African Journal of Biological Sciences

Journal homepage: http://www.afjbs.com

Research Paper   **Open Access**

A STUDY ON RETAILER BUYING BEHAVIOUR IN AN ELECTRICAL INDUSTRY

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Abstract:
The study of retailer buying behavior is a very important field of study. This deals with the results of the primary research whose purpose was to examine the impact of brand on influencing retailers to purchase a product. The objective of the paper is to stress the fact that the brand has an impact on the customer decision-making process. The primary data within the primary research were collected by using a quantitative method of questionnaire. The quantitative research involved a selected group of 110 respondents. An established questionnaire was pilot-tested and revised before it was used. As the statistical method was used chi-square test. Based on the above-stated subject area of research has been formulated two hypothesis focused on the relationship between the age of respondents and purchasing branded products and between the annual income and media for increasing retail sales.
Keywords: research, primary, study, impact, brand, quantitative, method, questionnaire, respondents, media, retail, customer, product.

Introduction:
A retailer is a person or business that you purchase goods from. Retailers typically don't manufacture their own items. They purchase goods from a manufacturer or a wholesaler and sell these goods to consumers in small quantities. Retailers buy from the wholesalers and sell goods to the consumers. Retailing is a distribution process, in which all the activities involved in selling the merchandise directly to the final

consumer (i.e. the one who intends to use the product) are included. It encompasses the sale of goods and services from a point of purchase to the end user, who is going to use that product. Retailer implies any organization, whose maximum part of revenue comes from retailing. In the supply chain, retailers are the final link between the manufacturers and the ultimate consumer. Retailers' purchasing habits are essential in determining market dynamics and impacting the supply chain as a whole in the electrical industry. To improve their market strategy and build strong commercial connections, manufacturers and suppliers must comprehend this behaviour.

This study investigates the different elements that affect retailer buying choices in the electrical sector. Through an analysis of factors like product quality, pricing tactics, supplier dependability, and market trends, the study seeks to offer a thorough picture of the factors that retailers think about when making purchases. The report also explores the difficulties that merchants encounter, like controlling inventory levels and keeping up with technology developments. This study aims to identify the underlying reasons and preferences influencing merchant behavior through a combination of qualitative and quantitative research methodologies. It is anticipated that the findings will provide insightful information to players in the electrical business, allowing them to enhance their strategies and better meet the demands of retailers, which will ultimately lead to increased customer happiness and market efficiency.

Review of Literature:

Mehdi Zangeneh, Ebrahim Aghajari, Mehdi Forouzanfar (2020) paper studies and explores the fuzzy logic controller parameter selection, highlighting its simplicity and ability to improve controller performance.

Reza Sharifi, Amjad Anvari-Moghaddam, Vahid Vahidinasab (2020) The paper presents a bi-level Stackelberg-based model for electricity retailers and consumers, focusing on profit maximization and demand response programs, and minimizing costs while preserving welfare.

D.P. Brown, Tsai's (2020) study reveals that retail price fluctuations in Texas' residential retail market are not fully reflected in price quotes, suggesting increased consumer education and credible price information.

Kam Chuen Yung (2020) IAPIS, a proactive PCBA assembly process improvement method, uses k-means clustering and multi-response Taguchi methods to identify critical parameters, optimize performance, and enhance yield.

Cristian Garcia's (2021) paper discusses recent MPC contributions in electrical drives, including weighting factor calculation, current/torque harmonic distortion optimization, and parameter uncertainties, providing a comprehensive overview for future research.

Wang (2021) introduces a heuristic method for managing load demand in microgrids using renewable energy resources, incorporating energy storage, voltage stability, and basic load support, resulting in cost reduction and improved voltage dip.

Xu Pan A, Christina W.Y. Wong a, Chunsheng Li (2022) The circular economy, a sustainable economic model replacing traditional resource consumption and waste generation, has been studied but lacks detailed information on its environmental and economic impacts.

Md. Tabil Ahammed, Chinmoy Das (2022) Automatic transfer switches (ATS) are electrical devices that use a programmable logic controller to transfer electricity from the main grid to a standby power supply.

Dr. Christina E. Simeone's (2023) Pennsylvania study reveals that competitive retail electricity generation suppliers (EGS) offer higher-priced products to residential consumers, partially due to mark-ups on voluntary green-power attributes.

Hongxun Hui (2023) introduces a coupon-based demand response scheme to encourage consumers to participate in demand response due to flat retail pricing policies, implementing it in a realistic DR project in China to reduce energy costs.

Sawli Haldar's (2023) review highlights the transformative juncture of integrating IoT with Integrated Electronic Systems, presenting challenges like cybersecurity, data privacy, and ethical considerations, requiring interdisciplinary collaboration.

Grant, K., Zhang, S. Kettle (2023) A life-cycle assessment of traditional FR-4 PCBs revealed that design considerations and the use of additive substrates can significantly reduce environmental impact.
Roghayeh Imani, Sarthak Acharya (2023) The study introduces sequential build-up-covalent bonded metallization (SBUCBM) as a cost-effective, environmentally friendly, and precise additive manufacturing method for miniaturizing copper interconnects in HDI PCBs.

Yizhi Ruan, Yuliang Cao, Dong Dong (2023) The digest proposes a modular air-cooling method for PCB windings, enhancing fluid and thermal dynamics, reducing the temperature by 40%, and reducing power consumption in power electronics.

Xing Chen, Yonglei Wu (2023) The review examines machine vision-based PCB defect detection algorithms, highlighting their potential for improved accuracy and efficiency, with future research directions including Transformers and Generative Adversarial Networks.

Qin Ling, Nor Ashidi Mat Isa (2023) This paper discusses image processing, machine learning, and deep learning-based methods, their algorithms, procedures, and advantages.

Sudipto Mondal, S. M. Muyeen (2023) This paper proposes a five-level transformer-less inverter based on a single switched-capacitor (SC) for renewable energy interface applications. The proposed inverter has auto-boosting capability, auto-limiting switching losses, and a control scheme for active and reactive power support modes. The design is validated through simulation and a laboratory-scaled prototype.

Chuang Dong, Yueping Wang (2024) This article examines the effects of user error correction methods on power retailers' profitability and suggests a model for calculating profits as well as a model for predicting and adjusting electricity use.

Juvenale Ouandji Kamdoum, Narcisse Serge Nouadjep (2024) The study uses advanced forecasting techniques to predict electricity demand for the Southern Integrated Grid for 2022-2027, achieving high accuracy and reliability.

J. Hidalgo-Crespoa, Andreas Riela, Johan Vogt Duberg (2024) This study examines prevailing PaaS business models for electrical and electronic equipment (EEE) to identify and categorize them, aiming to shift towards circularity and operational methodologies.

Md. Ismail Hasan, Iqtiar Md Siddique (2024) The research aims to evaluate risk incidents in India's electronics industry, analyze accidents, and identify high-impact incidents using risk scores and Priority Numbers, thereby enhancing control measures and reducing injuries.

Xiaodong Han (2024) This study investigates the influence of informatization automation on a water plant's coagulation dosing automation control system, revealing improved water quality, reduced drug consumption, and stability.

Amir Aghazadeh (2024) The paper introduces a flux matching method for V/V traction transformers, which effectively mitigates inrush current, adjusts residual flux, and ensures proper energization instant.

Alireza Tabatabaei Malazi (2024) The paper introduces a 17% efficiency drive circuit for Thomson coil actuators using a pulse forming network, enabling fast operation in hybrid high voltage direct current circuit breaker applications.
Lei Yue, Qing Xu, Hao Wang (2024) The research addresses order release issues in PCB industries by improving traditional WLC methods and designing control strategies based on process switching, demonstrating strong adaptability in simulation experiments.

Ruchira Nandeshwar, Siddharth Tallur (2024) The study enhances PCB-based biosensors' performance by using methylene blue electrodeposition to cover surface defects and enhance electroactivity, enabling the immobilization of an antibody for myeloperoxidase.

Jeonghyeon Choi, Youbean Kim (2024) The paper introduces a hybrid-plane PCB structure, utilizing low-loss dielectric materials near high-speed signal traces, reducing material usage and improving signal quality, as demonstrated in simulations.

Research Methodology:
The Chi-square test is a widely used non-parametric statistical tool that measures the difference between theory and observation. It uses the correlation coefficient, which ranges from -1 to +1, to determine the degree of correlation. A perfect positive correlation indicates that as one variable moves, the other moves in the same direction. The ANOVA is a measurable method used to show differences between two methods or parts through significance tests. It examines the difference between the examples and the difference within each example. This test is a simple and widely used non-parametric test in statistical analysis.

Analysis and Interpretation:

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
YEARS OF DEAL WITH THE INDUSTRY * THE COMPANY PROVIDES DISCOUNTS AND OFFERS TO THE RETAILER	110	100.0%	0	.0%	110	100.0%

YEARS OF DEAL WITH THE INDUSTRY * COMPANY PROVIDE DISCOUNT AND OFFERS TO THE RETAILER Crosstabulation

Count		THE COMPANY PROVIDES DISCOUNTS AND OFFERS TO THE RETAILER				Total
		Strongly agree	Agree	Disagree	Strongly disagree	
YEARS OF DEAL WITH THE INDUSTRY	below 3 years	8	4	2	1	15
	3 years to 5 years	16	13	5	1	35
	5 years to 7 years	10	27	6	7	50
	above 7 years	5	4	0	1	10
Total		39	48	13	10	110

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.266[a]	9	.151
Likelihood Ratio	15.198	9	.086
Linear-by-Linear Association	1.856	1	.173
N of Valid Cases	110		

a. 9 cells (56.3%) have an expected count of less than 5.
b. The minimum expected count is .91.

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	above 7 years	5	4	0	1	10

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Ordinal by Ordinal	Gamma	.200	.128	1.565	.117
Measure of Agreement	Kappa	.007	.051	.145	.885
N of Valid Cases		110			

YEARS OF DEAL WITH THE INDUSTRY * COMPANY PROVIDE DISCOUNT AND OFFERS TO THE RETAILER Crosstabulation

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a. Not assuming the null hypothesis.
b. Using the asymptotic standard error assuming the null hypothesis.

YEARS OF DEAL WITH THE INDUSTRY * COMPANY PROVIDE DISCOUNT AND OFFERS TO THE RETAILER Crosstabulation

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	above 7 years	5	4	0	1	10

Interpretation:

The significant value (0.49) is> greater than the P value (0.000). Hence, the null h
accepted so there is no significant relationship between years of dealing with the i
the company providing discounts and offers to the retailer.

Correlations

		QUANTITY OF PURCHASE OF THE PRODUCT	OPINION ABOUT THE DISCOUNT AND OFFER SCHEMES
QUANTITY OF PURCHASE OF THE PRODUCT	Pearson Correlation	1	.061
	Sig. (2-tailed)		.524
	N	110	110
OPINIONS ABOUT THE DISCOUNT AND OFFER SCHEMES	Pearson Correlation	.061	1
	Sig. (2-tailed)	.524	
	N	110	110

NON-PARAMETRIC CORRELATIONS

Correlations

			QUANTITY OF PURCHASE OF THE PRODUCT	OPINION ABOUT THE DISCOUNT AND OFFER SCHEMES
Kendall's tau_b	QUANTITY OF PURCHASE OF THE PRODUCT	Correlation Coefficient	1.000	.041
		Sig. (2-tailed)	.	.635
		N	110	110
	OPINIONS ABOUT THE DISCOUNT AND OFFER SCHEMES	Correlation Coefficient	.041	1.000
		Sig. (2-tailed)	.635	.
		N	110	110
Spearman's rho	QUANTITY OF PURCHASE OF THE PRODUCT	Correlation Coefficient	1.000	.040
		Sig. (2-tailed)	.	.679
		N	110	110
	OPINIONS ABOUT THE DISCOUNT AND OFFER SCHEMES	Correlation Coefficient	.040	1.000
		Sig. (2-tailed)	.679	.
		N	110	110

Interpretation:

This is a positive correlation. There is a calculated relationship between the quantity of purchase of the product and opinion about the discount and offer schemes**.**

Descriptive

KIND OF PRODUCT DO YOU BUY		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	Between-Component Variance
						Lower Bound	Upper Bound			
highly satisfied		37	3.62	.681	.112	3.39	3.85	2	4	
satisfied		31	2.13	1.088	.195	1.73	2.53	1	4	
Dissatisfied		27	2.74	.984	.189	2.35	3.13	2	4	
Highly dissatisfied		15	3.73	.704	.182	3.34	4.12	2	4	
Total		110	3.00	1.100	.105	2.79	3.21	1	4	
Model	Fixed Effects			.892	.085	2.83	3.17			
	Random Effects				.401	1.72	4.28			.565

Test of Homogeneity of Variances

KIND OF PRODUCT DO YOU BUY

Levene Statistic	df1	df2	Sig.
5.277	3	106	.002

ANOVA

KIND OF PRODUCT DO YOU BUY			Sum of Squares	df	Mean Square	F	Sig.
Between Groups	(Combined)		47.695	3	15.898	19.990	.000
	Linear Term	Unweighted	.982	1	.982	1.235	.269
		Weighted	.532	1	.532	.669	.415
		Deviation	47.163	2	23.582	29.650	.000
Within Groups			84.305	106	.795		
Total			132.000	109			

Robust Tests of Equality of Means

KIND OF PRODUCT DO YOU BUY

	Statistic[a]	df1	df2	Sig.
Welch	18.888	3	47.673	.000
Brown-Forsythe	20.594	3	88.951	.000

a. Asymptotically F distributed.

KIND OF PRODUCT DO YOU BUY

OPINION ABOUT DELIVERY OF THE PRODUCT			Subset for alpha = 0.05		
		N	1	2	3
Student-Newman-Keuls[a]	satisfied	31	2.13		
	Dissatisfied	27		2.74	
	highly satisfied	37			3.62
	Highly dissatisfied	15			3.73
	Sig.		1.000	1.000	.662

Means for groups in homogeneous subsets are displayed.

Interpretation:

From the above analysis, we find that the calculated value of the F-value
is accepted. Since the P value 0.000 is less than < 0.05 there is a significant
kind of product you buy and your opinion about delivery of the product.

Discussion and Conclusion:

The retail industry in India is experiencing a boom, with untapped potential due to increasing consumer needs and wants. To tap into this market, retailers must understand and recognize their behavior. This study analysed retail behavioural patterns, revealing that shopping preferences are largely influenced by reasonable prices, product quality, good service, and easy accessibility to stores. Advertising and sales promotional measures are mainly triggered by these factors. Consumers shopping habits are governed by factors such as price consciousness, product utility,
store loyalty and value for money spent.

The study suggests that retailers should revise their distribution channels, provide good margins, and ensure products are available at all locations. Regular retailer meetings and annual target incentives can help motivate retailers and increase sales. Additionally, introducing new promotional activities can increase retailer margins and boost sales. In conclusion, retailers must focus on satisfying their customers, providing good margins, and ensuring product availability. By understanding and recognizing their behavior, retailers can tap into the full potential of the retail market and achieve success in their respective domains.

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