



EFFECT OF MANUFACTURING INDUSTRIAL POLLUTION ON RESIDENTIAL PROPERTY VALUES IN OGBA, IKEJA, LAGOS

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Abstract

Industrial activities is crucial to man's existences for the provision of basic needs of man i.e. food, shelter and clothing but the strategic location of industries away from human habitation is also as important as the existence of industries. The industries and it activities in complementary with its locations, generate hazard to humans, the properties in line with value or values within the neighbourhood in aspect of polluting of environment. In Nigeria, government (Federal/ A state) policies to this effect have seemed perfect but there is still the lingering problem of pollution from industries affecting daily existence of humans and reduction in ;property value due to non – adherence to such policies as in the case study area of Lagos state, specifically Ogba area. A sample survey of 80 respondents/stakeholders was taken and using descriptive tools it revealed at a glance that there is significant impact of the pollution of the industries in Ogba on property value and lives of the residents in the neighbourhood. There should be a regulation that focus on pollution of these industries with their residential neighbourhood in the state by ensuring cleaner production and environmental impact analysis if relocation is not an option.

Keyword: *Pollution, Property Value, Manufacturing Industries, Neighbourhood.*

INTRODUCTION

During the past decades, the management of dangerous contaminants and residues from industrial operations has been of major concern and it has also assumed an important role in Lagos state in particular and Nigeria in general. This is as a result of the hazardous negative effects it has posed to residential neighbourhood around where the manufacturing industries are located, especially where they are largely concentrated (as it is in case study area). Pollution is a result of the activities of man, especially in the use of prodigious amount of raw materials and it has been so since the revolution of industries around the world. This shows why the rapid increase in

industrialization and technology around the area of study has brought about a decline in the quality of life and value of properties in the case study area (Ogba).

In Nigeria, the management of environmental has become a matter of a national importance. This is evidence from the different Federal Government programme on the importance of a clean environment stating from the declaration of 1976 as environmental health year and the launching in 1985 by the Buhari Regime, of the monthly environmental sanitation programme, which is still in operation in Lagos till date. Also, the establishment of the Federal Environmental Protection Agency (FEPA) promulgated by Decree 58 of 1988 under the Babangida regime to check the menace created by pollution has shown that even the government recognizes the importance of a clean and healthy living environment as it relates to the quality of life and property. A polluted environment or area means a polluted and poor living condition of the inhabitants of that area. This invariably causes shift in population or people from that area to a better environment or area and discourages migration of people to such areas which in turn affects the value of residential properties in such areas. This also causes many property owners to sell off their properties to manufacturing companies who will want to locate in such area and before one knows, an area designated for residential use, will be transformed silently into an industrial area: causing an alteration in the master plan of the state and a degradation of the environment at large. Pollution comes in different forms ranging from water, air and noise to dust which are among others that could affect human health adversely. Therefore, great concern should be given to its (pollution) management. The problem of pollution to the residential neighbourhood and the area at large is the reduction on demand and supply of property in the area. Take for example where there is oil spillage on agricultural land, this will not only affect the market value of such land but will also destroy the crops and soil nutrients on the land. The same scenario applies to where industrial waste in form of toxic and gas waste are emitted from industries around a residential neighbourhood. This will scare away residents and also scare away real estate investors from such area, as regards residential and commercial properties and consequently land in such neighbourhood will lose its value. The ones that are considered critical to this study as they affect neighbourhood include air pollution, solid waste pollution and noise pollution. The reason for this selection arise from the conspicuousness of these types of pollution in the case study area and the general prevalence of these types of pollution in our environment today, which invariably has ill-treated investment in real estate, consequently having a not-so-encouraging effect on land value.

STATEMENT OF PROBLEM

According to Adebisi Adesina in the Guardian Newspaper on Monday April 26, 2004, pollution is the greatest factor that affects property value of all environment degradation factors. Pollution, be it industrial or domestic is the silent killer of property value. Gaseous emission of carbon – dioxide, sulphur and nitrogen as well will vaporize together with water into the atmosphere and will in turn fall as acid rain

with its constant and corrosive action on building materials deface extremely valuable articles of national and historic importance. Although, acid rain is regarded to be unavoidable consequence of industrialization. Many industries are situated in this study area. Especially in Oba Akran Road, we have industries such as Nigeria Textile Mills PLC, Nigeria German Chemical PLC; woollen and synthetic Textile Mills limited, Dunlop Tyres, Guinness Nigeria Limited, Cocoa Industries, Berger Paint e.t.c. along Akilo there is first Aluminium PLC. There are also other industries along Acme Road such as West African Milk (WEMPCO), Harp Brewery e.t.c. Many problems are being faced by the residents of Ogba neighbourhood due to the activities of these industries which have caused some damages to the health of residents such as asthma symptoms and other respiratory systems, deteriorating of eyes, cardio – vascular diseases, impaired mental processes, reduction of amount of oxygen in the blood stream and can also cause mild headache and dizziness. So with this some question were thought, such as follows:

1. What are the manufacturing and residential properties in the study area
2. What are the effect of manufacturing industries on residential properties in the study area
3. What is the trends of residential (rental) value for past 10year.
4. what are the cumulative effect of manufacturing activities on residential neighbourhood.

AIM AND OBJECTIVES

The aim of this study is to examine the effect of manufacturing industries activities on residential properties value using Ogba Lagos state as a case study. With a view of achieving this aim, the study focuses on the following objectives.

1. To identify the manufacturing industries and various residential property in the environment.
2. To assess the effects of manufacturing industries pollution on residential property values in the study Area.
3. To examine the trends of residential (rental) value for past 10year.
4. To examine the effect of manufacturing industrial pollution on resident within neighbourhood so as to provide a reasonable recommendation to the effect .

RESEARCH METHODOLOGY

This involves the adequate description of the research area, stressing on the inclusiveness of the chosen area of this study, the research tools and sampling techniques necessitating the administration of questionnaire, interviews and visual observation. Which primary data collected from field survey i.e. through personal (one

on one), interview, questionnaire administration was done personally 50% of the questionnaires to the industries, 50% to the residents, Retrieval of copies of questionnaires was also carried out personally to examine direct personal observation with people attitude within the area. And Secondary data used for this research is extracted from the work off various scholars, government agencies (ministry of environment, Lagos state), related to the subject matter, libraries, textbooks, journals magazines, workshops which are relevant to the research work being carried out. The sampling size is 10% of the total population of study which 160 properties were sampling, both industrial and residential. This is based on the random sampling method with a view that a total of 80 copies of questionnaires were administered which reflected a good size or portion of every population unit relevant to the survey. The focus is on areas that are near to the ``danger zones`

AN OVERVIEW OF MANUFACTURE INDUSTRY

The word industry has several meanings. Sometimes it refers only to the manufacturing of goods. Making it different from agriculture and trade, for the purpose of this project, industry includes all the activities which provide us the things we want and need. This cases both agriculture and trade are mining, banking, manufacturing and building. Industries provide us with food we eat, cloth we wear and house we live in. These are the necessities of life. Modern industries have brought us the most and best food, clothing and shelter that man has ever had. Industry (from Latin industrious, ``diligent, industrious’’), is the segment of economy concerned with production of goods. Industry began in its present form during the 1800s, aided by technology advances and it has continue to “develop” countries (the U.K., the U.S., and CANADA) depend significantly on Industries, the countries they reside in, and the economies of those countries are interlinked in a complex web that may be hard to understand at first glance. Industry performs its magic with the use of two very simple elements; human being and nature. The success of modern industry has come about because it has made better use of these two elements than ever before. Modern industry had been described as an efficient partnership between men naturals or raw materials out of which goods one produced.

CLASSIFICATION of INDUSTRIAL SECTORS

1. Agricultural Industries
2. Manufacturing Industries
3. Mining and Raw Materials Extraction Industries e.t.c.

There are many different kinds of industries, and usually divided into different class or sectors. The primary sectors of industries are agriculture, mining and raw materials extraction. The secondary sector of industry is manufacturing - which is what is colloquially meant by the word "industry". The tertiary sector of industry is service production. Sometimes one talks about a quaternary sector of industry,

Consisting of intellectual service

Light industry –Heavy Industry

Labour-Intensive Industry- Capital-Intensive industry

By product: chemical industry, software industry, paper industry, entertainment industry, semiconductor industry, cultural industry and poverty Industry.

POLLUTIONS

Pollution is the introduction of pollutants (chemical substances, noise heat, light energy and others) into the environment which results in deleterious effects of such a nature as to endanger human health, harm living resources and ecosystems and impair or interfere with amenities and other legitimate uses of the environment. (David A.I 1976)

The major forms of pollution are discussed below along with the particular pollutants relevant to each of them:

AIR POLLUTION refers to the discharge gases and dust into the atmosphere. When these harmful substances enter the air around us, they may cause irreversible damage to humans and to our environment. Air pollution is a chemical, Physical (e.g. particulate matter) or biological agent that modifies the natural characteristics of the atmosphere(Perry J.H 19950)

The atmosphere is a complex, dynamic natural gaseous system that is essential to support life on planet Earth. (<http://www.airquality.co.uk>)



Plate 3: Look down from the Hollywood Hills with Griffith Observatory on the hill in the foreground, air pollution is visible in downtown Los Angeles on a late afternoon

Source:www.wikipedia.com

The burning of fuel and some other manufacturing activities release a lot of smoke and percolate, pollutants. This pollution causes the soil and deterioration of material and building.

WATER POLLUTION Water pollution occurs when waste material from agriculture, industries and domestic source are discharge into rivers, lakes and seas (Laurent Hadgis 1973). When toxic substances enter lakes stream, rivers, oceans and others water bodies, they get dissolved or lie suspended in water or get deposited on the bed. Water pollution has many sources. The most polluting are the city sewage and industrial waste discharge into the rivers. The facilities to treat waste water are not adequate in any city in Indian and other developing Countries. Presently only about 10% of the waste water generated is treated; the rest is discharged as is it into the bodies. Due to this, pollutants enter ground water, river and other water bodies. Such water, which ultimately ends up in our household is often highly contaminated, and carries disease- causing microbes. Factories and Industries often release poisonous chemical substances in to sea, river or lakes, resulting in the destruction of Mother Nature. An example of industrial sea pollution happened in Japan in the 1950s. A local factory had poured waste water containing mercury in to the minamata bay for 20 years. Tuna fish in the bay absorbed the mercury band people are the tuna. Many children were hence borne with birth deformities, people lost their hearing and sight and thousands eventually died.

<http://www.ee.ge.ca>



Plate 5: Raw sewage and industrial waste flow into U.S. from Mexico as the new river passess from Mexicali, Baba california to Calexico, California

Source: www.wikipedi.com

NOISE POLLUTION, Bragdon(1970) discuss that Constant expulsion of human being to noise tends to bring about permanent hearing losses. Human beings are also

clearly annoyed by noise which can be the loudness of the sound and with higher frequencies. Traffic noise that might almost pass unnoticed suddenly becomes annoying when a person attempts to make a telephone call from a booth on a city street. Noise also provides physiological effects in the human body one important effect are the body constricts and reduce the flow of blood. Other physiological effect include dilation of the pupils, peeling of the skin, tensing of the voluntary and involuntary muscle, diminution of gastric secretion increase in blood stream which increase tension nervousness, irritability and anxiety.

SOLID WASTE POLLUTION Every single day, tons and tons of domestic waste ranging from fish bones to huge pieces of rubbish such as un used refrigerator. If all these wastes are not disposed property, the damage they can do to the environment and human kind can be extremely devastating. Industrial solid waste can produce a wide range of environment effects. They may be looked upon as being toxic flammable, radioactive explosive bio – degradable. They are ultimately disposed on the land and their effect may be transferred in gaseous product to remote locations. Industries waste disposal is a profit reducing activity and most industrialists operating in Nigeria should be now be aware of the environment consequence of irresponsible disposal of industrial waste. As the number of factories generating toxic and hazardous waste increases the danger of living resources and human health will increase.



Plate 6: Accomodation of littler and organic debris in salford Quays, a section of the Manchester Ship canal Greater Manchester, U.K ‘
Source: www.

Wikipedia.com

PROPERTIES AND CLASSIFICATION

There are six main classification of property which two are relevant to the project. These property are residential, commercial, industrial, institutional, agricultural, and recreational (Kuye 2002)

RESIDENTIAL PROPERTY is main finding of the research Is residential property. They are accommodation that is know as house. It could be rural, urban and sub-urban house. It also varies in designs e.g mansionate,, flat, duplex, semi detached, detached

and tenement building. The Lagos State Country planning and Building Planning(Regulation 1996) define a residential unit as a building or part or building consisting of a rooming houses and a flat forming a habitation unit for one family with independent utilities. It also refer (residential estate) as an area of land on which many houses build either by private enter prices or public authorities.

INDUSTRY PROPERTY In this category, every class of property primarily used for the production of goods and services e.g factories and warehouses. The Nigeria urban and regional planning Decree No 88 of 1992 define an industrial property `to mean any development or use of land or any building on land for the purpose of:

- (1) Processing and mineral
- (2) Extraction of production by whatever means other then mining or product from another product or substance.
- (3) Repair and working on only mechanized equipment.

Other property are commercial, Agricultural, Recreational, institutional are sub-relevant to the research.

ANALYSIS OF EFFECT OF POLLUTION IN OGBA

TYPES OF POLLUTION	Frequency	Percentage%
Air pollution	44	63
Noise pollution	12	17
Water pollution	6	9
Land pollution	8	11
Total	70	100

SOURCE: Field Survey 2019.

The table above analysis the effect of various pollution in ogba the study area. The Air pollution have the highest effect in the study area with 63%, follow by noise pollution 17%, land pollution 11% and water pollution 6%.

Residential Property In ogba lagos

Types of houses	Frequency	Percentage (%)
Tenement Building	10	14.2
Mining Flat	11	15.6
2 Bedroom Flat	17	24.2
3Bedroom Flat	14	20
A Duplex/Semi Detached	18	26
Total	70	100

SOURCE: Field Survey 2018

The above consist of various residential property available in the study area. The property is analysis above in frequency and percentage.

CATEGORIES OF BUILDING OWNERSHIP FOUND WITHIN THE STUDY AREA

These data were collected through the questionnaire and close observation during field survey. The essence of this information is to ascertain various categories of building ownership found within the case study area (Ogba).

The various building within the case study is discovered to be owned by various owners while some are by majority owners. The owner occupier takes 32 followed by the public, which is government owned building (LSDPC) of 21, private ownership take 10 while group or corporate body takes the least

Variable (ownership)	frequency	Percentage (%)
Private	10	14.2
Public	21	30
Group/corporation	7	10
Owner occupier	32	45.8
Total	70	100

Source 2019.

The analysis of the area is converted into percentage i.e private residential property 14.2%, public residential property 30%, group or corporation 10% and owner occupier 45.8%.

RENTAL VALUE OF RESIDENTIAL PROPERTY FOR CERTAIN PERIOD (10 YEARS)

The table below illustrate the analysis of rent value in ogba within industrial estate for 10 years (2009 to 2018) on various residential building such as tenement building, mini flat, 2b/r flat, 3b/r flat, semidetached house and duplex.

Residential Property	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Tenement Building	50,000	70,000	70,000	80,000	100,000	100,000	100,000	120,000	150,000	150,000
Mini Flat	80,000	100,000	120,000	150,000	150,000	200,000	200,000	220,000	250,000	250,000
2B/R Flat	150,000	200,000	250,000	280,000	300,000	350,000	350,000	450,000	500,000	550,000

3B/R Flat	200,00	250,00	300,00	400,000	450,00	450,000	500,00	550,00	550,00	600,000
	0	0	0		0		0	0	0	
Semi Detached / Duplex	400,00	450,000	500,00	600,000	650,00	700,000	700,000	800,00	900,00	120,0000
	0		0		0			0	0	

Source :field survey 2018

The analysis is describing that the rental value is static in some years and low increase in other years on various residential property available in the study area.

ENVIRONMENTAL IMPACT ANALYSIS (EIA) REPORT ON INDUSTRIES IN OGBA

The essence of this information is to ascertain whether the old and new industries in Ogba have prepared environmental impact analysis on the neighbourhood. In view of the table below, one can easily understand that, just 14% gave positive answers and 20% gave answers which reflect that the environmental impact analysis has not been effective in the case study area. In conclusion, it shows that the industries prepared the environmental impact analysis but industrialists are not embarking on this.

Presence of EIA report	Frequency	Percentage (%)
Positive answer	10	14
Negative answer	14	20
Not effective	46	66
Total	70	100

Source: Field Survey, 2018

CONCLUSION

Right from the inception of the dissertation, a vivid observation was made and this is the fact that government has not implemented programme for pollution prevention for Lagos state and its environment. Therefore, one could reliably conclude that this is the main reason why the pollution surge has eaten in to the nerve of Lagos state especially the case study area (Ogba). Besides, an integral contributor to the problem of problem is the intense spread of the dust on all roads, refuse dumps in nooks and crannies. Since the government of Lagos state has the largest population explosion in Nigeria, it makes the problem even worse. The inability of government top provide a corresponding programme to allocate the requirements of several basic needs of life (housing, food and clothing)has caused a zigzag/haphazard mode of development in the state. This calls for the reshuffling of government’s programme and policies in order to eliminate this environmental plague called pollution. Such a step will also

enhance the standard of living and create a habitable environment for people in the case study area (Ogba) and the entire state as a whole.

RECOMMENDATION

Several things are expected from the government as well as the general public to curb pollution if not eradicated but at least reduce to barest minimum. Hence, the following recommendations are made.

1. More public enlightenment and proper management of refuse and waste dumping to prevent the accumulation of rubbish in the environment. The large amount of refuse generated by the populace is quite enormous and the local or state government should develop a formidable logistic for a lasting and effective waste management.
2. Adequate fund should be made available by the state government for the proper collection and management of waste that are generated in the state.
3. A ministry of industry should be created by the state government to check and monitor waste disposal activities of manufacturing industries within the state.
4. More statutory power should be given to the agencies that deal with the issue of factories or industries. Penalty for contravening the regulation of provision of electrostatic smoke device should be put in place and must be an adequate one.
5. Heavy industries should be discouraged from being located close to residential area. While heavy and noisy machine should be provided with noise device (electro noise and fume static device). Industries can reduce the amount of air pollutants they release by instilling scrubbers, which are capable of removing up to 90% of sulphur dioxide from waste gases.
6. Reduction of emissions from power station: This method concerns us, consumers of electricity, greatly. If electricity is used, less fossil fuel has to be burnt, and less air pollution would be emitted.
7. However, interest should be taken into account by town and country planning office in the enforcement of its regulations, for example, residential areas should not be the enforcement or provision of law guiding such as payment of heavy fines for the distortion of the master plan will go a long way to make people desist from such act.
8. To tackle effectively our environmental problems and enhance the quality of life in our settlements, we require information in the nature and dimension of these problems. The state government should make funds available for relevant research to increase our understanding of the source and effects of

gaseous pollution and all disciplines have a role to play in this increased understanding.

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