Scrap Metal Scavenging: Consumer Market, Consumer Buying Behaviour and the Environment

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ABSTRACT

The study was conducted to investigate youth's involvement in scrap metal scavenging. It aimed at identifying the marketing activities involved in scavenging of scrap metals. It also aimed at determining the impact of scrap metal scavenging on the environment. The data for the research was collected from one hundred youths in four purposively selected cities of Southwestern Nigeria. The respondents were selected using random sampling method. The variables of interest were measured using Likert-scale. Data was collected using pre-tested and validated structured questionnaires, focus group discussions and taped recording methods. Descriptive analysis such as frequency distribution and percentages were used to describe the variable tested. Inferential statistical tools were also used to analyse the relationship existing between the variables. The results revealed that the youth were favourably disposed to scrap metal scavenging. It was also revealed that marketing was involved in the business. The result further revealed that though metal scavenging was viable and economical, the environmental impact was positive. The study concluded that metal scavenging is key to getting cheaper raw materials for steel industries. Consequently, government should encourage the scavengers by formalizing the group and providing them with soft loans to buy and sell the scraps scavenged.

Keywords: Scavenger, consumer-market, consumer-buying behavior, wastes, environment

INTRODUCTION

Solid waste management remains a major phenomenon and one of the most intractable problems facing developing nations in Africa, Asia and Latin America. Scavenging therefore is a ubiquitous occurrence throughout the developing world. As a result of the above, wastes and scavenging have generated considerable research interests (Adeyemi, et al, 2001). Many researchers have worked on various aspects of solid wastes and these include waste magnitude (Fulani and Abumare, 1986); waste characteristics (Adedibu, 1983, 1985 and 1986); disposal problems (Odutola, 1986; Adedibu, 1986); factors affecting waste generation (Onidundu-Amao, 1989; Ibitoye, 1995), recently waste scavenging for poverty alleviation (Magaji and Dakye, 2011), and quality of work life of waste scavengers (Engler, et al., 2009).

Literatures are replete with the picture of scavenging as an occupation that provides livelihood for the poor in many societies in the world. Scavenging therefore, is an important survival strategy in which the lower class individuals cope with scarcity. Adegoke (1991) defines wastes as substances and materials which are disposed or are required to be disposed of according to the provision of national law. While Ajibade (2004) considers wastes as man's unwanted materials that need to be discarded, Magaji (2005) opines that wastes are materials that no longer have value to the person who is responsible for it, and is not intended to be discarded through a pipe. It does not normally include human excreta. He further says

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that they are generated by domestic, commercial, industrial, healthcare, agricultural and mineral extraction activities and accumulates in streets and public places.

Scraps metal is an important component of municipal solid waste (MSW) .In Nigeria, (Ohimain, 2013); says it accounts for 18% (Olanrewaju and Ilemobade, 2009); 10.8% (Ayotamuno and Gabo, 200) and 3-20% (Nabegu, 2010) of the municipal solid waste generated in the Southwest, Southeast and Northwestern parts of Nigeria respectively. Through the activities of scavengers, useful materials are often recovered from MSW including scrap metals, wood, plastics, etc. (Nabegu, 2010; Adebola, 2006; Nzeadibe, 2009; Scheinberg, 2012; Manhart, *et al.* 2011; Medina, 2010; Umaru, 2010). Scrap metals are among the most important priced materials in MSW. Many important metals have been recovered and recycled including iron and steel, copper, brass, aluminum (USGS, 2002; Onwughara, *et al*. 2010; Norgate *et al.* 2007). Recycling metals contributed 76.9 metric tons of metal valued at $14.2 billion or 58% of apparent metal supply in the USA (Papp, 2001). Scavengers salvage materials such as scrap metal, plastics, etc. to sell for recycling, as well as repairable and re-usable items that could be sold or used themselves. In all of these, scavengers of scrap metals primarily acquire, collect, or purchase those materials for which there is a market to sell their scavenged metals. The notion of market and selling here connotes the existence of consumer market and consumer buying behaviour at play.

Consumer behaviour is never simple; yet understanding it is the essential task of management. It is important to explore the dynamics of the consumer market and consumer buyer behaviour. According to East (1995), consumer buyer behaviour refers to the buying behaviour of final consumers – individuals and households, who buy goods and services for personal consumption, whereas consumer market refers to all the individuals and households who buy or acquire goods and services for personal consumption. Consumer behaviour covers the acquisition and use of goods and services by individuals or households. The focus here is on individual action. It is intended to explain how and why people do things. So, buying scrap metal is essentially consumer behaviour.

In marketing, much attention is devoted to the objects of action, that is, to the goods or services. This must be so because profits are made when consumers buy one brand rather than another. But in consumer behaviour, the focus is as much upon the action as the object. This is reflected in the way behaviours are classified.

Accordingly, Schiffman and Kanuk (2007) define the term consumer behaviour as the behaviour that consumers display in searching for, purchasing, using, evaluating and disposing of products and services that they expect will satisfy their needs. Consumer behaviour focuses on how individuals make decisions to spend their available resources (time, money and effort) on consumption-related items. In this respect, Schiffman and Kanuk (2007) opine that these decisions include what they buy, why they buy, when they buy, where they buy it, how often they buy it, how often they use it, how they evaluate it after the purchase; the impact of such evaluation on future purchases; and how they dispose of it. The above questions formed part of the basis and focus of this study.

RESEARCH PROBLEM

Solid waste management remains one of the most intractable problems facing developing countries like Nigeria. The situation in Nigeria is compounded by the huge importation of fairly used vehicles, refrigerators and completely knock-down (CKD) spare parts of used vehicles. These fairly used vehicles, refrigerators, and vehicle parts degenerate and disintegrate very fast because they have attained their book values or useful lives. This results

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in creating large concentrations of dumps of scraps of these used vehicles, and other scrap metals from refrigerators found in many cities of Nigeria.

In Nigeria, it is being estimated that 85% of scrap metals currently being scavenged and recycled are from fairly used vehicles, refrigerators and their degenerated parts. The environment continues to be unsightly and polluted. The abundance of this form of solid waste and the existence of two metal recycling plants in Osun State of Nigeria to mop up these wastes have heightened scavenging activities of this form of waste. Current researches have shown that over 15 million people all over the world earn a living from scavenging as a way of mitigating unemployment in developing world. Areo (2014) affirms unprecedented high rate of unemployment currently in Nigeria.

Preliminary investigations reveal the evolution of scrap metal markets, where marketing activities such as price haggling, buying and selling decisions take place. There was also observed the involvement of middlemen in the new found scrap metal business, giving rise to multilevel approach to metal scavenging.

The environmental impact of vehicles, and refrigerators brought in as fairly used was also of interest to the study. It is in the light of the above that this study was carried out. It aimed at examining the marketing intrigues involved in the scrap metal scavenging business. Specifically, it aimed at identifying the consumer behaviour involved in buying and selling of scrap metals. It also aimed at the assessment of the environmental impact of scavenging solid wastes like scrap metal.

CONCEPTUAL FRAMEWORK FOR ANALYSIS

Consumers make decisions every day. In the earliest times, marketers could understand consumers enough through the daily experience of selling to them. However, modern day marketing decision makers have lost direct contact with their customers. Consequently, most large companies research consumers buying decisions in great details to answer questions about what consumers buy, where they buy, how and how much they buy, and why they buy (Kotler and Armstrong, 2006). Marketers in their view can study actual consumer purchases to find out what they buy, where and how much. But they maintain that learning about the "whys" of consumer buyer behaviour is not so easy, the reasons are often locked deep within the consumer's head.

In most cases, consumers themselves do not know exactly what influences their purchases. Hence, Weiners (2003) opines that 95% of the thought, emotion, and learning (that drive our purchases) occur in the unconscious mind, that is, without awareness. In the light of the above, analysis of consumers is a key part of the foundation of marketing strategy, and consumer reaction to the total product determines the success or failure of the strategy. The study of consumer behaviour therefore, enables marketers understand and predict consumer behaviour in the market place.

Clearly as individuals, we are all unique. However, one of the most important constraints among all of us, despite our differences, is that we are all consumers. We are consumers on a regular basis of food, clothing, shelter, transportation, education, equipment, vacations, necessities, luxuries, services and even ideas (Skiffman and Kanuk 2007). As consumers, we play a vital role in the health of the economy, local, national and international. The purchase decisions we make affect demand for basic raw materials for transportation, for production, for banking. They affect the employment of workers and the deployment of resources, the success of some industries and the failures of others. In order to succeed in any business and especially in today's dynamic and rapidly evolving marketplace, marketers need to know everything they can about consumers.

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In the light of the above, consumer decision-making process is very important in determining the success or failure of a marketing campaign. It is imperative to note that no company can achieve successful growth trends without successfully perceiving the consumer decision process. The first theory on consumer decision was based on utility theory and consumers make their decisions depending on the outcomes of their decisions. In the model of utility theory, consumers are viewed as rational actors who determine how the external inputs from the input stage influence the consumers' recognition of a need; purchase, search for information and evaluation of alternatives. The experience gained through evaluation of alternatives in turn affects the consumer's existing psychological attitudes. According to Hawkins, *et al*. (2003), consumer decision process involves six stages namely: problem recognition, information search, alternative evaluation, purchase, use and evaluation.

On the other hand, the input stage of consumer decision-making model consists of two closely related post-decision activities; purchase behaviour, and post-purchase evaluation. In line with the above, Richame (2005) maintains that buying decisions involve many factors that most consumers are not aware of. In any purchase, Richame (2005) affirms that five steps are involved namely: need recognition, information search, evaluation of alternatives, purchase decision and finally, post-purchase behaviour. He concluded that even the simplest purchases can include any or all of these steps. O'Brien (2006) however, suggested that personal psychological and social issues are other variables which influence purchases, the probabilistic outcomes of uncertain decisions and the selected outcomes in order to determine their enhanced wellbeing.

Consumer behaviour is a relatively new field of study in the late 1960s. The process of consumer decision-making in the opinion of Schiffman and Kannk (2007) can be viewed as three distinct but interlocking stages. They are input stage, the process stage, and the output stage. The input stage is where researchers claim influences the consumers' recognition of product need and consist of two major sources of information: the firm's marketing efforts (the product itself, its price, its promotion, and where it is sold); and the external sociological influences as consumer (family, friends, neighbours, other non-commercial sources, social class, and cultural and sub-cultural membership. They further reiterate that the cumulative impact of each existing code of behaviour are all inputs that are likely to affect what customers purchase and how they use what they buy.

The process stage of the model focuses on consumer decision-making. The psychological factors inherent in each individual are motivation, perception, learning, personality and attitudes.

METHODOLOGY

The study was conducted in four purposively selected cities in the Southwestern Nigeria namely Akure (Ondo State), Ile-Ife (Osun State), Ogbomoso (Oyo State) and Ilorin (Kwara State). One hundred respondents were selected employing random sampling method from 300 sample size (see Table 1). Due to the low level education of the respondents, data was collected using focus group discussion, transcripts, video and audiotape recordings, apart from the use of pre-tested and validated structured questionnaire.

Descriptive statistical tools such as frequency distribution and percentages were used to analyse the data collected. Coefficient of correlation analysis through the use of simple regression analysis was employed to establish the relationship between the perception of youths in scrap metal business and socioeconomic characteristics of the youth scavengers. The variables relating to the scavenging business were measured using Likert 5-point scale such as Strongly Agreed (5), Agreed (4), Undecided (3), Disagreed (2) and Strongly

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Disagreed (1). A total of 45 respondents participated in the focus group discussions, out of 75 that were approached.

RESULT OF FINDINGS

Result of Findings from Focus Group Discussions (FGD)

Where Do Scavengers Buy Or Acquire Scrap Metals?

Youth scrap metal scavengers retrieve recyclables at dumpsites, landfills, houses, gutters, roadsides, streets, highways, auto-mechanic workshops, scrap vehicle markets, dustbins and public places (Plate 1).

Plate 1. A side view of a mechanic workshop, one of the sources for scrap metal scavengers

How Do They Buy or Acquire Scrap Metals? And What Tools Do They Use For Collecting Scrap Metals?

The scavengers move about on foot to streets, dustbins, landfills, dump sites and auto-mechanic workshops. The largest collections through purchases are made in and around auto-mechanic workshops, refrigerator repairers and already sorted out wastes in dumpsites. In other mentioned areas the scrap metals could salvaged free. The collection of scrap metals, were carried out using two-wheel carts (Plate 2) shovel, diggers and shaped sickle-like iron rods (Plate 3). Shovels and diggers were used to unearth buried scrap metals in landfills and dumpsites.

Plate 2. Carts used in conveying scavenged scrap metals

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Plate 3. Sickle and shovels used in scavenging scrap metals

When Do They Buy? And How Much Do They Buy? And How Often They Buy?

The scavengers buy every day of the week (between 9a.m – 6p.m) except on Sunday. They scavenge and buy as much as their purse can afford them. The scavengers buy as often as they can get the scrap metals.

Socio-Economic Characteristics of Scrap Metal Scavengers

The result in Table 2 shows that all (100%) of the respondents were male; that is, no female was involved in scrap metal scavenging in southwestern Nigeria to date. Majorities (80%) were still unmarried and were between ages 18 and 32 years. Educationally, majority (63%) had no formal western education, but had informal Qur'an education; 30% had primary school education, while only 7% attempted or had secondary school education. Table 2, also shows that majority (87%) of the youth scavengers were of Hausa extraction, while 13% were from other ethnic groups in Nigeria. A majority (60%) earned above N12,500 ($80) monthly, while 25% earned below that and only 15% earned above N12,500 per month.

Table 1. Distribution of respondent according to Sample size

Name of City	*State*	*Sample Size*	*Number Sampled*
Akure	Ondo	80	30
Ile-Ife	Osun	70	20
Ogbomoso	Oyo	50	15
Ilorin	Kwara	90	35
Total	4 states of Nigeria	300	100

Source: Field survey, 2013

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Table 2. Distribution of respondent youth scavengers on socioeconomic characteristics

Characteristics		*Frequency (f)*	*Percentage (%)*
Age	18-22	20	20
	23-27	50	50
	28-32	22	25
	33 and Above	8	8
	Total	100	100
Sex	Male	100	100
	Female	0	0
	Total	100	100
Martial Status	Married	18	18
	Single	80	80
	Divorced	2	2
	Total	100	100
Educational Background	Below primary	30	30
	Primary School	7	7
	Secondary School	-	-
	No Western Education but Qur'an	63	63
	Total	100	100
Ethnicity	Yoruba	6	6
	Hausa	87	87
	Ibo	7	7
	Total	100	100
Income	Less than N5000	25	25
	Moderate (N12,500)	60	60
	High (more than 15,000)	15	15
	Total	100	100

Source: Field survey, 2013

Perception of Youth's Participation in Scrap Metal Scavenging

Table 3, is the distribution of respondents based on their response towards perceptional statements on metal scavenging. An overwhelming majority (93%) were of the view that scrap metal scavenging has become their major preoccupation, with only 7% disagreeing. Another majority (85%) affirmed that scrap metal scavenging is profitable to them, while a minority,(15%) disagreed.

Majority again (74%) agreed that price haggling, extensive price bargaining was the 'game' of purchasing scrap metals; only 26% disagreed. On the issue of being engaged in other businesses, majority (60%) had no other business they engage in, while 40% either had other

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businesses or could not decide on this. An overwhelming majority (90%) of the respondents depended on sponsors or merchants to empower them to carry out scrap metal business, while insignificant few, 10%, disagreed.

Table 3, also shows that a simple majority (51%) was happy working as metal scavengers; 20% were undecided and 29% disagreed, meaning 29% of them were unhappy with scrap metal scavenging business. There was 28% minority who agreed that they were able to save money from their scrap metal scavenging business, while a majority, 60% disagreed that they could not make savings from their earned income. In the same vein as above, a minority, 28% agreed that they had enough motivation doing scrap metal scavenging, while another simple majority, 56% were of the view that they were not motivated to do scrap metal scavenging business. Conversely, majority of the respondents, 70%, agreed that their scrap metal scavenging was a means of meeting the needs of recycling plants, with only 20% disagreeing.

On the issue of environmental implications of scrap metal scavenging, majority (70%) agreed that their activities ensured a cleaner environment, while a minority, 15% disagreed.

Table 3. Distribution of youth scavengers according to their perception of scrap metal scavenging

S/N	*Perceptional Statement on Metal Scrape Scavenging*	*Strongly Agree (5)*		*Agree (4)*		*Undecided (3)*		*Disagree (2)*		*Strongly Disagree(1)*	
1.	Scavenging is your major occupation	60	60	30	30	3	3	4	4	3	3
2.	You make enough profit?	35	35	50	50	5	5	5	5	5	5
3.	Price haggling is part of the business	22	22	52	52	10	10	12	12	4	4
4.	You engage in other business	30	30	30	30	6	6	14	14	20	20
5.	Do you have sponsors?	70	70	20	20	0	0	5	5	5	5
6.	Are you happy with this vocation?	26	26	25	25	20	20	20	20	9	9
7.	You save money from your income	18	18	10	10	12	12	46	46	14	14
8.	You are motivated to continue	20	20	08	08	16	16	50	50	6	6
9.	Scrap metal meets the needs of recycling plants	60	60	10	10	10	10	14	14	6	6
10.	Scrap metal scavenging cleans the environment	40	40	30	30	15	15	10	10	5	5

Source: Field survey, 2012.
Note: Multiple responses were recorded. F=Frequency. %=Percentage.

Problems Associated With Youth Involvement in Scrap Metal Scavenging

The data in Table 4 reveals various problems affecting youths in the course of scavenging scrap metals. Majority (80% and above) revealed during focus group discussions and tape recorded interviews that skin disorder, tuberculosis, pneumonia, leg pain, back pain, exposure to danger, physical injury etc. were some of the job hazards associated with picking and sorting scrap metals.

In the same manner, diarrhea, malaria, typhoid and anthrax were identified with poor hygiene in housing and feeding activities in carrying out their scrap metal scavenging. This was expected because, due to high cost of renting apartments, most of these youths live in

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uncompleted buildings or makeshifts tents near their scrap metal depots. In situation where accommodation was available, they were usually overcrowded with 5-7 people sharing a 3x3 meter square single room with no toilet facility or bathrooms, and little or no ventilations. The scavengers were also noted not to have safety precautionary wears such as boots, raincoats, gloves, umbrella and goggles. Consequently, diarrhea and injuries resulting into infections such as tetanus, HIV/AIDS, anthrax, ringworm and typhoid were preponderant among the scrap metal scavengers.

Table 4. Problem matrix related to scrap metal scavenging

S/N	*Challenges*	*Housing & Feeding*	*Picking Scrap Metals*	*Sorting Scrap Metals*	*Transporting Scrap Metals*
1.	Back Pain	0(0)	85(85)	80(80)	50(50)
2.	Legal Pain	0(0)	90(90)	82(82)	50(50)
3.	Exposure to Danger	20(20)	88(88)	75(75)	70(70)
4.	Malaria	70(70)	60(60)	20(20)	10(10)
5.	Tuberculosis	60(60)	85(85)	80(80)	0(0)
6.	HIV/AIDS	0(0)	85(85)	70(70)	0(0)
7.	Typhoid	60(60)	88(88)	77(77)	70(70)
8.	Pneumonia	10(10)	80(80)	30(30)	80(80)
9.	Poliomyelitis	0(0)	85(85)	80(80)	70(70)
10.	Skin Disorders	0(0)	70(70)	75(75)	70(70)
11.	Anthrax	10(0)	65(65)	50(50)	30(30)
12.	Diarrhea	60(8)	45(45)	70(70)	10(10)

Source: Field survey, 2013

Relationship between the Youths' Level of Involvement in Scrap Metal Scavenging And Some Selected Socio-Economic Characteristics

The result of correlation analysis in Table 5 shows that the level of involvement of youth in scrap metal scavenging had a positive and significant relationship with age (r=0.288*), level of income (0.368*) and dependency on sponsors (r=0.193*) at 0.05 level of confidence. This shows that the level of involvement of these youths in scavenging scrap metal is dependent on age, income and their dependency on sponsors.

However, the study revealed a negative and significant correlation between education (r= -0.332*) and level of youths in scavenging scrap metals at 0.05 level of significance. This implies that education may likely reduce the level of involvement of these Hausa youths in scrap metal scavenging. This is, however, not what currently holds sway, as most of the youths had no parents or means of benefitting from western education.

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Table 5. Relationship between the scrap metal scavengers' involvement and socioeconomic characteristics

S/N	*Selected characteristics*	*Co-efficient of correlation (r)*	*Coefficient of determination (r^2)*
1.	Age	0.288*	0.0829
2.	Educational Level	-0.332*	0.1102
3.	Level of Involvement	0.193*	0.0372
4.	Income Per Month	0.368*	0.1354

Source: field survey 2012
* Significant at 0.05

GENERAL DISCUSSIONS

The interviewees were 100% all men, of the Hausa of Northern Nigeria's extraction, and between the ages of 18 and 32 years. This is probably because some parts of the Northeast Nigeria are currently experiencing Boko Haram, an Islamic insurgency by the youth of that region. The insurgency has made the region un-peaceful for any meaningful occupation and normal living was risky and farming was temporarily been abandoned.

Majority of the scavengers explained that hitherto, people dispose of weighty metal parts but because of the heightened scavenging for scrap metals, the value has been raised. Consequently, the scavengers had to do hard bargaining to purchase metal scraps. Another noteworthy observation was that, though, majority of the respondents had no western education, they were able to calculate, haggle and count money for purchasing scrap metals.

The study identified three levels of scrap metal scavenging before recycling. These are categorized as primary, secondary and tertiary levels of scrap metal scavenging. The primary (1^o) level were youths whose main preoccupation was to go into the field, dumpsites, landfills, streets, homes, highways, villages and dustbins to search, acquire or purchase scrap metals. The primary scavengers go from place to place with their two wheeled cart (Plate 3).

Closely related to this, were sedentary dumpsite scavengers who also scavenged scrap metals, but were more of a generalist, because they scavenged plastics, mattresses, electric wires, appliances, textiles, glass bottles and other valuable things such as metals. They scavenged and sort materials based on their types and forms, and people come to purchase from them right on the dumpsites (Plate 4).They had no carts, therefore prefers to be on dumpsite where they get fresh supplies as waste carrying vehicles dump general wastes. These dumpsite scavengers are still under primary level of scavenging.

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Plate 4. Scavenged and sorted scrap metals ready for sale

The secondary (2^{o}) scavengers are those who can be referred to as the middlemen. They partly finance the field primary (1^{0}) scavengers to go in search and buy scrap metals. They also supply them with two wheel carts to convey their purchases. These middlemen have between 4- 6 field primary scavengers working for them. The size of their scrap metal depots is moderate and was less than 10,000 tons (Plate 5).

Plate 5. Scrap scavengers' depot with three workers

The tertiary (3^{o}) scavengers were the merchants who have accredited middlemen supplying them with scrap metals. It is instructive to note that these merchants do not buy directly from the primary scavengers; they buy only from their accredited middlemen. They finance the middlemen who in turn finance the primary scavengers. The merchants have between 8 – 12 workers sorting the collected scrap metals into iron, copper, aluminium, tin and brass.

Plate 6. A fully-loaded articulated vehicle conveying scavenged scrap metals to a recycling plant sale

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Iron piles were observed to be far more in quantity than other metals. This is because the focus of collection was iron scraps. The scrap metal merchants have enough funds to charter trailer vehicles to convey these scraps to the recycling plants (Plate 6).

It was also noted that due to the activities of these scavengers, the environments were cleaner. Pedestrians had less injuries arising from sharp scrap metals. The incidences of injuries, however, were common with the scrap metal scavengers and sorters. Below is a model of scrap metal scavenging at three levels (see figure 1).

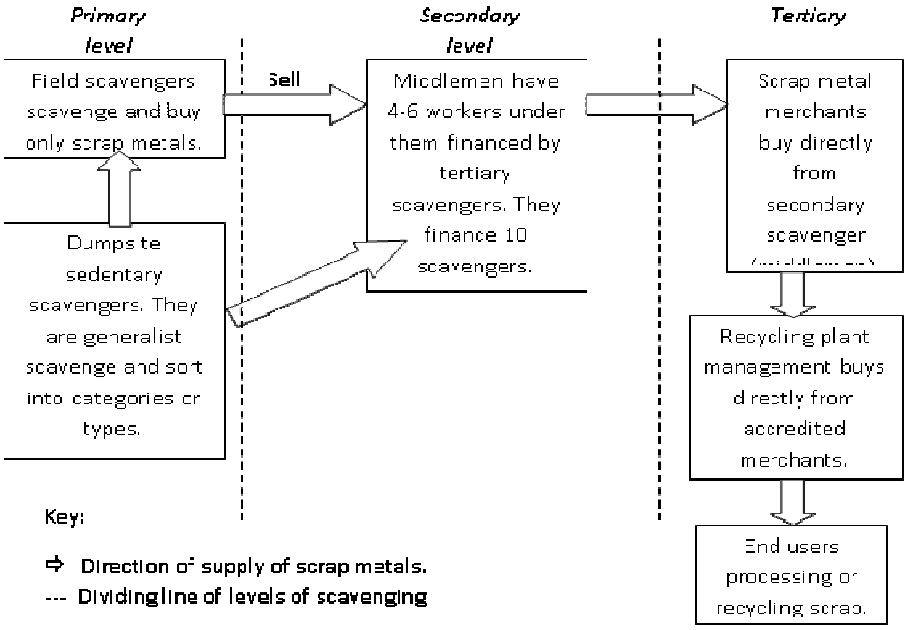

Figure 1. Showing a simple model of scrap metal scavenging at three levels

SUMMARY

Scavenging remains a veritable source of employment for Nigerians and other African youths. However, metal scavenging seems more lucrative than other forms of scavenging. Metal scavenging is about consumer buying behaviour and decision making and consumers are at the heart of this form of scavenging. Scrap metal scavenging has both positive and negative implications, which are enumerated below:

Positive Impact of Scrap Metal Scavenging In Nigeria

a. It is a source of employment for the teeming unemployed youths.
b. It re-directs the mind-set of the youths from crime to gainful vocation.
c. It helps in cleaning-up the environment.
d. It reduces the risk of causing injuries to pedestrians.
e. It helps to reduce accidents on roads.
f. Scrap metals are cheap source of raw materials for iron and steel mills.
g. It helps reduce gas emission through recycling.

Negative Implications of Scrap Metal

Scrap metal scavenging was observed to cause infections due to injuries, water-borne diseases such as diarrhea, typhoid, anthrax, etc. Scavengers do not wear protective materials

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such as hand gloves, boots, goggles, overall raincoats and umbrella. Consequently, they are exposed to all forms of dangers.

CONCLUSION AND RECOMMENDATIONS

Scrap metal scavenging in developing nations is a source of employment especially for the youths. It is a means of cleaning up the environment. It reduces gas emission into the atmosphere. In the light of its advantages outweighing disadvantages, Federal, State and Local Governments should encourage the scavengers by recognizing them as a formal sector. They should be organized into cooperatives to enable them access soft loans, while government serves as guarantors. The contribution of scavengers to the health of economy should be rewarded with loans to carry on their scavenging business.

The youths involved in scavenging should also be educated through workshops and seminar on safety measures involved in scrap metal scavenging. They should be educated on general sanitations and the use of safety wears in order to reduce the effect of health hazards.

REFERENCES

[1] Adebola, O. O. (2006). "The Role of Informal Private Sector in Integrated Solid Waste Management in Lagos, Nigeria, a Developing Country". In *Proceeding of the 21st International Conference of Solid Waste Technology and Management*. Philadelphia, P.A.

[2] Areo, A. B. (2014a). Early child entrepreneurship development: A paradigmatic approach to unemployment challenges: *Research in Humanities and Social Sciences, 4*(4), 41-48.

[3] Areo, A. B. (2014a). Traditional Medicine Practice: Attitude of Practitioners towards Marketing Principles and Impact on Patronage. *European Journal of Business Management, 6*(6), 161-167.

[4] Ayotamuno, J. M., & Gobo, A. E. (2004). Municipal Solid Waste Management in Port Harcourt, Nigeria. *Management of Environmental Quality: An International Journal, 15*(4), 389-398.

[5] East, R. (1995). *Changing Consumer Behaviour.* London: Cassel Educational Limited.

[6] Engler et al. (2001). Design Applied to Improve the Quality Work Life of Scavengers. Universdale do Estadode Minas Gerais – Escola de Design – Rua luz 101/101, Belo Horizonte, Minas Gerais. CEP 30220-080. Brasil.

[7] Kotler, P., Armstrong, G., Saunders, J., & Wong, V. (1999). *Principles of Marketing* (2nd European ed., pp. 227-234). Upper Sadle River: Prentice Hall Inc

[8] Manhar et al. (2011). Informal E-waste Management in Lagos, Nigeria. Socioeconomic Impact and Feasibility of International Recycling Co-operations. *Final report of component 3 of the UNEP SBC E-Waste Africa Project,* V. Frelburg, Germany: Oko Institute.

[9] Medina, M. (2010). "*Scrap and Trade: Scavenging Myths"* – Our World. Science and Technology. http://ourworld.unu.edu.en/scavenging-from-waste

[10] Medina, M. (2010). Solid Wastes: Poverty and the environment in Developing Country Cities: Challenge and Opportunity. *World Institute for Development Economics Research. Working Paper No. 23.*

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[11] Mogaji, J. Y., & Dakyes, S.P. (2011). An Assessment of Socioeconomic Impact of Waste-Scavenging as a Means of Poverty Alleviation at Gwagwalada, Abuja. *Conference Journal of Environmental Studies;* pp. 42-56.

[12] Nabegu, A. B. (2010). An Analysis of Municipal Solid Waste in Kano Metropolis, Nigeria. *J. Hum. Ecol. 31*(2), pp. 111-119.

[13] Norgate et al. (2007). Assessing the environmental impact of metal production processes. *Journal of Cleaner Production, 15*, 838-848.

[14] Nzeadibe, T. C. (2009). Development: drivers of waste recycling in Nsukka urban area. Southeastern Nigeria. *Theoretical and empirical researches in urban management, 32*(1), 137-149.

[15] Ohimain, E. I. (2013). "Scrap Iron and Steel Recycling in Nigeria." *Greener Journal of Environmental Management and Public Safety. 2*, pp. 1-9.

[16] Olarewaju, O. O., & Ilemobade, A. A. (2009). Waste to Wealth: A case study of Ondo State Integrated Wastes Recycling and Treatment Projects. Nigeria. *European Journal of Social Sciences, 8*(1), pp. 7-16.

[17] Onwughara et al. (2010). Disposal Methods and Heavy Metals Released from Certain Electrical and Electronic Equipment Wastes in Nigeria: Adoption of environmental Sound Recycling System. *International Journal of Environmental Science and Development, 1*(4), 290-297.

[18] Papp, J.F. (2001). "Recycling-metal", *US geological survey minerals yearbook, 2001.* USA: USGS.

[19] Richame, M. (2005). *Consumer Decision Making Models: Strategies and Theories.* USA: Oh My Decision Analyst.

[20] Scheinberg, A. (2012). Informal Sector Integration and High Performance Recycling: Evidence from 20 Cities. Women in Informal Employment Globalizing and Organizing. Working paper No. 23.

[21] Schiffman, L. G., & Kanuk, L. L. (2007). *Consumer Behaviour* (9th ed., pp. 29-40). Pearson Prentice Hall.

[22] Umaru, I. (2010). Recycling of Solid Waste and the Yan Bola Underground Economy: A Survey of Environmental Entrepreneurs in Central Nigeria. *J. Human Ecol., 30*(1), 45-54.

[23] USGS (2001). "Recycling metal". *Minerals Yearbook. 2001*. USA: United States Geological Survey.

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ISSN: 2223-9944, eISSN: 2223-9553