2012). The study was conducted in Mzuzu city, Malawi. Mzuzu city, is in the northern part of Malawi, with a total population of about 240,000 people and it covers an area of 146 square kilometres (NSO, 2020). The study had a sample size of 18, and the number was determined after reaching a saturation point. The participants were selected using homogeneous and expert sampling techniques. The sampling techniques enabled the researcher to select participants who had practical experience and were involved in solid waste management in Mzuzu city (Ndengu, 2012). Data was generated using semi-structured interviews, focus group discussions and observation and it was analysed thematically. Trustworthiness of the findings was achieved through multiple data generation techniques which lead to triangulation.

3. Results and Discussion

Using thematic analysis, themes that emerged were; sources of solid waste, scavengers, and earning income from solid waste and experiences of being a scavenger.

3.1 Sources of Solid Waste

The study established that solid waste in Mzuzu city, originates mainly from economic activities taking place in the central business district (CBD) and also from residential households. This is supported by the participants', responses indicated below:

... if you see waste in town, it is due to activities happening by people doing business (Participant 4, 10.01.2023).

Another participant added that;

... waste is created when many who sale beans, maize; when going home, they just leave their waste there (Participant 4, 19.01.2023).

Solid waste in Mzuzu city, is not only generated form business activities, but it also comes from residential locations. Participant 2, articulates that;

... a lot of these [wastes] come from homes in close locations (Participant 2, 17.01.2023).

The findings revealed that commercial activities and residential locations are the two main sources of solid waste in Mzuzu city. The findings are in line with a study by Sharma Jain (2020) who observed that solid waste in cities is created due to commercial activities that take place in the cities. Similarly, Nwosu and Chukwueloka (2020) concurs with Sharma and Jain (2020) that solid waste generated in cities is a result of economic activities and from home usage. Solid waste found in Mzuzu city, is generated due to commercial activities happening in the CBD and it also comes from residential homes.

3.2 Who Are Scavengers?

One of the participants described who Scavengers are, in the extracts below:

.... Scavengers are people who retrieve metals from dumped solid waste and sale (Participant 8, 18.02.2023).

Scavengers work on solid waste by retrieving metals. As a result, metals are hardly found at the dumping site. One of the participants narrated that;

... you cannot find metals there. Scavengers pick metals and sale at Luwinga market (Participant 4, 04.09.2023).

3.3 Experience of Being a Scavenger

Some Scavengers have been in the solid waste sorting business for some time, and this has been part and parcel of their life. When asked, as for how long he has been doing this. One of the participants expressed that;

... aaah I started before opening this dumping site. I started when the dumping site was at Mchengautuba [old dumping site], its where I started. At the time we were selling 20 Malawi kwacha per kg [about 20 cents], but now its hot business (Participant 9, 18.02.2023).

When the participant was asked whether scavenging is profitable, he replied that;

... yes, it is. Because, I am able to pay fees for my child at a private school, I also pay rent and I survive because of this business (Participant 9, 18.02.2023).

Scavenging or waste picking is a means by which some people earn a living by picking metals from the dumped waste and sale as indicated in 3.4 below. This is similar to a study by Chireshe (2020), who allege that, scavenging is a common practice in Africa cities. For instance, in South Africa about 20,000 waste pickers, rely on solid waste as their source of income. Therefore, is important to recognize the role waste pickers play, in solid waste management, as they help in reducing solid waste, in that the metals picked are used in recycling process (Parishwad et al., 2016).

3.4 Earning Income from Solid Waste

After picking the metals, scavengers sale at different prices depending on the type of metal. One of the scavengers expressed that;

Some [metals] it is 200 Malawi Kwacha [about \$0.2 US] per kg. Some like aluminium it is 1,200 kwacha [about \$1.2 US]. There are some [metals] per kg is 6,000 kwacha [about \$6 US]; some 2,000 [\$2 US] per kg. We pick one by one, metals for making wiring for electrical installation and if we gather 1 kg, it is 6,000 kwacha [\$6 US] (Participant 9, 18.02.2023).

The findings established that the prices of metals differ. The price of the metals can go as far as 6 US dollars and as low as 1 US dollar. The finding concurs with what Chireshe (2020) found, that scavengers play an important role in waste management in that they help to reduce the accumulation of metals that have been eventually dumped. Marelllo and Helwege (2014) also concurs with Chireshe (2020) arguing that scavengers help to reduce the quantity of recyclable waste dumped.

Conclusion and Recommendations

The study findings established that solid waste generated in Mzuzu city, is due to commercial activities and it also comes from residential homes. It was also revealed that some people earn income by selling metals, which they get from dumped solid waste and these people are known as scavengers. Despite not being recognized scavengers are stakeholders, in solid waste management as such they need to be recognized formally.

Therefore, it is important to recognize the role played by scavengers and incorporate them as stakeholders in the solid waste management. As such, there is need to assist the scavengers so that they carry out their activities safely, as stipulated by the Waste Management Theory. The Waste Management Theory postulates that solid waste management need to be done in such a way that it prevents harm to human beings and the environment, by turning solid waste into non-waste products through recycling.

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