

## **A STUDY ON CUSTOMER PERCEPTION AND PREFERENCE REGARDING LAST MILE DELIVERY SERVICES - ELECTRICAL AND HARDWARE RETAILERS**

**Mrs. Shilpa. S<sup>1</sup>, Dr. K. Malarvizhi<sup>2</sup>**

<sup>1</sup>Research Scholar, Dept. of Commerce, Hindustan College of Arts & Science, Chennai.

<sup>2</sup>Dean, School of Business Studies & Research Supervisor, Hindustan College of Arts & Science, Chennai.

### **Abstract:**

*This research is being done with the intention of determining how customers see the "last mile delivery" services offered by firms that sell electrical goods and hardware, as well as the customers' preferences regarding these services. The investigation makes use of numerous primary and secondary sources of data, including information obtained from 103 persons who took part in the survey. Primary data were collected through the use of methods such as surveys and interviews, whereas secondary data were gathered through the use of sources such as relevant literature, industry reports, and previous study. The research looks into a wide range of topics, such as the promptness and dependability of product delivery, the handling and safety of products, communication and transparency, adaptability and convenience, and customer service and support. By conducting an analysis of the collected data, the goal of the study is to acquire new knowledge regarding the preferences and perspectives of customers in the retail sector of the electrical and hardware goods industry linked to last mile delivery services. The findings of this research will contribute to a better knowledge of the requirements that consumers demand, and they will assist merchants in improving their delivery services so that they may more effectively satisfy the requirements that their customers require.*

**Keywords:** Customer Perception, Last-mile Delivery, Electrical & Hardware Retailers

### **Introduction:**

Customers' perceptions and preferences regarding electrical and hardware products have a significant impact on the success of retailers and manufacturers in this industry. Understanding how consumers perceive these products and the factors that influence their preferences is essential for businesses to effectively serve their target market and maintain market competitiveness. Electrical and hardware products include a vast assortment of items, such as home appliances, power tools, lighting fixtures, electrical components, and building materials. These items cater to the requirements of homeowners, contractors, businesses, and industries, serving both residential and commercial markets. Customer perception refers to how customers perceive and evaluate the attributes, functions, and ultimate worth of electrical and hardware products. It entails subjective evaluations based on individual experiences, knowledge, and expectations. On the other hand, customer preference refers to the preferences and inclinations consumers have towards particular electrical and hardware products, brands, or characteristics.

Understanding the perceptions and preferences of customers is crucial for businesses in numerous ways. It assists them in identifying the main drivers of customer satisfaction and loyalty. Businesses can align their product development, marketing strategies, and customer service efforts

with consumer preferences for electrical and hardware products if they are aware of the most important features. The perception and preference of customers influence purchasing decisions Vetrivel et.al (2015,2017,2018,2019). Customers gravitate towards products they perceive to be of high quality, dependability, and durability. Customer preferences and purchasing decisions are also influenced by brand reputation, pricing, product attributes, and performance. Additionally, external factors such as advertising, word-of-mouth recommendations, online reviews, and the overall reputation of the retailer or manufacturer influence consumer perception and preference Vetrivel et.al (2022, 2023). Therefore, businesses must actively manage these factors in order to positively influence the perception and preference of customers towards their products.

This study employs a combination of primary and secondary data analysis to obtain a deeper understanding of customer perception and preference in the electrical and hardware industry. Surveys and interviews are used to acquire primary data from a diverse sample of customers who have purchased electrical and hardware products. Existing research, industry reports, and pertinent literature are examples of secondary sources of data. This study seeks to provide retailers and manufacturers with valuable insights by examining customer perceptions and preferences regarding electrical and hardware products. These insights can enlighten decision-making processes, guide product development strategies, enhance marketing initiatives, and increase customer satisfaction and loyalty.

### **Impact of Customer Perception and Preference in successful Electrical and Hardware Business:**

The perception and preferences of customers have a substantial impact on the success of electrical and hardware companies. To gain a competitive advantage in the market, it is crucial to comprehend and effectively meet the needs and preferences of customers. Here are several significant effects of consumer perception and preference on the success of electrical and hardware companies:

**Customer Satisfaction and Loyalty:** Customers are more satisfied when their expectations are met or exceeded. When consumers perceive electrical and hardware products to be of high quality, dependability, and durability, they are more likely to return and recommend the business to others. Positive consumer perception and preference are necessary for long-term business success.

**Market Differentiation:** In a highly competitive market, a business can differentiate itself from competitors by focusing on consumer perception and preference. Businesses can carve out a distinct position in the market by gaining a comprehension of what customers value and developing products or services that reflect their preferences. This differentiation can attract customers desiring particular features or benefits, thereby contributing to the success of the business.

**Increased Sales and Revenue:** Positive consumer perception and preference have a direct impact on the generation of sales and revenue. When consumers perceive electrical and hardware products favourably, they are more likely to make purchases. Additionally, consumer preference drives repeat purchases and can generate opportunities for upselling and cross-selling. Customers who are satisfied and loyal contribute to the company's sustained sales growth and increased revenue.

**Reputation and Trust:** The perception and preferences of customers have a significant impact on the reputation and trustworthiness of an electrical and hardware company. When consumers perceive the brand and its products favourably, the business's reputation is enhanced. A positive reputation fosters client confidence, resulting in enhanced credibility and an increased likelihood of acquiring new customers. Additionally, a solid brand reputation mitigates any negative perceptions or preferences that may result from product problems or incidents.

**Understanding consumer perception** and preference provides valuable insights for innovation and product development. By analysing consumer feedback and preferences, businesses are able to identify areas for improvement, discover new product opportunities, and adapt to changing customer requirements. Aligning product offerings with consumer preferences improves a company's ability to remain competitive, satisfy market demand, and sustain long-term success.

**Objectives:**

1. To assess customer perception towards last mile delivery services provided by electrical and hardware retailers.
2. To examine customer preferences regarding last mile delivery options offered by electrical and hardware retailers.

**Scope of the Study:**

The scope of this study on customer perception and preference regarding last-mile delivery services offered by electrical and hardware retailers is limited to a particular or set of geographical regions. By limiting the study to a particular location, it is possible to conduct a more contextual analysis of the factors that influence consumer perception and preference in that market. The research will consider the local infrastructure, transportation networks, and customer demographics in the selected region(s) to obtain insight into the unique delivery challenges and opportunities electrical and hardware retailers face.

**Literature Review:**

1. **Sharma, G., & Kaur, D. A. (2020)** This study focuses primarily on the influence that consumers' perceptions of brand image and advertising have on their purchasing decisions for various electronic devices (such as washing machines, inverters, and microwave ovens). In addition, the work that is suggested will investigate the factors that are influenced by the brand image and advertisements, which, in turn, influence the purchasing behaviour of consumers. The growing demand that customers have for electronic devices, such as washing machines, inverters, and microwave ovens, is one of the primary motivating factors behind the decision to purchase these kinds of goods. The study would be helpful to readers in gaining an understanding of consumer purchasing behaviour in particular with regard to electronic products such as washing machines, microwave ovens, and inverters. With this knowledge, decision-makers and advisors within organisations would be able to develop appropriate strategies to advertise products and establish brands in a manner that is more effective within the context of the competitive market.
2. **Broadbridge, A., & Marshall, J. (1995)** A significant amount of scholarly investigation has been focused on the complaint behaviour of consumers. aims to make an empirical contribution

to this process by researching the levels of post-purchase dissatisfaction felt by customers who have purchased major and home electrical products. According to the statistics, the number of public complaints regarding electrical goods is significantly higher than the number of private complaints. The type of the product, its complexity, its expected lifespan, and its price are some of the elements that contribute to a high public action ratio; electrical goods that are simpler and less expensive generated the fewest complaints. In addition, it was observed that the level of discontent felt by customers increased as they sought remedy for the inadequate levels of customer service provided by electrical retailers.

3. **Sorooshian, S., Khademi Sharifabad, S., Parsaee, M., & Afshari, A. R. (2022)**Last-mile delivery (LMD) is crucial in supply chains, and logistics service providers are aware of the need to respond to shifting customer and societal expectations, competition challenges, and modern technologies. In light of the significance of artificial intelligence (AI) in contemporary technologies, this article utilised a narrative literature review to identify AI-powered technologies that aid in optimising the LMD component. This study considered two potential classes of technologies: tangible technologies, such as robots, drones, and autonomous vehicles, and intangible technologies, including decision support tools and operating systems. Thus, this article contextualises potential developments in contemporary LMD, recognising that technological progress brings both opportunities and challenges. This literature review indicates that the modern version of LMD is capable of delivering services that are both more productive and more sustainable, thereby satisfying the demand for improved services. Another objective of this article was to investigate the obstacles that limit the benefits of modern LMDs. The report concludes with performance-enhancing recommendations for practitioners and policymakers operating in the supply chain.
4. **Boysen, N., Fedtke, S., & Schwerdfeger, S. (2021).**As a result of the success of e-commerce and its successful diffusion into the majority of commercial activities, last-mile distribution is becoming increasingly problematic in urban areas around the world. Increasing parcel volumes to be delivered to customer residences increase the number of delivery vehicles entering city centres, thereby contributing to congestion, pollution, and adverse health effects. Therefore, it is not surprising that numerous novel last-mile delivery concepts have been developed in recent years. Unmanned aerial vehicles (drones) and autonomous delivery machines taking over package delivery are prominent examples. This paper examines established and novel last-mile concepts with a focus on the decision problems that must be addressed when implementing and operating each concept. To accomplish this, we systematically record the alternative delivery concepts in a compact notation scheme, discuss the most important decision problems, and review the extant research on operations research techniques for solving these problems. In addition, we outline prospective future research avenues.
5. **Mangiaracina, R., Perego, A., Seghezzi, A., & Tumino, A. (2019)**The purpose of this paper is twofold: first, to review and classify scientific publications dealing with innovative solutions for increasing the efficiency of last-mile delivery in business-to-consumer (B2C) e-commerce; and second, to enumerate future research directions in this area. Due to its impact on overall

logistics costs and, consequently, the economic viability of a business-to-consumer (B2C) e-commerce initiative, the last-mile delivery process requires special attention in order to be optimised. The review emphasises that the probability of failed deliveries, the customer density in the delivery areas, and the level of automation of the process are among the primary factors affecting its cost. Innovative and viable last-mile delivery solutions include parcel containers, crowdsourcing logistics, mapping consumer presence at home, and dynamic pricing policies. Eventually, some research voids and areas for additional study were identified (e.g., mapping customer behaviour and crowdsourcing logistics).

### Data analysis and Interpretation:

**Table showing the demographic profile of the Respondents**

Category	Variables	Frequency	Valid Percent	Cummulative Percent
Age	Less than 20	10	9.7	9.7
	20-30	54	52.4	62.1
	31-40	27	26.2	88.3
	41-50	9	8.7	97.1
	Above 50	3	2.9	100.0
	<b>Total</b>	<b>103</b>	<b>100.0</b>	
Gender	Male	61	59.2	59.2
	Female	42	40.8	100.0
	<b>Total</b>	<b>103</b>	<b>100.0</b>	
Educational Qualification	SSLC	13	12.6	12.6
	HSC	32	31.1	43.7
	UG	35	34.0	77.7
	PG	17	16.5	94.2
	Diploma	6	5.8	100.0
	<b>Total</b>	<b>103</b>	<b>100.0</b>	

The data provided presents insights into the distribution of respondents based on age, gender, and educational qualifications. In terms of age, the majority of respondents fell within the 20-30 age bracket, accounting for 52.4% of the sample. This was followed by respondents in the 31-40 age range (26.2%) and those aged 41-50 (8.7%). A smaller percentage of respondents were below the age of 20 (9.7%) or above the age of 50 (2.9%). Regarding gender, the sample consisted of 59.2% male respondents and 40.8% female respondents. This indicates a slightly higher representation of males in the study. In terms of educational qualifications, the distribution shows that a significant portion of respondents had completed undergraduate education (34.0%). This was followed by high school education (31.1%) and postgraduate education (16.5%). A smaller percentage of respondents had completed SSLC (12.6%) or held a diploma qualification (5.8%).

**Table showing one-way ANOVA between Educational Qualification and other factors**

Factors		Sum of Squares	Df	Mean Squares	F	Sig.
---------	--	----------------	----	--------------	---	------

<b>Communication &amp; Transparency</b>	Between Groups	34.552	4	8.638	6.068	0.000
	Within Groups	139.506	98	1.424		
	Total	174.058	102			
<b>Flexibility &amp; Convenience</b>	Between Groups	51.972	4	12.993	9.243	0.000
	Within Groups	137.756	98	1.406		
	Total	189.728	102			

The one-way ANOVA was conducted to analyse the relationship between educational qualification and factors such as communication & transparency and flexibility & convenience. For the factor of communication & transparency, the results showed a significant difference among the educational qualification groups ( $F(4,98) = 6.068, p < 0.001$ ). The between-groups analysis of variance revealed a sum of squares of 34.552 and mean squares of 8.638. This indicates that there are significant differences in the perceptions of communication & transparency among individuals with different educational qualifications. Similarly, for the factor of flexibility & convenience, the ANOVA results also indicated a significant difference among the educational qualification groups ( $F(4,98) = 9.243, p < 0.001$ ). The between-groups analysis of variance showed a sum of squares of 51.972 and mean squares of 12.993. This suggests that there are significant variations in the perceptions of flexibility & convenience based on the educational qualifications of the respondents.

### Conclusion:

In conclusion, the study on customer perception and preference regarding last mile delivery services in the context of electrical and hardware retailers offers valuable insights into the factors that affect customer experiences. The analysis of the data revealed significant disparities in respondents' perceptions of communication and transparency, as well as flexibility and convenience, based on their level of education. This emphasises the significance of considering customer educational backgrounds when addressing their requirements and expectations. The results also cast light on the sample's demographic composition, with the majority of respondents falling between the ages of 20 and 30 and a slightly higher proportion of male respondents. In addition, the distribution of educational attainment reveals that a substantial proportion of respondents had concluded their undergraduate education. These findings contribute to a greater comprehension of customer preferences in the electrical and hardware retail sector and can help retailers improve last-mile delivery services to meet customer expectations. Future research can delve deeper into the specific drivers of these perceptions and preferences in order to develop targeted strategies for enhancing customer satisfaction and loyalty in this domain.

### References:

1. Sharma, G., & Kaur, D. A. (2020). Impact of Advertising and Brand on Consumer Buying Behaviour With Respect to White Goods. *International Journal of Management*, 11(5).
2. Broadbridge, A., & Marshall, J. (1995). Consumer complaint behaviour: the case of electrical goods. *International Journal of Retail & Distribution Management*, 23(9), 8-18.

3. Sorooshian, S., Khademi Sharifabad, S., Parsaee, M., & Afshari, A. R. (2022). Toward a Modern Last-Mile Delivery: Consequences and Obstacles of Intelligent Technology. *Applied System Innovation*, 5(4), 82.
4. Boysen, N., Fedtke, S., & Schwerdfeger, S. (2021). Last-mile delivery concepts: a survey from an operational research perspective. *Or Spectrum*, 43, 1-58.
5. Mangiaracina, R., Perego, A., Seghezzi, A., & Tumino, A. (2019). Innovative solutions to increase last-mile delivery efficiency in B2C e-commerce: a literature review. *International Journal of Physical Distribution & Logistics Management*.
6. Vetrivel V, Solayappan AN (2015). "Brand determinants on customer based brand equity in television industry". *International journal of management science*, volume 7, Issue 1, Oct, 2015.
7. Vetrivel V, Solayappan AN(2015). Effect of Customer Based Brand Equity Determinants on Brand Extension in Television Brands, *International Journal of Business and Administration Research Review*, Vol. 3 Issue.10, April- June, 2015. Page 55-60.
8. Vetrivel V (2019), "Customer satisfaction and trust of private bank ATM's in Rural Areas", *International Journal of Commerce and Management Research*, Volume.5, Issue.5, Pages-97-101.
9. CH. Nandini Kishore Babu, V Vetrivel (2023). "Impact of Service Quality on Brand Equity and Brand Extension in The Automobile Industry, With Special Reference to Service Centers", *Journal of Survey in Fisheries Sciences* 10(1S) 5225-5234.
10. CH. Nandini Kishore Babu, V Vetrivel (2022)." The influence of service quality on customer satisfaction, trust, and loyalty in service centers of the automobile industry", *Ann. For. Res.* 65(1): 5203-5211, 2022.
11. Vetrivel V (2017). Financial problems of unorganized retail sector, *International journal of applied research*, Volume 3, issue 12, 161-164.
12. Vetrivel V (2018). Effect of manufacturer based problems on retail sector, *International Journal of Academic Research and Development*, Volume 3; Issue 2; P.No.319-321.