Working Conditions and Career Aspirations of Waste Pickers in Lagos State

ISAAC JACOB OMOSIMUA, OLURINOLA ISAIAH OLURANTI OBINDAH GERSHON, ADEROUNMU BUSAYO Department of Economics, Covenant University, NIGERIA

Abstract: In many cities of third world countries, managing waste represents a beehive of activities of human scavengers searching for re-usable or recyclable items that are either consumed or sold to generate funds for personal and family upkeep since alternative decent employment are not available for them in the formal employment sector. Many of these waste pickers are young, work without the necessary health and safety apparatus, exposing them to injury and various health hazards. This study therefore investigated the situation and career aspirations of waste pickers in Lagos state, Nigeria. Using the questionnaire approach, structured, semi-structured and open-ended questions were asked and SPSS package was used to descriptively analyze the data collected and interpreted. The result showed that 98% of the selfemployed waste pickers are conscious of their personal safety. Sadly, 82% of those employed by entrepreneurs are not provided with safety kits. About 68% of the waste pickers earn above №2, 500 (\$8.2) per day of work and while 55.6% are engaged in waste picking to raise funds for their dream businesses, 37.9%, 0.81% and 4.03% desire to be self-employed, secure formal job and further their education respectively. This study recommends that the Nigerian government should organize sensitization programs that aim at creating awareness about waste picking as a decent job and the potentials that it has in the actualization of future career aspiration of myriads of unemployed youths in Nigeria. Also, protective gear as clothing, gloves and boots should be given to waste pickers to better their working conditions.

KeyWords: Working conditions, Career aspirations, Informal Sector, Waste Pickers.

1. Introduction

Some characteristics of developing nations are backlog in waste collection coverage, open dumps and unsanitary environment caused by improper disposal of waste (Oteng-Ababio, 2014; Yavini, and Musa, 2013). This means that developing countries are faced with a huge amount of waste which affects human health, the environment and safety directly. Nigeria is the most populous country in Africa, a home to over 200 million people which accounts for about 47% of the total population in West Africa (UNFPA, 2019). Given the large population size of the Nigerian state, large tonnages of waste are generated daily (Smangele, Simatele, and Kubanza 2019). Improper disposal of solid waste is an environmental challenge in Nigeria and this challenge has made drainage systems and sewers to get blocked, causing preventable flood, painting a picture of an environmental catastrophe (Wale, 2019).

The activities of waste pickers involve the recovery of items such as metals, glass, polythene materials, plastic, irons, shopping bags, hospital drip bags, paper, cellular phones, wood, wire, batteries, and textile for sale. Therefore, they are notable for reducing dumpsite waste to only organic waste which can be used as fertilizers and other materials not considered useful to them (Afon, 2012).

Waste pickers among many others transform domestic and industrial waste into wealth (Ogbonna, and Mikailu, 2019). Their activities which reduce dumpsite waste to only organic waste, directly or indirectly help agencies responsible for waste management by reducing their cost. Waste pickers are very visible; in fact, the most notable element in the informal recycling scene which hinges around five major activities: waste separation, collection, transportation, processing of recyclables and finally trading of the processed materials (Ojeda-Benitez, Armijo-de-Vega and Ramirez-Bareto, 2002; Ogbonna, and Mikailu, 2019). The recycling process begins with waste picking, an activity in which a large number of people especially in developing countries find great employment opportunity. Recycling in Nigeria is gradually gaining grounds, making notable contribution to poverty reduction and job creation (Nzeadibe and Iwuoha, 2008).

It is widely known that waste pickers impact positively on the local economy of any country, however, these waste pickers are susceptible to injuries for lack of the necessary personal protective equipment (PPE) and are thus faced with pitiable working conditions. The local and state government departments are not known to be providing any form of support to waste pickers and so, they suffer from a wide range of illnesses, such as lead poisoning, skin diseases, respiratory infections, gastrointestinal diseases, and cuts from objects that are sharp (Cointreau-Levine, 2000). Their health condition is largely at risk because of the unsafe and hazardous means by which they carry out their activities. They are often found working where decaying organic wastes including highly toxic medical waste are deposited (Awopetu, Awopetu, Sample,

Olufiropo, Awokola, Fullen, and Hammond, 2014).

Despite the economic, environmental and public health benefits which societies enjoy from waste picking activities, waste pickers are usually marginalized; and as a result of their low earnings, degrading social status, negative experience with health and educational care, the career aspirations of waste pickers have not been the focus of many researchers (Viljoen, Blaauw, and Schenck, 2016). With regard to the socioeconomic conditions of waste pickers, there are conflicting results in the literature as shown by the studies of (Afon, 2012; Nzeadibe and Iwuoha, 2008; and Binion and Gutberlet, 2012).

Some studies examined the nature of informal recycling activities in Lagos state with focus on health and economic implication (Nzeadibe and Iwuoha, 2008; Ogunrinola and Adepegba, 2012). Medina, (2008); and Wilson, Velis, and Cheeseman, (2006) focused on the informal recycling sector in developing countries with emphasis on organizing waste pickers to enhance their impact. Oates, Sudmant, Gouldson, and Gillard, (2018); Gutberlet, (2012) emphasized on reduced waste and improved livelihood for all. However, remarkably little is known about the working conditions and career aspirations of waste pickers in Lagos state, Nigeria. This study however fills the gap in literature of investigating

the working conditions and career aspirations of waste pickers in Lagos state, Nigeria.

The main objective of this study therefore is to investigate the socioeconomic conditions and career aspirations of waste pickers in Lagos state, Nigeria. In a state where unemployment rate is 14.6% (NBS, 2018) which according to the United Nation World Urbanization Prospects (UWUP) represents about 3.2 million people, it is pertinent to investigate into researchable areas that holds economic potential. This paper is organized thus; following the introduction is the theoretical framework and brief literature review. The methodology of the study is discussed in section three and the data, interpreted in section four. Section five concludes the study.

2. Theoretical Framework and Brief Survey of Literature.

2.1 Theoretical Literature

The role of the waste picking in the employment generation process has been a subject of much debate. While it is agreed that employment opportunities and decent earnings abound in the sector (Afon, 2012; Nzeadibe and Iwuoha, 2008; and Binion and Gutberlet; 2012); others have questioned the decency or otherwise of such jobs (Viljoen, Blaauw, and Schenck, 2016). Another vital theoretical issue which is worthy of examination is the concept of the informal sector introduced by Keith Hart, a British sociologist. The informal sector typically refers to economic activities not recorded in the national accounts which waste picking is part of. While some researchers are of the view that the sector provides temporary employment (Todaro, 1969), others do not support this view (Barnerjee, 1983; Amin,1981; and Ogunrinola, 1991).

Much empirical work tends to support the human capital theory, the theory which was developed by Becker and Mincer is a theory of human capital investment and labor market earnings. It explains both individuals' decisions to invest in human capital (education and training) and the pattern of individuals' lifetime earnings. Investments in education and training entail costs both in the form of direct expenses (e.g., tuition) and foregone earnings during the investment period, so only those individuals who will be compensated by sufficiently higher lifetime earnings will choose to invest.

Human capital theory also explains the pattern of individuals' lifetime earnings. In general, the pattern of individuals' earnings is such that they start out low (when the individual is young) and increase with age although earnings tend to fall somewhat as individuals near retirement. This is so because investment in skills acquisition improves earning stream over the lifetime. Going through a process repeatedly makes one a master of it. Thus, rather than wait endlessly for formal jobs amidst high unemployment rate, young people do take up apprenticeship or informal jobs with a view to becoming a skilled craftsman in the trade selected. The careers of waste pickers who have acquired the skill overtime through either apprenticeship, self-employment or paid employment is a question with which this study is concerned. While some are engaged in waste picking to raise funds for their dream businesses, some desire to be self-employed, secure formal job and further their education.

2.2 Survey of Empirical Literature

The activities of waste pickers are relevant to the growth of the economy as they help improve environmental quality and promote the health and wellbeing of the people (Afon, 2012; Ndubuisi-Okolo, Anekwe, and Attah, 2016; Wale, 2019). However, their health condition is largely at risk because of the unsafe and extremely hazardous means by which they carry out their activities as they work under conditions of physical exertion for extended periods of time and hardly takes out time to rest (Awopetu, et.al, 2014). It is well documented that solid waste may pose a serious risk to human health and the environment (Medina, 2005). Economic inadequacies also push waste pickers to consume recovered food waste which can put them at risk of stomach infections, parasites infection and

food poisoning which can in turn cause nausea and diarrhea (Silva, Fassa, Siqueira, and Kriebel, 2005). The bio-aerosols and other toxic compounds inhaled in the combustion process also portend danger to them. Burning waste and fuel exhaust fumes can cause eye irritation, lung infections, decreased lung functions and different respiratory ailments (Gomez-Correa, Agudelo-Suarez, and Ronda-Perez, 2008; and Ray, Mukherjee, Roychowdhury, and Lahiri, 2004).

The studies by Nguyen, Chalin, Lam, and Maclaren, (2003) where 267 waste pickers were interviewed, there were reported spinal and lower extremity pain related to frequent kneeling which occurs in the process of collecting and sorting of solid waste which pose as risk to their health and possibly future career development. Findings from Mothiba, (2016) revealed that only 22% of the interviewed waste pickers viewed their health as poor and when asked about their future career aspiration, 38% of the interviewed waste pickers intend to further their education, whereas the remaining 62% did not desire further education. The former intended to study nursing, handwork, teaching and a majority wanted to obtain Grade 12 certificate which is obtained after a successful completion of high school. The reasons given by those that are not interested in further education are many and varied. Some felt they were too old, others wanted to support their families and the rest thought some members of the community would make fun of them if they went back to school and sit in the same class with their children's age mates. Many of the responding waste pickers indicated that financial constraint was responsible for their early decision to drop out of school to make ends meet. A number of males as well as females reported that their peers laughed at them for being in the industry and were marginalized whereas younger waste pickers said that for fear of public ridicule, they were afraid to tell some of their friends about the kind of work that they were involved in.

Viljoen, Blaauw, and Schenck, (2016) studied the barriers that prevent street waste pickers from improving their socioeconomic conditions. The survey research approach was used in their study and between April 2011 and June 2012, the researchers conducted structured interviews with 914 persons involved in waste picking and a total of 69 off takers in thirteen major cities spread across 9 provinces in South Africa. The results of the study revealed that poor language proficiency, low levels of schooling, limited language skills, low and uncertain level of income as well as poor access to basic and social needs hindered waste pickers from improving on their socioeconomic conditions. The study recommended the implementation of intervention policies aimed at improving the socioeconomic wellbeing of waste of waste pickers.

Abd'Razack, Medayese, Shaibu, and Adeleye, (2017) in Kaduna metropolis, Nigeria assessed the perception of households on solid waste benefits recycling and the accruing to households. The approach used in the study was quantitative. Respondents were selected using stratified random sampling 500 and questionnaires were administered to the households. The study used descriptive statistics to analyze the benefit of and perception towards waste recycling. The result of the study showed that households with low income recycled their waste more and earned income benefits compared to those with higher income. The study also showed that higher income household's perception about waste pickers is degrading.

Afon, (2012) studied the social, economic, health and environmental implications of solid waste scavenging activity in Olusosun, one of the government's designated open waste dumpsites in Lagos, Nigeria. The study utilized primary data obtained from waste pickers and simple techniques such as mean, frequency distributions, percentages and cross tabulations between various variables were used in the analysis and interpretation of the data collected. The results showed that scavengers reduce the waste on the site to almost only organic materials since other materials such as metals, plastic, glass and polythene materials are recovered for re-use or sale. This reduces quantity and leaves only organic materials to be buried. Also scavengers have helped agencies responsible for waste management in reducing financial and technological commitments. The study concluded that scavenging should be regulated to make sure that operations become environmentfriendly thus creating fewer hazards to both the operators and members of the public.

Ogbonna, and Mikailu, (2019) studied the role of the informal sector in sustainable municipal solid waste management using Lagos state Nigeria as case study. The researchers examined how informal sector players contribute to waste management, waste recycling and waste-towealth activities in Lagos State, Nigeria. The study was based on the data collected from field observations, interviews and questionnaires administered to waste collectors, scavengers, waste cart pushers, resource merchants, recyclers and other stockholders of the informal municipal solid waste management in sixteen Local Government Areas (LGAs) of Lagos State, Nigeria. The results of the study showed that the search for valuables, recyclables and reusable items at dump sites has always been driven by poverty and desire to earn a living. The study concludes that the actors of the informal sector in municipal waste management have been working under conditions that put their health, which is an important asset to them, at risk for not undertaking safety preventions. The study was

able to establish that there is a ready and profitable market for reusable and recyclable municipal waste materials in Lagos State, Nigeria.

Some studies have proposed that protective gear as clothing, gloves and boots should be given to waste pickers to reduce pathogenic infections and increase their activities (Ojeda-Benitez, Armijo-de-Vega and Ramirez-Bareto, 2002; Wilson, Velis, and Cheeseman, 2006; Hina and Devadas, 2008), however, a lot of controversy has been stirred. It was experienced in Calcutta, India that the waste pickers sold the personal protective equipment (PPE) given to them and preferred to work unguardedly (UNEP, 1996). Thus, due to the informal and undefined nature of waste picking, their working conditions are somewhat difficult to improve on. Some studies are of the opinion that employment opportunities and decent earnings abound in waste picking activities (Afon, 2012; Nzeadibe and Iwuoha, 2008; and Binion and Gutberlet; 2012); others have questioned the decency waste picking (Viljoen, Blaauw, and Schenck, 2016). This study was carried out to put right this controversy by investigating into the socioeconomic conditions and career aspirations of waste pickers in Lagos state, Nigeria.

3. Methodology

3.1 Research Design and Instrument of Data Collection.

In achieving the aim of this study, which is to investigate the socioeconomic conditions and career aspirations of waste pickers in Lagos state. Lagos is a state in Nigeria, located in the South Western part of the country (6° 35' N, 3° 45' E). It is the smallest state in terms of area of land, with about 3577Km2 of which 22% are lagoons and creeks. In the North and East, it is bounded by Ogun State, in the West by Republic of Benin and in the South by the Atlantic Ocean (Salami, Adegite, Bademosi, Lawal, Olutayo, and Olowosokedile, 2018). According to Wale (2019), with per capita waste generation of 0.5 kgper day, the Lagos state generates more than 10,000 tons of urban waste every day. There are six active dumpsites in Lagos: Ojota dump (Olusosun), Okofili (Souls 2), Souls 3, Katangowa (Abule Egba), Ewu elepe Epe. The Ojota dump, Okofili and Katangowa dumpsites (which are the dumpsites covered in this study) are the most frequently used LAWMA, (2019).

According to Nzeadibe and Iwuoha (2008), there are over 1000 waste pickers in Lagos state of which a total of 125 made up of 25 females and 100 males were randomly selected and administered questionnaires for this study. The sample population which is over 10% of the total population can be a good representation the total population. The research instrument used was the survey approach using questionnaire containing structured and semi-structured questions. The questionnaire was categorized into four sections. Section A, was concerned with general questions relating to their earnings, job details, working days and hours hazards experienced and preventive measures. Section B enquired about their future career aspirations. Section C concentrated on the biodata of respondents while the last section asked about their relationship with local government authorities. The primary tools of analysis for this study are basic descriptive statistical analyses. For the statistical analysis, simple techniques such as mean, frequency distributions, percentages and cross tabulations between various variables were carried out through the use of Statistical Package for Social Science (SPSS).

4. Analysis of Data

4.1 Data Presentation, Analysis and Discussion.

The data collected is presented in table 4.1 below and discussed thereafter.

S/N	Description	F	Μ	Т	TPR	%
1a.	Self employed waste pickers (WP)	13	95	108	125	86.4
b.	Waste pickers with safety kits	11	90	101	108	93.5
c.	Waste pickers without safety kits	1	1	2	108	1.85
2a.	Employed Waste Pickers	12	4	16	125	12.8
b.	Access to safety kits	0	3	3	16	18.8
c.	No access to safety kits	11	2	13	16	81.3
d.	Remuneration by kg of recovered waste	12	2	14	16	87.5
e.	Remuneration by other means	0	1	1	16	6.25
3	Apprentice	0	1	1	125	0.8
4a	Waste pickers who step on dangerous objects	20	47	67	124	54
b.	Waste pickers who donot experience any hazard	5	51	56	124	45.2
c.	Indifferent respondent(s)	1	0	1	124	0.81
5a	Infection prevention measures by WP: local herbs	24	99	123	125	98.4
b.	Infection prevention measures by WP: antibiotics on prescription	2	0	2	125	1.6
ба.	No of days per week spent on waste picking: 3-4 days	1	2	3	121	2.48
b.	No of days per week spent on waste picking: 5-6 days	22	86	108	121	89.3
c.	No of days per week spent on waste picking: 7 days	2	8	10	121	8.26
7a.	No of work hours: 5 to 8 hours	3	2	5	125	4
b.	No of work hours: 8 to 10 hours	15	25	40	125	32
c.	No of work hours: 10 to 14 hours	7	73	80	125	64
8a.	Earnings from waste picking per day < N2500	18	20	38	120	31.7
b.	Earnings from waste picking per day N2500 to N4900	1	81	82	120	68.3
9a.	Why waste picking?: Preference for self-employment	6	41	47	124	37.9
b.	Why waste picking?: Inability to secure desired formal employment	0	1	1	124	0.81
c.	Why waste picking?: To raise funds for my education.	0	5	5	124	4.03
d. 18	SWh2367-3944 picking?: To raise funds for my dream business.	19	50	69	124	lume.6
e.	Why waste picking?: Other reasons	0	2	2	124	1.61

Table 4.1 Data presentation and analysis

Abbreviations- F= female; M= male; T= total; TPR= Total Population of Respondents.

4.1.1 Composition of Employment Status of Waste Pickers in Lagos State.

One hundred and twenty-five waste pickers were randomly selected for this study. Table 4.1 (1a) revealed that 86.4% of the total population of respondents constituting 13 females and 95 males were self-employed. While 12.8% of the respondents constituting 12 females and 4 males as shown in (2a) were employed waste pickers, 1 apprentice representing 0.8% of the respondents was reported in the study. It is imperative to note that of the total respondents, 25 were found to be female workers while 100 were male workers. The large percentage male waste pickers over female workers could be as a result of the demands of the job which females find inconvenient and stressful (Oguntoyinbo, 2012, and Adeyemi, Olorunfemi and Adewoye, 2001).

4.1.2 Working Conditions of Waste Pickers in Lagos State.

4.1.2.1 Hazards Experienced During Waste Picking:

Table 4.1 shows the kind of hazards that workers have experienced since they started picking waste. Out of the 124 persons who responded to this question, 56 workers representing 45.2%, 5 of which are females stated that they have never experienced any hazards since they began waste picking (table 4.1, 4a) while 67 workers representing 54%, 20 of which are females reported to have stepped on dangerous objects during waste picking (table 4.1, 4b).

Increased hazards can affect job performance (Murphy, 1989). Protective foot wears need to be worn more often by waste pickers to avert the risk of foot injuries on the waste site. According to Danish, Ramzan, and Ahmad (2013), controlling hazardous situations creates an efficient and competent environment.

4.1.2.2 Safety Measures:

With respect to the question of safety on the job, table 4.1 (1b) revealed that 93.5% of the selfemployed respondents representing 11 female workers and 90 male workers were equipped with protective gears while 1.85% representing 1 female and 1 male worked without protective gear (table 4.1, 1c). For the employed respondents, only 18.8% representing 3 male workers in table 4.1 (2b) had access to protective equipment while a whopping 81.3% representing 11 female workers and 2 male workers were asked to work without any protective equipment (table 4.1, 2c).

Commitment to safety has a direct relationship with job performance and job satisfaction (Kaynak, Toklu, A., Elci, and Toklu, I. 2016; Michael, Evans, Jansen, and Haight, 2005). The activities of waste pickers are important to the economy asuch, their safety is equally important (Medina, 2008). The result showed that good working conditions for the employees are not a priority for most employers, and self-employed workers cater for their own safety more than that of their employees, this could make employees more susceptible to injuries and other health hazards thereby reducing overall efficiency. Ensuring safety can induce efficiency and reduce the risk of injury or accidents on the job.

4.1.2.3 Infection Prevention and Control during Waste Picking:

From table 4.1 (5a), as regards how waste pickers prevent infection arising from waste picking, 123 workers (representing 98.4%), 24 of which are female workers responded that they take local herbs to prevent infection while just 2 workers, a male and a female (representing 1.6%) take antibiotics on prescription.

According to Cole, and Neumayer (2005), high disease burden may impact negatively on a country's growth, development and productivity. People suffering from illnesses are often unable to work or study as a result of weakness and asuch unable to cater for the needs of their dependants for example children and aged parents. In a nutshell, labour supply will be cut short if a disease has a fatal effect on individuals. However, if it is non-fatal, affected individuals remain in the labour force but with severely impaired productivity.

4.1.2.4 Earnings:

Motivation has a direct impact on work performance (Rahiman, and Kodikal, 2017). Motivation can both be internal and external and can initiate work-related behaviour (Haque, M. F., Haque, M. A., and Islam, 2014). Motivation can come in the form of earnings. In this study, 68.3% (82 waste pickers) of the respondents earn between №2500 (\$8.2) to №4900 (\$16) while 31.7% (38 waste pickers) of the respondents earn below №2500 (\$8.2) (table 4.1 8a&b). Table 4.1 (2d) shows that 87.5% (representing 12 female and 2 male workers respectively) of employed waste pickers are paid per kg of waste recovered while 1 male worker paid by means other than per kg of waste recovered (table 4.1, 2e). This method insinuates payment according to productivity and could induce hard work and commitment.

Interestingly, this study revealed that 68.3% of waste pickers earn at least $\aleph12500$ (\$40.8) per week, $\aleph50$, 000 (163.2) monthly and $\aleph600$, 000 (\$1958) annually (assuming they work only 5days in a week). This conforms with the works of Afon, (2012), Nzeadibe and Iwuoha, (2008), and Binion and Gutberlet, (2012) which insinuated that the income of waste pickers isn't

really low. The monthly income of majority of waste pickers is above the country's №18000 (\$58.7) per month minimum wage and about №560,000 (\$1827.4) annual per capita income (PCI).

Fig 4.1 Per capita income data in Nigeria (1970-2017)



Source: WDI, 2018

The graph above shows the Nigerian PCI's trend from 1960 to 2017. Inferentially, because majority of waste pickers earn above this average, alternative employment can be found in waste recovery for a state such as Lagos which has over 3.2 million unemployed persons. This means the government needs to create more awareness about waste picking and change the stereotype of this job as being a job for the poor. This will educate citizens about the profitability and viability of this work while also adding value to the environment.

4.1.2.5 Working hours and days of waste pickers in Lagos state

From table 4.1 (6a, b and c), 3 workers spend 3-4 days per week on waste picking, 108 workers spend 5-6 days a week on waste picking and 10 workers work all the days of the week representing 2.48%, 89.3% and 8.26% respectively. This shows the flexibility of work days as workers could choose the number of days they want to work, depending on their needs. Also, to show flexing of work hours, 4% of the respondents worked between 5 to 8 hours daily. While 32% of the respondents worked between 8 to 10 hours, 64% worked between 10 to 14 hours so as to earn more money

4.1.3 Aspirations of Waste Pickers in Lagos state

From table 4.1 (9a-e), the study examined the career aspiration of the respondents. Out of the 124 respondents, 47 (representing 37.9%) of them desire to be self-employed, 1 (representing 0.81%) of the workers intends to secure a formal sector job, 5 (representing 4.03%) workers are working to obtain funds to further their education, and 69 (representing 55.6%) of them are raising money for their dream businesses. It can be deduced therefore, that waste picking has

the potential of creating an avenue for workers to achieve their goals and aspirations which could create a sense of fulfilment on the part of these workers.

5. Discussion of Findings and Conclusion.

The activities of waste pickers in the informal sector are paramount to reducing unemployment, achieving environmental sustainability, and improving public health and safety. The result of this study shows most of the employed waste pickers lack protective equipment. Also, most of the waste pickers consume local herbs to prevent infections arising from waste picking. As for earnings, the result showed that most waste pickers earn well above the national minimum wage and per capita income. The result also showed flexibility of working days and hours.

55.6% of the waste pickers aspire to own their dream businesses i.e. develop to become waste processors or various business owners in the future while 0.81% of the respondents aspire to secure formal jobs in the future. 4.03% of the waste pickers aspire to further their education in the future.

Given the economic relevance of waste pickers, this study recommends that the Nigerian government should organize sensitization programs that aim at creating awareness about waste picking as a decent job and the potential waste picking has in the actualization of future career aspiration. Also, protective gear as clothing, gloves and boots should be given to waste pickers to better their working conditions.

4.1.4 Area for future study- the blue box initiative

Increase in population has a positive relationship with waste generated thus, it is expected that the activities of both street and dumpsite waste pickers will intensify in the future. However, to protect the environment which according to World Bank, (2014) consists of the soil, water, air and a host of medicinal products and food, efficient waste management practices needs to be taken into account. To this effect, the Lagos State Waste Management Agency (LAWMA), birthed the blue box Initiative in 2020. The blue box initiative is a single stream recyclable collection program that will encourage the separation of recyclable materials from the point of generation. The initiative aims at capturing about 50% recyclables upstream; attract investors and create green jobs; reduce carbon footprint; and promote a healthier and cleaner environment.

The initiative which aims to achieve zero tolerance of scavenging (waste picking) in both streets and dumpsites by June, 2021 will impact on their means of livelihood. What will be the impact of this initiative on the livelihoods of waste pickers? This should be a question for another day.

References

- [1]. Abd'Razack, N. T., Medayese, S. O., Shaibu, S. I., & Adeleye, B. M. (2017). Habits and benefits of recycling solid waste among households in Kaduna, North West Nigeria. *Sustainable cities and society*, 28, 297-306.
- [2]. Adeyemi A. S, Olorunfemi J. F., and Adewoye, T. O. (2001). Waste scavenging in third world cities; a acse study of Illorin, Nigeria. Environs.
- [3]. Afon, A. (2012). A survey of operational characteristics, socioeconomic and health effects of scavenging activity in Lagos, Nigeria. *Waste Management & Research*, 30(7), 664-671.
- [4]. Ali, A. Y. S., Ali, A. A., & Adan, A. A. conditions (2013). Working and employees' productivity in manufacturing companies in sub-Saharan African context: Case of Somalia. Educational Research International, 2(2), 67-78.
- [5]. Awopetu, M. S., Awopetu, R. G., Sample, E. D., Olufiropo, A. O. C., Awokola, S., Fullen, M. A., & Hammond, F. N. (2014). Municipal solid waste management and the role of wastepickers in Nigeria. *Int J Educ Res*, 2, 1-12.
- [6].Bakotic, D., & Babic, T. (2013).Relationship between working conditions and job satisfaction: The case of croatian shipbuilding company. *International*

journal of business and social science, 4(2).

- [7].Binion, E., & Gutberlet, J. (2012). The effects of handling solid waste on the wellbeing of informal and organized recyclers: a review of the literature. *International journal of occupational and environmental health*, 18(1), 43-52.
- [8]. Cointreau-Levine, S. (2000). Guidance pack: private sector participation in municipal solid waste management. 2. Guidance note: a review of recent international experience of private sector involvement in munnicipal solid waste management and guidelines for the steps to be taken to ensure successful private sector perticipation in the coming years. Skat.
- [9].Cole, M. A., & Neumayer, E. (2005). The Impact of Poor Health on Factor Productivity. Journal of Development Studies, 42(6).
- [10]. da Silva, M. C., Fassa A. G., Siqueira, C. E. and Kriebel, D. (2005).
 Word at work: Brazilian rag pickers. Occupational Environmental Med: 62(10): 736-740.
- Danish, R. Q., Ramzan, S., & [11]. Ahmad, F. (2013). Effect of perceived organizational support and work environment on organizational commitment; mediating role of selfmonitoring. Advances in Economics and Business. 1(4), 312-317. http://dx.doi.org/10.13189/aeb.2013.010 402
- [12]. Gomez-Correa, J., Agudelo-Suarez, A. and Ronda-Perez, E. (2008). Social conditions and health profile of

recyclers from Mendellin. 10(5): 706-715.

- [13]. Gutberlet, J. (2016). Recovering resources-recycling citizenship: Urban poverty reduction in Latin America. Routledge.
- [14]. Gutberlet, J. and Baeder, A. M.
 (2008). Informal recycling and occupational health in Santo Andre, Brazil. International Journal of Environmental Health. 18(1): 1-15.
- [15]. Haque, M. F., Haque, M. A., & Islam, M. (2014). Motivational Theories-A Critical Analysis. ASA university review, 8(1).
- [16]. Hina, Z. and Devadas, V. (2008).Urban solid waste management in Kanpur: Opportunities and perspectives. Habitat International. 32: 58-73.
- [17]. Kaynak, R., Toklu, A. T., Elci, M., & Toklu, I. T. (2016). Effects of occupational health and safety practices on organizational commitment, work alienation, and job performance: using the PLS-SEM approach. *International Journal of Business and Management*, 11(5), 146-166.
- [18]. LAWMA, (2019). ResourceRecovery and Recycling. RetrievedMarch 18, 2019:
- [19]. http://www.lawma.gov.ng /resource-recovery-and-recycling/
- [20]. Medina, M. (2005). Serving the unserved: informal refuse collection in Mexican cities. Waste Management, 23(5): 390-397.
- [21]. Medina, M. (2008). The informal recycling sector in developing countries:

organizing waste pickers to enhance their impact.

- [22]. Michael, J. H., Evans, D. D., Jansen, K. J., & Haight, J. M. (2005). Management commitment to safety as organizational support: Relationships with non-safety outcomes in wood manufacturing employees. Journal of Safety Research, 36, 171-179. http://dx.doi.org/10.1016/j.jsr.2005.03.0 02
- [23]. Mothiba, M. P. (2016). A study on working conditions and health status of waste pickers working at landfill sites in the City of Tshwane Metropolitan Municipality (Doctoral dissertation).
- [24]. Murphy, K. R. (1989). Is the relationship between cognitive ability and job performance stable over time? Human Performance, 2(3), 183-200. http://dx.doi.org/10.1207/s15327043hup 0203_3
- [25]. Ndubuisi-Okolo, P., Anekwe, I. R., & Attah, E. Y. (2016). Waste management and sustainable development in Nigeria: A study of anambra state waste management agency. *European Journal of Business* and Management, 8(17), 2222-1905.
- [26]. Nguyen, H., Chalin, C., Lam, T. and Maclaren, V. (2003). Health and social needs of waste pickers in Vietnam, Research paper WASTE-ECON program in Southeast Asia.
- [27]. Nzeadibe T.C., & Iwuoha H.C.(2008). Informal waste recycling in Lagos, Nigeria: IWM Business Services Ltd: Volume 9(1) Pp 24-31.
- [28]. Nzeadibe T.C., & Iwuoha H.C. (2008). Informal waste recycling in

Lagos, Nigeria: IWM Business Services Ltd: 9(1): 24-31.

- [29]. Nzeadibe, T. C., &Anyadike, R.
 N. (2012). Social participation in city governance and urban livelihoods: Constraints to the informal recycling economy in Aba, Nigeria. *City, Culture and Society*, *3*(4), 313-325.
- [30]. Oates, L., Sudmant, A., Gouldson, A., & Gillard, R. (2018).
 Reduced waste and improved livelihoods for all: Lessons on waste management from Ahmedabad, India.
- [31]. Ogbonna, A. C., & Mikailu, A. (2019). The role of the informal sector in sustainable municipal solid waste management: A case study of Lagos State, Nigeria. Annals of the Faculty of Engineering Hunedoara, 17(3), 117-122.
- [32]. Ogunrinola, I. O., & Adepegba, E.
 O. (2012). Health and economic implications of waste dumpsites in cities: The case of Lagos, Nigeria. *International Journal of Economics and Finance*, 4(4), 239-251.
- [33]. Ogunrinola, O. I. (2011). Global economic crisis and career aspirations among 'okada'riders in
 - a. Nigeria: the influence of apprenticeship skills training. Business and Economics Research Journal, 2(3), 51-67.
- [34]. Oguntoyinbo, O. O. (2012).
 Informal waste management system in Nigeria and barriers to an inclusive modern waste management system: A review. *Public health*, 126(5), 441-447.
- [35]. Ojeda-Benitez S, Armijo-de-Vega C and Ramirez-Bareto ME (2002). Formal and informal recovery of

recyclables in Mexicali, Mexico: Handling alternatives. Resources, Conservation and Recycling 34, 273-288.

- [36]. Oteng-Ababio, M. (2014). Rethinking Waste as a Resource: Insights from a Low-Income Community in Accra, Ghana. *City, Territory and Architecture, 1*(1), 10.
- [37]. Rahiman, H. U., & Kodikal, R. (2017). Impact of employee work related attitudes on job performance. *British Journal of Economics, Finance and Management Sciences, 13*(2), 93-105.
- [38]. Ray, M. R., Mukherjee, G., Roychowdhury, S., and Lahiri, T. (2004).
 Respiratory and general health impairments of rag pickers in India: A Study in Delhi. International Archives of Occupational Environmental Health, 77: 595–598.
- [39]. Salami, H. A., Adegite, J. O.,Bademosi, T. T., Lawal, S. O., Olutayo,O. O., & Olowosokedile,
 - a. O. (2018). A Review on the Current Status of Municipal Solid Waste Management in Nigeria: Problems and Solutions. *Journal* of Engineering Research and Reports, 1-16.
- [40]. Smangele Dlamini, MulalaDanny Simatele and Nzalalemba SergeKubanza (2019) Municipal
 - a. solid waste management in South Africa: from waste to energy recovery through waste-to-energy technologies in Johannesburg,

Local Environment, 24:3, 249-257, DOI: 10.1080/13549839.2018.156165 6

- [41]. Sorensen, G., Peters, S., Nielsen, K., Nagler, E., Karapanos, M., Wallace, L., ... & Wagner, G. R. (2019). Improving working conditions to promote worker safety, health, and wellbeing for lowwage workers: the Workplace Organizational Health Study. International journal of environmental research and public health, 16(8), 1449.
- [42]. United Nations Environmental Programme (UNEP). (1996).
 International Source Book on Environmentally Sound Technologies for Municipal Solid Waste Management.
- [43]. United Nations Population, (2019). https://www.unfpa.org/
- [44]. Viljoen, K., Blaauw, P., & Schenck, R. (2016). " I would rather have decent job": Potential barriers a preventing street-waste pickers from improving their socio-economic conditions. South African Journal of Economic and Management Sciences, 19(2), 175-191.
- [45]. Wale B., (2019). Solid waste management in Nigeria. *BioEnergy Consult*.
- [46]. Wilson, D. C., Velis, C., & Cheeseman, C. (2006). Role of informal sector recycling in waste management in developing countries. *Habitat international*, 30(4), 797-808
- [47]. World Bank, (2014). Nigerian Economic Overview and Performance.

Source:

www.worldbank.org/en/country/nigeria/ overview.

[48]. Yavini, T. D., & Musa, A. A. (2013). Municipal solid waste and pollution management in Jalingo metropolis: Problems, challenges and strategies. *Journal of Environment*, 2, 125-133.