



# Market Architectural Patterns and the Challenges of Market Infrastructure in Port Harcourt Metropolis

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## Abstract

## Original Research Article

The study focused on market architecture and problems encountered in market design with reference to Port Harcourt Metropolis in Rivers State. Descriptive survey research design was employed for the study. Two research questions were used to guide the study. The population for the study consisted of traders and users of markets located in Port Harcourt metropolis. Four hundred (400) respondents served as the sample size for the study. They were drawn randomly through the use of stratified random sampling technique. A validated structured questionnaire having a reliability coefficient of 0.76 determined through PPMC was used to elicit information from the respondents. Mean and standard deviation of descriptive statistics was used to analyze data obtained from the respondents. The study revealed among others that markets buildings have several entrances/exits, also markets building provide ventilation and average natural lighting respectively. However, problems encountered were cost of space which is high, accessibility of market centers by customers is low and visibility of goods displayed is low which may cause increased informal/ roadside trading. The study concluded that market architecture serves functions e.g. social functions for traders/customers and allow architectural structures to build up through space design but with little regards to planning layout and cost implication of space needed for traders making it less efficient and unfriendly to poor traders. It was recommended among others that market centers should be redesigned and planners should consider visibility and accessibility when making their layout design also cheapened centers should be made available for traders.

**Keywords:** Market Architecture, Market Challenges, Accessibility, Ventilation, Trading Spaces, Port Harcourt.

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## Introduction

Markets play an important role in the social-economic and physical organization of spaces in cities. Markets are also considered basic institutions in every society because exchange transactions cannot be avoided. Narrowly defined; market places have been thought of to be spaces reserved for buying and selling

activities in every community. Such notions have been disapproved because “market places often perform a multiplicity of roles beyond sales transactions; they are important urban spaces to support social interaction, community engagement and economic exchange” (Adegboyega, 2013). Therefore, market architecture is expected to go beyond trading



rows and market buildings as multiple human activities are considered.

Marketplaces have served different purposes to people over time; apart from providing spaces for commercial exchanges, they provide space for relaxation, recreation and political interactions. Markets, therefore, serve as platforms for public social engagements which either residents or visitors can take part in. Furthermore, markets have also been described as “tourist attractions” when identifying cities (Janssens & Sezer, 2013). This means marketplaces serve multiple roles and functions for people; ergo their designs should consider aspects of social spaces that allow public participation besides sales rows.

Markets spaces are also created and operate within certain contexts such as policies regulating trade in a given community, social institutions and general market system structures. “Markets are embedded both in systems of law that regulate and enforce contracts and in cultures that provide a commonsense understanding of commercial practices” (Fligstein & Calder, 2015). This means markets are influenced by their immediate environment which guides how trading activities are conducted as well spatial arrangements.

Before the development of markets, rural agricultural producers used to participate in periodic trade meetings known as “rural fairs”. This usually happened when farmers could not produce certain goods and services within their families/households thus they had no choice but to gather at a central place to exchange their commodities with those produced by other families (Casson, 2014). This provides an opportunity for cultivators to sell their crops and get what they need in return. This was how the first market came about; people selling and buying goods and services at a central place.

Rent was originally paid in kind and thus peasants had to sell their yields to at least get some money that could be used in paying the landlord. The convergence of many people selling their commodities in a central place led to the development of towns and growth of production. International trade strengthened markets

Trade by travelling merchant-adventurers such as the Phoenicians and the Arabs contributed to market development. They bartered goods between countries which led to the growth of trade.

Market architecture came about when people selling their goods and services under the morning sky realized it was prudent to have a roof over their heads. Market squares were initially open spaces which were located at the heart of every town. As time went by, there was a roof-closing over the heads of traders which led to the development of market rows and stalls. Although architecture of markets was developing over the years; they still remained open because it allowed for the free flow of movement and it was also accessible.

According to the Oxford Dictionary (2022), a market is simply defined as; “a regularly established place where people can buy and sell goods and services”. Architecture of markets does not refer to the building where trading occurs, it includes:

If marketplaces are well planned, it can help increase trading activities and improve the city’s image. An ill-planned market can cause congestion and make trading activities inefficient and uncomfortable therefore creating a negative architectural image (Cullen, 2012).

Markets normally provide room for social interactions since; they promote contact among traders and their customers. Most conversations and social relations are built at the marketplace. Bargaining skills are also enhanced at the market. Traditional markets promote social life among the people.

“When computers become the dominant form of communication, traditional markets offer something very important: direct human interaction” (Tracey-White, 2005). Markets should provide architectural spaces that promote accessibility, interaction and movement. The physical environment of markets should be flexible to enhance different human activities.

### **Aim and Objectives of the Study**

The aim of this study is to examine the architecture of markets in Port Harcourt Metropolis and how the architectural structure of

these markets contributes to the challenges experienced by traders and market users within the metropolis. The objectives of the study are to:

- i. Identify the types of market architecture in Port Harcourt Metropolis.
- ii. Identify the challenges caused by the market architecture.

**Research Questions**

The following research questions will guide the study:

- 1. What are the types of market architecture in Port Harcourt Metropolis?
- 2. What are the challenges caused by the existing market architecture in Port Harcourt Metropolis?

**Methodology**

The study adopted descriptive survey design which is quantitative research methods. According to Charles-Owaba (2019), a descriptive survey research design is one in which a group of people or items is studied by collecting and analyzing data from a selected sample considered to be representative of the entire population. This design was considered appropriate for the present study because data were collected from a sample of respondents who are knowledgeable about the architectural structures of markets and the challenges associated with them in Port Harcourt Metropolis, with the intention of generalizing the findings to the broader population.

The study population was gotten from government-built markets and their end users (Traders, Customers, Head of Market Union bodies, Commercial car drivers, Private car owners, Cart Pushers, Passersby) in Port Harcourt and Obio/Akpor local government areas. These markets are peculiar with the challenges of roadside trading. Sampling is essential in this research to choose appropriate respondents to gather data. Three categories of respondents were selected which are 1. Markets 2. Market union bodies. 3.

For this study structured questionnaires were used to collect data from the respondents. The questionnaires were distributed by the researcher through trained research assistance. The data collected through questionnaires and personal observation were analyzed using appropriate analytical techniques. Data obtained from the questionnaires were analyzed using the Statistical Package for Social Sciences (SPSS), where descriptive statistical methods such as bivariate statistics were applied. These involved the calculation of measures of central tendency, including frequencies and percentages, which were presented using tables and pie charts for clarity. The observations were systematically documented and presented using photographs and sketches to provide visual evidence and support the interpretation of the findings.

**RESULTS**

**Research Question 1:** What is the type of market architecture in Port Harcourt Metropolis?

Table 2: Mean and Standard deviation of multiple access, lighting and ventilation of the market buildings.

S.N		SA	A	N	D	SD	Mean	Std	Decision
1	There is multiple access to the market building	137 (32.4%)	81 (19.1%)	61 (14.4%)	79 (18.7%)	65 (15.4%)	3.35	1.47	Agree
2	The Market building is wellventilated	(22.5%)	(39.2%)	(15.8%)	(11.1%)	(7.3%)	3.62	1.16	Agree
3	The Market	103	117	65	45	65	3.13	1.26	Agree

building is well lighted (24.3%) (29.6%) (15.4%) (10.6%) (15.4%)

3.40 1.30

Source: Generated by Researcher

Table 2 below shows analysis of multiple access to the market building, natural lighting of the market building and ventilation of the market building. Concerning multiple access to the market building, 32.4% of the respondents strongly agreed, 19.1% agreed, 14.1% were neutral, 18.7% disagreed and 15.4% strongly disagreed. Resulting in a mean score of 3.35 and standard deviation of 1.47 leading to a decision of "Agreement" Concerning the natural ventilation of the market building, 22.5% of respondents strongly agree, 39.2% agreed, while 15.8% were neutral, 11.1% disagreed and 7.3% strongly disagreed. Resulting in a mean score of 3.62 and standard deviation of 1.16 leading to a

decision of "Agreement". Furthermore, concerning the natural lighting of the market building, 24.3% strongly agreed, 29.6% agreed while 15.8% were neutral, 10.6% disagreed and 15.4% strongly disagreed that the market building is well-lightened, resulting in a mean score of 3.13, and a standard deviation of 1.26. The grand mean for the three statements was 3.40 with a standard deviation of 1.30, leading to an overall decision of "Agreement" for the three statements.

**Research Question 2:** What are the challenges caused by the market architecture?

Table 3: Mean and Standard deviation of the design type of the market, in terms of affordability, customer's access, and goods visibility.

S/N	Items	SA	A	N	D	SD	Mean	Std	Decision
1	The building type of the market makes the cost of spaces affordable	94 (23.9%)	36 (9.1%)	66 (16.7%)	74 (18.7%)	125 (31.6%)	2.95	1.57	Disagree
2	The building type of the market gives you easy access to customers	82 (19.4%)	55 (13.0%)	81 (19.1%)	80 (18.9%)	125 (29.6%)	2.74	1.49	Disagreed
3	The building type allows your goods to be easily seen by customers	50 (11.8%)	111 (26.2%)	63 (14.9%)	59 (13.9%)	140 (33.1%)	2.70	1.45	Disagreed
<b>Grand Mean</b>							<b>2.80</b>	<b>1.50</b>	<b>Disagree</b>

The respondents expressed disagreement (mean=2.95, STD = 1.57) concerning the market building type encouraging the affordability of spaces in the market, with

23.9% strongly agreeing (SA) and 9.1% agreeing (A), 18.7% disagreeing and some respondents, 31.6% strongly disagreed (SD). Similarly, the respondent expressed a

disagreement (mean= 2.74, STD = 1.49) concerning the building type encouraging easy access to customers with 19.4% strongly agreeing (SA) and 13.0% (A), a significant 18.9% disagreeing (D) and 29.6% strongly disagreeing (SD).

Furthermore, respondents disagreed (mean=2.70, STD = 1.45) that the building type allows goods to be seen easily by customers, with 11.8% strongly agreeing (SA) and 26.2% agreeing (A), 13.9% disagreeing (D), and a substantial 33.1% strongly disagreed (SD) The grand mean of 2.80 indicates a disagreement with the effectiveness of the building type aiding in clear vision of goods by customers, which is a major aspect in traders customers transaction in a market, thereby potentially fostering roadside trading.

### Discussion of Findings

Research Question 1 identified what type of market architecture exists in Port Harcourt Metropolis. This question specifically looked at architectural factors including market having multiple entries, natural ventilation system and natural lightings. The results in table 1 show that respondents agreed that markets building have multiple entries with a mean score of 3.35. Markets buildings have multiple entrances because of the peculiarity of markets circulation. Markets require multiple entries to allow free flow of movement and avoid congestion. Markets are usually areas with more activities, the designs should therefore take into consideration the large volume of people that move in and out of markets. Thus, respondents answer agrees with Lucas (2020) who said markets buildings architecture should allow accessibility and good circulation pattern.

Respondents agreed with the statement that markets have natural ventilation with a mean score of 3.62. Markets should be properly ventilated to allow easy flow of air because activities in markets especially are high during peak time and the weather condition in most parts of the tropics where markets are usually built is usually hot. Markets area users experience discomfort when trading indoors therefore providing good ventilation improves

air quality and heat level. This agrees with Cullen (2012) who stated that natural qualities of spaces affect users feel in that space.

Respondents agreed to the statement that markets buildings are well lighted, it had a mean score of 3.13. Lighting are very important when considering space for trading, good lighting increases the visibility of goods traders will be selling, improve security within the area and attract more customers. Natural lighting should be considered when building markets so as to cut cost on lighting and improve the outlook of trading atmosphere. Agree with Tracey-White (1999) who said markets should provide areas that promotes environmental friendly architecture.

Research Question 2 asked what challenges markets architecture causes in Port Harcourt Metropolis?. This question looked specifically at affordability of trading space, access to customers and display of goods. From table 3 results show that respondents disagreed that markets architecture promote affordability of trading space, access to customers and display of goods. With a grand mean score of 2.80.

Respondents' opinion showed that markets trading space are not affordable majority of the respondents disagreed (50.3%) and strongly disagreed (16.8%) that markets space are affordable while (23.9%) strongly agree and (9.1%) agree. Markets size, spacing and allocation determines how expensive a space could be to traders. Markets should be planned architecturally to meet the needs of everyone. Markets having a high cost might discourage certain classes of traders from trading indoors thus promoting more of roadside traders. This result is similar to Lucas (2020) who mentioned that cost of space is affected by how markets were planned and space allocations were done, poor planning could lead to area that are too small for certain traders.

Respondents disagreed markets building provide access to customers. It had the mean score of 2.74. Markets allow easy access to move from one place to another may be the way stalls were arranged, spacing or poor entry allows buyers not to have access to the traders. Access encourage buyers to move from one stall to another. Agree with Helen (2003) who said

Markets architecture should allow free flow of movement by traders and customers.

Respondents also disagree that markets allow goods to be seen by customers. It had the mean score of 2.70. Display of goods is very important so as to catch the eyes of customers passing by. If markets are architecturally planned in a way that stall is narrow this may affect how goods are displayed. Visibility of goods promote customers movement and increase sales if stalls are designed well. Support Tracey-White (1999) who said markets should be planned architecturally, poorly designs of markets could lead to formations of barriers between traders and customers.

### Conclusion

The study reveals that markets have architectural features such as multiple entries, natural ventilation systems, and natural lightings but the buildings' architecture causes challenge such markets have high cost of space, no access to customers and poor visibility of goods by customers. Markets architecture have affected trading activities this might have led to the increasing number of traders using the roadside as their place of work. Markets have an architectural role not only helping traders carry out their economic activities but also allowing social activities to take place. Market authorities should look into way of improving the layout and architecture of the markets by reducing the cost of space and allowing easy access and visibility.

### Recommendations

From the study above the following are recommended:

1. Market authorities should look into ways of re-designing the market by making sure traders can easily access their customers.
2. Increasing the affordability of the trading space so as to reduce the number of traders using the frontage as their place of work.

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