



Impact of Insurgency on Employment and Income Generation in Plastic Waste Recycling Industry in The North-Eastern States of Nigeria

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Abstract

The study assessed Impact of Insurgency on Employment and Income Generation in Plastic Waste Recycling Industry in The North-Eastern States of Nigeria. The population of the study comprised the residents within Adamawa, Bauchi, Borno, Gombe, Tararaba and Yobe States, out of which 385 persons were sampled. The research instrument was questionnaire. Three hundred and eighty-five (385) copies of questionnaires were administered and all were retrieved, making 100% return rate. The study employed inferential statistics (Logistic regression) and descriptive statistics (frequency and percentage) for data analysis. The results were presented in tables and discussed according to the research objectives. The study revealed a significance decrease in the Employment and Income Generation in Plastic Waste Recycling Industry in The North-Eastern States of Nigeria. Insurgency has negative impact on Employment and Income Generation in Plastic Waste Recycling Industry in The North-Eastern States of Nigeria. The study recommended that more effort should be made by the Federal Government to restore peace and normalcy in the Northeast states of Nigeria. This will help businesses to flourish and give room for employment opportunities in the Northeast states of Nigeria.

Key words: Insurgency, Employment generation, income generation, solid waste, Recycling, Logit regression

I. INTRODUCTION

Waste is defined as any unwanted material that is due for discarding. But technically, waste is considered as a resource in a wrong place. Solid waste arises from unusable residues in raw materials, leftover, rejects and scrap from process

operations, used or scrap packaging material and even the saleable products themselves when they are finally discarded, (Muhammad and Manu, 2013). It is also seen as substances or objects which are disposed or are intended to be disposed or are required to be disposed of by the provisions of national laws (Basel Convention UNEP, 2004).

Solid wastes could be defined as non-liquid and nongaseous products of human activities, regarded as being useless. It could take the forms of refuse, garbage and sludge (Leton and Omotosho, 2004). Cities in Nigeria, being among the fast growing cities in the world (Onibokun and Kumuyi, 1996) are faced with the problem of solid waste generation. The implication is serious when a country is growing rapidly and the wastes are not efficiently managed. Waste generation scenario in Nigeria has been of great concern both globally and locally. Of the different categories of wastes being generated, solid wastes had posed a hydra-headed problem beyond the scope of various solid waste management systems in Nigeria (Geoffrey, 2005).

Recyclable materials include many kinds of glass, paper, cardboard, metal, plastic, tires, textiles, batteries, and electronics. The composting and other reuse of biodegradable waste such as food and garden waste is also a form of recycling. Materials for recycling are either delivered to a household recycling center or picked up from curbside bins, then sorted, cleaned, and reprocessed into new materials for manufacturing new products (Villalba, Segarra, Fernández, Chimenos, & Espiell, 2002).

According to Asur and Nkereuwem, (2013), Boko Haram Insurgency is a general problem that has forced many shop owners to lock up their shops. This has a negative multiplier effect on taxpayers' compliance and revenue



earning capacity of the government. Therefore, income and employment generation in Borno state.

'Boko Haram' is an expression in Hausa Language, which means, western education is forbidden. Hausa is a major tribe in Northern Nigeria and the Republic of Niger. The group known by the world as Boko Haram is officially called "Jama' atul Ahlissuna Lidda' Awatiwal-Jihad" an Arabic phrase meaning "people committed to the propagation of the prophet's teaching and jihad. It is an extremist Islamic sect in the north-east Nigeria that has created havoc across the country."

The designation of the Boko Haram sect as religious fundamentalist was applied by conservative scholars in the early years of the 21st century, as an organized term, though it is now widely applied to a multitude of groups outside religion, especially but not exclusively to jihadist. A defining character of the Boko Haram sect as religious fundamentalism is that it is always socially but not necessarily politically conservative (Chibuzo and Ogaba, 2014). As a religious fundamentalist, the Boko Haram seeks to overthrow of the socioeconomic and political order by the use of various means including violence or terrorism, incremental reform of existing political regimes, among others (Chibuzo and Ogaba, 2014).

The term insurgency conjures often wild disparate interpretation; suffering at the hands of both experts and pundits. Commonly accepted meanings remain elusive, with predictable conceptual confusion (Moore, 2007). According to Moore (2007), the term insurgency continues to be used interchangeably, and inexactly, with warfare such as irregular warfare, unconventional warfare, revolutionary and even terrorism. He further posits that the interchangeability of terms is understandable, given the diverse nature and adaptability of those who wage insurgency and the overlapping traits of these types of conflict (Moore, 2007).

It is against this backdrop that this research seeks to critically assess the impact of insurgency on employment and income generation in solid waste recycling industry in North eastern states of Nigeria.

PROBLEM STATEMENT/JUSTIFICATION:

The management of solid waste has posed a serious challenge to the development of many developing nations across the globe. Factors responsible for the growth in waste generation in many modern cities are traced to increasing population that is complemented by rapid urbanization and industrialization and the other factor is tied to citizen's socio-economic status and

the type of predominant commercial activities (David, Oladipo, Anthony, Isaac & Kolawole 2014).

The attack on North-eastern Nigerian had been very devastating because the city had always been one of the commercial centres of Western Sudan for the past 500 years (ThisdayNewspaper2014).

Also, Amori, Fatile, Ihuoma & Omoregbee (2012) assert that, food wastes constituted the highest proportion of wastes generated from halls of residence in Nigerian tertiary institutions in south-west Nigeria. Others were plastic/rubber bottles, ash waste and metal cans. In all the other locations, paper waste, polythene bags and leaves constituted the largest components of solid wastes while metal cans and plastic/ rubber bottles constituted an insignificant proportion due to the large population of people nature of plastic waste makes its disposal a problem that needs to be tackled because of the implication it has on biophysical environment such as soil. The environmental problems of plastic waste disposal in Nsukka, ranges from blocking of the drainage systems, blockage of ruminant tracts, soil infertility, pollution of ponds and also environment degradation. (Nkiru, Chinwe & Philp, 2014).

Recycling of this plastic waste tends to be the solution to this environmental problem. Recycling can render social, economic, and environmental benefits. And on the other hand, it has cost in terms of health and overhead cost. United State Environmental Protection Agency (EPA 2018) discussed the benefits of recycling as; it reduces the amount of waste sent to landfill and incinerations. It helps create jobs in the recycling and manufacturing industries. (Montana department of environmental Quality) (2004).

The research gap is that the previous researches conducted in Maiduguri show the problems of insurgency affected the economic activities of the people of Borno State and the North-East generally. However, the effect of insurgency on the employment and income generation of the waste dealers, waste recycling industry and the scavengers have not been investigated. To address those issues identified, this study will analyze the impact of insurgency on employment and income generation in solid waste recycling industry in North-east of Nigeria.

OBJECTIVES OF THE STUDY:

The specific objectives of the study include:

- i. To determine the impact of insurgency on income generation in solid waste recycling industry in the North-eastern state of Nigeria.



- ii. To evaluate the impact of insurgency on employment in solid waste in the North-eastern state of Nigeria.

II. LITERATURE REVIEW:

Conceptual issues relate to insurgency, solid waste, plastic waste, recycling of solid waste etc were discussed.

Concept of insurgency

According to Powell and Abraham (2006) insurgency refers to a violent move by a person or group of persons to resist or oppose the enforcement of law or running of government or revolt against constituted authority of the state or of taking part in insurrection. Insurgency as defined above becomes violation of the constitutions criminal law and the international treaty obligations of a nation in the same circumstances.

Concept of Solid Waste

Michael and Agwuoke (2012) define waste as material which are as a result of human activities of which some can be reuse or recover as a resources, recycled into material production processed. It is any substance or object which the holder discards or intends or is required to discard. Waste is defined as any unwanted material that is due for discarding. But technically, waste is considered as a resource in the wrong place. Solid waste arises from unusable residues in raw materials, leftover, rejects and scrap from process operations, used or scrap packaging material and even the saleable products themselves when they are finally discarded, (Muhammad and Manu, 2013).

Concept of Recycling/Reuse

According to Geraldor, Auro and, Adriano (2017), recycling is a set of techniques aimed at removing the most valuable waste and reusing it in the production cycle, either in the original or a parallel production cycle. Bisio and Boots (1996) define recycling as a method of materials management in which discarded materials are separated from waste and processed to acceptable standard to re-enter the economy as useable products.

Empirical Review

Empirical researches on impact of insurgency on solid waste recycling industry in environmental economics are scanty. However, few studies had been done on the impact of insurgency on income generation and employment on solid waste recycling industry, and also impact of insurgency on other sectors, such as agriculture, small and medium scale industry in Nigeria.

Gangaya, and Mshelia, (2021) examine the socio-economic and demographic characteristics of waste

scavengers, practitioners of a common form of solid waste resource recovery practices in Mubi metropolis. The results revealed that majority of the scavengers within Mubi metropolis are males. The female counterparts do not partake much in these types of trade. The reason could not be farfetched from the unwholesome nature of the business and its demands.

Modu, and Uba, (2020), assert that, Boko Haram insurgency has a negative impact on the production of goods and services by Small and Medium Scale enterprises to a high extent in Borno state. The findings further revealed that there was significant difference between the mean responses of business owners in more secured places and less secured places regarding the extent of the impact of Boko Haram insurgency on production of goods and services. Therefore, the null hypothesis was rejected. It was therefore recommended among others that, government at all levels (federal, state and local Governments) should ensure there is adequate security for the operations of SMEs to protect the business owners/managers and promote economic viabilities of businesses.

III. METHODOLOGY:

Research Design

The study employed a survey research design. The survey design enables the researcher to “describe phenomena accurately” (Blanche et al, 2006). This design also corresponds to what Bryman (2004) describes as Cross-sectional research design that aims at getting data from multiple places at a given point in time so as to analyze relationship across a number of variables of interest (Bryman, 2004). Survey in research is a technique in which data is gathered by asking questions from respondents.

This study will make use of qualitative data to research. This design will enable the researcher to collect information from the respondents that will help the researcher to examine issue raised from various angles to construct a rich and meaningful picture of a complex, multifaceted situation” (Leedy and Ormrod, 2005).

Population

The target population of the study include plastic waste recycling industry, plastic waste dealers and scavengers of plastic waste in the North-east (Adamu State, Bauchi Sate, Borno State, Gombe Sate, Taraba State and Yobe State) of Nigeria.

Sample Size and Sampling Technique



The sample size of the study was total of 600 respondents. i.e. 100 respondents from each state of the North-East of Nigeria.

The study adopted the multi-stage random sampling techniques. The choice of this techniques of sampling is as a result of the nature of the study area. According to Kothari (2004), if the total area of interest happens to be a big one, a convenient way in which a sample can be taken is to divide the area into a number of smaller non-overlapping areas and then to randomly select a number of these smaller areas (usually called clusters), with the ultimate sample consisting of all (or samples of) units in these small areas or clusters. Thus in cluster sampling the total population is divided into number of relatively small subdivisions which are themselves clusters of still smaller units and then some of these clusters are randomly selected for inclusion in the overall sample.

Method and Instruments of Data Collection

Primary data was sourced through the use of structured questionnaire The collected information from the respondents will be used to estimate the research model. The questionnaires consisted of close-ended questions i.e. respondents are only required to supply short answers by ticking the correct answers to the questions. This is because it increases some control and enhanced guidance to the respondents, which significantly enhance the validity and reliability of the instrument (i.e. the extent to which expected results are obtained).

The questionnaire was in two sets, one for the solid pickers, solid waste dealers and the plastic waste recycling industry. The second focused on questions regarding the employment and income generation from both solid waste pickers, solid waste dealers

and insecurity and the recycling industry. (i.e. total of 600 respondents). i.e 100 questionnaires were distributed to each state of the north-east of Nigeria.

Data Analysis

The study employed mix method (quantitative and qualitative). The quantitative method data were collected through questionnaire and the qualitative method data collected through interview. Descriptive and inferential statistics were used for data analysis with the aid of STATA software. Descriptive statistics (frequency and percentage) was employed to analyse the socio-demographic data of the respondents and inferential statistics (Logit regression) was used to analyse the research objectives.

Empirical Model and Model Specification

This study used logit regression as a model to examine the impact of insurgency on income and employment generation of the plastic waste recycling industry in the north-east of Nigeria. A dummy dependent variable (employment and income generation in solid waste recycling industry in the North-eastern state of Nigeria) would be regressed on a series of factors that are identified and included as explanatory variables. The model was characterized by a binary dependent variable with mutually exclusive and exhaustive outcomes. The dependent variables are employment and income generation in solid waste recycling industry in the North-eastern state of Nigeria. 1 (one) if insurgency has positive impact on income and employment generation of the plastic waste recycling industry in the north-east of Nigeria and 0 (zero) if otherwise.

$$INSUGY=f(LINCPD, LINCPM, CPWPK, NWK, PPWPK, NSSPWD, KPWGPD, PFWSD) \dots(1)$$

$$INSUGY=f(NSPWB, NWRI, NPEWRI, INCSCA) \dots(2)$$

Following Maddala (1990), the empirical model gives rise to a system of two probabilities as:

$$\text{Prob}(Y_{t=j}) = \frac{\sum 2 e^{\beta_i X_i}}{e^{\beta_k N_i}} \dots(3)$$

Where j = 0 or 1

$$\text{Prob}(Y_{t=j}) = \frac{e^{n_j X_i}}{e^{n_0 X_i} + e^{n_1 X_i}} \dots(4)$$

According to Maddala (1990) a clear specification for this Logit model can be written as, thus:

$$P_i = \beta_k + \beta_j X_j + e_i \dots(5)$$

Where:

P_i = Dependent variable

β_k = Intercept (constant term)

β_i = Coefficient of explanatory variables

X_1 = Explanatory variables

e_i = Error term

The model that would be used for determining the factors (independent variables) that influenced the dummy dependent would be specified as:



$$P_i = \beta_k + \sum \beta_i X_i + e_i \quad \dots(6)$$

$$P_i = \beta_k + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \beta_4 X_{4i} + \beta_5 X_{5i} + \beta_6 X_{6i} + \beta_7 X_{7i} + e_i \dots(7)$$

Where:

P_i = Income and employment generation of the plastic waste recycling industry in the north-east of Nigeria, thus 1 if the insurgency has positive impact on income and employment generation of the plastic waste recycling industry in the north-east of Nigeria and 0 if otherwise.

β_k = Intercept Constant term

βX_j = Coefficient of explanatory variables

e_i = Denotes impact of insurgency on income and employment generation of the plastic waste recycling industry in the north-east of Nigeria as determined by other factors not considered in the model.

Therefore, the response and explanatory variables for objective one are:

Y = Insurgency (INSUGY)

X_1 = Hours spent at work per day (HSWPD)

X_2 = Level of Income per day (LINCPD)

X_3 = Level of Income per month (LINCPM)

X_4 = Cost of plastic waste per kilogram (CPWPK)

X_5 = Number of workers (NWK)

X_6 = Price of plastic waste per kilogram (PPWPK)

X_7 = Number of scavengers selling plastic waste in a day (NSSPWD)

X_8 = Kilograms of plastic waste gather per day (KPWGPD)

X_9 = Profit from waste scavenging daily (PFWSD)

The response and explanatory variables for objective one are:

Y = Insurgency (INSUGY)

X_1 = Number of scavengers in plastic waste business (NSPWB)

X_2 = Number of waste recycling industries (NWRI)

X_3 = Number of people employ by waste recycling industries (NPEWRI)

X_4 = Income from scavenging (INCSCA)

IV. RESULTS AND DISSCUSSION

Variables	Frequency	Percentage (%)
Gender		
Male	600	50.0
Female	0	50.0
Age		
Below – 15	100	16.7
16-25	200	33.3
26-35	200	33.3
36 – above	100	16.7
Marital Status		
Single	450	75.0
Married	150	25.0
Divorced	0	0.0
Widow	0	0.0
Level of Education		
Informal Education (Qur'anic School)	100	16.7
Primary School	150	25.0
Secondary School	150	25.0
Higher Institution	50	8.3
No Formal Education	50	8.3
Status of respondents		
Recycler	50	8.3
Dealer	200	33.3



Scavenger	350	58.3
Total	600	100.0

Table 4.1: Demographic Characteristics of the Respondents n= 600
Sources: Field Survey, 2023

Table 1 described the socio-demographic characteristics of the respondents. 600 respondents participated in this study out of which 100.0% were males, 33.3% were within the age bracket of 16-25 and 26-35 years, 75.0% were unmarried and 25.0%

had primary and secondary education and 58.3% were scavengers. This means that majority of the respondents were scavengers in their active age of labour with relative education.

Table 2: Impact of Insurgency on Income Generation in Solid Waste Recycling Industry in the North-Eastern State of Nigeria

Variable	Coefficient	Standard Error	Z	P-value	Odds Ratio
Constant	1.146	0.123	9.317*	0.000	3.146
HSWPD	-0.457	0.139	-3.288***	0.001	1.579
LINCPD	-0.478	0.164	-2.915***	0.018	1.613
LINCPM	-0.723	0.152	-4.757**	0.000	2.354
CPWPK	0.431	0.153	2.817***	0.017	1.539
NWK	-0.457	0.149	-3.067***	0.001	1.579
PPWPK	0.065	0.012	5.417*	0.000	1.067
NSSPWD	-1.151	0.132	-8.719**	0.000	3.161
KPWGPD	-0.372	0.112	-3.321**	0.000	1.451
PFWSD	0.236	0.025	9.440*	0.000	1.266
Pseudo R ² =	0.785	79%			

Note: *** significant at 1% level, ** significant at 5% level, * significant at 10% level

Independent Variables: LINCPD, LINCPM, CPWPK, NWK, PPWPK, NSSPWD, KPWGPD, and PFWSD

Dependent Variable: INSUGY

Hours spent at work per day (HSWPD)

The result shows that hours spent at work per day (HSWPD) has a negative coefficient that was significantly related to income at 1% level. This means that insurgency has the likelihood of reducing the number of hours scavengers spent scavenging by 1.579.

Level of Income per day (LINCPD)

Level of Income per day (LINCPD) was negative and significantly related to scavengers' income at 10% level. This negative coefficient indicates that decrease in the level of scavengers' daily income as a result of insurgency has the likelihood of decreasing scavengers' income by 1.613.

Level of Income per month (LINCPM)

Level of Income per month (LINCPM) has a negative coefficient and significantly related to scavengers' income at 5%. This negative coefficient indicates that decrease in the level of scavengers' monthly income due to insurgency

activities in the study area has the likelihood of decreasing scavengers' income by 2.354.

Cost of plastic waste per kilogram (CPWPK)

Cost of plastic waste per kilogram (CPWPK) was significant at 1% level and positively related to scavengers' income. The positive coefficient implies that high cost of plastic waste per kilogram has the probability of increasing scavengers' income by 1.539.

Number of workers (NWK)

As expected, the coefficient of number of workers (NWK) was negative and significantly related to scavengers' income at 1% level suggesting that decrease in the number of scavengers as a result of insurgency has the likelihood of decreasing recycling industries' profit by 1.579.

Price of plastic waste per kilogram (PPWPK)

The coefficient of value of price of plastic waste per kilogram (PPWPK) was positive and significantly related to scavengers' income at 10% level. The positive coefficient of price of plastic waste per kilogram (PPWPK) indicates that increase in the price of plastic waste has the likelihood of increasing scavengers' income by 1.067.



Number of scavengers selling plastic waste in a day (NSSPWD)

Number of scavengers selling plastic waste in a day (NSSPWD) has a negative coefficient that was significantly related to income at 5%. A decrease in number of scavengers selling plastic waste in a day (NSSPWD) due to insurgency has the likelihood of decreasing recycling industries' profit by 3.161.

Kilograms of plastic waste gather per day (KPWGPD)

Kilograms of plastic waste gather per day (KPWGPD) has a negative coefficient and significant at 5%. This negative coefficient means

that kilograms of plastic waste gather per day (KPWGPD)

determines scavengers' income. A decrease in the kilograms of plastic waste gather per day (KPWGPD) has the likelihood of decreasing scavengers' income by 1.451.

Profit from waste scavenging daily (PFWSD)

Profit from waste scavenging daily (PFWSD) has a positive coefficient as expected and significantly related to scavengers' income at 10%. An increase in the profit from waste scavenging daily (PFWSD) has the likelihood of improving the productivity of recycling industries by 1.266.

Table 3: Impact of Insurgency on Employment in Solid Waste Recycling Industry in the North-Eastern State of Nigeria

Variable	Coefficient	Standard Error	Z	P-value	Exp(B)
Number of scavengers in plastic waste business (NSPWB)	-0.274	0.049	-5.600**	0.000	0.760
Number of waste recycling industries (NWRI)	-1.060	0.400	-2.65*	0.008	2.886
Number of people employ by waste recycling industries (NPEWRI)	-0.285	0.045	-6.283**	0.000	1.330
Income from scavenging (INCSCA)	-0.911	0.146	-6.239**	0.000	0.402
Constant	0.049	0.050	0.970	0.333	0.952
Pseudo R ²	0.62				

Note: ** Significant at 1% level, * significant at 5% level

Independent Variables: NSPWB, NWRI, NPEWRI, INCSCA

Dependent Variable: INSUGY

Number of scavengers in plastic waste business (NSPWB): Number of scavengers in plastic waste business (NSPWB) has a negative coefficient that was significantly related to employment at 1% level. This negative coefficient value is as a result of the fact that there are few people in scavenging business as a result of insurgency activities in the northeast Nigeria. A unit decrease in the number of scavengers in plastic waste business (NSPWB) has the likelihood of creating unemployment opportunity by odd of 0.760.

Number of waste recycling industries (NWRI): Number of waste recycling industries (NWRI) a negative coefficient as expected and significantly related to employment at 5%. This implies that the activities insurgency discourages investors in the study area. A unit decrease in the number of waste recycling industries (NWRI) has the likelihood of decreasing employment opportunity by odd of 2.886.

Number of people employ by waste recycling industries (NPEWRI): Number of people employ by waste recycling industries (NPEWRI) was significant at 1% level and negatively related to employment. A unit decrease in the number of people employ by waste recycling industries (NPEWRI) has a likelihood of creating unemployment by odd of 1.330.

Income from scavenging (INCSCA): Income from scavenging (INCSCA) has a negative coefficient that was significantly related to employment at 1% level. A unit decrease in the income from scavenging (INCSCA) has the likelihood of decreasing employment by odd of 0.402.

Summary of Findings

1. Insurgency has negative impact on income generation in solid waste recycling industry in the North-eastern state of Nigeria ($P < \alpha$).
2. Insurgency has negative impact on employment in solid waste recycling industry in the North-eastern state of Nigeria ($P < \alpha$).



V. CONCLUSION AND RECOMMENDATIONS

The study concluded that insurgency has negative impact on income generation and employment in solid waste recycling industry in the North-eastern state of Nigeria ($P < \alpha$). The study recommended that more effort should be made by the Federal Government to restore peace and normalcy in the Northeast states of Nigeria. This will help businesses to flourish and give room for employment opportunities in the Northeast states of Nigeria.

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Questionnaires on

"Impact of Insurgency on Employment and Income Generation in Plastic Waste Recycling Industry in The North-Eastern States of Nigeria"

INSTRUCTIONS: Please you are required to just tick appropriate bracket like this (√). Please tick ONLY ONE option from the list of available options. Thank you.

1. Gender

- a) Male []
b) Female []

2. Age

- a) Below – 15 []
b) 16-25 []
c) 26-35 []
d) 36 – above []

3. Marital Status



- a) Single []
b) Married []
c) Divorced []
d) Widow []

4. Educational Qualification,

- a) Informal Education (Qur'anic School) []
b) Primary School []
c) Secondary School []
d) Higher Institution []
e) No Formal Education []

5. Status of the despondence:

- a) Recycler []
b) Dealer []
c) Scavenger []

6. How many hours do you spend in work per day?

During the insurgency	Tick	after the insurgency	Tick
a. 3 to 3 hours		a. 3 to 3 hours	
b. 4 to 5 hours		b. 4 to 5 hours	
c. 6 to 7 hours		c. 6 to 7 hours	
d. 8 to 10 hours		d. 8 to 10 hours	

7. Level of Income per day?

During the insurgency	Tick	after the insurgency	Tick
a. Less than ₦2000		a. Less than ₦2000	
b. ₦2001 – ₦5000		b. ₦2001 – ₦5000	
c. ₦5001 – ₦6000		c. ₦5001 – ₦6000	
d. ₦6001 and above		d. ₦6001 and above	

8. Level of Income per month?

During the insurgency	Tick	after the insurgency	Tick
a. Less than ₦50,000		a. Less than ₦50,000	
b. ₦51000 – ₦60,000		b. ₦51000 – ₦60,000	
c. ₦61,000 – ₦70,000		c. ₦61,000 – ₦70,000	
d. ₦71,000 and above		d. ₦71,000 and above	

9. How much do you buy plastic waste per kilogram from the dealers?

During the insurgency	Tick (√).	after the insurgency	Tick(√).
a. ₦40, per kilogram		a. ₦50, per kilogram	
b. ₦50, per kilogram		b. ₦60, per kilogram	
c. ₦60, per kilogram		c. ₦70, per kilogram	
d. ₦70, per kilogram		d. ₦80, per kilogram	

10. How many workers do you have in your industry?

During the insurgency	Tick (√).	after the insurgency	Tick (√).
a). 1-20 workers		a). 1-20 workers	
b). 21-30 workers		b). 21-30 workers	
c). 31-40 workers		c). 31-40 workers	
d). 41-60 workers		d). 41-60 workers	
e). 61-100 workers		e). 61-100 workers	

11. How much do you buy plastic waste per kilogram from scavengers?

During the insurgency	Tick (√).	after the insurgency	Tick(√).
a. ₦30, per kilogram		a. ₦40, per kilogram	
b. ₦40, per kilogram		b. ₦50, per kilogram	
c. ₦60, per kilogram		c. ₦60, per kilogram	
d. ₦70, per kilogram		d. ₦80, per kilogram	

12. How much do you sell to the plastic waste per kilogram to the recycling industry?

During the insurgency	Tick (√).	after the insurgency	Tick(√).



a. ₦40, per kilogram		a. ₦50, per kilogram	
b. ₦50, per kilogram		b. ₦60, per kilogram	
c. ₦60, per kilogram		c. ₦70, per kilogram	
d. ₦150, per kilogram		d. ₦220, per kilogram	

13. How many scavengers use to bring plastic waste for you to buy in a day?

During the insurgency	Tick (√).	after the insurgency	Tick (√).
a). 10-20 scavengers		a). 10-20 scavengers	
b). 21-40 scavengers		b). 21-40 scavengers	
c). 41-50 scavengers		c). 41-50 scavengers	
d). 51-70 scavengers		d). 51-70 scavengers	

14. How many kilograms of plastic waste do you gather per day?

During the insurgency	Tick (√).	after the insurgency	Tick (√).
a. 20-30 kilograms		a. 20-30 kilograms	
b. 31-50 kilograms		b. 31-50 kilograms	
c. 51-60 kilograms		c. 51-60 kilograms	
d. 61-80 kilograms		d. 61-80 kilograms	

15. As a plastic waste scavenger, how much do you gain from waste scavenging daily?

During the insurgency	Tick (√).	after the insurgency	Tick (√).
a. ₦500-1000		a. ₦2,000-3,000	
b. ₦1001 - ₦2000		b. ₦3,001 - ₦4,000	
c. ₦2001 - ₦3,000		c. ₦4,001 - ₦5,000	
d. ₦2001 - ₦3,000		d. ₦5,001 - ₦6,000	
e. ₦3001 and above		e. ₦6001 and above	