THE INTERNATIONAL JOURNAL OF BUSINESS & MANAGEMENT

Factors of Industrial Migration into the Industrial Area of the 9th Mile of Enugu State, Nigeria

Ogbu, S. Okonkwo
Senior Lecturer, Department of Geography and Meteorology,
Enugu State University of Science and Technology (ESUT), Enugu, Nigeria
Ani, Sonia Onedinuno
HOD, Department of Geography and Meteorology,
Enugu State University of Science and Technology (ESUT), Enugu, Nigeria

Abstract:
This study on the factors that influenced the movement of industries into the industrial area of the 9th Mile area of Enugu state was carried out in order to identify the pulling factors of industry, determine the relative position of the pulling factors, and examine the pattern of industrial migration into the area. The survey research design and simple random sampling technique were adopted. The data were collected through questionnaire, oral interview, and field observation. The population of the study comprised the directors or industrial owners, managers and employees in the industries at the 9th Mile area. These respondents were selected as follows; 11directors or industrial owners, 11managers, and 58 employees of the industries at 2 per industry, totalling 80 respondents. The collected data were analysed using percentages, and pie graph. From the results, 25 factors among which available water resources and local market are more influential than others. It is ease of transport, security, cheap machine repair services, cheap labour training, and sand that were the least of all the pulling factors of industry into the area. Also, the patterns of industrial migration into the area are mainly the opening of branches of industry and inter-regional migrations of industries. Others are main plant relocation, rural-urban, and intra-city patterns of industrial migrations in the study area. From the results of this study, it is recommended for the industries that use large quantity of water, produce for local market, and space demanding to move their production activities to the 9th Mile area.

Keywords: *Industrial area, industry, influential factors, migration, pattern*

1. Introduction

The generation of economic output especially through industries is very important to the development of an area. This is because industries increases a nation's output and incomes since it is the industrial development which makes it possible to produce greater amounts of consumer as well as producer goods. Moreover, because of industrial growth, the construction and provision of infrastructure becomes possible. Thus, industrial growth not only stimulates directly the productive activities but promotes social over-head activities (Chopra and Meindl, 2007). In this regard, industry brings about diversification of products and productions. It makes possible the increase in quantity, quality and variety of goods and services produced for domestic consumption and export. Industries also bring about increased modern sector employment since they have greater scope for employment (Mberede, 2006).

Therefore, for an area to survive, it needs to be noted for what it produces and contributes to the world market depending on the available resources or opportunities of any kind either natural on human. It is in this regard that industries are found where they are in different parts of the world including Nigeria and the 9th Mile, and for an industry to be wherever it is certain resources provided by the area must be attractive to it in order to exact pulling forces to industrial activities. Industrial migration in a dynamic society where economic adjustments can be made more or less freely is concerned with the factors which determine the ideal or best location of particular industries. Since the early stages of industrial development, the movement of industries from central city to suburb has been discernable (Prosser, 2002).Generally, migration of industries is influenced by economic consideration though certain non-economic consideration might also influence the movement of some industries. This is so because the most important goal for industries is to minimise cost and maximise profit (Prosser, 2002). Thus industries tend to move into areas that have greater economic advantage in other to have higher profit margin. This formed the basis for this study in order to identify the resources of the environment that are attractive to industrial activities in the study area, and the patterns of industrial migration into the area.

2. The Study Area

The 9th mile area is in Udi local government area of Enugu state. It lies approximately between latitudes 6° 25′39″N and 6° 42′74″N and longitudes 7° 24′19″E and 7° 40′52″E(Fig 1). It is about 144km (9 Miles) from Enugu town which is the

capital of Enugu state, and where the name 9th Mile was derived. It is bounded by Enugu-Ngwo in the east, Owa-imezi in the west, Ameke Ngwo in the north, and Nsude in the south (Mba, 2004) (Fig 2).

According to the National Population Commission (NPC) (2006), Udi local government area in which the 9th Mile is located has a population of 234,002. This is projected to 331,612 in 2019 with the national population growth rate of 2.8% (National Bureau of Statistics, 2012). The study area lies at the foot of Udi escarpment (Adinna, Enete and Tony, 2009). It is characterised by lowlands of about 61 metres and highlands of 456 metres above the sea level, and underlain by shale. The topographic characteristics fall within the Nsukka-Okigwe cuesta (Ozonzeadi, 2004).

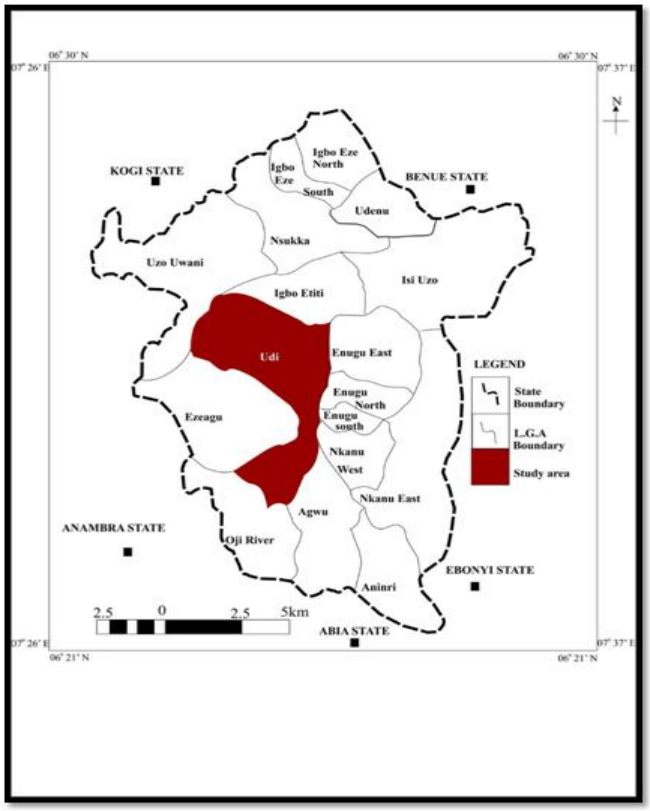

Figure 1: Map of Enugu State Showing Udi L.G.A
Source: Ministry of Land Survey, Enugu, 2014

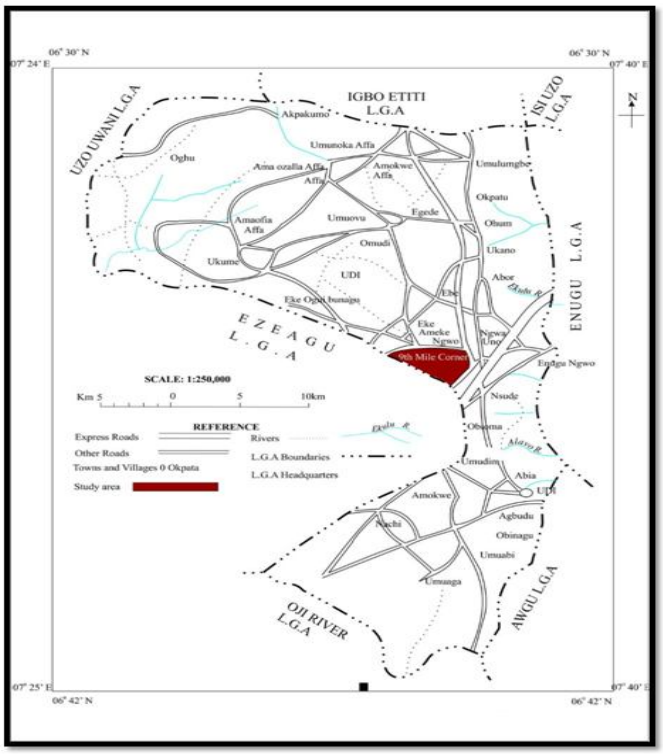

Figure 2: A Map of UDI Local Govt. Area Showing 9th Mile Corner
Source: Ministry of Land and Enugu.2014

The Rivers like owi and alavo rise from the Eastern side of the North-South trending escarpment and are characterised by the South-East direction of flow which give rise to dendritic drainage pattern as shown by Ugwu (2001).

The type of soil is lateritic in nature (Ajayi, 2003) and generally reddish in colour due to the presence of iron. They are sticky when wet, hard, pervious and of poor fertility when dry. The area is underlain by three geologic formations; the Mamu, Ajali, and Nsukka formations (Reyment, 2005).The Mamu formation, previously known as lower coal measures (Reyment, 2005) consists of fine-medium grained, white to grey sandstones. The Ajali formation, known as false bedded sandstone, covers about 80% of the study area. The Nsukka formation, previously known as the upper coal measures, lies conformably on the Ajali sandstone and exists as reddish ironstone covers of Ajali sandstone and as outliers of undulating hills.

The two air masses of the warm moist tropical maritime (MT) air mass which originates from the Atlantic and the dusty tropical continental (CT) air mass which originates from the Sahara desert influence the area. The wettest months are between July and September, and the driest months are between December and January. The annual rainfall is usually more than 2000 mm as shown by Mba (2004).Guinea (tropical) savannah marks the Northern edge of the high forest, and the beginning of the Guinea savannah (derived savannah with parkland savannah trees). The grasses are usually tall since they receive up to 1000mm of rainfall annually and the duration of rainfall not less than 5-6 months and they are interspersed with trees like Mango, Oil bean and gallery forests (Arous and Lazare, 2009).Most of the people in the area are involved in agricultural activities, producing cassava, cashew trees, stringed beans, vegetable, and oil beans (Okoli, 2000).The land of the 9th mile area is blessed with a natural aquifer which is very close to the surface. The area serves as a good source of clean water, and because of this aquifer, the largest brewery in West Africa (Amah brewery), bottling and other industrial activities are located in the area. They employ most of the population of the area as shown by Okoli (2000). Some embark on ancillary activities such as road side trading, mechanics, tailoring, transport operators, shoe menders, dry cleaning services, etc. (Ozonzeadi, 2004).

3. Literature Review

This review involved theory, definition of concepts, and factors of industrial migration.

Migration theory focuses on the optimal location choice that is determined by the attractiveness of a site for firm location. This research work trails the path of the simple Neo-classical theory, because the study is primarily based on those factors that pull firms from previous location to a new one in other to minimise cost and maximise profit. It is also due to the fact that Neo-classical relocation theory of McCcann (2001) emphasizes a high degree of profit maximisation and flexibility so that all other profitable changes may be incorporated readily in the future.

3.1. Industry

Lowe and Harvey (2005) defined industry as the aggregate of manufacturing or technically productive enterprises in a particular field, often named after its principal product; such as the automobile industry and the steel industry. More (2000) saw industry as the production of a good or service within an economy. In the opinion of Barthold (2006) industry is a group of companies that are related in terms of their primary business activities and the goods and services they produce. According to Blyth (2002), industry means any systematic activity carried on by co-operation between an employer and his workmen for the production, supply or distribution of goods or services with a view to satisfy human wants. This study adopted the definition of industry by Blyth (2002) because it takes into consideration every systematic activity that results in the production, supply or distribution of goods or services.

3.2. Migration

Garapich(2005) saw migration as geographical mobility or spatial mobility between one geographical unit and another, generally involving a change from place of origin or place of departure to the place of destination or place of arrival. In terms of industry, it is the movement of industrial plant from the previous location to a new location. It can also mean the act of opening a branch of a parent company in another location as found by Smith (2001). The definition of migration adopted for this study is the one given by Smith (2001), because most industries that migrate do not move the entire company rather they open branches in the area. On the other hand, Hoyle and Knowles (2008) defined an industrial area as an area zoned and planned for the purpose of industrial development, while McBride (2006) examined an industrial area and resolved that it is an area that predominantly has industry as its main land use. This study adopted the definition of industrial area by McBride (2006) because it covers an area that has industry as it main land use which is the same as the study area.

3.3. Factors of Industrial Migration

The processes which determine the location and migration of industries are more complex and dynamic. This means that the making of generalisation becomes less easy and the dangers of stereotyping increases (Prosser, 2002). The reason for this is that the initial factors that favour a location may no longer apply today and industries tend to migrate. The following as shown by Prosser (2002) were identified as the factors that determine industrial migration; availability of raw material, availability of cheap and skilled labour, proximity to markets, presence of transport facilities, land, services and government incentives, and external economies.

3.4. Availability of Raw Material

To Marx (2012) raw material is the basic material from which goods, finished products or intermediate materials (that are themselves feedstock for finished products) are made. A feedstock connotes a bottle neck asset critical to the

production of other products. For example, crude oil is a feedstock in the form of fuel, plastic, industrial chemical an example of pharmaceutical industries (Marx, 2012).

Raw materials are important for industries to make the final products. If the raw materials are available at a close distance, the production costs is reduced. In most industries, the major cost is the cost of raw materials, hence, it is seen that most industries are situated in close proximity of the supply of raw material because it reduces the cost of buying raw materials from a distant area and the cost of transporting the raw material to the plant. A good example is the Nkalagu cement factory which is located at Nkalagu because of the presence of limestone. Industries, which in their previous location buy their major raw material from a distance source, can be attracted to move to a nearer new area which has that particular raw material in abundance. For instance, Chevron Corporation which is located at San'Ramon California U.S.A moved part of their industrial plant to Nigeria because of the presence of crude oil (Prosser, 2002).

3.5. Proximity to Market

Market is nothing more than the demand for industrial products, and wherever demand is highest production processes move in to partake in the volume of sales. Roth (2012) gave three reasons as to why an industry would want to locate near the market. They are; to minimise transport costs, because the finished products are perishable, and to secure an increased share of market in the business. Access to market is an important factor in industrial location or relocation. This is due to the fact that producers want to be in close reach to the consumers. In fact the relative importance of market as a location or relocation factor has greatly increased during recent years owing to the change in the character of industry. This change involves the move from manual to automated production which has resulted in mass production of goods and the change in the speedy and regular delivery of goods (Hughes, 2005). A good case is the Tai Koo children clothing company which moved from Zhill to Zeighjin in China because of the presence of large market (Peck, 2005). Also Guinness Nig. Plc, a subsidiary of Diageo Plc from the United Kingdom is in Nigeria because of its large market (Innes, 2004)

3.6. Labour

In view of Massey (2004) labour is the aggregate of all human, physical and mental effort in creation of goods and services. Labour can be used to describe work performed, and includes valuable services rendered by a human agent in the production of wealth other than accumulating and providing capital (Mazzarol and Choo, 2003).Kurt (2007) explained that adequate supply of cheap and skilled labour is necessary for an industry because an industry which is labour-intensive may choose to locate near to an area of high unemployment in order to take advantage of the availability of labour at a fairly low wage in order to reduce cost. A good example is the Sony electronics company which moved part of its production plant from Japan to the United Kingdom because of the low wage rate (Kurt, 2007).With mechanisation, automation, transport improvement which allows for greater mobility, technology in production, workforce can travel more freely, and given the fact that labour can be readily obtained in most areas the effect of labour in attraction of industry ranks very low in the modern industrial activities.

3.7. Presence of Transport Facilities

Transport is concerned with the movement of freight, people and information. Transport influences the location of industry and this is because most businesses locate in certain areas to minimise their transportation costs. Massey (2004) showed that industries tend to move to areas with cheap, accessible and excellent transport networks for both raw materials and market.

3.8. Land

Galhano (2009) identified land as the primary input and factor of production which is not consumed but without which no production is possible because it is from it that all other factors of production are derived. Industries tend to move to areas with cheaper and vast land, less congested and cramped sites and improved accessibility as found on the edges of cities and in smaller towns (Prosser, 2002). For instance, the Honhum skip construction company moved from Guangzhou to Guangdong in China because the latter has a flat and cheaper land for industrial development.

3.9. Services and Government Incentives

Existence of public utility services, amenities in a particular area like the nature of vegetation, banks, schools, hospitals, post office, and location of allied activities can influence the migration of an industry to that area as shown by Fabio (2002). Also, Matear, Gray, Garrett and Deans (2000) opined that government has classified some areas as backward areas where entrepreneurs would be granted various incentives like subsidies, or provision of finance at concessional rates and provision of educational facilities to the children of labourers if they locate their industries in those areas. For instance, the United Kingdom government, for over the past thirty years offered range of incentives (grants, tax breaks, and reduced rents and rates) to existing firms to relocate to the depressed areas of the United Kingdom.

3.10. External Economies

External economy is the cost saving benefits of locating near factors which are external to a firm, such as locally available skilled labour, training, research and development facilities (Laffont, 2008). External economies of scale will increase the productivity of an entire industry, geographical area or economy as found by Mayhew (2009). The external factors are outside the control of a particular company and encompass positive externalities that reduce the firm's costs (Gibson, 2006).For instance, the use of common facilities such as transportation, the use of skilled labour, banking and

insurance services, water, information services, and electricity. External economies can take the form of common information services provided either by association of the firms or even by the government. These external economies result in a fall in the cost of production, and can induce a firm to move to such areas (Alexander, 2008).

4. Materials and Methods

In this study, survey research design was adopted, and the study population comprised the directors or industrial owners, managers, and employees in the industrial area of the 9th Mile. Due to equity and independent opportunity for each member, simple random sampling technique was applied, and each of them was selected because of their ability to give detailed and relevant information about the factors that have pulled industries into the area. Also, they possess the attributes needed to give detailed and correct answers to the questions asked. The study purposively selected 11directors or industrial owners, 11managers, and 58 employees at 2 from the available industrial plants in the industrial area of the 9thMile who agreed and willingly attended to the study. Hence, a total number of 80 respondents were used. This was as a result of restriction on the release of information concerning many industrial plants in the area.

The data for this study were collected through the methods of structured and unstructured questionnaire, guided interview, and field observation. Similar questionnaire was administered on the 3 groups of the respondents and the data from these data collection methods were merged. The analytical techniques adopted were simple percentage ratio, and graphs (pie and bar graphs).

5. Results and Discussions

The variables analysed were factors/resources that pull industry into the study area, the relative contribution of each of the factors, and patterns of industrial migration into the area.

5.1. Factors of Industrial Migration into the Industrial Area of the 9thmile

The factors of industrial migration into the area were identified as resources of sand, water (availability, cheap), market facilities (size, regional, local, volume of sales), resources of land (availability, cheap, space),labour features (skilled, unskilled, availability, cheap), facilities of transport (easy, availability, cheap), after-work services (education, health, and recreation facilities), security, energy resources (availability), area accessibility, and agglomeration economies (repair and maintenance services) (Table 1). The total of the response scores on Table 1 are more than the size of the sampled population because each of the element of the studied population (80 respondents) responded to each of the variables.

The results indicate that water occupies the 1stposition with the highest frequency score of 70 responses which represent 8.2%. Water is ubiquitous in the area because of the presence of good aquifer which is close to the surface and very easy to drill. The reason is that the sandstone rock that is available at the 9th Mile area can hold large quantities of water in the pore spaces, and water may percolate following the gradient of the stratum. When such groundwater is tapped, it forms an important source of water for industrial and human uses in the area because water from such sources is always clean. This groundwater consists mainly of rainwater which has percolated down into the rocks, and it is found near the surface. This explains the reason for easy access to groundwater in the area through the drilling of bore hole, and why bore holes are common feature at the 9th Mile area, and resulted in many sachet water production businesses in the area. In the opinions of Obeta (2003), and Ogbu and Nwosu (2020), water has varieties of uses in the area. It is used as industrial raw material, cleaning agent in industrial processes, and for domestic activities both in the area and mainly in Enugu urban environment.

Electricity is in the 2nd position with 68 responses (8.0%). The sources of energy in use to crush and extract materials drive machines or to move materials and products, heat objects such as oven for baking, and for chemical and electrolytic processes for the industries are mainly electricity from Enugu Electricity Distribution Company (EEDC), firewood, and generating plants installed by the industrial plants in the area (Ogbu, 2014). At the 9th Mile, industrial plants are all scattered in their locations along the lines of electric power, and each of them is hooked up with power source from EEDC as the main source of electricity in the area.

S/N	Factor	Frequency	Percentage (%)	Rank
1	Sand	10	1.2	22nd
2	Water	70	8.2	1st
3	Market size	20	2.5	15th
4	Volume of sales	60	7.2	6th
5	Local market	65	7.7	4th
6	Regional market	25	3.1	13th
7	Low cost of land	30	3.7	11th
8	Availability of Space	62	7.3	5th
9	Electricity	68	8.0	2nd
10	Education	19	2.3	17th
11	Health care	30	3.7	11th
12	Cheap machine repairs	11	1.4	21st
13	Banking services	17	2.1	19th
14	Public security	18	2.2	18th

15	Fire service	5	0.6	25th
16	Water resources	50	6.1	7th
17	Cheap labour training	9	1.1	24th
18	Public transport	15	1.8	20th
19	Skilled labour	20	2.5	15th
20	Unskilled labour	40	4.9	9th
21	Low cost of labour	25	3.1	13th
22	Ease of transport	10	1.2	22nd
23	Accessible transport facilities	40	4.9	9th
24	Connection to other areas	45	5.4	8th
25	Low cost of water supply	67	7.8	3rd
	Total	813	100	

Table 1: Frequency Scores of the Factors of Industrial Migration into the 9th Mile Area
Source: Fieldwork, 2019

Four (4) industrial plants have no other sources of electricity except EEDC. The spatial distributions of the 4 industrial plants are at Ngwo-Uno (O. F. D. Oil Expeller), Ameke (Pagosina Block Industry and Graceco Sachet Water), and Nsude (Alex Enterprise) in the ratio of 1:2:1. Since these industrial plants convert one form of materials or the other to better products, national sources of electricity, EEDC is very important because of the volume of energy requirements. Also, since procurement and installation are difficult and costly, every production activity in the area obtains electricity from the national sources that are already available and cheaper too.

In the 3rd position with score of 67 responses (7.8%) is low cost of water supply in the area. Water is indispensable for industrial and other uses and sought wherever available. This explains the reason for many industrial activities especially those that need and use large quantity of water or in which water forms a major raw material in the area. Examples Nigeria Bottling Co. Plc., 7 Up Bottling Co. Plc., Nigerian Breweries, Aqua-Rapha Investment Nig. Ltd, Rancco Water, Sharon Paints and Chemicals Nig. Ltd, and Flour Ville Bakery. Others include Campion Bakery, Ugo Bakery, Full Meal Bakery, Pagosina Blocks Industry, Graceco Sachet Water, Edu C. Block Industry, Raphade Blocks and Concrete, etc. The least and rear position of 25th is occupied by security service of fire services with 5 responses or 0.1%. The issue is that the study areais very close to Enugu urban area where fire services are always readily available and easily reached. The results of the interview and field observation indicate that the area has not experienced fire out break from industrial activities. The positions of other factors that pull industries into the study area are as found on Table 1.

5.2. Relative Position of the Pulling Factors of Industrial Plants into the 9th Mile Area

The degrees of influence of the pulling factors on the migration of industries into the study area were measured using a 5 Likert scale of strongly influential, influential, undecided, not influential, and strongly not influential. Table 2 shows the result of the influential factors on industrial migration into the industrial area of the 9th Mile. The factor ordering (Table 2) indicates that 1st and 2nd order factors were considered influential in the pull of industries into the area, while the4th and 5th order factors were not considered in the pulling of industries into the study area. The 3rd order factors are found between influential and not influential factors. For easy description and understanding, strongly influential and influential factors were merged and their sums were used in the descriptions of the important factors that pulled industry into the area. The non-influential factors were excluded in this discussion because they did not contribute in any way in the migration of industry into the 9th Mile area. The result of the factor ordering (Table 2) shows that the most influential factors in the pull of industries into the area are the available water resources, and local market with score of 8 (7.5%) each to be in the 1st position. The available local market in the area is sizeable enough to provide population threshold necessary for the industrial products of especially domestic production activities in the area. This implies that industries in the 9th Mile area were attracted to the area because of the available local market facility which enables them to be physically closer to customers, so as to be better placed in understanding local cultural issues and traditions, engage in market research, and respond quickly to changes in the market situations.

S/N	Factor	Strongly Influ. (1st order)	Influential (2nd Order)	Total	Percentage (%)	Rank
1	Sand	2	0	2	1.9	20th
2	Water resources	3	5	8	7.5	1st
3	Market size	2	4	6	5.6	5th
4	Volume of sales	2	3	5	4.7	8th
5	Local market	7	1	8	7.5	1st
6	Regional market	3	3	6	5.6	5th
7	Low cost of land	2	2	4	3.7	11th
8	Availability of Space	4	3	7	6.5	3rd
9	Electricity	5	1	6	5.6	5th
10	Education	0	4	4	3.7	11th
11	Health care	0	4	4	3.7	11th

S/N	Factor	Strongly Influ. (1st order)	Influential (2nd Order)	Total	Percentage (%)	Rank
12	Cheap labour training	0	2	2	1.9	20th
13	Low cost of water	1	4	5	4.7	8th
14	Public security	0	2	2	1.9	20th
15	Fire service	1	1	2	1.9	20th
16	Cheap machine repairs	0	2	2	1.9	20th
17	Banking services	1	2	3	2.8	16th
18	Public transport	1	2	3	2.8	16th
19	Skilled labour	2	2	4	3.7	11th
20	Unskilled labour	0	7	7	6.5	3rd
21	Low wage rate	0	3	3	2.8	16th
22	Ease of transport	0	2	2	1.9	20th
23	Access transport facilities	2	2	4	3.7	11th
24	Connection to other areas	1	4	5	4.7	8th
25	Low cost of electricity	1	2	3	2.8	16th
	Total	40	67	107	100	

Table 2: 1st and 2nd Order Factors in Industrial Migration into the 9th Mile
Source: Fieldwork, 2019

Availability of space, and unskilled labour clustered in the 3rd position. The total score in each case is 7 that represent 6.5%. Space that pertains to land is largely available and accessible in the area. This is common in all directions and explains the reason why space demanding industries like MNCs cluster and enjoy space resources in the study area. It is also a small town found on the edge of Enugu city that can accommodate the various industrial activities. The idea of Prosser (2002) that industries tend to move to areas with cheaper and vast land, less congested and cramped sites and improved accessibility as found on the edges of cities and in smaller towns applies to the 9th Mile. The most important factor in terms of labour that has drawn industries to the area is the presence of unskilled labour which is a result of high rate of unemployment in the area. This unemployment has also resulted in low wage rate and this reduces cost for industrial owners. This is further emphasised by Kurt (2007) who stated that a labour-intensive industry may choose to locate near to an area of high unemployment in order to take advantage of the availability of labour at a fairly low wage.

The factors of market size, regional market, and electricity with score of 6 and 5.8% are found in the 5th position. Market size and regional market stress on the importance of sales of industrial products, without which industrial activities cannot survive. Thus, volume of sales of products is very important in any production activities. On the other hand, no mechanised production of any kind can take place without energy that provides the mechanical force in production processes. The factors of ease of transport, security, cheap machine repair services, cheap labour training, and availability of sand clustered in the rear position of 20th. Each of them obtained score of 2, an equivalent of 1.9%. These factors are necessary in industrial migration, but there are other stronger factors in the study area.

5.3. Patterns and Source Areas of Industrial Migration in the Study Area

The result on Table 3 shows the pattern in which industries migrate into the area and it is noted that the most recurrent pattern is opening a branch which occupies the first position with a score of 50 responses or 45.5%. In the 2nd position is the inter-regional pattern with score of 45 responses (41.0%) which is common among the MNCs in the area. Main plant relocation, intra-city, and urban-rural patterns clustered in the 3rd position with percentage score of 4.5% (5 responses) in each case. With the exception of inter-regional pattern of migration, domestic industrial plants are more involved in other patterns of migrations of productive activities in the study area. The result on Table 3 is further illustrated on Fig 3 in which domestic branch plant migration featured prominently above other patterns of industrial migrations in the area.

S/N	Pattern	Frequency	Percentage (%)	Rank
1	Main plant relocation	5	4.5	3rd
2	Opening a branch	50	45.5	1st
3	Intra-city	5	4.5	3rd
4	Urban-rural	5	4.5	3rd
5	Inter-regional	45	41	2nd
	Total	110	100	

Table 3: Patterns of Industrial Migration at the 9th Mile
Source: Fieldwork, 2019

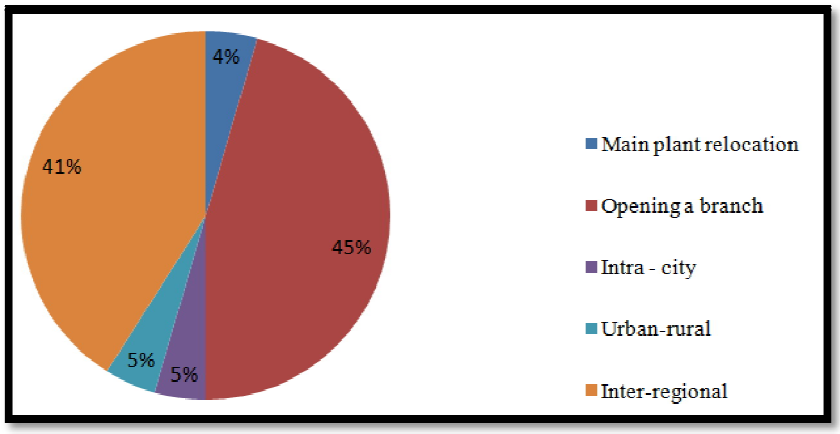

Figure 3: The Migration Pattern of Industries at the 9th Mile
Source: Table 3

6. Summary

From the result of this study, a number of factors pulled industries into the 9th Mile industrial area. They are 25 in number, and the most important among them are water resources, availability of energy, and market resources, while security and cheap labour training facilities are found in the rear position. The available water resources, and local market tallied in the 1st position among the influential factors that pulled industry into the area, and in the 3rd position are the factors of availabilities of space and unskilled labour in the area. Three (3) factors clustered in the 5th position, namely; market size, regional market, and electricity, while the least influential factors are ease of transport, security, cheap machine repair services, cheap labour training, and availability of sand. Also, the patterns of industrial migration into the area are mainly the opening of branches of industries and inter-regional migrations of industries. Others are main plant relocation, rural-urban, and intra-city patterns of industrial migrations.

7. Conclusion

Based on the findings of this study, it is seen that the factors that have influenced industries to move to the 9th Mile are many and favourable. The major ones are available resources of water, market facilities including regional and local markets, resources of land in terms of space and availability, variables of labour particularly the availability of unskilled labour, etc. However, their strength in the pull of industry to the area is not the same for every industrial activity and for every entrepreneur. Therefore, the 9th Mile industrial area provides a conducive environment for both regional and local or domestic industrial productions. Again, the pattern of migration of industry into the area is dominated by establishment of new branch plant, and inter-regional migration.

8. Recommendation

From the results of this study, the following recommendations are made;

- Industries whose major input material is water, should be encouraged to move their productive activities to the 9th Mile industrial area because of the good aquifer available in the area.
- The easily accessed regional market from the area and the available local market are good in the sale of industrial products. Thus, more industries should move to the area in other to take advantages of the available market facilities in the area.
- Since the 9th Mile area has vast area of land, industries that require large area of land for space especially manufacturing activities will like the study area as a good place for production activities.
- The study area has large number of unskilled labourers who are ready to be hired at a low wage rate. Industrialists should take advantage of this fact to move their productive processes into the area.

9. The Influence of Raw Materials

The result of the fieldwork on Table 4 shows that the available raw materials in the area are sand, water, and wood. Sand is found in the 9th Mile area because of the presence of rivers and other agents of denudation. It is either river/gutter found at the areas of sedimentation or red sand, laterite that is commonly found along the slopes hill tops. This sand is used for road construction and the production of building blocks. Also, wood is found in the area because of the presence of trees and this wood is utilised in the production of wood pellets for carrying crates and also for furniture making as well as firewood.

Among these raw materials resources, water has the highest score of 87.5% with 70 respondents and found in the 1st position. Sand and wood have the same score of 6.25% with 5 respondents each. Such industries that use water as input material or in which water forms a major raw material are; Nigeria Bottling Co. Plc., 7 Up Bottling Co. Plc., Nigerian Breweries, Aqua-Rapha Investment Nig. Ltd, Rancco Water, Sharon Paints and Chemicals Nig. Ltd, and Flour Ville Bakery. Others include Campion Bakery, Ugo Bakery, Full Meal Bakery, Pagosina Blocks Industry, Graceco Sachet Water, Edu C. Block Industry, and Raphade Blocks and Concrete. Also sand is used as raw material by all the firms in block industry, and master holdings Construction Company, while Hoval Nig Ltd and furniture firms use wood as one of their input materials in their production activities. It is again, used in construction, and as firewood in bakery plants and domestic activities.

S/N	Raw materials	Frequency	Percentage (%)	Rank
1	Sand	5	6.25	2nd
2	Water	70	87.5	1st
3	Wood	5	6.25	2nd
	Total	80	100	

Table 4: Industrial Raw Materials from the 9th Mile Area
Source: Fieldwork, 2019

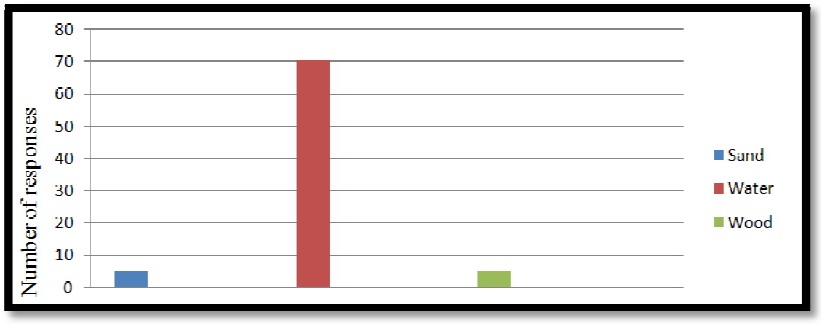

Figure 4: The Raw Materials from the Study Area

9.1. Market Facilities

The result on Table 5 shows that among the market facilities obtained from the field, local market occupies the 1st position with the highest score of 80 responses which represent 32.0%. the total responses of 250. Volume of sales is in the 2nd position with 65 responses (26%) and in the 3rd position with score of 55 responses (22%) is the regional market availability. Market size occupies the least position (4th) with 50 responses which are equivalent to 20%. Market size is the number of individuals in a certain market who are potential buyers and/or sellers of a product or service. Volume of sales is the amount or number of units that are sold on a particular products or services. The market size in the 9th Mile area is defined by the sales volume because the unit of goods sold shows how large the market is. Also, the local market is a situation where customers are a short distance from suppliers. While regional market is a situation where customers are in a defined region such as neighbouring states in a section of a country. These market facilities are available in 9th Mile and its environs because of its large population. Fig 4 further illustrates the result in Table 2 and shows that the commonest market facility available in the area is the local market facility. This implies that industries in the 9th Mile area were attracted to the area because of the available local market facility which enables the industries to be physically closer to customers, so as to be better placed in understanding local cultural issues and traditions, to engage in market research, and to respond quickly to changes in the market.

S/N	Market facilities	Respondents Frequency	Percentage (%)	Rank
1	Market size	50	20	4th
2	Volume of sales	65	26	2nd
3	Local market	80	32	1st
4	Regional market	55	22	3rd
	Total	250	100	

Table 5: Market Facilities
Source: Fieldwork, 2019

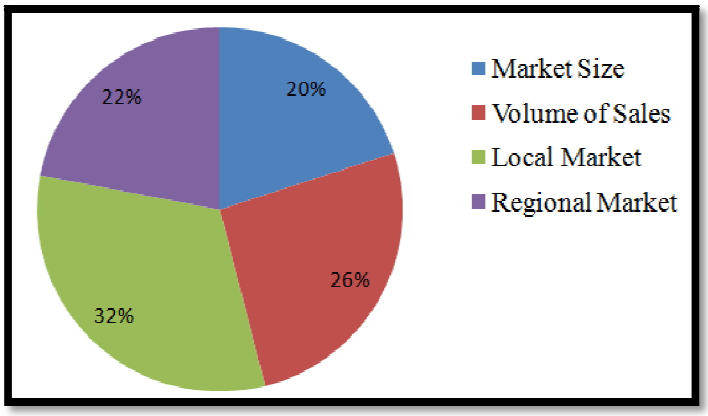

Figure 5: The Market Facilities of Industrial Plants at the Industrial Area of the 9th Mile

9.2. The Resources of Land

The result on Table 6 indicates that the available resources of land in the 9th mile area are low cost of land and availability of space. The cost of land in the area is due to the fact that it is a rural area. Also, the 9th Mile area has vast area of land which is not that suitable for farming and this makes it available to industries that require large area of land for their activities to move to the area. Availability of space has the higher score of 82.35% with 70 responses and low cost of land has the score of 17.65% with 15 responses.

S/N	Land Factor	Respondents Frequency	Percentage	Rank
1	Low Cost of land	15	17.65	2nd
2	Availability of space	70	82.35	1st
	Total	85	100	

Table 6: The Resources of Land
Source: Fieldwork, 2014

9.2.1. Available Services Facilities

From Table 7 it can be seen that the available service facilities in the study area are electricity, education, health care, postal services, waste management, public security, fire services, water resources, town planning, and public transport. It should be noted that water supply network and public transport clustered in the first position with 70 responses (14%) each. Electricity is in the 2nd position with a score of 65 responses which represent 13%. The 3rd position was occupied by public security with a score of 12%, waste management and education also clustered in the 4th position with a score of 11% each. The 5th, 6th and 7th positions were occupied by postal services, health care, and fire service with a score of 10%, 8% and 6% respectively. Town planning occupied the last position (8TH) with a score of 1%. The result in Table 4 is further addressed in Fig 5 which shows that the most important service facilities available in the area are water supply network and public transport.

S/N	Service Facilities	Respondents Frequency	Percentage (%)	Rank
1	Electricity	65	13	2nd
2	Education	55	11	4th
3.	Health Care	40	8	6th
4.	Postal Services	50	10	5th
5.	Waste management	55	11	4th
6.	Public Security	60	12	3rd
7.	Fire Service	30	6	7th
8.	Water resources	70	14	1st
9.	Town Planning	5	1	8th
10	Public transport	70	14	1st
	Total	500	100	

Table 7: Available Service Facilities in the 9th Mile Area
Source: Fieldwork, 2014

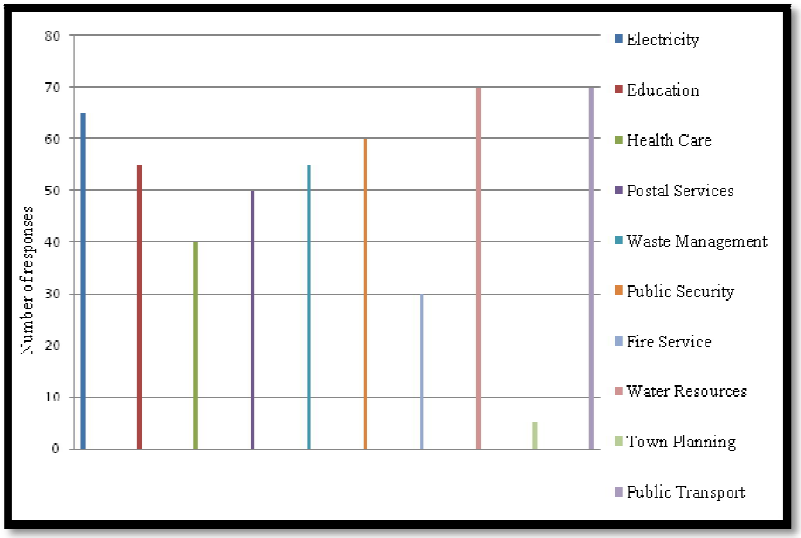

Figure 6: The Service Facilities Available in the Study Area

9.2.2. Features of Labour

Table 8 shows that among the features of labour, unskilled labour occupies the first position with the highest score of 49% or 80 responses. Wage rate is in the 2nd position with 70 responses (42%), while skilled labour occupies the last position with response score of 15 which are equivalent to 9%. An unskilled labour job requires no skill and less training for satisfactory performance. Unskilled labour is available in large quantity in the study area because it is a rural area with many uneducated people. Wage rate which is the amount paid for nominal time of work. Since the land in the 9th Mile area is not suitable for farming, this leaves a large number of unemployed people seeking for menial jobs and industrialist take advantage of this fact to pay low wage rate. While skilled labour jobs requires additional skill and much training for competent performance, this is required in low quantity in the 9th Mile area because most of the industrial activities in the area are automated and such skilled personnel can be imported from other areas. This result is better understood with Fig 6 which shows at a glance the proportion of the percentage contributions of the features of labour in attracting industrial activities into the area. From the result (Fig 6) unskilled labour is more attractive than other features of labour.

S/N	**Features Of Labour**	**Respondents Frequency**	**Percentage (%)**	**Rank**
1	Skilled labour	15	9	3rd
2	Unskilled labour	80	49	1st
3	Wage rate	70	42	2nd
	Total	165	100	

Table 8: Features of Labour That Pull Industries into the 9th Mile Area

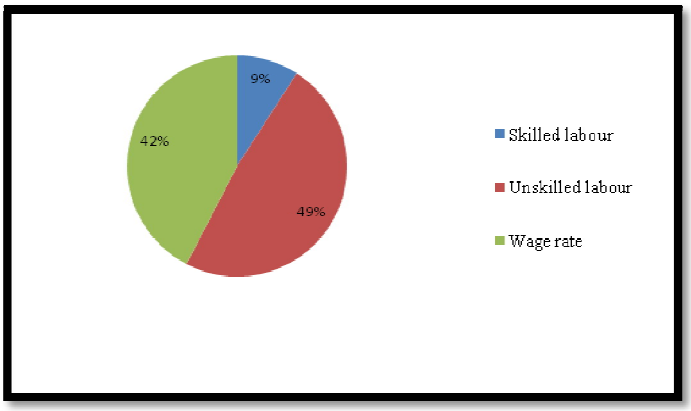

Figure 7: The Features of Labour That Pull Industrial Plant Into the Study Area
Source: Fieldwork, 2014

9.2.3. Transport Facilities

From the result on table 9, it is seen that Accessible transport network and connection to other areas clustered in the first position with 44.12% each while ease of transport stood at the last position with a score of 20%. Accessible transport is available in the 9th Mile area because there are a lot of transport operators in the area which results to good quality of transport options, and affordability. This accessible transport network available in the area also results in the ease of transportation of freight and passengers. The 9th Mile area is in a central location which results in connectivity to other area. This connectivity makes it possible for goods to get to consumers easily and on time. This can be further understood in Fig 7 and it shows that accessible transport network and connection to other areas area readily available in the study area.

S/N	**Transport Facilities**	**Respondents Frequency**	**Percentage (%)**	**Rank**
1	Ease of transport	20	11.76	2nd
2	Accessible transport network	75	44.12	1st
3	Connection to other areas	75	44.12	1st
	Total	170	100	

Table 9: The Influence of Transport Facilities on the Movement of Industries to the Study Area
Source: Field Work, 2014

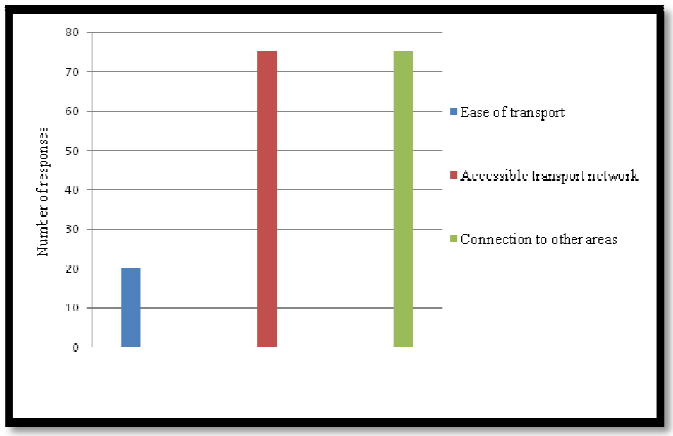

Figure 8: The Transport Facilities Available in the Study Area

9.2.4. The Influence of Government

The result in table 10 shows that government does not influence the decision of industrial owners to move their industries to 9th mile.

S/N	Government Influence	Respondents Frequency	Percentage (%)
1	Incentives	0	0
2	Policies	0	0

Table 10: The Influence of Government on Industrial Migration to the Area
Source: Fieldwork, 2014

9.2.5. The Features of External Economies

The result on Table 11 shows that among the features of external economies, banking and insurance service attracted to the area occupies the first position with the highest score of 70 responses which represent 24%. Low unit cost of electricity is in the 2nd position with 65 responses (22%) and in the 3rd position with score of 60 responses (20%) is the low unit cost of water supply. While cheap labour training and cheap machine repaired clusters in the last position with 17% (50 responses) each. The results on Table 8 are furthered illustrated in Fig 8 which shows the extent of influence of the features of external economies on the movement of industries into the 9th Mile area. This implies that banking and insurance services attracted to the area is more influential to the migration of industries into the area than other features of external economies.

S/N	External Economies	Respondents Frequency	Percentage (%)	Rank
1.	Low unit cost of electricity	65	22	2nd
2	Low unit cost of water supply	60	20	3rd
3	Cheap labour training	50	17	4th
4	Cheap machine repairs	50	17	4th
5	Banking and insurance service attracted to the area	70	24	1st
	Total	295	100	

Table 11: The Influence of External Economies on the Migration of Industrial Plants to the Area
Source: Fieldwork, 2014

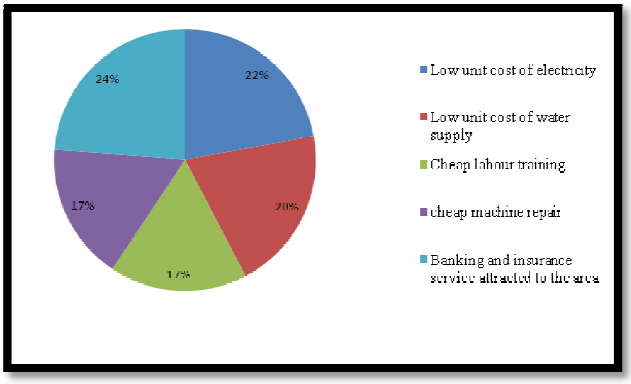

Figure 9: The Influence of External Economies on Industrial Migration in the Study Area

9.3. Relative Position of the Pulling Factors of Industrial

9.3.1. Plants at the 9th Mile Area

Table 12 shows the factors of industrial migration and their codes

S/N	Factors	Code
1	Sand	S
2	Water	W
3	Market size	MS
4	Volume of sales	VS
5	Local market	LM
6	Regional market	RM
7	Low cost of land	LCL
8	Availability of Space	AS
9	Electricity	EL
10	Education	ED
11	Health care	HC
12	Postal service	POS
13	Waste management	WM
14	Public security	PUS
15	Fire service	FS
16	Water Resource	WR
17	Town planning	TP
18	Public transport	PT
19	Skilled labour	SL
20	Unskilled labour	UL
21	Wage rate	WAR
22	Ease of transport	EOT
23	Accessible transport network	ATN
24	Connection to other areas	COA
25	Incentives	I
26	Policies	P
27	Low unit cost of electricity	LUCE
28	Low unit cost of water supply	LUCWS
29	Cheap labour training	CLT
30	Cheap machine repairs	CMR
31	Banking and insurance services attracted to the area	BIS

Table 12: The Factors of Industrial Migration and Their Codes
Source: Fieldwork, 2014

The degrees of influence of the pulling factors on the migration of industries into the study area were tested using a Likert scale with a five level Likert items such as strongly influential, influential, undecided, not influential and strongly not influential. Table 12shows the result of the influence of the factors on industrial migration into the industrial area of the 9th Mile. These variables were ordered as follows;

- Strongly Influential (5) - first order
- Influential (4) - second order
- Undecided (3) - in between order
- Not influential (2) - fourth order
- Strongly not influential (1) - fifth order

The factor ordering (Table 11) indicates that 1st and 2nd order factors were considered influential in the pull of industries into the area. While the4th, and 5th order factors were not considered in the pulling of industries into the study area. The scale 3 is found between influential and not influential factors

The result on Table 13 shows that the most influential factors that have pulled industries into the industrial area of the 9th Mile area are water, local market and water resources with scores of 6.9% each. While the least influential factors are; postal services, town planning, incentives and policies with no score.

S/N	Factor	Strongly Influential (5) (1st Order)	Influential (4) (2nd Order)	Total	Percentage (%)	Rank
1	Sand	2	0	2	1.9	7th
2	Water resources	3	5	8	7.5	1st
3	Market size	2	4	6	5.6	3rd
4	Volume of sales	2	3	5	4.7	4th
5	Local market	7	1	8	7.5	1st
6	Regional market	3	3	6	5.6	3rd
7	Low cost of land	2	2	4	3.7	5th
8	Availability of Space	4	3	7	6.5	2nd
9	Electricity	5	1	6	5.6	3rd
10	Education	0	4	4	3.7	5th
11	Health care	0	4	4	3.7	5th
12	Cheap labour training	0	2	2	1.9	7th
13	Low cost of water	1	4	5	4.7	4th
14	Public security	0	2	2	1.9	7th
15	Fire service	1	1	2	1.9	7th
16	Cheap machine repairs	0	2	2	1.9	7th
17	Banking services	1	2	3	2.8	6th
18	Public transport	1	2	3	2.8	6th
19	Skilled labour	2	2	4	3.7	7th
20	Unskilled labour	0	7	7	6.5	2nd
21	Low wage rate	0	3	3	2.8	6th
22	Ease of transport	0	2	2	1.9	7th
23	Accessible transport facilities	2	2	4	3.7	5th
24	Connection to other areas	1	4	5	4.7	4th
25	Low cost of electricity	1	2	3	2.8	6th
26	Total	40	67	107	100	

Table 13: 1st and 2nd Order Variables
Source: Fieldwork, 2019

9.4. Pattern and Source Areas of Industrial Migration in the Study Area

The result on Table 13 shows the pattern in which industries migrate into the industrial area of the 9th Mile and it is noted that the most recurrent pattern is opening a branch which occupied the first position with a score of 50 responses which represent 45.5%. In the 2nd position is the inter-regional pattern with score of 45 responses (41%). Main plant relocation, intra-city and urban-rural patterns clustered in the 3rd position with percentage score of 4.5% (5 responses) in each case. The result on Table 14 is further illustrated in Fig 9. Hovar Nig Ltd relocated the entire plant from Enugu town to the 9th Mile area, which also indicates urban-rural pattern. The industries that employed opening a branch and regional patterns of migration are; Nigerian Bottling Company Ltd whose headquarters is in Lagos, Nigeria, 7up Bottling Company Plc whose headquarters is in Lagos, Nigeria, Andy Young Aluminium whose headquarters is in Abuja, Nigeria, Nigerian Breweries Plc whose headquarters is in Lagos, Nigeria, and Master Holdings Nig Ltd whose headquarters is in Anambra, Nigeria.

S/N	Patterns	Respondents Frequency	Percentage (%)	Rank
1	Main plant relocation	5	4.5	3rd
2	Opening a branch	50	45.5	1st
3	Intra-city	5	4.5	3rd
4	Urban-rural	5	4.5	3rd
5	Inter-regional	45	41	2nd
	Total	110	100	

Table 14: Migration Pattern
Source: Fieldwork, 2014

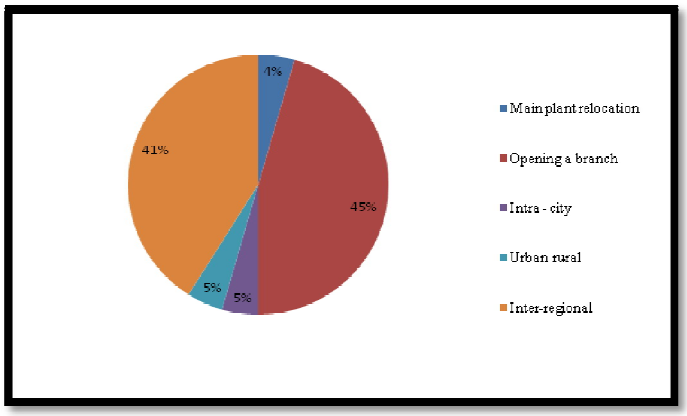

Figure 10: The Migration Pattern of Industries into the Study Area

9.5. Discussion of Research Findings

The findings of the field research carried out and the analysis done on the factors of industrial migration into the industrial area of 9th Mile are as follows;

- The 9th mile industrial area is an area with good aquifer with water in abundance which is the reason why water is the major raw material available in the area. Most of the industries have water as their major input material. This has prompted the movement of these industries to 9th Mile, because this proximity reduces the cost of buying and transporting water from a far distance. This agrees with the view of Prosser, (2002) that 'industries which in their precious location buy their major raw material from a distant source, can be attracted to move to a nearer new area which has that particular raw material in abundance'
- Industries in the 9th Mile were influenced to move to the area because of the market present around it, that is, Local market. This is due to the fact that producers want to be in close reach to the consumers. A case in hand is Hover Nigeria Ltd, who produces wood pellets for Brewery industries was influenced to move to 9th mile because of the presence of Coca-Cola, 7up and Ama brewery who consumes their product in 9th mile. This finding goes in accordance with the opinion of Peck (2005) that 'industries tend to move to areas with large market so as to minimise cost and maximize profit'.
- The industries present at the 9th Mile area are mostly large industries which require large space. The 9th Mile area is an area with vast land and improved access to different areas and it is also a small town found on the edge of Enugu town that can accommodate the various activities of these industries; this has prompted the industries to move to the area. The idea of Prosser (2002) that 'industries tend to move to areas with cheaper and vast land, less congested and cramped sites and improved accessibility as found on the edges of cities and in smaller towns' applies to 9th mile.
- Existence of public utility services, amenities in a particular area like Banks, Schools, Hospitals and location of Allied activities can influence the migration of an industry to the area (Fabio, 2002). This view of Fabio is evident in the 9th Mile area because the service facilities that can induce the movement of industries are available in the area and they include; electricity, education, public transport, water supply network, postal services, and waste management.
- The most important factor in terms of labour that has drawn industries to the area is the presence of unskilled labour which is a result of high rate of unemployment in the area. This unemployment has also resulted in low wage rate and this reduces cost for industrial owners. This is further emphasised by Kurt (2007) who stated that 'an industry which is labour-intensive may choose to locate near to an area of high unemployment in order to take advantage of the availability of labour at a fairly low wage on order to reduce cost'.
- The 9th Mile area is at a central location with connection to other areas and this has induced industries to move to the area. This finding agrees with Massey (2004) who said that 'industries tend to move to area with cheap, accessible and excellent transport networks both in regards to raw materials and market'
- It was discovered that the Government have no influence on the movement of industries to 9th Mile industrial area either through incentives or policies
- The cost saving advantages that accrue to industries in the 9th Mile for the reason of being close to each other include Banking and Insurance service attracted to the area, low unit cost of electricity, low unit cost of water supply, cheap labour training and cheap machine repairs. These external economies induced industries to move to 9th Mile because it reduces the cost of production. This finding agrees with the opinion of Alexander (2008) that 'external economics result in a fall in the cost of production of industries. These advantages can induces a firm to move to such areas'
- The most important and strongly influential factors that have drawn industries to the 9th Mile industrial area are; water, local market and water resources
- The pattern of industrial migration utilized by industries in 9th Mile is opening a branch and also most of the industries moved from other regions to the South- east region.

10. Summary, Recommendation and Conclusion

10.1. Summary

This research determined the factors that influence the movement of industries into the industrial area of the 9th Mile and to achieve this; the following objectives were postulated;

To outline the factors that pull industrial plants into the area

To evaluate the relative position of the factors that pull industrial plants into the study area.

To identify the patterns of industrial migration into the area.

A number of research questions enabled the researcher to achieve the set out objectives. These questions are;

- What are the factors that influence the movement of industries into the industrial area of the 9th Mile?
- What is the most important factor in relation to other factors that pull industries into the area?
- Which pattern of migration did the industries utilized in moving into the area?

Generally, the importance of this study; factors of industrial migration into the industrial area of 9th mile is to aid industrialist to consider various geographical factors before establishing their industrial plants and also to create awareness on the benefits that will accrue to industrial owners who move their plants to 9th mile industrial area.

The study adopted the survey research design and data were obtain from the directors or industrial owners, managers and employees in the industries through the questionnaire and oral interview. Also the simple random sampling technique was used to select sample size of 80 respondents for this study, eleven directors or industrial owners, eleven managers and fifty eight employees in the industries. The collected data were analysed through the use of percentages, tables, and graphs (pie and bar graphs).

From the result of the analyses, a number of factors have pulled industries to the 9th Mile industrial area. They are; raw material, market facilities, resources of land, labour, transport facilities, service facilities, and external economies. However, water, local market, and water resources are the most important factors that has influenced the movement of industries into the 9th Mile. Also, the patterns of industrial migration into the area are mainly the opening of branches of industries and inter-regional migrations of industries. Such migration of industries involves movement from Lagos, Abuja, Anambra, and Enugu areas into the study area.

10.2. Recommendation

In view of the important position of industries as a means of sustainable development to nations, the following recommendations are postulated;

Industries whose major input material is water, should be encouraged to move their industrial activities to the 9th Mile industrial area because of the good aquifer available in the area.

The market facility available in the 9th Mile area is large and favourable. Thus the researcher recommends that more industries should move to the area in other to take advantage of the market available for a higher profit margin.

The 9th Mile area has vast area of land, so industries that require large area of land to accommodate their production activities should be induced to move there.

Public utility services needed by industries such as electricity, education, public transport, water resources postal services and waste management are available in the study area. Hence, the researcher recommends that industries who want to make use of these services should move part or whole of their operations.

The 9th Mile industrial area has large number of unskilled labourers whom are ready to be hired at a low wage rate. Industrialist should take advantage of this fact to move their plants to the area.

The researcher recommends that since the 9th Mile area is at a central location with connection to other areas and accessible transport networks, industrial owners should move their plants to the area in other to enjoy ease of transporting their raw materials and finished product.

Also, Government should put forward incentives such as tax holidays, free land and other policy initiatives that will protect industries especially smaller industries to encourage them to migrate to the 9th Mile industrial area in other to encourage more economic development of the area.

10.3. Conclusion

Based on the findings of this research work, it can be seen that the factors that have influenced industries to move to 9th mile are many and favourable and these factors include; raw materials, market facilities, resources of land, labour, transport facilities, presence of service facilities and external economies. Also, due to the favourable nature of these factors to the growth of industries, more industrialists are being encouraged to move to the area.

10.4. Areas for Further Research

- Pattern of industrial migration into the area of 9th mile.
- Factors of industrial migration out of an industrial area
- Effects of industrial migration into the industrial area of 9th mile.

11. References

i. Adinna, E.N., Enete, I.C. and Tony, O. (2009): 'Assessment of Urban Heat Island and Possible Adaptations in Enugu Urban Using Land SAT/ETM'. *Pakistan Journal of Social Sciences,*6: pp 26-31.

ii. Ajayi, P.O.S. (2003): *Comprehensive Geography for Senior Secondary Schools.* Revised edition, Lagos: Johnson Publishers Ltd.
iii. Alexander, V. (2008): *'Externalities' in Hamowy Roland, the Encyclopaedia of Liberiantism.* Thousand oaks', CA: Sage: Cato Institute.
iv. Anumudu, C.N. and Anumudu, F.R. (2005): *Applied Statistics for Social and Management Sciences.* Enugu: Great AP Express Publishers Ltd.
v. Arous, M.B. and Lazare, K (2009): *African Studies in Geography from Below*. Ibadan: African Books Collective.
vi. Audretsch, D. and Feldman, M. (2003): 'Industrial Movement, Spatial Association and Functional Linkages'. *Regional Studies.*6(4), pp. 371-384.
vii. Baker, S. (2001): *Industries of Great Britain.* University of Illinois Press. Pp. 52
viii. Bakker, Karen (2005): *Neoliberalzing Nature?* : 'Market Environmentalism in Water Supply in England and Wales'. Annals *of the Association of American Geographers* 95(3), pp 542-565.
ix. Barnett, A.H. and Yundle, B. (2005): *'The End of the Externalities Revolution'.*
x. Barthold, F. (2006): *Institutional Approaches in Economic Geography, Handbook of Economic Geography.* Ed. Eric, Sheppard, Trevor, J. Barnes and Peck (2005): Blackwell Publishers.
xi. Blyth, M. (2002***):*** *Great transformations: Economic Ideas and Institutional Change in the Twentieth Century*. Cambridge: Cambridge University Press.
xii. Brains, P. (2010): *Percent/ Percent Common Errors in English Usage*. Washington State University.
xiii. Chopra, S. and Meindl, P. (2007): *Supply Chain Management*. Canada: Pearson Publishers.
xiv. CIA World factbook (2008): 'Rate Order- Industrial Production Growth'. *CIA World Factbook CIA*
xv. Clerke, B. (2003): *New Production Patterns in the World Economy*. Oxford, Oxford University Press.
xvi. Coulomb, Pierre (2004): *Capital and Land: Landownership by Capital in Great Britain*. London: Edward Arnold.
xvii. Cunningham, E (2009): *Harnessing Creative Industry*. London: Oxford University Press.
xviii. Dick, P. (2002): *The Long interview*. Newbury Park, CA: Sage Publications.
xix. Edward, B., Coyle, J. And Novack, R. (2006): *Management of Transportation*. Thomson South-Western.
xx. Emielu, S.A. (2000): *Human and Regional Geography for Senior Secondary Schools*. Lagos: West-African Publishers.
xxi. Fabio, S. (2009): 'The Industrial District and the New Italian Economic Geography'. 10(4): *European Planning Studies*.
xxii. Farlex, A.H. (2012): *Industrial area and Estates.* New York: Wiley.
xxiii. Favell, A. (2008): *Euro stars and Euro cities: Free Movement and Mobility in an Integrating Europe, Malden (MA*). Oxford: Wiley-Blackwell.
xxiv. Friendly, Michael (2008): 'The Golden Age of Statistical Graphics'*; Statistical Science.* Volume 23, number 4, 502-535.
xxv. Galhano, J.P.A. (2009): 'The Artificial Simulacrum World', *the Geopolitical Elimination of Community Land USE and its Effects on our Present Global Condition.* 71pp. New York, USA: Eloquent Books.
xxvi. Garapich, M. (2005): The Politics of Migration and Immigration in Europe, Sage: London.
xxvii. Gelles, D. (2005):' Coca-cola Company'. *Source watch centre for media and democracy*
xxviii. Gibson, J.K. (2006): *Post Capitalist Politics.* Minnesota: University of Minnesota Press.
xxix. Gillham, B. (2008): *Developing a Questionnaire.* (2nd Ed): London, UK: Continuum international Publishing Group Ltd.
xxx. Global 500 (2009): 'Annual ranking of the world's biggest companies from fortune magazine'. *CNN.*
xxxi. Gustofsson, A. And Johnson, M.D. (2003): *Competing in a service economy*. San Francisco: josey-bass, p.7.
xxxii. Hall, C.M. (2005*):* 'Reconsidering the Geography of Tourism and Contemporary Mobility',*Geographical Research*. 43: pp 125-139. London: Channel View Publication.
xxxiii. Handlin, A.J. (2007): 'Migration and Social Mobility in National and International Urban Systems in Greyer, M.S'. *(Ed) International Handbook of Urban Policy*. Cheltenham: Edward Elgar, pp 107-37.
xxxiv. Hayter, R. (2000): *The Dynamics of Industrial Location: The Factory, the Firm and the Production System.* New York: Wiley.
xxxv. Hoyle, B.S. and Knowles, R.D. (2008): *Economic Geography.* Second Edition, London: Wiley.
xxxvi. Hughes, A. (2005): *Geographies of Exchange and Circulation: Alternative Trading Space Progress in Human Geography.*
xxxvii. Innes, J. (2004): *Guinness Nig Bottling Plant.* Packaging Gateway.
xxxviii. Inyang, P.E.B. (2005): *Climate Regions.* In Oformata, G.E.K. (Ed) Nigeria in Maps: Eastern States. (PP. 27-29) Benin City: Ethiopia Publishing House.
xxxix. Juan, L.O., Raul, R. And Jordi, S.C. (2001): *Macroeconomic implications of EMU at the Regional Level*, ERSA Conference Papers. ERSA 01 p 146: European Regional Science Association.
xl. Kelley, W.M. and Donnelly, R.A. (2009): *The Humongous Book of Statistics Problems*. New York: Alpha Books.
xli. Karl Marx (2012): *The Concise Encyclopaedia of Economics*. Library of Economics and Liberty: (2nd Ed): Liberty Fund.
xlii. Koepke, A.S. (2000): *Industries Classification on the Basis of Raw Materials and Finished Goods.*Oxford University Press.
xliii. Kogan, E. (2008): 'China's Commercial Aviation in Take-off mode'. *Asia times*
xliv. Kurt, k. (2007): *Factors of Industrial Location*. London Publishing House

xlv. Laffont, J.J (2008): '*Externalities'*. The New Palgrave Dictionary of Economics, 2nd Ed.
xlvi. Lowe, S.G. and Harvey, K.J. (2005): *Work, Industry, and Canadian Society*. Second Ed. Scarborough, Ont: Canada: Nelson Books.
xlvii. Markusen, J.R. (2002): *Multinational Firms and the Theory of International Trade.* Cambridge: MLT Press.
xlviii. Marx (2010): *Raw Material and Uses.* Part iii: Chapter 7. London: Oxford University Press.
xlix. Massey, D.B. (2004): *Spatial Division of Labour: Social Structures and the Geography of Production.* Third Edition. New York: Metleun.
l. Massey, D.B. (2004): *Towards a critique of industrial location theory*. London Centre for Environmental Studies.
li. Matear, S., Gray, B., Garrett, T. And Deans, K. (2000*):* 'The Effect of Government on Industrial Location'. *International Journal of Industry Management*. Vol. 19, No.1. Pp. 83-110.
lii. Mauz, J.M. (2013): *Practical Guidelines for Conducting Research:* Summarising Good Research Practice in Line with the DCED Standard.
liii. Mayhew, S. (2009): *Dictionary of Geography.* New York: Oxford University Press.
liv. Mazzarol, Tim and Choo, Stephen (2003): 'A Study of the Factors Influencing the Operating Location of Small Firms'. *Journal of Property Management*, vol. 21, issue 2, pp. 190- 208. MCB UP Ltd.
lv. Mba, H.C. (2004): *Management of Environmental Problems and Hazard in Nigeria.* Lagos: Ash Gate Publishers.
lvi. Mbendi, A. (2011): *Mineral Mining in Ghana-Overview*. Canary Island.
lvii. Mberede, F.M. (2006): *Express Economic.* Onitsha: Global Publishing C. O.: Multilingual Translators, 2009.
lviii. McCann, P. (2001): *Theory of Industrial Migration in the Netherlands, a Synthesis of Empirical Studies.* Rotterdam: Netherlands Economic Institute.
lix. McBride, P.J. (2006): *Human Geography: Systems, Patterns and Change.* Surrey: Nelson.
lx. Moore, Brenda (2014): *In-Depth Interviewing in Routledge Handbook of Research Methods in Military Studies.* (Eds) J. Sorters, P. Shields, S. Henriette. 115-128. New York: Routledge.
lxi. More, Charles (2000): *Understanding the Industrial Revolution.* London: Routledge.
lxii. Munn, P. And Drever, E. (2004): *Using Questionnaires in Small-Scale Research. A Beginners Guide*: Glasgow, Scotland: Scottish Council for Research in Education.
lxiii. Nathaus, K. and Gilgen, D. (2011) (Eds): 'Raw Materials and Market Societies: Concepts andCase Studies'. *Historical Social Research 36(3), Special Issue*.
lxiv. National Bureau of Statistics (2012): Federal Republic of Nigeria Official Gazette: *Legal Notice on Publication of the Details of the Breakdown of the National and State Provisional Totals 2006 Census.*
lxv. National Population Commission: NPC (2006): Nigeria population census figures
lxvi. Ogbu, S.O. and Enete, C.I. (2006): *Fundamentals of Research Methods and Reports in Environmental Studies.* Enugu: Glanic Ventures.
lxvii. Okoli, F.C. (2000): *Theory and Practice of Local Government: A Nigeria perspective: A Case Study of Udi Local Government Area*. John Jacob: Classic Publishers Ltd.
lxviii. Oppenheim, A.N. (2000): *Questionnaire Design, Interviewing and Attitude Measurement.* (New Ed.): London, UK: Continuum International Publishing Group Ltd.
lxix. Orajaka, S. (2002): *Geology of Eastern Nigeria.* In Oformata, G.E.K. (Ed): *Nigeria in Maps*, *Eastern States*. Pp 5-7. Benin City: Ethiopia Publishing House.
lxx. Ozonzeadi C. (2004): *Nigeria, A People United, A Future Assured, Survey of State, Case Study of Enugu*
lxxi. Patrik, Aspers (2011): *Markets.* Cambridge: Polity Press.
lxxii. Peck, J. (2005): *Economic Geographies in Space.* Economic Geography 81(2): 129-175.
lxxiii. Pellenberg, P.H. and Brons, J. (2003): 'Firm Relocation Decisions in the Netherlands: An Ordered Logit Approach'.*Papers in Regional Science,* 79, 191-219.
lxxiv. Peter, D.K. (2001): *An Analysis of Industrial Location Factors with Particular Reference to Indonesia*. Canada: University of British Columbia.
lxxv. Phillips, D.R. (2003): Industries and Development. Oxford University Press.
lxxvi. Prosser, R. (2002): 'Factory Location and Industrial Movement: a Study of Recent Experience in Great Britain'. Volume 1 and 2. London*: National Institute of Economic and Social Research.*
lxxvii. Quinn, A. (2001): '*Interviewing the art of science*' in NK Denzin and YS Lincoln (eds) Handbook of Qualitative Research, pp. 361-376.
lxxviii. Reyment, N. (2005): *Geology of Udi.* Lagos: John Wiley and Sons Nigeria.
lxxix. Ronaldo, .C.F. (2005): 'Critical Issues in Brazil's Industrial Sector'. Baker institute.
lxxx. Roth, S. (2012): 'Learning Common Places on the Common Place Cornerstones of a Polyphonic Market Theory'. *Journal of Critical Organisation Inquiry* 10 (3) 43-52.
lxxxi. Rugman, A.M. and Verbeke, A. (2004): 'A Perspective on Regional and Global Strategies of Multinational Enterprise': *Journal of International Business Studies 35(1).*
lxxxii. Seidman, Irving (2008): *Interviewing as Qualitative research: A Guide for Researchers in Education and the Social Sciences.* Pg 91: Teachers College Press.
lxxxiii. Silvestre, B.S., and Dalcol, P.R.T. (2009): 'Geographical Proximity and Innovation: Evidences from the Campos Basin oil & gas Industrial Agglomeration-Brazil'. *Technovation,* vol. 29 (8), pp. 546-561.
lxxxiv. Smith, D.M. (2001): *Location Decisions and Industrial Mobility.* Michigan University of Michigan: Ann Arbor.

lxxxv. Thrift, N.J. and Olds, K. (2003): *Refiguring the Economic in Economic Geography, Progress in Human Geography.* 20, 31-37.
lxxxvi. Udu, E.U. and Agu, G.A. (2001): *New Systems Economic*. Onitsha: Africana Feb Publishers.
lxxxvii. Ugwu, L.N.(2001): The Causes Of And The Environmental Impact Of Gully Erosion In Ngwo, Udi Local Government Area , Enugu State. Unpublished PhD Thesis, Department Of Geography And Meteorology, Enugu State University Of Science And Technology, Enugu, Enugu State.
lxxxviii. Waugh David (2000): *Geography an Integrated Approach*. Third Edition. Canada: Nelson Thornes.
lxxxix. Weitzer, A. (2004): *Sampling in Research Methods.* Mango, Australia: Iceman Publishers.
xc. Wolfgang, Franz (2009): 'Real And Monetary Challenges To Wage Policy In Germany at the Turn of the Millennium: Technical Progress, Globalization And European Monetary Union'.*Cesifo Working Paper Series 200*: Cesifo Group Munich.
xci. Yates, D.S., David, S.M., and Daren, S.S. (2008): *The Practice of Statistics*, 3rd Ed. Freeman.