



IMPACT OF ARCHITECTURAL DESIGN ON CONSUMER BEHAVIOUR: A CASE STUDY OF SPAR PORT-HARCOURT SHOPPING MALL.

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Keywords

Shopping, Mall, consumer behavior, Architectural design, Impact of consumer behavior.

ABSTRACT

Shopping centres keep evolving with time as technology responds to human needs, expectations and environmental change. In the ancient world i.e. Greece, Rome, Babylon etc. the central shopping areas consisted mainly of open/common space where merchants could display and sell their products. Some centres also featured several restaurants and bars. Today, shopping malls have achieved and surpassed those early expectations. In today's consumer culture, the Mall can be seen as the centre of all human earthly experience. The concept of consumer behaviour/culture in recent times have been linked to research from different disciplines such as Law, Economics, Geography, Architecture etc. This study was aimed at determining the impact of Architectural discipline and consumer behaviour in shopping designs using Spar Port-Harcourt shopping mall as a case study. Design criteria that influence consumer preferences and quantity have been investigated by determining the extent to which the location of various stores and facilities, as well as the physical surroundings and location, have affected today's consumer Behaviour.

1.0 Introduction

As long as Life still exist, human consumption habit is inevitable. Apart from the basic needs of man i.e. water, food, shelter, clothing, the transition from individuality, to collective industrialization, technological advances have consistently provided new needs and offered various opportunities and products to be consumed and services are offered. The growing needs of entertainment, health and wellness, fashion, tourism etc. have influenced the designs and various concepts/themes of shopping mall designs worldwide. For this research, Spar Port-Harcourt shopping Mall will be used as a case study to determine the impact of Architectural design on consumer behaviour in shopping mall designs.

'In a today consumer culture, the Mall can be seen as the centre of all human earthly experience.' (Eliot, 2020)

2.0 Literature Review

In the late 18th century, public markets were mostly covered under one roof with collections of retailers popularly known as 'Bazaar's, Agora's and Souqs'. The widespread of Automobile in the 1920s mostly in the united states, led to the first shopping centre of few of dozens of shops, that included parking of cars; starting in 1946, the popularity of various sellers coming together in one roof enclosed at strategic places, offering various goods grew spontaneously. Open-air centres anchored by departmental stores were built to accommodate the growing needs. In 1956, Victor David Gruen, an Australian Architect designed the first enclosed shopping Mall at Southdale (Southdale centre) near Minneapolis.



Figure 2.1 showing shopping street of Pompeii, 70 A.D (European Union property school, 2014)

The study of Consumer behaviour is related to many disciplines such as economics, geography, architecture, law, sociology etc. from a different point of view and investigated their effects on their fields. With the support of technology, modern consumption spaces have emerged to enable consumers to reach the products and services more easily and faster. According to Winston Churchill (1943), *"We shape our buildings, thereafter they shape us"*. This tells us how much of the role Architect's need to play in the design and development of a modern shopping Mall. There are several factors to consider while trying to construct a shopping mall, which includes but not limited to finishes and choice of materials, outdoor and indoor spatial organization, Size and capacity, goods and services to be offered.

2.1 Factors to consider in Shopping Mall Architecture

Shopping malls or centres are large space that can accommodate large national or local markets, multi-departmental stores, restaurants, café, entertainment, Automobile etc. In general, consumer behaviour could be defined as a pattern of responds/actions of customers towards a product/service or brand as regards to time, events, seasons, policies, price and value. Architecture is, therefore, more concerned with the implementation of design principles in the design of shopping centres and units in such a way that influences customers to buy more physical products and services while saving them time in a more convenient way which requires the knowledge of consumer behaviour and architectural knowledge. The following are factors to consider in the design of a shopping mall:

- a. **Location**
- b. **Size** (capacity) i.e. super-regional, regional, neighbourhood/community, etc.
- c. **Theme/Sectors** e.g. entertainment & shopping, shopping, Leisure & entertainment, shopping, leisure & Accommodation. Etc.
- d. **Interior Design**-material, elements, ventilation, zoning, lighting.
- e. **Exterior Design**-building form/concept, material usage, elements/features
- f. **Integrated landscaping**-green areas, walkways, parking, entrance/exit route, delivery/logistics, and drainage. Etc.

There should be a visual semi-discontinuity from the outside; the outside of the building should not completely give information about what is on the inside. The inside spaces should be well connected to allow seamless movement within the internal shopping spaces.

Besides Architectural design principles and practice, other major steps need to be considered for the successful development of a shopping mall. These steps are a combination of economic, financial, tenant structure, and choice, traffic planning, advertising, public relations and logistics all constitute the sub-details of the mixture.

2.2 Spar Port-Harcourt Shopping Mall



Figure 2.2 3D Ariel view of Spar Port-Harcourt Shopping Mall. Source: (Skyscraper city, 2013)

Spar is the largest chain of Hypermarket stores in Nigeria with a mission to deliver world-class shopping Experience for the people of Port Harcourt. The Port-Harcourt mall branch was constructed between 2013-2014 as redevelopment and expansion of the existing Supabod Store Structure. Its operational time is from 9:00 AM-9:00 PM on working days and 11:00 AM-9:00 PM on weekends. Between 12:00 noon-5:00 PM daily, is usually very busy. Spar is known to be the Largest Mall in Port Harcourt spreading over 16,000 square meters (172, 223sq.ft) of retail space with over 50 brands ~ Grocery, Fashion, Electronics, Food & Multiplex & many more. It is located along Azikiwe road, next to Government House Rivers State. Spar Shopping Mall, Port-Harcourt is a world-class centre for shopping and entertainment. It has a 3D, 2D and 9D cinema film house, restaurants, one Anchor store (Spar), etc. some of the big brand tenants are: Dollar store, Sumptuous meals, Debonair Pizza, Levis, Swatch, Lifemate, FineBrothers, MTN, Airtel, Nike, Adidas, etc.

3.0 Methodology

The main purpose of this research is to reveal the impact of architectural design approach on consumer behaviour in shopping malls using spar Port-Harcourt shopping Mall as a case study. To better achieve a credible result, a field (physical) study was conducted and relevant pictures were taken for further illustrations. A sketch of the adjacent land use map was done to analyze the impact of the choice of location and accessibility on consumer behaviour. Furthermore, the research was conducted applying a quantitative method for data collection. An online questionnaire was distributed targeted at residents in Port Harcourt who have had personal shopping experience at Spar-Port Harcourt shopping Mall before.

3.1 Sample Size

The sample size for this survey report was 82 respondents and the data gotten was analyzed using the Kwik survey online app. The respondents were grouped into males and females, architects or just a Spar customer, had personal experience shopping at Spar and age range respectively. The survey showed 100% of the respondents have had a personal experience shopping at Spar, 65% are male, and 35% female. 62% were Architects and 37% were just a Spar customer. 15% were under 25 years of age, 72% (25-35) years, 11% (36-45) years and 2% above 46 years old. Other Survey results are rightfully presented with charts/graph in section 4.0 of this paper.

3.2 Questionnaire

The questionnaire was aimed at three categories of information which are the

- Demographic data (age range, gender group, occupation),
- the personal Shopping experience,
- Accessibility and location.

The list below, show the questions used in the survey data collection in numbers:

1. Have you been to Spar shopping mall located at Azikiwe Road Port Harcourt, adjacent government house, Rivers State, and done shopping or purchased any items before?
2. What Gender are you please?
3. Which means of transportation do you use most to get to Spar shopping centre, Port-Harcourt?
4. How often do you visit Spar shopping mall Port-Harcourt?
5. On average, how long do you spend in Spar Port-Harcourt Shopping mall?
6. Please rate the level of accessibility of each of these facilities based on your personal experience shopping at Spar Port-Harcourt shopping mall.

7. Have you ever had any challenge accessing Spar due to any of these challenges? Please tick as it applies to you personally.
8. What do you shop for most of the time at the Spar shopping mall, Port-Harcourt? Select only one of the below.
9. During Peak periods when customers are much in the main shopping mall (magnet store), how long do you wait for your turn in making payments for your goods on average?
10. What attract you mostly to continue shopping at Spar, Port-Harcourt Mall? Please tick as desired.
11. How easy has it been to locate items on the shelves and shops either as a first-timer or a
12. A regular shopper at Spar Port-Harcourt Shopping Mall?
13. Please kindly indicate your age range from the options below.
14. Are you an Architect or just a Spar customer?
15. Please leave a general review of your shopping experience @Spar Port-Harcourt shopping mall.

A detailed option for each of the questions is illustrated below in this research paper; with explanations and charts. To view the complete survey summary, a link in the reference has also been provided at the reference section of this research paper which can be used for more research work on the impact of Architecture on consumer behaviour in shopping malls.

4.0 Findings and Discussions

This case study will be analyzing the location map and adjacent land use facilities to find out how it could have influenced accessibility, security and Purchasing habits. A sketch of the site plan was also taking to know the traffic and circulation pattern around the site and any other supporting facilities therein. The existing floor plan layouts were also sketched which gave us a clearer picture of store locations, amenities and overall movements around the interior spaces and how all these has influenced consumer's behaviour. Onsite pictures were taking during the peak-periods and low periods to critically analyze how effective the interior walkways, aisles and the vertical and horizontal circulation considered by the Architect could be. The results of both online survey and onsite visitation are both analyzed and discussed in *pari passu* as we further in this research paper.



Figure 4.1 showing Spar Port-Harcourt shopping mall main entrance Hall on December 25th, 2016. (Nairaland, 2016)

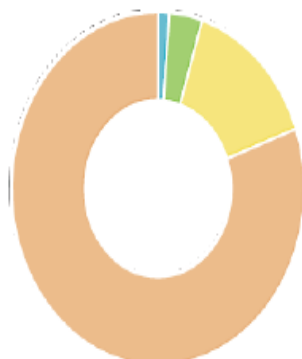
Due to the strategic location of this site which took security, accessibility into consideration as well as the adjacent facilities mainly the state secretariat which draws a crowd of rivers state indigenes every day, and Azikiwe Road which is the major access to this facility which is also the only major route to Port-Harcourt Town; this has made a great impact on consumer behaviour that attracts customers from different locations of Port Harcourt. From our survey report, 1% says they visit Spar

every day, 15% once a month, 4% once a week, and 80% says when necessary. On average, 37% spends 5-45minutes in the mall when visiting, 5% spends 4hrs-6hrs, 57% spends 1-3hrs and 1% says they spend all day. 40% shop for food and household supplies more, 22% cinema/movies, 12% restaurants/snacks, 11% electronic and hardware gadgets while only 5% shop for fashion and clothing accessories more. The charts below show the graphical representation of the survey data gotten.

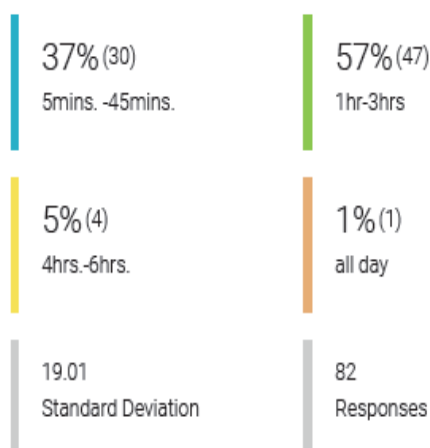


Figure 4.2 Main entrance of Spar Shopping mall from Azikiwe road. . (Authors fieldwork)

4 How often do you visit Spar shopping mall Port-Harcourt?



5 On average, how long do you spend in Spar Port-Harcourt Shopping mall?



4.1 Location Map



Figure 4.3 Map showing Spar shopping Mall, vehicular access and adjacent land use facilities. Source: (Google Maps, 2020)

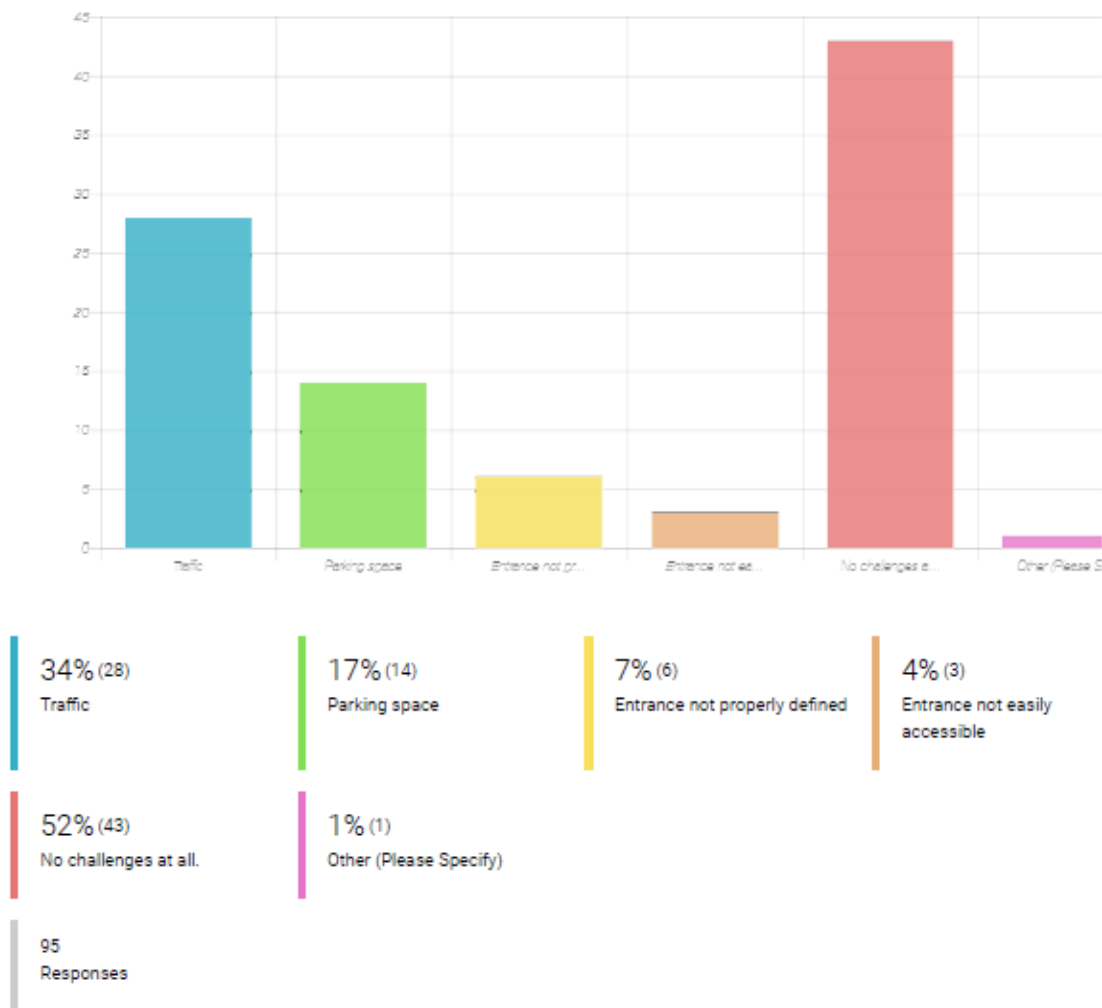
Figure 4.3 above clearly shows the location of Spar Port-Harcourt shopping Mall. The site has 360 car parking spaces with a standby powerhouse, Car wash and warehouse. The Rivers State secretariat and Government house are adjacent to the Mall, opposite you can find the BUA Refineries, behind is the Christ Apostolic Inter-denominational church, and beside is Unity Bank. The major access to this site is along Azikiwe road, but it was realized that due to high patronage of this Mall, at Peak periods the traffic gets so high so another entrance and exist was created at the back along Forces Avenue to ease the traffic in front during peak periods.

From our survey report, 20% make use of personal transport to get the Spar, 73% use Public Taxi while 5% use a metro bus. 34% claims to have challenges due to traffic to access spar, 52% says no challenges at all, 17% had challenges of parking space, 4% says the entrance is not easily accessible, 7% responds the entrance not properly defined. The charts below show the graphical representation of the survey data gotten.



Figure 4.4 showing the Ancho store main entrance and baggage counter. . (Authors fieldwork)

7 Have you ever had any challenge accessing Spar due to any of these challenges? please tick as it applies to you personally.



Traffic during the festive period

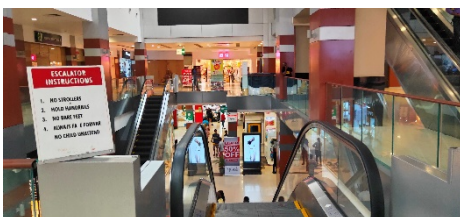
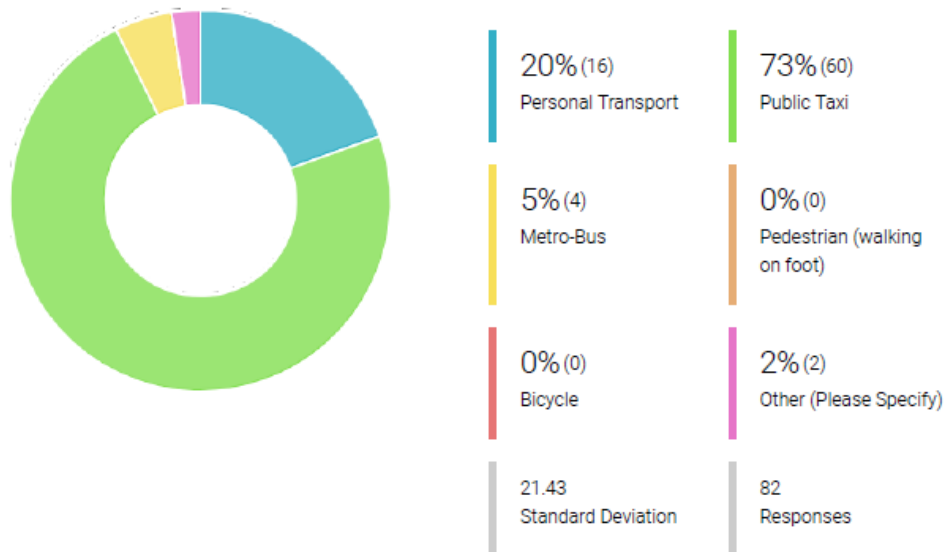


Figure 4.5 Interior space showing shops and escalators. . (Authors fieldwork)

3 Which means of transportation do you use mostly to get to Spar shopping center, Port-Harcourt?



We also found out that 68% of the visitors/customers are attracted mostly to continue shopping at Spar because of the variety and availability of quality products and services. 27% were attracted most due to Architectural design and form, 11% due to location and accessibility, 13%-brand name, 7%-cheaper items and 1%-good security as shown in the chart below (question 10)



Figure 4.6 Second floor showing restaurants and skylight from the rooftop for maximum daylighting. (Authors fieldwork)

10 What attract you mostly to continue shopping @Spar, Port-Harcourt Mall? please tick as desired.

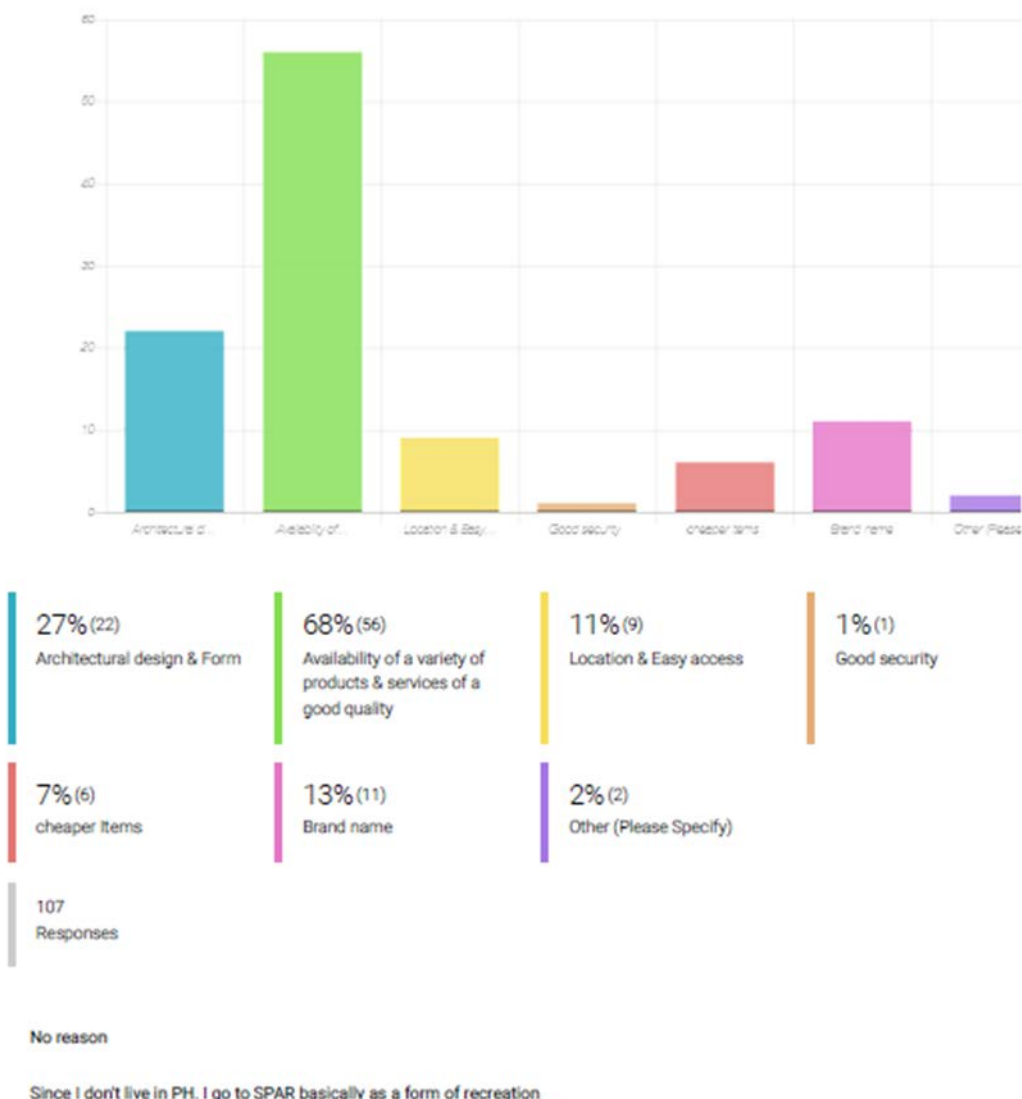
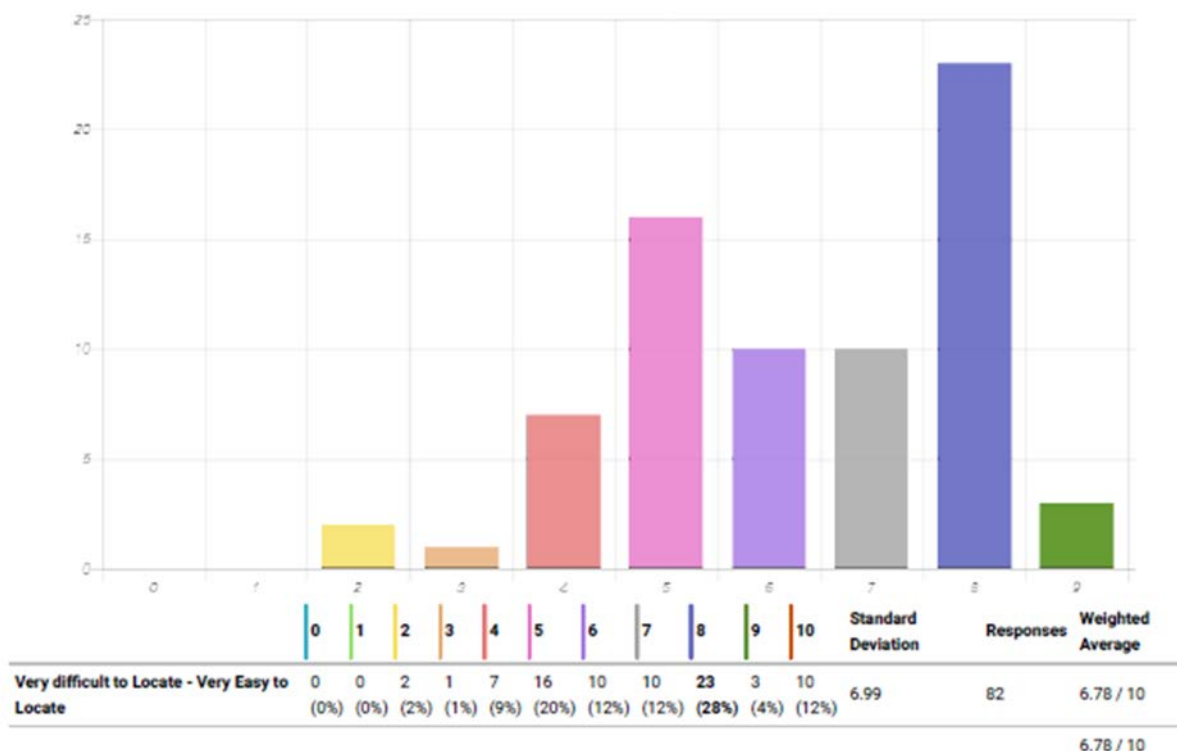


Figure 4.7 showing exit only from the Anchor store into the main entrance lobby. . (Authors fieldwork)

The architect ensured that only one secured entrance is made available to the anchor store and the entrance and payment point located at the end of the store having an 'L' shape. This has positively impacted the consumers to buy even more as it gives them no choice than go through almost every item displayed in the store as a price trap for more purchases. Response

from question 8 of the survey reveals that more people go to Spar to shop for food and household items at 40% while fashion and clothing are least at 5%.

11 How easy has it been to locate items on the shelves and shops either as a first timer or a regular shopper @ Spar Port-Harcourt Shopping Mall?



On a scale of 1-10, 2% at scale 2 responded to have found it difficult to locate items on the shelves, 12% at scale 10 responds to have found it easy to locate items on the shelves and also 28% at scale 8 found it easy to locate physical items on the shelves as shown the chart above (question 11)



Figure 4.8 showing interior space shelves and space in between for customer's seamless movement. Aisles space of 2700mm (9ft) wide, and headroom of 3,300mm (11ft) high.

- 9 During Peak periods when customers are much in the main shopping mall (magnet store), how long do you wait for your turn in making payments for your goods on average?

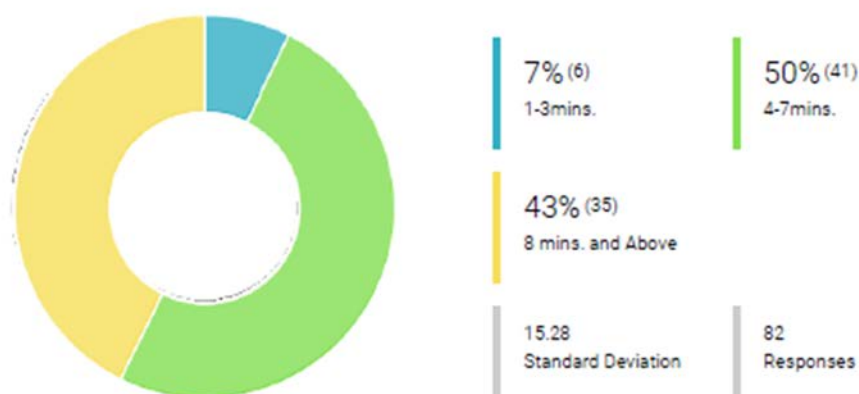
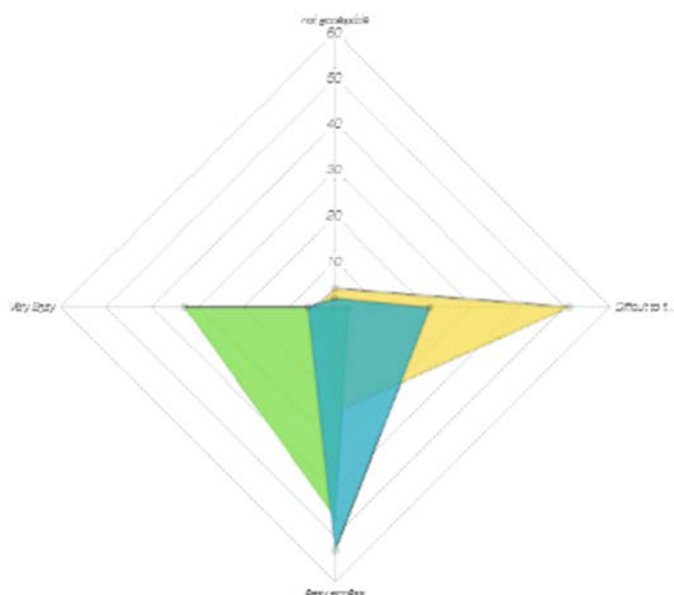


Figure 4.9 interior space showing payment points inside the anchor stores. . (Authors fieldwork)

The Anchor store is approximately 6,850 square meters and has a total of 19 payment points at the exit point. In question 9 of the survey, 50% revealed that they spend an average of 4-7 minutes to successfully pay for goods purchased during peak periods. 43% says 8 minute and above, and 7% says they spend an average of 1-3 minutes. Comparing the number of pay points and the total square meters, we can summarize that the average waiting time is good enough and not too long to discourage a customer from abandoning goods purchased.

6 Please rate the level of accessibility of each of these facilities based on your personal experience shopping @Spar Port-Harcourt shopping mall.



	not accessible	Difficult to find	easy access	Very Easy	Standard Deviation	Responses	Weighted Average
Public Toilets	2 (2%)	21 (26%)	53 (65%)	6 (7%)	20.06	82	2.77 / 4
Staircase/lifts/escalators	0 (0%)	3 (4%)	46 (56%)	33 (40%)	19.58	82	3.37 / 4
emergency escape routes	4 (5%)	51 (62%)	23 (28%)	4 (5%)	19.24	82	2.33 / 4
							2.82 / 4

53% of the respondents found it easy to locate the public toilets and only 2% said not accessible and 21% found it difficult. On staircase/lifts/escalators (vertical circulation), 46% find it easy to locate while only 3% found it difficult to find. 51% responded found it very difficult to find the emergency escape routes, only 4% said very accessible as indicated in the graph above (question 6). The figure 4.9 below shows the main entrance to the anchor store and baggage security point which ensures additional security to both customers and items in the anchor store aside from the various checking points inside and CCTV camera's strategically placed.

5.0 Conclusion and Recommendations

From the analysis of the entire results gotten and site visitation and observation, it clearly shows the impact of good architecture on consumer behaviour. *'The shopping mall is a complete business area mainly for maximizing profit and sales, therefore, it is expected that a good architectural design should rather influence the visiting customers to either stay longer depending on what services they seek and make more purchase.'* The Spar shopping mall has proven that to be possible. Figure 4.0 above shows an uncontrollable crowd inside during one of the peak period (December 25th 2016) and from our observation, it wasn't an architectural fault cos the size of the aisle at the main entrance hall is 14,300mm (28ft) wide, which is proportional to the entire square area of the building. We found out that lack of good competitions and availability of a variety of quality products and services, as well as security and accessibility with good management, was the reason behind the uncontrollable crowd during peak period as shown in the chart of question 10 above. (Usually festive periods).

In question seven, 52% said they have not encountered any challenges accessing spar shopping mall which has positively impacted the consumer's behaviour as shown in the charts of question 7, 8 and 11 above. All the interior spaces and shops were easily accessible but there was a challenge of vertical circulation not sufficient enough to move passengers quickly between the floors at peak periods. Also from the respondent in question 6 as shown in the chart above, indicates that 51% find it difficult to locate the emergency escape route! Which is risky to human life in terms of safety but doesn't necessarily have a direct impact on consumer behaviour.

We also found out that the shopping mall didn't have a defined drop-off space. When it is raining, customers who have purchased goods can't move out of the entrance until the rain stops thereby increasing traffic on the main entrance which leaves a negative impact on the consumer shopping experience. This can be seen from the 3D Ariel view in figure 2.2 of this research paper.

The management must also ensure that all pay points are working always to reduce the average waiting time of payment from customers, especially during peak periods. It is therefore expected that Architects should pay more attention to location, size, theme/sector, interior design exterior design/form, and integrated landscaping while planning and designing a shopping mall of whatever capacity as well explained in 2.1 of this research paper.

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