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Impact of Retail Formats on Consumer Buyer Behavior- A Study of Fast Moving Consumer Goods Market in South Africa

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

Inspite of the fact that retailers around the globe are embracing different retail formats to invoke positive consumer responses, little evidence exists of empirical research, that explores the success of a particular retail format in the South African Fast Moving Consumer Goods market. Retail formats are required to be aligned with the changing customer taste and preferences, and the trends in the industry in order to be effective.

This research paper explores the impact of retail formats in the Fast Moving Consumer Goods market by surveying a randomly selected sample of 96 respondents of consumers in the Sandton area of Johannesburg, South Africa. It became evident through the survey that the respondents are aware of the different retail formats, which increase their potential as customers of Fast Moving Consumer Goods (FMCGs). It is found through empirical research that Hypermarkets followed by Convenience Stores and Super Markets are the most preferred retail stores by the customers for the purchase of FMCGs whereas Independent Retail Stores have an insignificant impact on the customers.

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1. INTRODUCTION

"South Africa is a growing economy and has the largest GDP in Africa, the most established retail market (accounting for 14.34 percent of GDP in 2012), and the most consumer spending in Africa. Modern retail accounts for more than 60 percent of sales" Kearney [1]. This South African market is in search of an effective retail format that attracts customers and invokes a positive consumer behavior. Sinha and Banerjee [2] opine that a variety of formats are being rolled out with no clear verdict as to what may drive the choice of the stores in the longer run. Sinha and Banerjee [2] further state that the newly established stores are able to attract shoppers into stores due to their ambience, but they are finding conversions into purchases to be lower than expected.

Modern retail stores of all formats require substantial investments, hence a management debate is required to decide the most effective retail format in the different consumer segments. Wakefield and Baker [3] suggest that competition between Malls and newer forms of shopping centers has led the mall developers and management to consider alternative methods to building excitement with customers. However every country is unique with its unique set of consumers and consumer behavior. Kim and Jin [4] are of the view that the difference in retail marketing strategies between multinational versus Korean discount stores illustrates the importance of understanding local customers and business customs while operating in global markets. Little literature is available to decide the most effective retail format for FMCGs market in South Africa and hence a need is identified for conducting a research study.

This research paper evaluates the impact of different retail formats on the consumer behavior and establishes out the most effective retail formats in the FMCGs market in South Africa.

2. LITERATURE REVIEW

Several researchers have discussed the importance of appropriate retail formats that retailers may embrace for various categories of products. Mehta and Wickramasuriya [5] suggest that small provision shops are indispensable for an economy as well as consumers and it is significant to have some of these as modern upgraded stores. In the competitive era of twenty first century, retailers around the globe have tested different retail formats and the researchers have also tried to explore the consumer behavior towards such retail stores. Sinha, Banerjee and Uniyal [6] maintain that a store is chosen based on the self confidence that the customer has regarding the store about the nature and quality of product and services that the customers are going to receive. But as Sinha [7] suggests the retailers need to take up the task of demonstrating the value added by a store, since the format of the store could be the prime driver shaping orientations of the consumers toward the distinctive characteristics of different stores. Consumer attracted to the store needs to be retained and as suggested by Kaul [8], consumer shopping behavior is seen from a holistic perspective of entire shopping experience and the retailer focus is not on the store itself but on what does the store means to the shoppers. Thus different shoppers, with their dynamic behavior, may perceive the same store differently.

The demographics of the consumers also have a role to play in influencing the consumers' behavior and as suggested by Prasad and Aryasari [9], shoppers' age, gender, occupation, education, monthly household income and family sizes have important association with the retail format choice. Other researchers argue that there are other factors that influence consumers in selecting the retail formats. Carpenter and Brosdahl [10] found that unique combinations of store attributes like price competitiveness, location, convenience to home, knowledgeable sales persons, well known brand, store atmosphere and shopping orientations like shopping confidence, brand consciousness, price consciousness can predict the format choices of male shoppers. Still there are other researchers who feel that the need of new formats of retail is because of the ever changing customer taste and preferences. "Customer taste and preferences are changing leading to radical transformation in lifestyles and spending patterns, which in turn are giving rise to new business opportunities. There is a change being observed in the shopping pattern of customers." Jhamb and Kiran [11]. Similarly Platt [12] observes that the consumers' desire to shop anytime and anywhere is forcing retailers to adopt new store formats for the future and may

include drive-through pick-up locations, product showrooms, immersive experiential centers, brand stores, community service stores and specialty stores.

3. RESEARCH DESIGN AND METHODOLOGY

As the first step, retail store formats offering Fast Moving Consumer Goods (FMCGs) in the South African market were identified through the desk research. The consumer behavior which the marketers and retailers are primarily concerned with were identified from literature review and as suggested by Shi, Cheung and Prendergast [13]) includes stock piling (SP), purchase acceleration (PA), brand switching (BS), spending more(SM) and product trial (PT). A sixth element of store visit (SV) was included in the research. The next step was to conduct a primary research, which involved a structured, and specifically designed questionnaire, which was self-administered in the month of May 2015 to 110 management students of 25-55 years age group. The copies of the questionnaire were administered at two Under Graduate and Post Graduate management classes and in the college cafeteria. Respondents were randomly selected based on the convenience of the researcher. 14 copies of the questionnaire were omitted from the analysis since they were not properly/completely filled. The questionnaire consisted of 13 questions which were divided in three sections-A, B & C. The first section (Section-A) consists of 5 questions, which sought to obtain the respondents' demographic information. The second section (Section-B) consists of 2 qualifying questions to ensure that the respondents are representative of the target population, who are aware of the different retail store formats. In cases where the response was negative, the interview was terminated and the questionnaire was discarded. The third section (Section-C) consisted of 6 questions on a 5-point Likert Scale ranging from 1 'Never' to 5 'Always', which aided the researcher gain insight into the consumers' behavior towards different retail store formats. The questions were asked about the most likely consumer response towards a retail store format.

The aim of the survey was to understand the impact of retail formats on the consumers' behavior in the FMCGs segment consumers'. A particular consumer behavioral response may be evoked by more than one type of a retail format. For example, brand switching may be induced by a convenience store, a discount store or a hypermarket. Similarly, a particular retail format may induce more than one type of consumer behavioral response. For example, a discount store may induce stock piling, purchase acceleration and brand switching also. Thus the hypothesis was designed to understand the relation between the two.

After collecting the data, the data were prepared for further analysis. Chi Square test and Z- Test Analyses were performed to study the impact of retail formats on the consumer behavior and to identify the most effective retail store format in the FMCGs segment from among the retail store formats considered. These retail store formats are capable of bringing the consumer responses such as store visit, stock piling, purchase acceleration, brand switching, spending more and product trial. The impact of independent variables (different retail store formats) on dependent variable (consumer response in terms of store visit, stock piling, purchase acceleration, brand switching, spending more and product trial)) were observed using Excel. The association between dependent and independent variables was studied using Chi Square and Z-Test analysis. After analyzing the impact of individual retail formats on the consumer buyer behavior, an in-depth analysis was also conducted using Z-Test to study the overall impact of retail formats on the consumer buyer behavior. The z- score was calculated on the rankings basis.

On the basis of the above, the following hypotheses were developed and tested-

- **H_0:** In Fast Moving Consumer Goods segment the type of retail store format has no significant impact on the consumer buyer behavior.
- **H_1:** In Fast Moving Consumer Goods segment the type of retail store format has a significant impact on the consumer buyer behavior.

Table 1. Retail store formats considered In the FMCGs segment

S. no.	Sector	Retail store formats considered
1.	Fast moving Consumer Goods	Convenience Store, Super Market, Super Store, Hyper Market, Discount Stores, Flea Market, Petrol Pump Retailing, Stand Alone Stores and Independent Retail Outlets.

The hypotheses were tested using chi-square and Z-Test analysis and before applying the tests the internal consistency of the data was verified using Cronbach alpha.

4. EMPIRICAL FINDINGS AND DISCUSSION

According to Nunnaly [14] Cronbach's α (alpha) is an important psychometric instrument to measure the reliability of the data. The reliability coefficient indicates that the type of retail formats used for analyzing the impact on consumer behavior is reliable. So, various statistical tools can be applied and tested.

Table 2. Reliability test conducted

S. no.	Types of stores	Cronbach α
1	Convenience stores	0.67
2	Super markets	0.94
3	Super stores	0.92
4	Hypermarkets	0.92
5	Discount stores	0.81
6	Flea market	0.78
7	Petrol pump retail stores	0.51
8	Stand alone stores	0.96
9	Independent stores	0.95

An alpha value of 0.60 and 0.70 or above is considered to be the criterion for demonstrating internal consistency of new scales and established scales respectively. So, various statistical tools can be applied and tested. The cronbach alpha calculated for the scales is high except Petrol Pump Retail Stores. This indicates that the reliability of the scales is reasonably high thus, depicting high level of internal consistency among the measurement items.

The Goodness of Fit chi-square tests whether the proportions of responses within each question are significantly different from a uniform distribution. The significance level where $p<0.05$ is used for interpretation.

Chi Square Test compares the observed data to the expected data under the assumption of a uniform distribution and calculates the chi - square value and its associated *p* value. It is evident that the majority of the respondents agreed /strongly agreed that the type of retail format used by the retailers has a significant impact on the purchasing behavior of the consumers. This result is statistically significant since $p<0.05$ except in Stand-alone stores and petrol pump retail stores where the values are insignificant.

The Chi square value (122.6) signifies that the Hypermarkets followed by the Convenience Stores and the Supermarkets are the most preferred retail store formats of the consumers for the purchase of FMCGs. On the other hand the *p*-value >0.05 (0.361) at Independent Retail Outlets reflects that their influence is insignificant and not preferred by the consumers for the purchase of FMCGs.

Table 3. Goodness of fit chi square test

Factors	Convenience stores		Super markets		Hyper markets		Super stores	
	χ^2	*p*-value	χ^2	*p*-value	χ^2	*p*-value	χ^2	*p*-value
Visit retail store for purchase	31,4	.0001	37,9	.0001	122,6	.0001	24,5	.0001
Visit retail store for trying a new product	21,31	.0001	28,5	.0001	41,3	.0001	34,7	.0001
Retail store induces expenditure	19,2	.0007	36,5	.0001	38,2	.0001	34,2	.0001
Retail store induces brand shifting	22,7	.0001	28,7	.0001	40,1	.0001	46,7	.0001
Retail store accelerates purchase	14,1	.0069	21,7	.0001	39,1	.0001	45,7	.0001
Retail store induces stock piling	16,9	.002	20,4	.0004	34,6	.0001	43,7	.0001

Table 4. Goodness of fit chi square test

Factors	Discount stores		Flea markets		Petrol pump retailing		Stand alone stores		Independent retail outlets	
	χ^2	*p*-value	χ^2	*p*-value	χ^2	*p*-value	χ^2	*p*-value	χ^2	*p*-value
Visit Retail store for purchase	12,1	.0166	29,3	0001	77,1	0001	11	.0265	4,34	.361
Visit retail store for trying a new product	9,17	.0569	39,8	.0001	26,5	.0001	14,0	.0072	28,7	.0001
Retail store induces expenditure	26,1	.0001	62,0	.0001	17,2	.0017	11,4	.0001	5,55	.2353
Retail store induces brand shifting	34,9	.0001	22,7	.0001	12,3	.0152	16,2	.0027	11,8	.0189
Retail store accelerates purchases	28,5	.0001	22,7	.0001	3,89	.421	16,6	.0001	1,29	.863
Retail store induces stock piling	13,0	.0112	10,2	.0001	5,82	.213	29,6	.0001	15,8	.0001

It is also evident from the study that consumers prefer the Hypermarkets (χ^2= 41.3) for trying a new product of daily use. However the impact of Discount Stores (*p*-value 0.0569) is least significant on the preference of consumers.

The Hypermarket (χ^2= 38.2), the Supermarket (χ^2= 34.2), and the Super Stores (χ^2= 34.2), have the most significant impact in tempting the consumers for more expenditure. Conversely, the Independent Retail Stores have an insignificant impact (*p*-value 0.2353) on the consumers to spend more on FMCGs.

The study confirms that the Super Stores (χ^2= 46.7), and the Hypermarkets (χ^2= 40.1), have the most significant impact on the customers that induces them to change their brand of FMCGs. The study also suggests that the Independent Stores (*p*-value 0.0189) and Petrol Pump Retail Stores (*p*-value 0.0152) have lower impact than the other types of retail stores on the Consumer's brand shifting decision of the FMCGs.

It is revealed from the study that the Hypermarkets (χ^2= 45.7), the Super Stores (χ^2= 39.1), and the Discount Stores (χ^2= 28.5), have a significant influence on the customers, where as the Petrol Pump Retail Stores (*p*-value 0.421) and Independent Retail Stores (*p*-value 0.863) have an insignificant impact on the consumers to accelerate their purchase of the FMCGs.

It is evident from the data that the Petrol Pump Retail Stores (*p*-value 0.213) have no significant impact on the consumers to pile a stock of FMCGs.

4.1 Z Test

To analyze the data further, and to conclude the findings, Z-test is used as a statistical tool in the research. As suggested by Sage Publication [15] the level of significance used is 5%, which is a commonly used level of significance by the researchers.

Z Test was conducted to measure the significant impact of each of the store on the purchasing behaviour of consumers in South Africa.

Table 5 reflects that the Convenience Stores, Super Markets, Super Stores, Hypermarkets, Flea Markets and Stand Alone Stores have significant impact on the consumers' purchasing behavior of FMCGs.

Table 5. Z-test scores for individual retail stores

S. no.	Types of stores	Z test	*p*-value
1	Convenience stores	3.82	.0001
2	Super markets	4.27	.0001
3	Super stores	7	.0001
4	Hypermarkets	-5.55	.0001
5	Discount stores	1.27	.204
6	Flea market	7.45	.0001
7	Petrol pump retail stores	0.27	.787
8	Stand alone stores	4.91	.0001
9	Independent stores	1.82	.0687

It also emphasizes that the Discount Stores, the Petrol Pump Retail Stores and the Independent

Table 6. Z-test scores

X	f´	F	d = (X−x̄)	d²	f*d²	f*X
1	115,67	116	-2	4	464	116
2	124,44	124	-1	1	124	248
3	148,56	149	0	0	0	447
4	127,56	127	1	1	127	508
5	59,78	60	2	4	240	300
Total		576	0	∑d²=10	955	1619

*∑f*d²=955 ∑F*X=1619*
$\sigma_x = \sqrt{\sum d^2 / (n-1)}$ Where $d^2 = (X-X)^2$
$\sigma x = 0,02$
$\mu = \sum f*X / n = 2,81$
$Z = (X - \mu) / \sigma_x = 9,50$

Stores do not have significant influence on the consumers' purchasing behavior of FMCGs.

However, the researcher did an in-depth analysis in Table 6 above to study the overall impact of the retail stores of South Africa on the consumers' buying behavior and found that the retail store formats have a significant impact on the consumer behavior as suggested by the acceptance of the alternative hypothesis. Although Discount Stores, the Petrol Pump Retail Stores and the Independent Stores independently do not have a significant impact on the consumer behavior.

From the calculations above, the findings of the Z-test confirms that the null hypothesis is rejected due to the value of Z lying outside the acceptance region as reflected in Fig. 1, Z = 9.5 which is > 1.96. Hence the alternate hypothesis is accepted.

5. DISCUSSION OF THE FINDINGS OF THE STUDY

It is evident from the statistical test conducted that different retail formats invoke different variables of consumer behavior such as store visit, stock piling, purchase acceleration, brand switching, spending more and new product trial. Thus consumers may see the store as an ideal store for trying a new product or for brand switching or for other variables of the consumer behavior.

The above finding is consistent with the findings of Kaul [8], who suggests that consumer-shopping behavior is seen from a holistic perspective of entire shopping experience and the retailer focus is not on the store itself but on what does the store means to the shoppers.

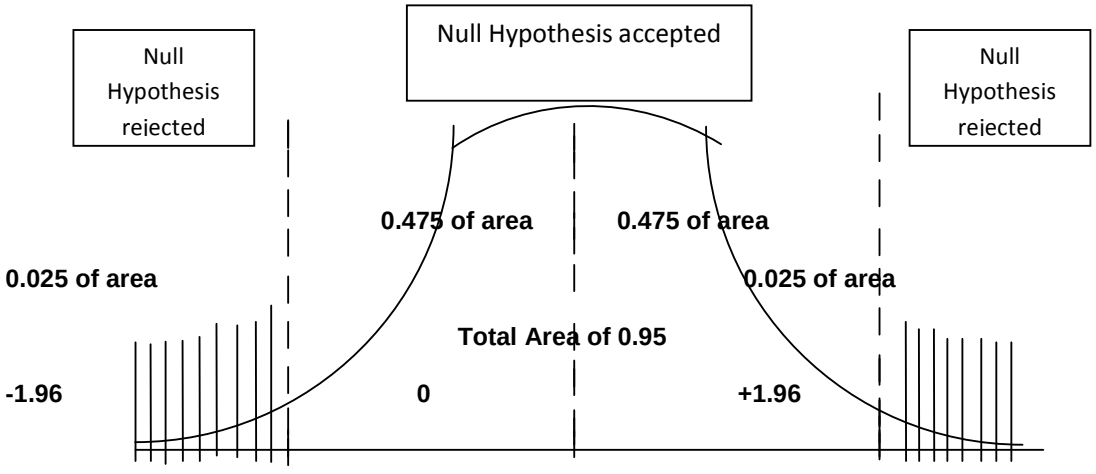

Fig. 1. Two tailed Z-test (α =0.05)

Rejection Region for Two-Tailed Z Test (H_1: $\mu \neq \mu_0$) with α =0.05. The decision rule is: Reject H_0 if $Z \leq -1.960$ or if $Z \geq 1.960$

The study by Carpenter and Brosdahl [10] that the unique combinations of store attributes can predict the format choices is reinforced by the research findings that the consumers react differently to the different types of retail store formats.

The study gives the retailers an insight into selecting the most appropriate retail format and would also help them align their retail store format selected with the type of consumer response they would like to evoke.

6. LIMITATIONS

The research study has certain limitations, for instance the respondents were chosen from Sandton, Johannesburg area only; it was not conducted in other geographical regions of the country and hence the results of the study cannot be generalized.

The study only considers the Fast Moving Consumer Goods (FMCGs) segment of the retail industry and ignores other segments; hence the findings of the research should not be applied to other segments.

The study relied on Random sampling. English language was used to draft and design the questionnaire; regional language was not used in the study.

The study is conducted in the year 2015, however the retail store dynamics and the consequential consumer behavior is very fluid in nature. Thus the research findings are limited to the present day situation and should not be generalized for future periods of time.

7. CONCLUSION

It became apparent from the exploratory study conducted that the retail store formats has a significant impact on the consumer buying behavior in the FMCGs market in South Africa. However, the degree of impact of different retail formats on consumer behavior is diverse and some of the retail formats do not have a significant impact on the consumer buyer behavior.

It was noticed that the Hypermarket followed by Convenience Stores and Super market are the most preferred retail stores of customers for purchase of FMCGs. On the other hand the *p*-value >0.05 (0.361) at the Independent Retail Outlets reflects that their influence is insignificant and not preferred by customers for purchase of FMCGs.

Thus it becomes evident that the retailers in South Africa cannot overlook the need to study and analyze the most appropriate retail formats to influence the consumers' behavior in the FMCGs market. Retailers can choose among the most popular retail formats in FMCGs that have shown a significant impact on the consumers' behavior.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Kearney AT. Seizing Africa's retail opportunities. The 2014 African Retail Development Index. Available:https://www.atkearney.com/documents/10192/4371960/Seizing+Africas+Retail+Opportunities.pdf/730ba912-da69-4e09-9b5d-69b063a3f139. (Accessed 28 July 2015)
2. Sinha PK, Banerjee A. Store choice behavior in an evolving market. International Journal of Retail & Distribution Management. 2004;32(10): 482–494.
3. Wakefield KL, Baker J. Excitement at the mall: Determinants and effects on shopping response. Journal of Retailing. 1998;74(4):515-539.
4. Kim JO, Jin B. Korean consumers' patronage of discount stores: domestic vs multinational discount store shoppers' profiles. Journal of Consumer Marketing. 2001;18(3):236-255.
5. Mehta SC, Wickramasuriya RS. Innovation in conventional retailing: The Econ Minimart of Singapore. Vikalpa. 1989; 14(1):13-20.
6. Sinha PK, Banerjee A, Uniyal DP. Deciding where to buy: Store choice behaviour of Indian shoppers. Vikalpa. 2002;27(2):13-28.
7. Sinha PK. Shopping orientation in the evolving Indian Market. Vikalpa. 2003; 28(2):13-22.
8. Kaul S. Hedonism and culture: Impact on shopping behaviour - A research agenda. Vikalpa. 2007;32(3):81-89.

9. Prasad CJ, Aryasari AR. Effect of shopper attributes on retail format choice behavior for food and grocery retailing in India. International Journal of Retail & Distribution Management. 2011;39(1):68-86.
10. Carpenter JM, Brosdahl DJC. Exploring retail format choice among US males. International Journal of Retail and Distribution Management. 2011;39(12): 886-898.
11. Jhamb D, Kiran R. Emerging retail formats and it's attributes: An insight to convenient shopping. Global Journal of Management and Business. 2012;12:63-70.
12. Platt SK. The future of retail: Emerging technology and store formats. Available:http://risnews.edgl.com/retail-news/The-Future-of-Retail--Emerging-Technology-and-Store-Formats91897 (Accessed 15 July 2015)
13. Shi Z, Cheung K, Prendergast G. Behavioural response to sales promotion tools- A Hong Kong study. International Journal of Advertising. 2005;24(4):467-486.
14. Nunnaly J. Psychometric theory. New York: McGraw-Hill; 1978.
15. Sage Publication. Encyclopedia of Survey Research Methods. Available:https://srmo.sagepub.com/view/encyclopedia-of-survey-research-methods/n13.xml (Accessed 20 September 2015)

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