RESEARCH ARTICLE

TRADE AND TRANSPORT NEXUS IN THE ECONOMY OF OZORO, DELTA STATE NIGERIA

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Abstract

Both trade and transport logistics activities have flourished in Ozoro over the past decades. Based on these observations, this paper conjectures that trade and transport logistics development are mutually reinforced. The potential economic impacts of transport improvement are not only likely to be significant and wide-ranging. Developing an understanding of the transport and transport related challenges opportunities facing alternative industry sectors is an important first step in the development of an investment programme to improve productivity and competitiveness particularly in a local economy such as Ozoro, in Delta, state Nigeria. Improvements in transport connectivity driven by increased network capacity, reduced travel times and cost together with improved network reliability generate improvements in productivity through what are sometimes referred to as agglomeration economies.

Keywords: Trade, Transport, Nexus, Logistics, Economy, Delta State.

Introduction

The Ozoro area, made up of Ozoro town at the centre, Owelogbo, Otor Owhe, Emevor, Oghara Iyede and the surrounding villages in Oyede, Ofagbe, Ovrode, Otibio, Okpe Isoko, Iyede-Ame, Ellu, Igbuku, Bethel and Iluelogbo is essentially an economic region, functioning as a spatial system. Daily, within the area, passenger and freight flow in directions and intensities which reflect location and concentration of demand, supply and other incentives propelling the system (Albreehts and Tasan-kok, 2020; Takahiro and Gerasimos, 2020 and Christopher 2021). In this way, the productive capabilities of all parts of the region are mobilized into a functioning unit. This unit of economic capability is in turn linked, structurally and organisationally, to the mainstream of the national economy by the association of traders and transporters. The gateways for this linkage are mainly the towns of Warri, Sapele, Ughelli, Asaba, Port Harcourt and Oleh (Fig. 1). It is in this way that trade and transport provide the links that hold society together as well as the dominant structural framework around which regional and inter-regional economic activities are spatially arranged. By this there is an urgent need to develop strategic spatial planning methods adopted to the conditions of communities with weak planning systems facing rapid urbanisation (Mathias et al, 2019; USAID 2021).
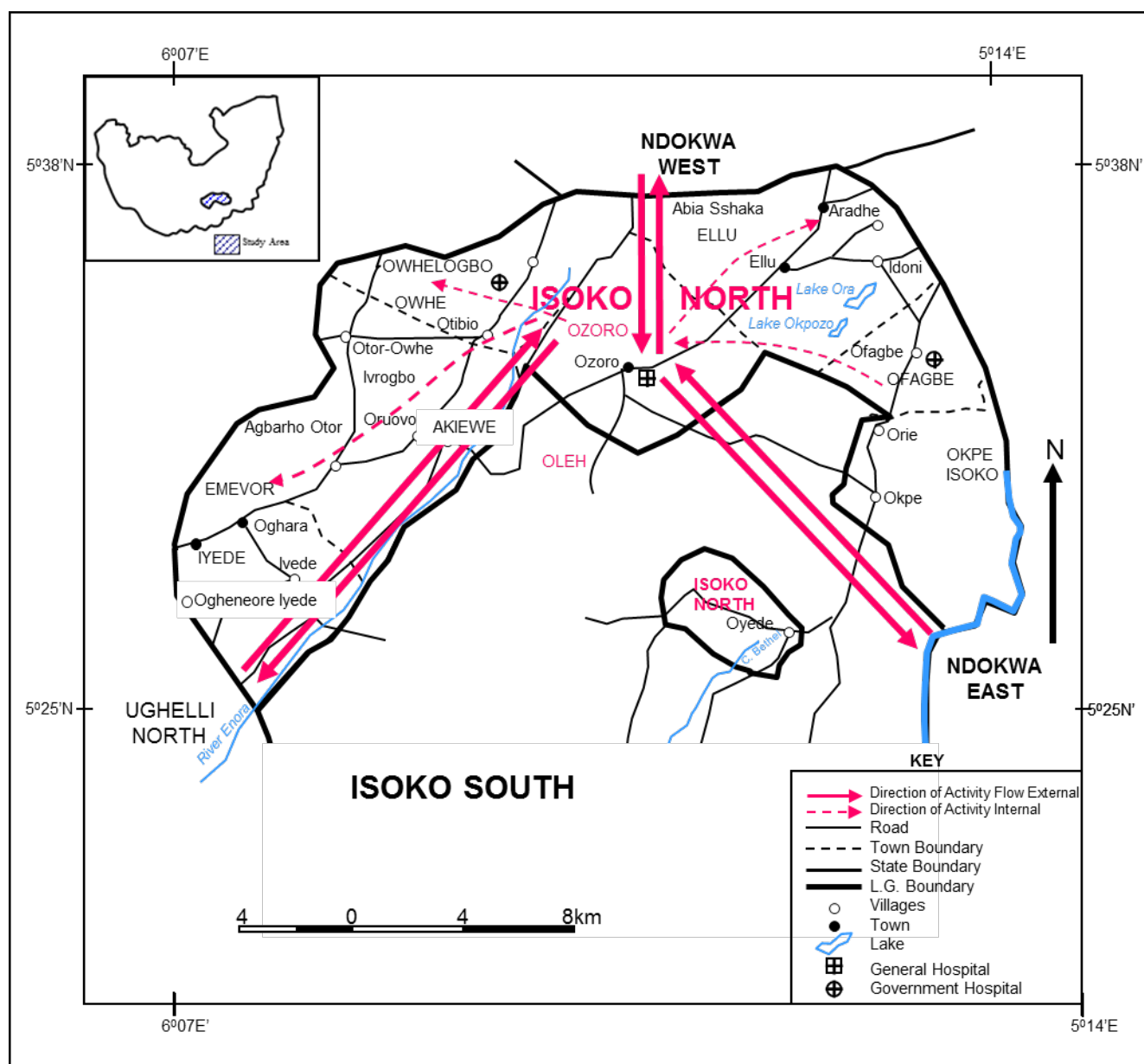
Fig. 1: The Ozoro spatial System
Source: Author's Fieldwork, (2023)

The purpose of this article is to examine the pattern and functioning of the internal trade linkages of the Ozoro area, as well as the transport network and modes by which the spatial interactions are effected.

Research Method

The Trade Patterns

Three distinct patterns of trade can be recognised within the Ozoro area: trade in Ozoro town, trade in Ozoro rural areas and trade between Ozoro town and the peripheral/hinterland area. Though each of the trade pattern has its distinguishing operational features, the three are linked in structure through the association of trader/middleman function. Hierarchies of middlemen traders collect and build up the scattered surplus produce of their respective areas of operational into an "exportable" lot. This is eventually sent to markets outside the area in exchange for other types of produce which are "imported" to meet local demand. The distinction between the patterns lies in differences of commodities dominantly traded, differences of operational processes and differences of the spatial and structured organisation.

The commodities of trade in Ozoro town show a balanced mix of primary products and manufactured goods. The primary products include farm crops such as yam, cassava/garri, rice, beans, fruits and vegetables which are basic staples for the urban population. They also include animal products, poultry and fish, as well as forest products such as timber, palm oil, palm kernel, palm wine and firewood, all of which are in great demand in the town.

The manufactured goods are of the simple type, consumer commodities including mainly tinned food and beverages, bread, cigarettes, cosmetics, drinks, textile goods, foot wears, rain protectors, household materials such as beds, mattresses, cutlery, cooking utensils and lamps, books and stationary, drugs, building materials such as cement, rods, pipes and iron roofing sheets, gums, photographic materials, electrical materials, clocks and watches, enamel and china wares, plastic containers, bicycles and bicycle parts, motorcycles and fuel. Traders buy these goods mainly from Warri, Ughelli, Benin, Lagos and Onitsha to sell in the town.

Lacking in industrial establishments (except bead making and printing at high scales), the town does not possess the market threshold for the supply of the heavier and more sophisticated types of industrial equipment. Moreover, besides a small proportion of the workers at the Delta State University of Science and Technology, Ozoro and a handful of top civil servants and middle class businessmen around. There is also market capacity left of the town to make dealership in such commodities as motor vehicles, floor carpets and modern upholstery and setting up of large scale supermarkets, a visible enterprise for any serious businessman.

Trade is dominantly retail. However, low level wholesale transactions obtain between some individual traders in the town selling a number of items at a time to a buyer from the village for further retail in the rural areas. Like in most other Nigerian towns and cities, the commodities are displayed for sale in the urban market centres and along the streets. In each of these locations some traders operate in sheltered structures and some in the open space. Majority of the traders in the market centre are in shelters. About half of these shelters are of solid and permanent structures with corrugated iron-sheet roots, and half of shanty and rickety structures with umbrella roofs and without walls to them. The commodities here are, however, displayed in specific commodity areas such that the manufactured goods are confined to the better shelters and food products to the shanty shelters and open spaces.

Operating in the open space is more a feature of the street trade. But even along the streets trading in sheltered structures is more dominant than the open space trade. This is true in terms both of the space occupied and the number of traders involved (Fig. 2). It is even truer in terms of the quality and value of merchandise. In a five day commodity census conducted in the town between 26 June and 30 June 2023, sheltered merchandise was found to consist dominantly of manufactured goods while the open space trade users dominated by agricultural produce, especially vegetables, fruits, grains and firewood. Small qualities of drinks, bread, cigarettes, stationary, some vegetables and fruits were sold in the open. And counting every other trader, the collective value of the goods on a typical day, by the respective modes of operation, was reckoned as follows;

   a.   Sheltered trade along the streets   -   N650,000
   b.   Sheltered trade in the main market   -   N380,000
   c.   Unsheltered trade along the streets   -   N100,000
   d.   Unsheltered trade in the main market less than   -   N20,000

However, there are two daily markets in Ozoro town namely Ala Square market on Urude quarters and Akporio market along Ughelli road.
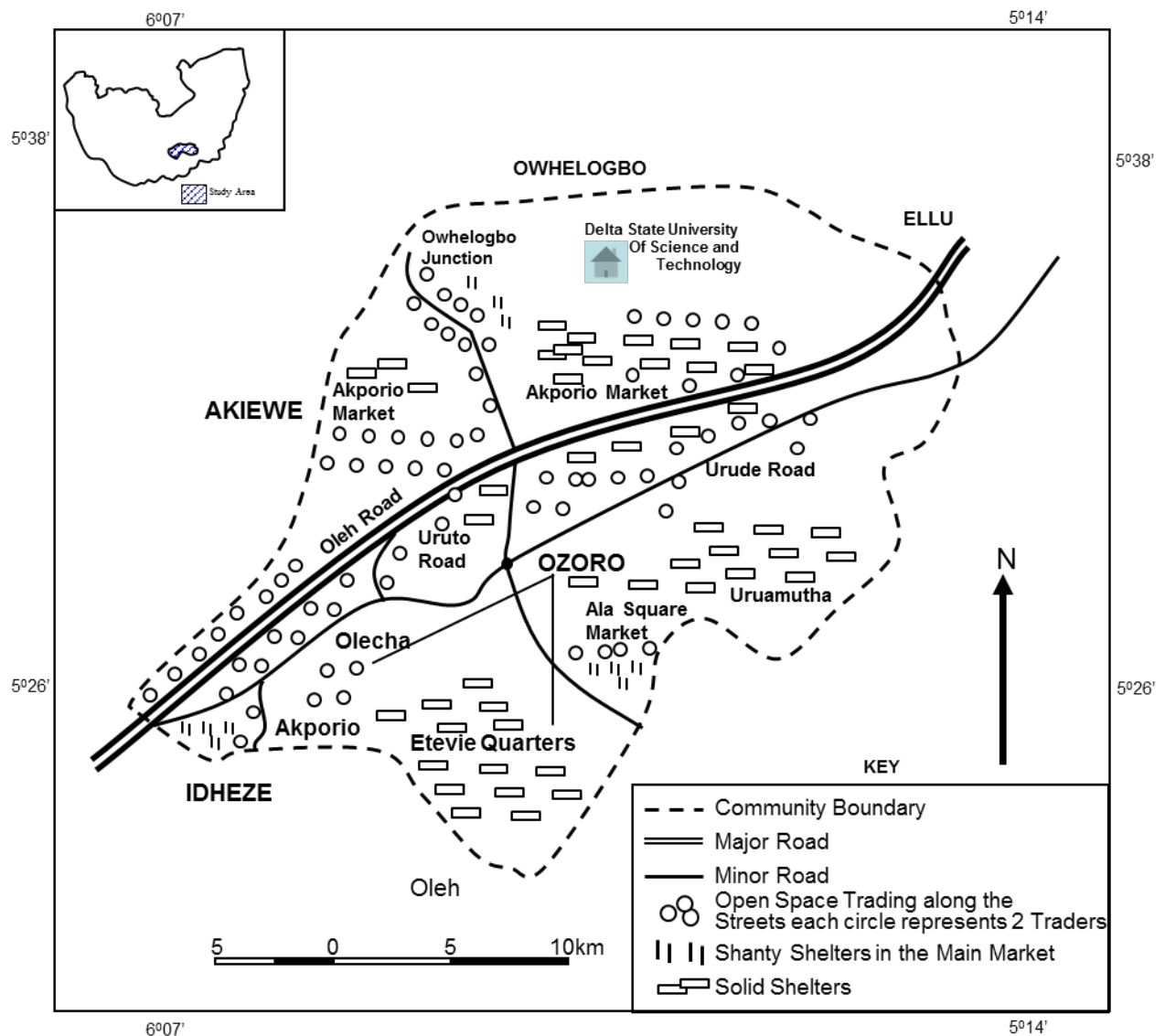
Fig. 2: Showing incidence of sheltered and unsheltered trading structure in Ozoro markets and along the urban roads.

Source: Author's Fieldwork, (2023)

Fig. 2 also reveals a remarkable locational coincidence along the streets of sheltered and unsheltered trading operation. Their business periods is generally from 8am to 8pm each day for the sheltered traders, and 7am to 9pm for the unsheltered ones, are also virtually coincident and show similar patterns of oscillation in intensity of business over the period (Fig. 3).
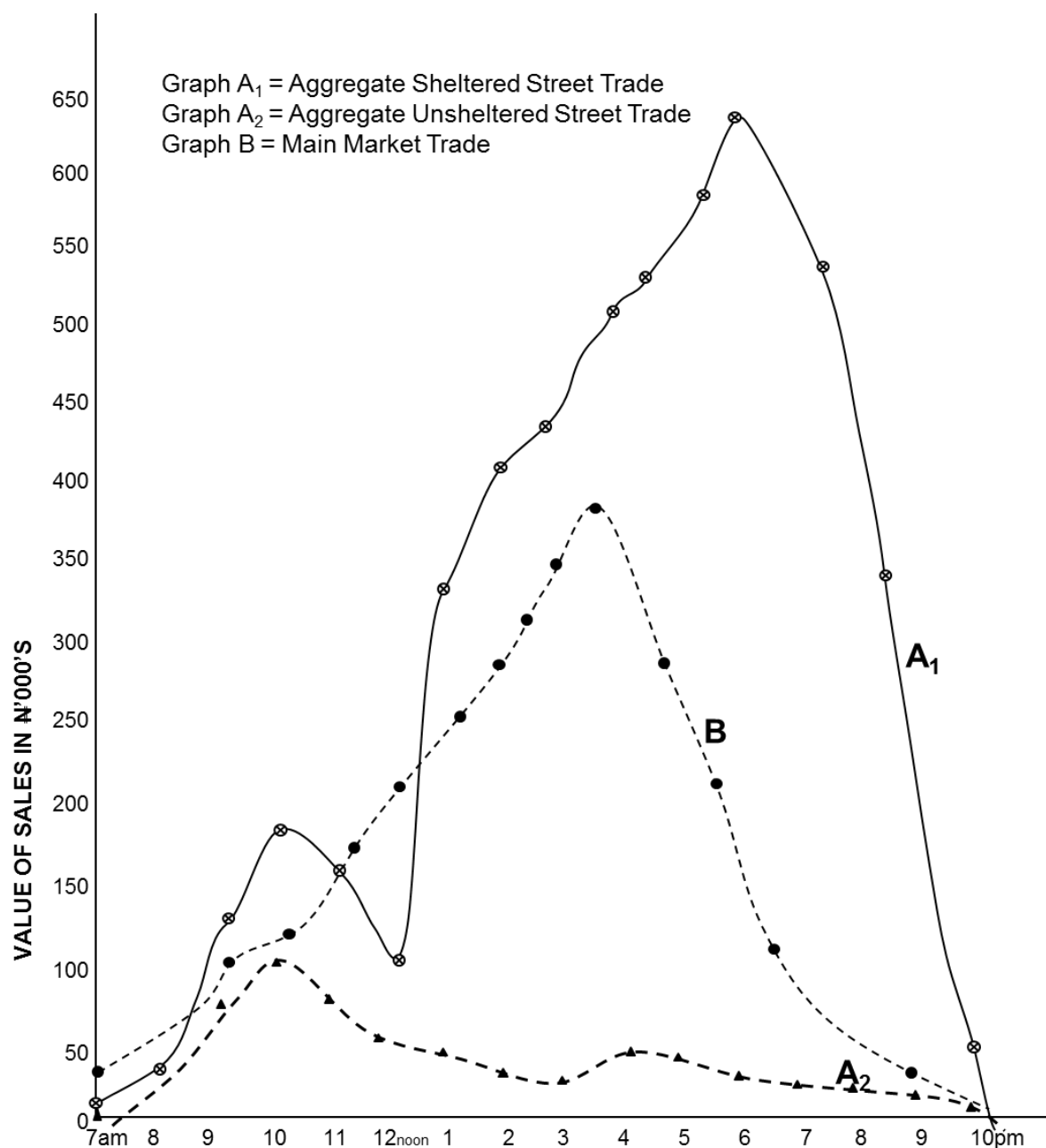
Fig. 3: Oscillation of Business Intensity

They both show double peaks (the first between 8am and 12noon and the other between 2pm and 6pm) in contrast to the single peak of the main market which occurs between 12noon and 6pm. The similarity of operational features between the sheltered and unsheltered businesses along the streets is suggestive of identical locational orientation, the unsheltered ones being small – man affairs taking advantage of loopholes created by the larger business units. These loopholes arise from (a) the failure of the larger units to provide some needed goods in their stores due to their characteristics and specialization in certain types of commodities and not others (b) their failure to provide their goods in such marketable units as to accommodate every grade of buyer however small the quantity he wants at a time, (c) setting their prices higher than what the unsheltered businesses are willing to accept and (d) from their remaining open for a shorter period relative to the interest of some buyers.

There are however, roads like the Delta State University of Science and Technology road where the unsheltered traders are very few, and the Ozoro – Owelogbo junction, Urude road, Ala square and Ozoro – Oleh roads, where they very much outnumber the sheltered traders. These situations reflects the buying habits of the groups of people who mostly and respectively constitute their market. Ozoro – Owelogbo, Ozoro Oleh and Ozoro – Kwale roads serve mainly villagers from the adjoining rural areas who readily patronize the roadside, unsheltered traders whereas the university road serves buyers from the university campus, bankers and some civil servants usually in

cars, who have little or no time for the road side open – space traders and who, in any case would normally prefer to make their purchases from the stores and supermarkets.

Traditionally, Ozoro is an agro-settlement whose inhabitants are virtually subsistence farmers. With the establishments of schools, churches, small-scale traders, and health institutions, Ozoro began to have a population that consist of a large proportion of farmers and farming assistants and a small proportion of a non-farm population. It is important to point out that with the sitting of Ozoro Polytechnic and later Delta State University of Science and Technology, the local government secretariat and banks brought into the town a large group of staff, students and non-farming population. This phenomenal annual increases in the population of Ozoro has implications for the food requirements of the population. With this growing population means expanding demand for food in particular. The people interviewed were asked the type of food crops that are produced most and were ranked as follows:

1. Cassava
2. Plantain
3. Oil Palm
4. Maize
5. Yam
6. Pepper
7. Melon
8. Groundnut

It is important to note that the reduction in the level of farm labour supply has affected the level of food crop production in Ozoro town. Children and women use to be part of the farmers farm labour force. Today, the children go to school while the women engage in various activities such as office work (for the educated) and trade. Thus, those who remain on the farms including some women farmers who have formed very limited labour supply and has affect farm size holdings. Therefore, total farm productions are not as high as they ought to be if labour had been cheap.

Findings and Discussions
Trade in Ozoro Rural Areas

Trade in Ozoro rural areas is transacted at specific market centres, each village having its own centre, or one principal centre out of some two or more such centres. The markets, which are essentially collecting and distributing centres for local agricultural produce and craftworks, hold on definite days in a four – day cycle. Each market defers to one or the other of the markets of spatially adjacent areas on the days it is not holding. In an ideal situation, a particular market holds on a day it is the only one operating within a market ring which includes a number of contiguous communities who relate among themselves the season of their respective markets (Mabagwu, 1978; Madu 200; Gegeleso et al, 2022; Ayantoyibo and Gbadegesin, 2023).

As a result of the traditional importance of rural markets, there exists in every rural community in Ozoro region at least one market. One common characteristics of these markets is that they are all periodic. The basic reason for the periodicity of the markets, is to allow for a sufficient build – up of effective demand and sometimes also supply, e.g. of ripe fruits. The interval between market days is often used in preparing goods for sale at the next market day. From the point of view of producers – sellers, therefore, market periodicity facilities the combination of production and sales in an efficient manner.

Important rural markets in Ozoro and environs include Yanga market (Owelogbo), Eki Ellu, Eki Emevor, Eki Otor Owhe, Eki Oghara-Iyede, Eki Okpe Isoko, Eki Orode Eki Ofagbe and Eki Igbuku. (Fig. 4). Some of these, such as Okpe – Isoko, Eki Otibio, Eki Ovrode, Eki Ofagba and Owhe/Akiehwe, are typical village markets. Each serving mainly their local areas to a radius of not more than five kilometres. This distance is the farthest range of pedestrian reach. The other markets have larger catchment areas which include people from outside the Ozoro area. In this, Eki yanga (Olwelogbo), Eki Emevor, Eki Otor Owhe and Eki Oghara-Iyede belong to a class by themselves. Also, the surplus starch and tapioca in Ozoro are exported to Ajugunle market in Lagos.
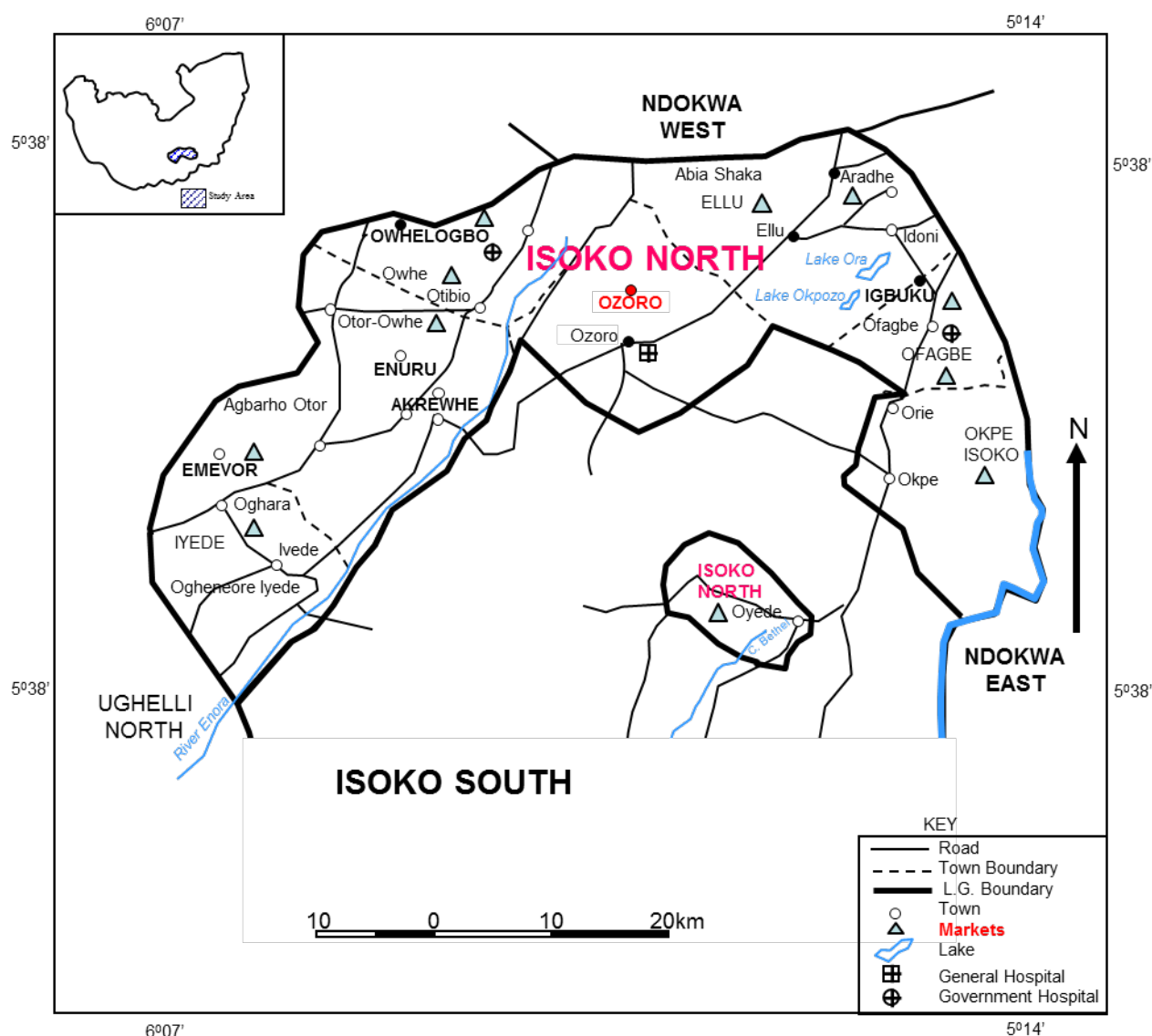
Fig. 4: Important rural markets in Ozoro and environs.
Source: Author's Fieldwork, (2023)

Palm oil and kernel, fruits (especially banana, plantain, oranges, mangoes, guavas etc, vegetables and livestock are the actual surplus products of the local farms in the entire area. Commercial farm produce are also brought to the village markets from non-local sources through middlemen traders. Local craft products are also important in the village markets. Pots, baskets, leather sheaths for knives, sleeping mats, mortars and pestles are among the prominent ones. Non – local craft products such as raffia bags, dancing drums are brought to the markets by middlemen. The middlemen also bring in for retail assorted types of simple manufactured goods including especially food provisions, smoked fish and stock fish, cosmetics, textile materials and clothing, machetes, dinning plates, drinking glasses, tiles for home and industries, and bicycle parts. The goods are obtained some straight from Onitsha, Warri, Benin, Sapele, Ughelli etc, and some from Ozoro town. Apart from the local villagers, buyers at the rural markets include some direct consumers as well as middlemen from Ozoro town who visit the markets to purchase farm produce, particularly yam, livestock, fruits and vegetables.

The Trade Pattern

Road transportation is a form of land transport which includes the movement of people and goods by motor cars, trucks, buses, motorcycles and bicycles. It is the most popular means of transport (Atubi and Onokala, 2003; Atubi, 2005a and Atubi 2012). As a popular form of land transport, road transportation can contribute greatly to national development when made efficient. However, road transportation in Ozoro region is far from being efficient. Transport has been likened to the human blood circulatory system whose healthy functioning is a necessary condition for the sustenance of human life. (Adeniji, 2000; World Bank, 2022; Kasim and Ayinla, 2022). Transport systems provide a key to the understanding and operations of many other systems at many different

scales. At one extreme, inter-continental transport provides essential communication between the advanced and developing worlds, while local transport to rural markets in many parts of the third world is a vital component in changing dynamic socio-economic structures.

There is hardly any human society or human settlement system that can function efficiently and effectively without adequate, reliable, safe and affordable transport systems. The most fundamental reason for this being the catalytic effect of transport development on socio-economic growth and development (NISER, 2001; Atubi, 2008e, 2019a and 2019b). Like the trade patterns in Ozoro region, three patterns of traffic flow can also be identified: flows within the town, flows between the town and the periphery and flows between the town and its outer hinterland. These patterns are distinguished by types and relative intensities of traffic as well as modes of transportation in common use. Traffic flows within the town are in part both a cause and consequence of the flows between the town and its environs including the peripheral region.

Traffic Flow within Ozoro Town

Traffic flows in Ozoro town are dominated by passenger rather than freight movements. Most of the inhabitants of the town are public servants (including school teachers, local government workers, and staff of the university) as well as bankers, factory workers, and businessmen, rather than traders. The passenger movements derive mainly from the daily commutation between the workers residential areas and their places of work. A second source of regular passenger movements is the commutation between residence and school by university and secondary school students who live outside their campuses as well as primary school children. The third source of passenger movement is more general and rather occasional. They include movements deriving from visits to the markets, shopping centres, relaxation sports (that is hotels, night clubs and television viewing centres), hospitals and agencies such as the education office, courts, mobile telecommunication centres, and also visits to the public utility workers offices such as those of the Benin electricity distribution company (BEDC) and the works department.

Movement of freight within the town is limited by the fact that most traders in the markets and along the streets store their goods in lock-up shelters or shops. This is true mostly of dealers on manufactured goods. However, large scale dealers on foodstuffs in the main market as well as other markets in Ozoro also operate in lock-up shelters, only a few petty traders, drawn especially from the open – space sellers of foodstuffs in the markets and along the streets, carry their goods every day to and from their centres of operation. The dominant mode of circulation in Ozoro town is by the use of buses, motorcycles, tricycle (keke) and walking. The use of bicycles is marginal and hand pushed trucks and wheel –borrows very negligible. There are no internal bus services.

Traffic Flow between Ozoro Town and the Periphery

The term 'rural transport' can be defined as short – distance movements between an urban centre (Ozoro) and the surrounding rural areas, between two rural settlements or between a rural settlement and the farmland that belongs to it. However, the modes, routes and traffic of rural transport may depend to some extent, on the prevailing geographical, environmental and technological development of the area under study. Rural transport therefore, means movement of people, goods and services within rural areas and between (rural areas) and urban centres that will afford the rural areas the opportunity to reach their economic growth and trade potential to enable them attain their desired quality of life.

The centre – periphery flows of traffic are also dominated by passenger movements. People from the villages who go to the town to sell their local products make up a substantial proportion of the traffic. Middlemen who commute between Ozoro town and the peripheral villages and vice versa, are very few in number. Each of them normally hire's tricycle (keke), bus or pick up to carry their goods, but they generally move with goods only in one direction (Ozoro and environs) so that their activity does not change the dominance of passenger flows. This higher proportion of passenger to freight traffic is further enhanced by the large number of people who visit the town from the villages (i.e Ofagbe, Owelogbo, Emevor, Oyede etc) purely for official, social, recreational and other such purposes, rather than for trade.

Transportation between Ozoro town and the peripheral areas is mostly by tricycles, walking, motorcycles, bicycles and motor vehicles. However, there are a few directions where the use of the motor vehicles, motorcycles, and tricycles exceeds walking and bicycle. This depends very much on the nature of the dominant commodity from the area, and also on the location of the populace and productive villages along a given axis. For example, along the Ozoro – Kwale road, the major commodity moving into the town is groundnut and fish (both dried and fresh) and the road between Ozoro – Owelogbo, the major commodity is palm wine. The traders bring them in on motor vehicles, and tricycles because the value of the quantity that could be carried on bicycles and motorcycles at a time would be too meagre to justify the business trip, hence the use of vehicles and tricycles (keke). But generally, there is as well the question of high transport cost relative to revenue, which is involved in transporting the goods

by vehicles and tricycles (keke) hence, the use of bicycles, and mostly motorcycles (Okada). Transportation along the Ozoro – Owelogbo road offers a contrast to this. Here, bicycles, followed by motorcycles are more important than any other means. As a general rule, beyond the distance of fifteen kilometres from the town, the tricycle and motorcycle comes into more prominent use, assisted by motor vehicles (Fig. 5)
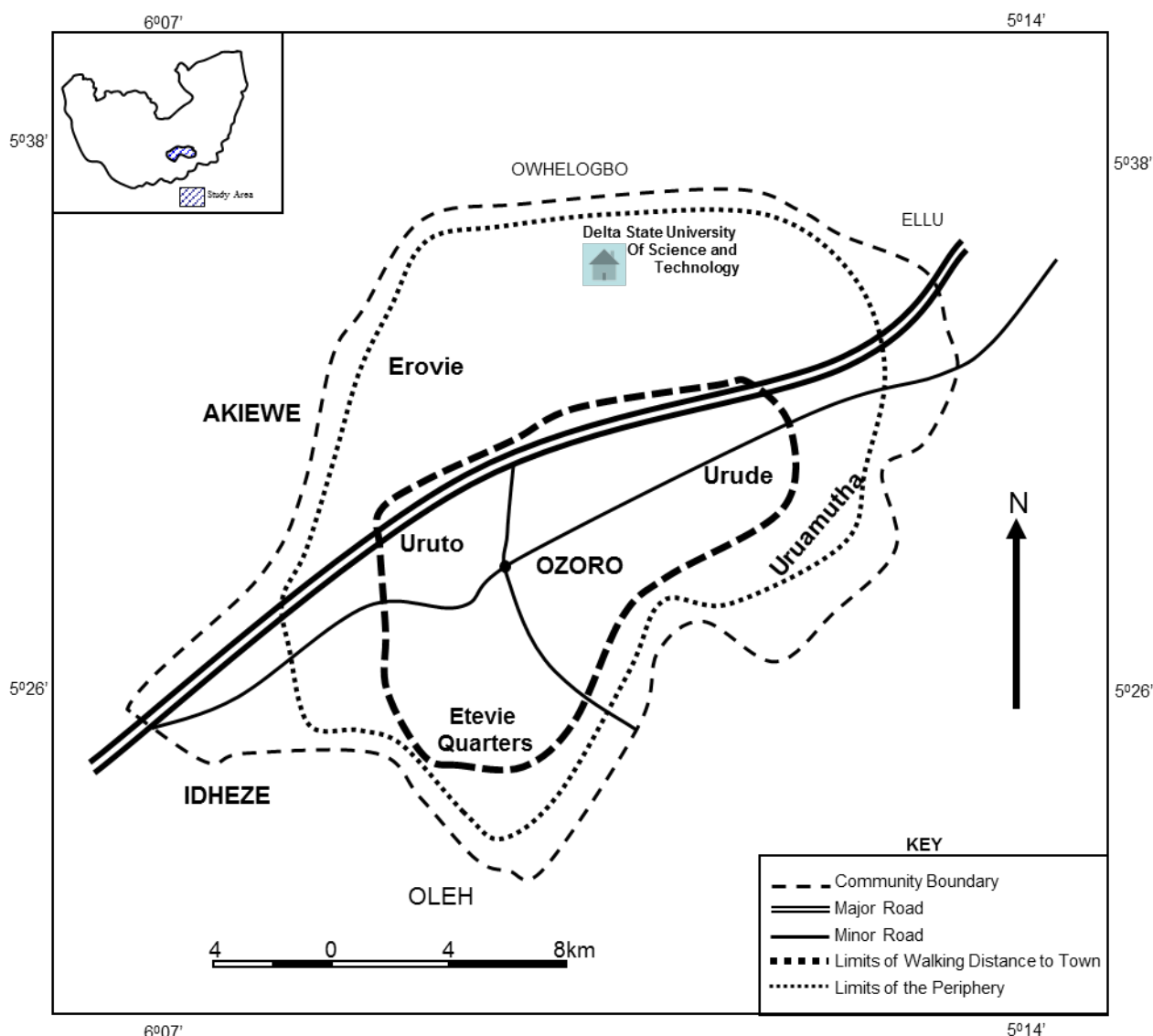

Fig. 5: Ozoro Peripheral Region showing limits of regular movement distance to Ozoro town
Source: Author's Fieldwork, (2023)

Some villagers who bring their goods on their heads or motorcycles to the town go home by motor transport or tricycle (keke) some of the traders interviewed on this explained that the transport charge they would pay on their heads and their loads on the journey to Ozoro town is too much for their purse and for the profitability of their business. Moreover, it is after they must have sold their commodities that they would get some money to foot the motor transport bill. This bill according to them is often much lower and well within their purse on their return journey when they would be carrying no loads. The use of motor transport and motorcycle (Okada) on the return journey is also influenced by the level of profit made by the traders in their business trip to the town.

Traffic Flows between Ozoro Town and Outer Hinterland

Official, social or recreational visits to Ozoro town from the outer hinterland communities of the Ozoro area are few and far between. Regular traffic flows between the two areas mainly serve the purpose of trade, and more of goods than passengers are transported.

The search for a new rural transport planning paradigm in developing countries began in a somewhat unfocused manner. The initial point of departure was simply dissatisfaction with the existing implied policy reliance on infrastructure investment for conventional motorized vehicles as both the catalyst for economic and social change, and the prime means of enhancing accessibility and personal mobility, with vehicle supply being left to the private sector (Atubi and Ali, 2008; Somuyiwa et al, 2023).

Approach to rural transport studies requires a holistic understanding of the mobility and access needs of the rural communities in Ozoro and environs. It is a demand led or people centred approach which emphasis on the need expressed by the affected communities/villages (i.e. Ozoro and environs). In context, rural transport is more broadly seen as an input into successful rural livelihood strategies, within which access consists of three complementary elements (a) rural transport sources and intermediate means of transport, (b) location and quality of facilities and (c) rural infrastructure as shown (Fig. 6).
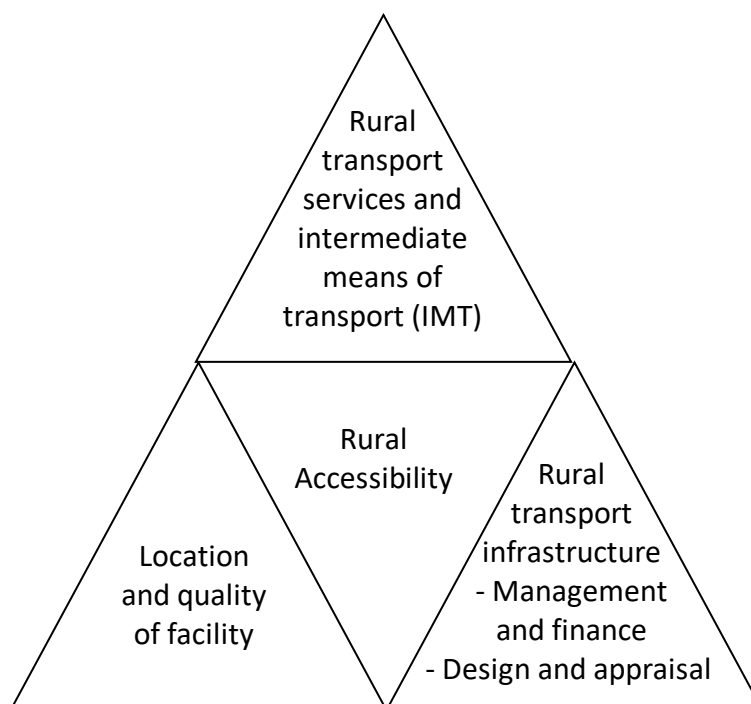

Fig. 6: The Elements of Rural Transport
Source: (Atubi and Ali, 2011, adapted from Lebo and Schelling, 2001)

The major direction of the centre – outer hinterland traffic flow is Western and Eastern axis which connects the town and the agriculturally rich areas of Emevor, Ofagbe, Ovrode, Aradhe, Otibio (Otor Igho), Owelogbo, among others. The usual mode of commuting between Ozoro and the areas is by motor transport, mostly tricycle (keke), motorcycle and a few 7-tonne trucks. On the respective market days of Emevor, Ofagbe, Otor-Owhe, Oyede, and Okpe Isoko, not less than fifteen vehicles, sixty tricycles and numerous motorcycles (Okada) leave the town for the areas. They travel out very early in the morning and come back the same day.

Conclusion

The more regular trade contact which exists between the town and the peripheral villages is based on large quantities of low – scaled goods in either direction. This trade is sustained more by economy of location than its level of profitability. Trade in the rural areas themselves, based essentially on agricultural produce sold at the periodic markets, thrive with vigour. It is against the background of the high level of trade in the Ozoro area that transportation within it is geared more to movement of passengers and freight. In this, the popular modes are tricycle, motorcycle and bicycle riding as well as motor vehicles. However, rural transportation is very important for the growth and development of any rural area and as well as for the efficient movement of people and goods.

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