



Establishing a Nexus between On-Street Commercial Activities, Associated Environmental Risks Hazard Risks and Planning Policy: An Exploratory Analytical Approach

B. O. Bankole¹, S. J. Arohunsoro¹, O. O. Ojo¹ and A. A. Shittu^{2*}

¹*Department of Tourism and Hospitality Management, Faculty of the Social Sciences, Ekiti State University, Ado Ekiti, Nigeria.*

²*Department of Geography and Planning Science, Faculty of the Social Sciences, Ekiti State University, Ado Ekiti, Nigeria.*

Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/ACRI/2021/v21i430243

Editor(s):

(1) Dr. Marco Muscettola, University of Bari, Italy

Reviewers:

(1) Anurag Mudgal, Pandit Deendayal Energy University, India.

(2) Suwimon Kooptiwot, Suan Sunandha Rajabhat University, Thailand.

Complete Peer review History: <https://www.sdiarticle4.com/review-history/72859>

Original Research Article

Received 15 June 2021
Accepted 19 August 2021
Published 30 August 2021

ABSTRACT

The paper established a nexus between on-street commercial activities, associated environmental and hazard risks and environmental planning policy in Ado Ekiti. In order to achieve the objectives, a series of survey was carried out. This included site visitation, field observation, and collection of relevant data through questionnaire. A total number of 800 lock up shops were identified in various locations in the study area meant for various commercial purpose and a further 1200 slots were added for hawkers, market induced service operators, road side traders, members of Drivers' Unions, passengers, pedestrians etc, bringing the total number to 2000 out of which 10% was sampled totaling 200 respondents in all. The two hundred respondents were randomly stratified from the Atikankan, old garage, Mathew, Irona, Ojumose, Oke-Iyinmi and Idolofin area. Out of the 200 questionnaires, only 199 were filled and returned. The study revealed that on-street commercial activities were responsible for several environmental problems and other hazards in the study area, thereby frustrating environmental planning policy. It is recommended that a more

*Corresponding author: Email: Adewalerichard37@gmail.com;

efficient rerouting of traffic along major high ways and around market locations must be adopted. Markets like Oba's Market, Bisi Market, Erekasan Market should be developed to meet the global standard. Enough parking spaces should also be provided around these Markets to ease the commercial activities in the study area among others.

Keywords: *On-street commercial activities; traffic congestion; on-street parking; hazard risk; waste disposal and environmental planning.*

1. INTRODUCTION

A lack of convenience, transportation challenges, financial concerns and an inadequate supply of public utilities and services have all been attributed to urbanization in Nigerian cities. As a result of varying roles of cities, population densities, and government intervention levels, the severity of these problems varies from place to place. City centres in Nigeria are essential from a social and economic perspective despite these challenges. They provide affordable accommodation for low-income people and natives, as well as serving as a hub for social and economic activity in Nigeria [1].

A growing number of people choose to do their shopping on the streets rather than in traditional supermarkets, marketplaces, or auto parts stores. City distribution and consumption patterns reflect this change [2]. As a result of this, the government has expressed great worry and physical planners responsible for accommodating and directing future growth of cities have taken note. Planners have begun to wonder if traditional markets will be able to meet the ever-increasing needs of the urban population, and if retailers and consumers will continue to view them as the best places to sell their products [2]. Local traders in the hamlet engage in one form of street trading or another, so it is not a new phenomenon. As a result of planning system flaws, it has reached a menacing level [3].

The term street trading can have a variety of meaning but typical definitions would be the selling or exposing or offering for sale any article or the supplying or offering to supply any service in a street for gain or reward and the retail or wholesale trading of goods and services in streets and other related public areas such as alleyways, avenues and boulevards [4]. Street trading thus defied encompasses a wide range of activities and there are many variations in the history, nature, scale, permanence and location of these activities [5]. Traditional street markets, farmers markets, fruit and vegetable stalls, flower

sellers, ice cream carts and kiosks, AA and RAC membership and recruitment desks, balloon and toy sellers, poster displays, tourist souvenir stalls, hamburger and hot dog caravans, baked potato kitchens, roast chestnut braziers, children roundabouts, punch and Judy, white mime artists, buckers, and newspaper and Big Issue sellers are all typical street trading activities [6].

2. THE STUDY AREA

Ado – Ekiti is one of the oldest towns in Nigeria. Its history dates back to a period before the advent of Ewi dynasty in 1310AD. It grew into a town of repute about 700 years ago when the “Oba Ado” otherwise called the “Ewi jointed the princely adventure instituted by the several children of Oduduwa (from Ile – Ife) to found their own territories. Ancient Yoruba history tells that Oba of Benin and Oba of Ado (Ewi) were brothers born of the same mother to Oduduwa. The two of them were reported to have left Ile – Ife for a place known today as city and its vicinity to settle. But the Ewi and his people pitched their camp at a place called ‘ORUNMOBI’ meaning “God – fortified round wall”. The place was said to have been a fairly ground surrounded by low hills and was situated near the present Benin City. Later on constant strife frequency clashes and bloody encounters featured prominently between the followers of the two brothers.

The first Oba Ado or Ewi is called Awamaro or Elewi. In his bid to find a suitable settlement, he conquered many villages, towns, and hamlets and stopped at Idoani and Agbado. As he wondered westward, the Elewi arrived at a hill place. He moved to the top of one of the hills and settled his people there once and for all. He named the hill “Oke Ewi” (i.e Ewi’s hill). On setting down finally, Awamaro named the people who accompanied him “ADO” meaning “the encampers”. From this, Ado –Ekiti got its name. Literally, “ADO” means “WE SETTLE” and the word “EKITI” which mates it a compound word refers to the hilly terrain of the area. In the early era, the town was called “ADO-EWI-EKITI”. Is a title use to distinguish the Ado – Ekiti ruler from

3. LITERATURE REVIEW

It was identified in the study of Nduka and Duru [3] that overcrowding and other difficulties plagued towns throughout the Industrial Revolution (Iron Age). They lived in cities where there was fresh air, greenery, freedom, independence, and good health, whereas the wealthy people who could afford it chose to live in the suburbs. Poor people in the city's centre began engaging in a variety of on-street commercial enterprises in order to make a living. According to Nduka and Duru [3], commercial and marketing activities are conducted at street-side businesses and both daily and periodic marketplaces in the traditional core areas of cities in developing countries. On the roadside, merchants' shops and professionals' offices fight with residential users for parking space and visibility.

It has been suggested that on-street parking should be controlled in order to avoid chaos [3]. For the maintenance of the park, parkers could be charged a fee. On-street parking in the central business district must be regulated and subject to fees. To do this, either a traffic warden or parking meters can be used [3]. As argued by Cross [1], on-street parking and street merchants or hawkers are the most common causes of traffic congestion. Transportation in cities becomes more and more sluggish, which reduces productivity at work, but also leads to increased boredom and environmental damage.

Gani [2] pointed out that commercial activities have taken over most of the important roadways in the city because of the difficult economic times. As well as on the highways, kiosks, makeshift businesses, and empty containers are placed in a random manner, creating an eyesore for first-time visitors to Lagos. Traders' drive to sell their items has traditionally been blamed for obstructing traffic flow and causing road congestion. Aside from unlawful buildings, these lanes are often clogged with street vendors. There are marketplaces, kiosks, and canopies in the space between lanes, with traders' tables and booths making up the majority of unlawful buildings.

Adimekwe [7] observed that street trading does offer a number of benefits to the community but it also generates a number of conflicts and problems. Thus street trading provides affordable outlets for small business, which can add value to a town or city centre and make a positive

contribution to the vitality and viability of that centre. At the same time street trading is also seen to give rise to a number of problems. Street traders can cause both vehicular and pedestrian congestion and potentially restrict safety and emergency vehicle access to and from buildings. Retailers trading from shops and stores within town and city centres may object to street trader on the grounds that they may compete unfairly with them and take some of their business, that they may obscure shop windows and displays and that they change the ambience of the general shopping environment. More general environmental concerns focus on waste disposal, litter generation, noise and smells especially from hot food operations [8]. There are also concerns that street trading can give rise to problems associated with crime and disorder but there is little hard evidence that street trading provides an outlet for the stolen goods. However there are concerns that sale of dangerous goods and the sale of prohibited goods to minors. Street markets can also encourage street robbery and pick pocketing but the introduction of CCTV has helped to reduce the scale of this problem [9].

According to Acheampong [10], street trading provides an outlet for the sale of stolen goods. However there are concerns about the sale of dangerous goods and the sale of prohibited goods to Minor Street markets can also encourage street robbery and pick pocking buy the introduction of CCTV has helped to reduce the scale of this production. In Britain, Cheltenham Borough Council, for example, suggest that street trading is an acceptable activity within Cheltenham town centre provided that it is selectively located where it can make a positive contribution to the vitality and viability of the town. Within this broad policy framework the council will normally not permit street trading in the town's pedestrianised zones except for organized event promoted /supported by the council, ready to eat seasonal / festive food traders and flower sellers.

4. RESEARCH METHODS

The study employed the use of questionnaire and observation methods. In order to achieve the objectives earlier stated a series of survey work was carried out. This included site visitation, field observation, and collection of relevant data through questionnaire. These were viewed and assessed on how and to what extent they had contributed to the defacing of the environment physically and environmentally in the study area.

A total number of 800 lock up shops were identified in various locations in the study area meant for various commercial purpose and a further 1200 slots were added for hawkers, market induced service operators, road side traders, members of Drivers' Unions, passengers, pedestrians etc, bringing the total number to 2000 out of which 10% was sampled totaling 200 respondents in all. The two hundred respondents were randomly stratified from the Atikankan, old garage, Mathew, Irona, Ojumose, Oke-lyinmi and Idolofin area. Out of the 200 questionnaires, only 199 were filled and returned. Tables, graphs, charts, and diagrams were adopted in analyzing the data.

5. FINDINGS AND DISCUSSION

5.1 Traffic Congestion and On-street Commercial Activities

Eighty four respondents which represent 42.2% of the target population believe that the traffic congestion in the traditional area of Ado-Ekiti is caused by on-street parking/on-street motor parks which eventually result to the on street commercial activities. Forty seven respondents which represent 23.6% are of the opinion that the traffic congestion is caused by too many vehicles plying the route. 18.6% and 15.6% of the target population believe that the congestion in the

study area is caused by on street trading and population concentration respectively (Table 1).

Table 1. Causes of traffic congestion in the study area

Causes	Number	%
On-street parking	84	42.2
Too many vehicle plying the route	47	23.6
On-street trading	37	18.6
Population concentration	31	15.6
TOTAL	199	100

Source: Field survey 2021

The data indicate that the majority of the people in the study area believe that the traffic congestion around the place is caused by the on-street parking. The implication is that on-street commercial activities also occur where there is high population concentration but no provision is made for the attendant infrastructure for exchange of goods and services during the developmental stages of such areas. Prominent examples of these are: old garage and Oba Market. Take for instance, when Oba Market and Bisi Market were constructed without any provision for future parking. Even, the so called new motor park that was located beside the First Bank PLC had been converted to lock-up shops.



Plate 1. On-street parking along old Garage road

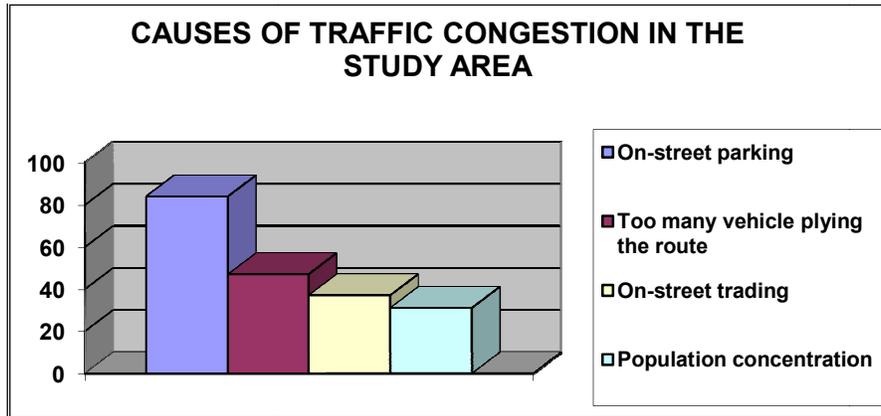


Fig. 2. Causes of traffic congestion in the study area

Source: Field survey 2021

5.2 Hazard Risk and On-street Commercial Activities

The above table indicates that accident takes the highest percentage (41.7%). Harassment and sexual abuse take 31.2% and 10.1% respectively. Others like slapping, whipping and so on take the remaining 17.1%. Traffic lawlessness walks unchecked in the study area, bus operators and trades playing the untouchable god have rendered the use of public roads a hellish experience. The conspiracy of the traders, commercial cyclists and commuter drivers to reduce the wide roads into a narrow pass for motorists is a study in traffic stress subjecting motorists to a painful driving who sometimes result in series of accidents). Harassment takes 31.2% of the total respondents. This often gives rise to unhealthy

rivalry between traders for space, menace of pick pockets, conflicts between traders and government official's etc. Some cunning men, most especially the bus conductors and thugs will pretend as they want to buy goods from the young girls only to end up in raping them. Young girls are more often victims of sexual abuse that may lead them to social delinquency in later life (Table 2).

Table 2. Hazard risk

Risk	Number	%
Accident	83	41.7
Harassment	62	31.2
Sexual abuse	20	10.1
Other	34	17.1
TOTAL	199	100

Source: Field survey 2021

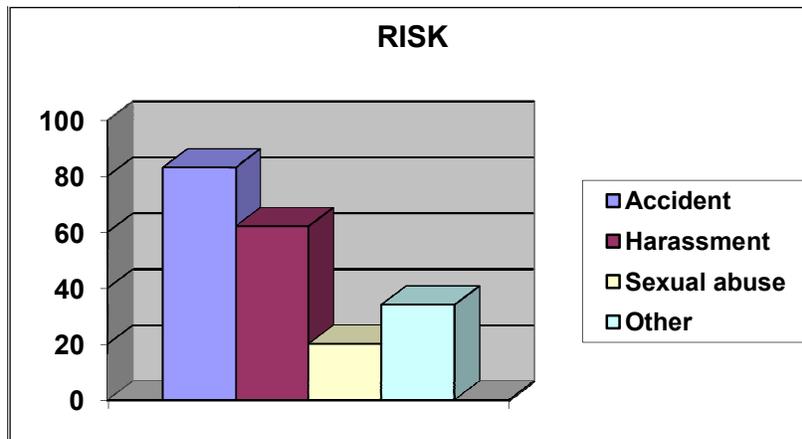


Fig. 3. Health, hazard / risk

Source: Field survey 2021

5.3 Environmental Waste Disposal and On-Street Commercial Activities

Eighty six respondents which represent 43.2% are using Ekiti State Waste Management Boards bin. 56.8% of the respondents dispose their waste through burning; dumping in drains, road side and every other ways convenient for them. The implication is that nearly all locations where trading activities exist are always very with the streets all littered with refuse during and at the end of the day. These locations have been a major source of concern to the State and Local Government and the public at large. The state of the environment is such that can cause health hazards of great magnitude. The dust bins provided by the Ekiti State Waste Management Board (EKSWB) are not enough to cater for the

refuse generated around the study area as a result of on-street commercial activities (Table 3).

Table 3. Methods of waste disposal by on-street traders

	Number	%
Burning	40	20.1
Drainage	43	21.6
Along the road	21	10.6
EKWMB'S bin	86	43.2
Others	09	4.5
TOTAL	199	100

Source: Field survey 2021

This is largely responsible for the filthy environment, blocked drains etc in the study area.



Plate 2. Accumulated refuse in front of fajuyi hall



Fig. 4. Methods of waste disposal by on-street traders

Source: Field survey 2021

5.4 Environmental Planning Implication in Ado Ekiti

Generally speaking, on-street commercial activities are widespread phenomena in the traditional core area of Ado Ekiti. It manifests itself in many forms and at different locations and can be permanent, temporary or periodic. There is spatial specification products dealt with – Ojumose is noted for building materials, electrical and electronics, New Garage – Ijigbo road for wears, provisions, record stores, Post Office – Atikankan for repairs. Erekesan market – a daily and periodic market organized from dawn till dusk, is most important as provincial market organized on the other fourth day. Items sold here include domestic animals, craft products, farm tools, vegetables, yam, grains and meat. Because of inadequate stalls widespread hawking and street side trading are common along Post Office – Ijigbo road on market days.

The stalls are in poor conditions and maintenance is usually left for the traders. Items are marketed in the lock up and open stalls and in open hare ground and in makeshift structures. In Atikankan, Post Office and Omugbagba market open bare ground is used for selling of yam, grains and vegetable. There are more Hausa traders in Atikankan part of the study area. About 85% of the respondent around this area is using drainage as the medium of disposing their waste. The organization of stalls affords little circulation. There is possibility of fire hazards and lack of appropriate utilities and services. Circulation space is less than required and the available ones are misused for display of products. Parking facilities are not provided. Pedestrians, hawkers and motorists struggle for spaces along the road. Along this road (Post Office – Ijigbo and Oke-Ila – Old Garage) curb and street parking is common for circulation / loading though on short-time basis. Environmental Sanitation in the market is poor. The town centre harbours banks and several petrol filling stations.

Basically, on-street commercial activities are having both positive and adverse impacts on the traditional core area of Ado-Ekiti. The appreciation of the benefits and problems associated with on-street commercial activities has been very divergent. To some people, there is no derivable benefit from the existence of on-street commercial activities. It is seen officially as a phenomenon which has brought a lot of problems to the environment. On the other hand,

it is seen by others to be beneficial not only to the population but also to the economy. Amongst the most important goods offered by the street traders today are fresh produce, prepared foods traditional medicine products, meat, alcohol, second hand goods, clothing, household goods, art and craft, newspapers, magazines, flowers etc. the most prevalent services include transportation (bikes and buses) hair salons, shoe repairs, telephone kiosks, mechanics etc. primarily, these activities are located in the public spheres where there is high concentration of pedestrians and vehicular movement and other modes of socio economic activities [10].

A number of indices are used in determining the performance of an economy. One of such is the level of employment which is an important index in major economic analysis [6]. The existence of on-street commercial activities in the study area has reached a point where it can safely be said to be major employment generator. The absence of any data on the number of locations and people involved has largely been responsible for the non appreciation of the employment opportunities associated with on-street commercial activities. It is estimated that about one million people are engaged on-street commercial activities. It therefore provides employment for thousands of people who would otherwise have been unemployed.

Planners should not close their minds to such issues because trading activities helps the economy, by taking the goods to the final consumers. Easy accessibility to facilities is one of the objectives of planning; and in the absence of proper planning; the spontaneous emergence of the informal sector activities will therefore bring about the needed commercial linkage for the exchange of goods and services [6]. Adversely, the problems associated with on-street commercial activities in the study area have been very menacing in recent times. These problems include environmental degradation, dirtiness, traffic hold up and socio spatial disorderliness among others. According to the survey, the refuse, largely organic products, are generated from the sales of food items, water sachets and other sources dumped along the street gutters and drainages. Areas like Okesa, Oke-Iyinmi, Idolofin, Ojumose and so on are always littered with waste materials which source are traceable to on-street commercial activities. Such on-street commercial activities therefore constitute major administrative and financial

strains on the government in its effort to keep the urban environment clean.

There is also a high incidence of constrained/restricted traffic movement. In most area the trading activities encroached and reduced the width of the traffic routes; which are mostly single lanes thus culmination in heavy traffic build up. Many useful man hours are lost on the road while a sizeable quantity of fuel burnt in the process also contribute to air pollution from automobiles. In some places, traffic accidents occur while traders tried to turn across the roads sometimes resulting in their death. Every little space is filled up with one activity or the other in all the trading lanes and often gives rise to unhealthy rivalry between traders for space, menace of pick pockets, conflicts between traders and government official's etc. these have often resulted in serious social upheavals including mob action and rioting.

Socially is a serious form of child abuse because underage children are been exploited and exposed and exposed to serious risks. Young girls are more often victims of sexual harassment that may lead them to social delinquency in later life. In fact, nearly every residential building along the routes of the traditional core area of Ado-Ekiti has been converted to shops, offices, car display stands and retail outlets. Obstruction of pedestrian walkways by billboards and signpost and indiscriminate erection of same including on street parking of vehicles thereby narrowing down the road carriage way and resulting in traffic build up, unclear refuse dumps on the roads. Most of the aesthetically designed roundabouts have been converted to refuse dump areas.

The level of application of physical planning principles and practice to eliminate the effect of trading activities trading activities has been very low. The requirement for approvals of development proposals have been largely ignored by the local government and other government agencies and the development control department. It must however be mentioned that where attempts were made by the planning authority to apply physical planning principles, it has been met with serious brutality.

Trading activities have continued to thrive despite the attempt to control them and there is a continued search for an alternative and more humane solution to the problems associated with it. The various attempts so far have been uncoordinated, hence the ineffectiveness of the

various Edicts and their implementation. Indeed, there is no responsibility definition among various levels of government for such control. There are many negative implications that can result as a result of unpleasant environment. These problems manifest themselves in the following manner: congestion of the existing housing areas is in excess of what can realistically support safe and healthy living; rapid rise of social vices such as juvenile delinquency, prostitution, child abuse, crime, etc. also to be noted are poorly planned and ineffectively managed intra and intercity transportation system, and broken down or over stretched infrastructural service.

The juxtaposition and incompatible location of activities and use along the Road corridors often in the creation of environmental nuisances which manifest in congestion at the center, the hooting of vehicles' horns, the jeering of people, unclear drains or the outright blocking of the drains. Incidents of refuse dump here and there and disorderly parking of vehicles is a common feature in the study area. The emergent scenario is often chaotic, and unsightly. Some of the resultant effects could also be seen in the usual flooding of some of these areas and the more or less permanent presence of hoodlums and area boys whose activities provide risk to other people's lives. Others are evident in the form of reduction in residential housing stock, unconscious, unplanned expansion, creation of stressful environment as a result of noise, traffic, the reduction in pedestrian carriageway, visual assault, and loss of aesthetic value and the obstruction of light and air to inner residential building.

6. CONCLUSION

There are major deficiencies in the planning polices in Ekiti State in particular and Nigeria generally. First, the gap between surveys of existing conditions ostensibly concerned with identifying areas in need of improvement and the planned proposal for the future system is too wide and far between. These surveys are designed to show the main lines of action to be followed. A disproportionate effort is put into collection of rapidly outdated data compared to the amount of thought given to the formulation of future requirements. The relationship between these two set of actions are rarely clear.

Secondly, the commercial system of distributive traders has never been placed within an integrated frame work despite the increasing

integration of the function of warehousing, wholesaling, retailing (domestic shopping activities) and even the entire spectrum of business services. The planning profession seems to be more concerned with keeping them apart while these functions are in themselves a coordinated entity.

Thirdly, it seems physical planners are handicapped by lack of adequate information and frame work to show how explanation of past processes and current location patterns can be linked through to the provision of future controls. As stated earlier, the lack of appreciation of the informal sector activities which are integral component of the commercial system is an immediate manifestation of the deficiency in planning policies and approaches. In formulating commercial planning policies to deal with the problem of informal sector activities, much attention should be given to the future needs of the existing businesses as is given to the increasing demands of entirely new form of activities.

A greater recognition of the complex interplay of a variety of market processes is required and a closer relationship between planning design models and explanations of present spatial patterns should be found. No commercial planning policies (laws, edicts, crash programs etc) can be implemented in Nigerian cities without some radical readjustment of the existing situation. Planning powers have so far tended to work against the smaller, marginal businesses and to support the interest of the larger organization. These weaker elements of our commercial system should be supported while some opportunities for survival should be given to them in the scheme of things now and in the future.

7. RECOMMENDATIONS

By its wide spread nature, temporary and shifting characteristic, informal sector activities are very difficult to manage. A large amount of human and financial resources would be required to manage and eliminates the problems associate with it but the following are recommended:

There should be more effective traffic management systems in order to ensure free flow of traffic. A more efficient rerouting of traffic along major high ways and around market locations must be adopted. Such studies are expected to emanate from district planning

studies which in turn should follow the metro wide plan of Ado Ekiti prepared years back.

Also, markets like Oba's Market, Bisi Market, Erekesan Market should be developed to meet the global standard. Enough parking spaces should also be provided around these Markets to ease the commercial activities in the study area. Those markets should be upgraded to the ultra modern standard of about 3 stories so as to accommodate about 100 parking lots each.

Also, there should be development of a traditional market for each 50,000 population the master plan also recommended the segregation of specific market activities from peripheral and street activities, while the existing markets must be upgraded and extended to accommodate parking facilities in them, There should also be implementation of the provision of the Urban and Regional planning Law of Nigeria Decree No. 88 of 1992 with regard to the level of Planning Administration, as this will enhance the local Government to be more involved in the handing of vital problems which are people oriented, this will also ensure effectiveness of the Planning Authority at the Local level.

It is also recommended that there should be development that will aid employment of the population, this should be in form of programs relating to commerce and transportation which are self sustaining. The Weak Centre Strategy should be adopted by the State Government in order to reduce the on-street commercial activities in the study area. In this case, there will be sub-centre all over Ado-Ekiti that will be performing functions that are similar to that of the main Central Business District which is the study area.

There should also be a reinforcement of the effort of traffic officials of the Local Government Task Force, the National Civil Defense Corps with more recruitment and in order to encourage the special Marshal Cadre of the Federal Road Safety Commission whose response have been effective during traffic peak period.

In the same vein, there should be combat child abuse in trading activities by discouraging children of school age up to 18 years from such activities. A child at school will not be available for exploitation by parents, guardians, etc.

Traders should be organized into cooperative societies to be able to educate them and arrange

grants through cooperative / commercial banks in addition to provision of micro finance scheme to allow the traders to have access to funds that would attract low interest rates that could be easily paid back by the beneficiaries.

Furthermore, government should also enact law which will allow on-street trading to take place only during off peak periods as part of measures to curb street trading and provide avenue for people to carry out trading activities unhindered.

Also, in order to solve sanitary problem in the study area, refuse collection points should be located at all market centres. Apart from this, individual shop owners and households should be mandated to purchase dustbins.

The State Government in conjunction with expatriates should build small scale factories where the refuse will be recycled as this will provide consumable goods, job opportunities and incomes in return.

Lastly, Town Planning Authority in Ado-Ekiti should stop giving approval to commercial buildings like banks, shopping complex, petrol filling stations among others. Take for instance, the Habit bank along Ilawe Road that was recently built was approved despite not having adequate parking spaces. The study area should be declared an action area for rehabilitation or possible redevelopment.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Cross J. Co-optation, Competition and Resistance: State and Street Vendors in Mexico City, Latin American Perspectives, Sage Publications; 2017.
2. Gani E. The Dead City: The Decay of the Urban Organism Scope: An Online Journal of Film and Television Studies. 2016;23.
3. Nduka and Duru. Planning for Street Connectivity: Getting from here to there planning Advisory Service Report 515, American Planning Association; 2014. Available:www.planning.org
4. Ademiluyi IA, Odugbesan JA. Sustainability and impact of community water supply and sanitation programmes in Nigeria: An overview. African Journal of Agriculture Research. 2018;3(12):811–817.
5. Adimekwe SA. The impact of environmental pollution in Imo State: A Case Study of Okigwe Local Government Area. Journal of Educational and Social Research. 2013;3(5):79-85.
6. Acheampong PT. Environmental Sanitation in the Kumasi Metropolitan Area. A Master of Science Thesis Submitted to the Department of Planning. Kumasi: Kwame Nkrumah University of Science and Technology; 2010.
7. Aremu AS. Assessment of sanitation facilities in primary schools within Ilorin, Nigeria. Journal of Applied Sciences in Environmental Sanitation. 2012;7(1):29-33.
8. Bello H. Environmental Sanitation Practices in the core of Ikorodu, Lagos state. (Unpublished) Bachelor of Science Dissertation submitted to the Department of Urban and Regional Planning Obafemi Awolowo University Ile-Ife, Nigeria; 2017.
9. Daramola OP. Environmental sanitation practices in residential areas of Ibadan Metropolis. A Thesis Submitted in Partial Fulfillment of the Requirement for the Award of Doctor of Philosophy Degree in the Department of Urban and Regional Planning, Faculty of Environmental Design and Management, Obafemi Awolowo University, Ile-Ife, Nigeria; 2015.
10. Luthi Ch. Community-based environmental sanitation planning approaches for the South: the householdcentred approach. Berlin; 2012.

© 2021 Bankole et al.; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:
The peer review history for this paper can be accessed here:
<https://www.sdiarticle4.com/review-history/72859>