

A STUDY ON INTENTION OF TECHNOLOGY ADOPTION AND USAGE BEHAVIOR AMONG THE UNORGANIZED RETAILERS IN ALIGARH DISTRICT, UTTAR PRADESH

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Abstract

Purpose of the study is to assess the usage behavior of technology by unorganized retailers in Aligarh District, Uttar Pradesh, and investigate the factors influencing their intention to adopt technology in their business operations. A quantitative research approach was employed to understand retailer perceptions of technology usage and adoption. Convenience sampling was employed to get data from a sample of fifty local retailers in the Aligarh District by means of a standardized questionnaire. The questionnaire covered various aspects of retailer perceptions towards unorganized retail, and data analysis was performed using descriptive statistics and visual aids. The study found that technology adoption in retail operations varies, with Mobile Payment Solutions and POS Systems being the most widely adopted. Challenges include lack of technical skills, resistance to change, high costs, and data security concerns. Limited internet connectivity is a minor issue. 70% of respondents plan to adopt new technology solutions in the future, while 30% may have specific reasons for not adopting new technology. In conclusion, this study provided valuable insights into the extent and challenges of technology adoption in the retail operations of unorganized retailers in Aligarh District. The findings highlighted both areas of strength and opportunities for growth in technology adoption.

Keywords: Point of Sale, Technology Adoption, Unorganised Retailer, Retailer Perceptions, E-commerce.

Introduction

Unorganized retail is a significant part of the retail industry in India, accounting for over 90% of the country's retail industry. Unorganized retailers are small businesses that operate without a formal organizational structure and are primarily made up of small retail stores with little or no standardization, selling goods and services in fragmented quantities to local customers within a small geographical area or locality. Despite the emergence of a large-scale organized retail industry, the unorganized retail market remains the most important method of retailing in India for most people. The adoption of technology among unorganized retailers can help them to compete with organized retailers and improve their performance. Understanding the determinants of technology adoption

intention and usage behavior among unorganized retailers is crucial for the successful implementation of technology in the retail industry.

Technology has revolutionized the retail industry, from how consumers shop to how the retail industry operates. The application of innovations and digital technologies in retail and e-commerce processes is referred to as retail technology. The way retail technology is used has a direct impact on the consumer experience. Both online and physical retailers now make significant investments in various facets of retail technology. AI-driven technologies, such self-checkout kiosks and smart mirrors, are examples of in-store retail tech tools. Retail technology help e-commerce organizations manage their client bases, maintain a smooth retail experience across numerous platforms, and manage their inventories more efficiently with the aid of cloud software and CRM systems. The future of retail technology is exciting, with trends such as AI, machine learning, automation, augmented reality, RFID, and mobile technologies expected to take over in the coming years. The adoption of technology in the retail industry is crucial for retailers to stay competitive and meet customers' needs. By embracing digital technologies and strategies, retailers can thrive in the digital age and deliver value to customers in new and innovative ways.

- **Contactless stores:** With the shift to work from home models and travel restrictions on account of the pandemic, contactless stores have become popular. Customers can shop without touching anything, and the payment is made through mobile apps or other contactless payment methods.
- **Virtual try-on technology:** Virtual try-on technology is already being implemented by stores like Sephora, Target, Ikea, and more. This technology allows customers to try on clothes, makeup, and other products virtually before making a purchase.
- **Self-checkout:** Self-checkout technology allows customers to scan and pay for their items without the need for a cashier. This technology has been implemented in many retail stores, including Walmart, Target, and Home Depot.
- **Augmented reality:** Augmented reality technology allows customers to visualize products in their homes before making a purchase. This technology has been implemented by companies like IKEA and Wayfair.
- **Personalization:** Retailers are using customer data to personalize the shopping experience. This includes personalized recommendations, targeted advertising, and customized promotions.

- **Mobile payments:** Mobile payment technology allows customers to pay for their purchases using their mobile devices. This technology has been implemented by companies like Apple, Google, and Samsung.

Overall, these examples show how technology has transformed the retail industry, from contactless stores to virtual try-on technology. Retailers are using technology to improve the customer experience, streamline operations, and stay competitive in the digital age.

Literature Review

Baker et. al., (2010), Examine the technological adoption patterns of knowledge workers in Saudi Arabia who utilize desktop computers, considering the TAM2 framework and the distinctive influence of Saudi culture on IT adoption in a developing, non-Western nation. Adhering to the principles of the ethics-emic research tradition, which advocates for cross-cultural theory and framework examination, the study, discovers that the TAM2 model explains 40.3% of the variation in behavioral intentions among Saudi users. This contrasts with Venkatesh and Davis' 2000 study, which accounted for 34-52% of the variance in usage intentions among U.S. users.

Thakur (2013), aims to explore the elements that influence customers' adoption of new innovations, particularly in the context of mobile payment services. Using a sample of urban residents from two Indian metropolises, the current study verifies a model based on the Technology Acceptance Model (TAM) in order to obtain significant, all-encompassing insights on consumers' perceptions and usage intentions of mobile payment systems.

Thakur et al., (2014), studied two main goals are to examine the stability of suggested structural relationships across various customer groups and to test the functional relationship between adoption readiness (AR), perceived risk (PR), and usage intention for mobile payments in India. Design, procedure, and strategy to create AR, a thorough assessment of the literature on the key characteristics of technology acceptability was conducted. Examine the elements that influence consumers' acceptability of using e-books

Jin (2014), studied compatibility, relative advantage, self-efficacy, and subjective norms are the external elements. PEU, PU, intention to use, and contentment with e-book usage are the internal elements. The primary factors influencing the use of e-books are external factors. The strength of e-book adoption can be attributed in large part to the integrated TAM. The study's conclusions have potentially important ramifications that can be applied to the creation of standards and a framework for evaluating the behavior of e-book consumers.

Chauhan et al. (2016), aimed to investigate the influence of various demographic factors, including age, gender, marital status, monthly family income, educational attainment, and prior internet usage,

on the adoption of electronic banking in India. In order to quantify e-banking adoption behavior, included additional elements including social norms and perceived risk in addition to core constructs of the technology acceptance model (TAM) like perceived utility, perceived ease of use, intention to use, and attitude. A significant portion of it has been ascribed to the educated youth in India using computers, the Internet, and cell phones more frequently.

Kumar et al. (2017), aims to investigate the fundamental elements that impact students' decision to use mobile banking.

Dezdar (2017), seeks to investigate the variables that impact students' intentions to use green information technology (INT) and their subsequent impact on students' actual usage of green IT (ACT). Originality and worth - The majority of earlier research concentrated on organizational variables that affect the adoption and use of green IT, and there is a dearth of literature examining the attitudes and actions of IT users toward green IT.

Hota et al. (2018), has two goals: first, to determine the extent to which customers have adopted multivendor ATM technology; and second, to create and evaluate a model that explains the usage of multivendor ATMs in India. Consequences for practice the study's conclusions may help banks and suppliers better understand how their customers are utilizing their ATM technology, which will enable them to launch initiatives that will accelerate the technology's acceptance and grow their clientele.

Patil et al. (2020), seeks to determine the key factors influencing the adoption of mobile payments by consumers in India, the nation with the second-highest number of mobile subscribers worldwide. In contrast to the majority of previous studies that solely look at behavioral intentions, including examining usage behavior and reiterating the critical significance that attitudes play in consumer adoption studies. In order to investigate the impact of different constructs that influence technology adoption on consumers' intention to adopt (and use) solar power generators (SPG) at the household level and their subsequent switching behavior,

Roy et al. (2021), plan to apply a variant of the unified theory of adoption and use of technology (i.e., UTAUT 2).

Lorente-Martínez et al., (2021) contributed to evaluate the extent to which brick-and-mortar shops are implementing in-store analytics. Online retailers have made extensive use of web analytics technology, and there is already equipment in place to collect comparable data in physical stores. While a lot of study has been done on how individuals are using mobile payments, there aren't many studies that look into how businesses, particularly unorganized ones in underdeveloped nations, are utilizing mobile technology.

Mishra et al., (2021), Examine unorganised stores in urban India using an exploratory grounded theory technique in order to fill this research gap.

Aithal et al., (2022), study is to comprehend how low-cost technologies are currently being used by small merchants and what circumstances led to their adoption

Research limitations/implications the present study augments the domain of alternative energy usage behavior by applying (UTAUT 2) to the adoption of alternative energy sources (namely, solar) and subsequent switching behavior from traditional sources at the household level. Overall, these studies suggest that the adoption of technology among unorganized retailers is influenced by various factors such as perceived usefulness, perceived ease of use, perceived compatibility, and perceived risk. Understanding these factors can help retailers to adopt technology more effectively and improve their performance. Additionally, the TOE factors play a significant role in the adoption of technology applications in organized retail outlets.

Objective

- The objective of the study is to assess the actual usage behavior of technology by unorganized retailers in the district of Aligarh Uttar Pradesh. The study also investigates the factors influencing the intention of unorganized retailers in Aligarh District to adopt technology in their business operations.

Methodology

Qualitative research approach used to describe retailer perception towards technology usage and adoption by unorganized retailers in Aligarh, Uttar Pradesh. Primary data collected to chosen sample and gathered using a sample questionnaire. 50 samples selected by using Convenience sampling method to collect data from a nearby local retailer in Aligarh district. The questionnaire is specially designed to collect data on various aspects of a retailer's perception towards unorganized retail. The collected data was analyzed using descriptive statistics such as frequency distribution, mean, bar diagram, and pie chart by using MS-Excel. The study may be limited by factors such as sample size and sampling techniques.

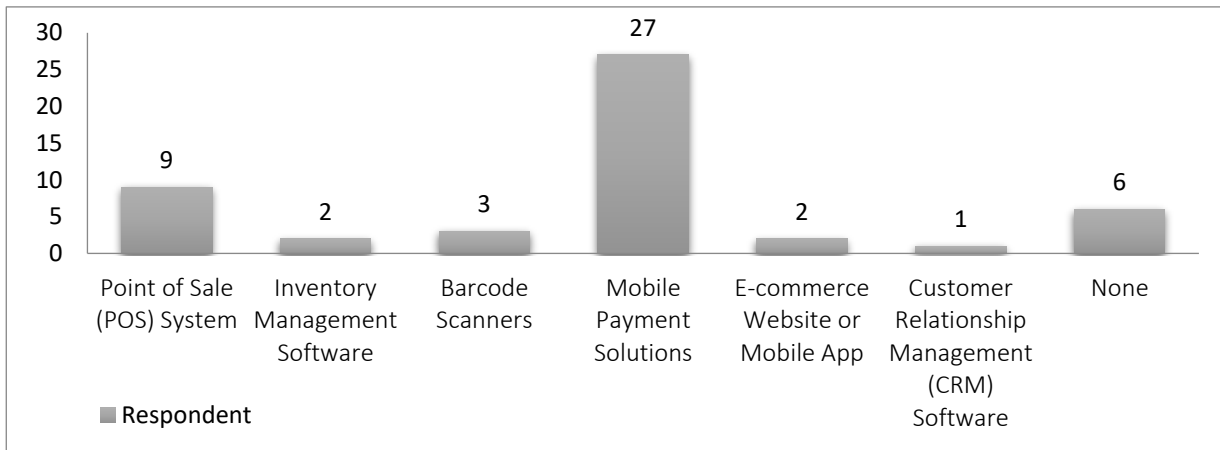
Data Analysis

Table 1:- Do you currently use any technology solutions in your retail operations?

Options	Respondent (No.)
Point of Sale (POS) System	9
Inventory Management Software	2
Barcode Scanners	3
Mobile Payment Solutions	27

E-commerce Website or Mobile App	2
Customer Relationship Management (CRM) Software	1
None	6
Total	50

Fig. 1



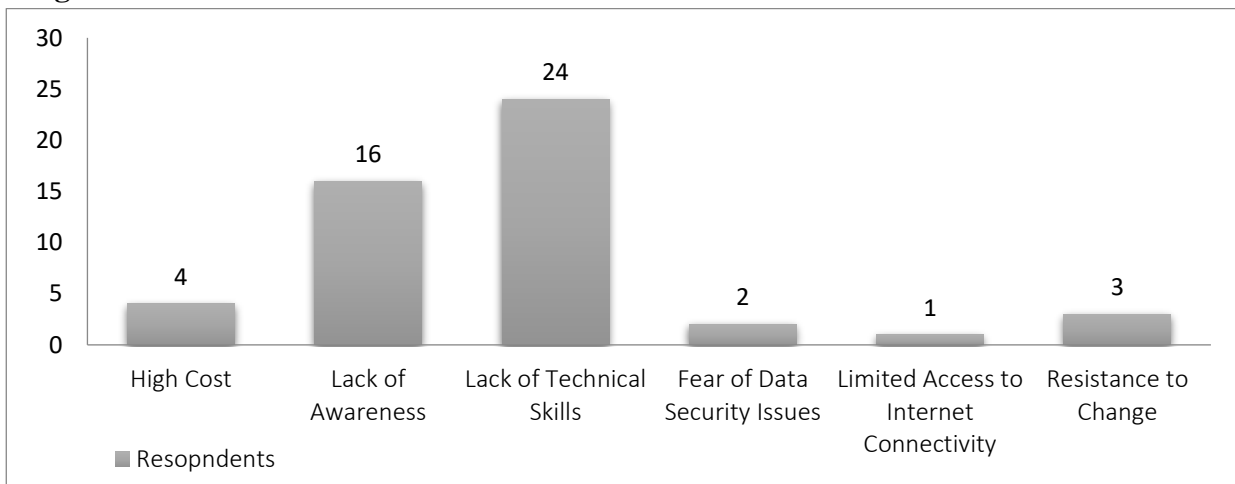
The data illustrates the extent of technology adoption in the retail operations of the surveyed individuals. Among the respondents (totaling 50), the most widely adopted technology solution is Mobile Payment Solutions, with 27 retailers utilizing this technology. A notable number of retailers also employ Point of Sale (POS) Systems (9 respondents), while Barcode Scanners are used by 3 retailers. Inventory Management Software, E-commerce Websites and Mobile Apps are employed by just 2 retailers each, indicating a relatively low adoption rate. Customer Relationship Management (CRM) Software has the least adoption, with only 1 respondent. Significantly, 6 respondents indicated that they do not currently use any technology solutions in their retail operations. This data suggests a varied level of technology adoption among the surveyed retailers, with Mobile Payment Solutions and POS Systems being relatively more prevalent. But there's always potential for improvement, particularly when it comes to using more complete technological solutions like CRM and inventory management software, which may help shops improve customer interactions and optimize their operations.

Table 2:- What are the primary reasons for not adopting technology in your retail operations?

Options	Respondents
High Cost	4
Lack of Awareness	16

Lack of Technical Skills	24
Fear of Data Security Issues	2
Limited Access to Internet Connectivity	1
Resistance to Change	3
Total	50

Fig. 2

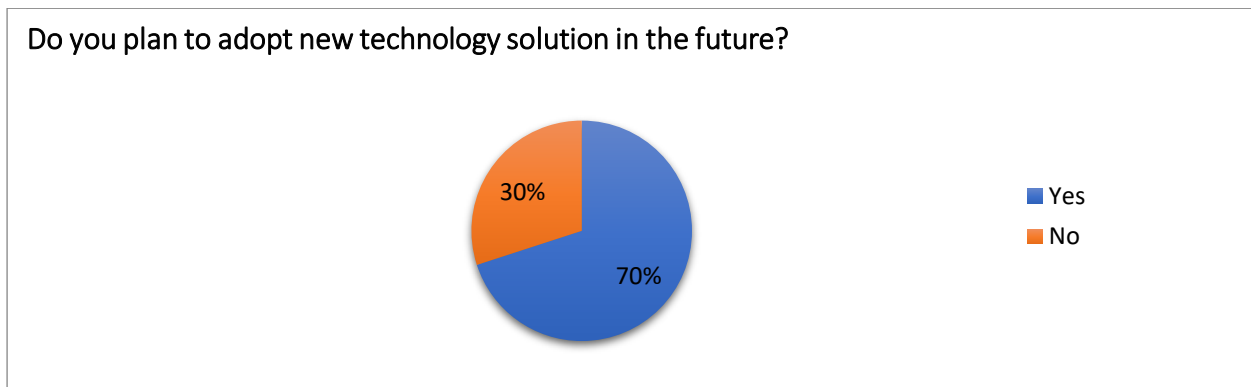


The data provided reflects the primary reasons for not adopting technology in retail operations, as reported by 50 respondents. Among the respondents, a notable majority pointed to a lack of technical skills as the most prevalent obstacle, with 24 respondents identifying this as a barrier. Lack of awareness follows closely, with 16 respondents expressing that they are hindered by their limited knowledge about technology. Resistance to change was mentioned by 3 respondents, while high costs were cited by 4 respondents, and concerns about data security issues were mentioned by 2 respondents. Limited access to internet connectivity was identified as a challenge by just 1 respondent. In summary, the data highlights that a lack of technical skills and awareness are the most prominent obstacles hindering technology adoption in retail operations, underscoring the need for training and education in this field to enable more businesses to harness the benefits of technology.

Table 3:- Do you plan to adopt new technology solutions in the future?

Question	Respondent		
	Yes	No	Total
Do you plan to adopt new technology solutions in the future?	35	15	50

Fig.3



The data provided indicates responses to a question about whether respondents plan to adopt new technology solutions in the future. Of the 50 respondents, 70% have answered "Yes," expressing their intention to adopt new technology solutions, while 30% respondents have answered "No," indicating their lack of such plans. This data suggests that a majority of the respondents are open to embracing new technology solutions in the future. However, there is a notable minority that does not have such plans. It is essential to acknowledge that these intentions may be influenced by various factors, including the specific needs and circumstances of each respondent. Nevertheless, the data underscores the overall trend toward technology adoption in the future, indicating that many individuals or organizations recognize the importance of staying current with technological advancements.

Findings

Current Technology Adoption

- The data demonstrates that technology adoption in retail operations varies widely among the respondents.
- Mobile Payment Solutions and Point of Sale (POS) Systems stand out as the most widely adopted technologies, indicating their significance in modern retail settings.
- Barcode Scanners are used by a notable but relatively smaller number of retailers.
- Inventory Management Software, E-commerce Websites, and Customer Relationship Management (CRM) Software show lower adoption rates, suggesting potential areas for growth and improvement.

Challenges to Technology Adoption

- The data identifies the primary obstacles faced by retailers in adopting technology solutions.

- A lack of technical skills and awareness are the most prominent barriers, as reported by a significant number of respondents. This emphasizes the need for education and training to bridge this knowledge gap.
- A smaller proportion of respondents cited resistance to change, high costs, and data security concerns as limiting factors.
- Limited access to internet connectivity appears to be a minor challenge.

Future Technology Adoption

- The data highlights a positive trend, with a substantial majority of (70%) respondents expressing their intention to adopt new technology solutions in the future.
- This indicates that retailers understand how critical it is to keep up with technology developments in order to stay competitive and satisfy changing consumer expectations.
- The 30% of respondents not planning to adopt new technology solutions may have specific reasons for their decision, underscoring the importance of understanding individual business contexts.

Conclusion

The study reveals several key insights regarding the extent and challenges of technology adoption in the retail operations of the surveyed individuals. The data underscores the varying landscape of technology adoption in retail, with some areas of strength and others with room for growth. Overcoming the challenges of technical skills and awareness is essential to maximize the benefits of technology adoption. The strong inclination among the majority of respondents to adopt new technology solutions in the future signifies a positive outlook for the continued integration of technology in the retail sector. It is crucial for retailers to adapt to these trends to remain competitive and address the evolving demands of the market.

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