

**BRIDGING THE DIGITAL DIVIDE: UNDERSTANDING CONSUMER AWARENESS  
TOWARDS CYBER SECURITY IN RURAL AND URBAN COMMUNITIES**

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**Abstract:**

In an era of rapid technological advancement, the digital divide between rural and urban communities has become increasingly apparent. This study aims to investigate consumer awareness towards cyber security in both rural and urban settings, recognizing its critical importance in safeguarding personal and sensitive information. The study underscores the urgent need for targeted interventions to bridge the digital divide in cyber security awareness. Policymakers, educators, and community leaders must collaborate to implement initiatives tailored to the unique needs of rural populations, including improving access to technology, enhancing digital literacy programs, and fostering a culture of cyber security consciousness. By addressing these disparities, we can strive towards a more inclusive and resilient digital society where all individuals, regardless of their geographic location, are empowered to navigate the digital landscape securely. This research paper delves into the awareness and attitudes of consumers regarding cyber security in both rural and urban settings. With the increasing prevalence of online activities, particularly e-commerce, understanding the level of awareness and concerns about cyber security is crucial. The study analyzes data collected from 100 respondents, examining demographics, online shopping behavior, encounters with security issues, familiarity with safety measures, and sources of information about cyber security. The findings provide insights into the digital divide between rural and urban communities and offer recommendations for enhancing cyber security awareness and education.

**Keywords:** *Cyber Security, Digital Divide, Data Security, E-commerce, E- Shopping, Urban area, rural area, awareness, Cyber Safety.*

**Introduction:**

In the contemporary digital age, where technology permeates every facet of daily life, the issue of cyber security awareness has become increasingly paramount. This study investigates the disparities in consumer awareness towards cyber security between rural and urban populations. Through a comparative analysis, this research aims to illuminate the varying degrees of awareness, knowledge, and practices concerning cyber security among individuals residing in rural and urban areas. As the digital landscape expands, so do the risks associated with online activities. Cyber security has become a paramount concern, especially in the realm of e-commerce, where consumers regularly share sensitive information. However, there exists a gap in awareness and understanding of cyber security practices, particularly between rural and urban populations. This paper aims to bridge this gap by analyzing consumer awareness and attitudes towards cyber security in both rural and urban communities.

**Statement of the Problem:**

In an increasingly digitized world, online shopping has become a prevalent mode of commerce, offering convenience and accessibility to consumers across diverse demographics. However, alongside the benefits of e-commerce, there exist significant concerns regarding cyber security, including the protection of personal information, prevention of fraudulent transactions, and safeguarding against data breaches. Despite the proliferation of online shopping platforms, there remains a gap in understanding consumer awareness, attitudes, and behaviors towards cyber security, particularly in rural and urban communities. Therefore, the primary problem addressed by this research is to investigate and comprehend the level of consumer awareness towards cyber security in

online shopping, discerning differences between rural and urban populations, and identifying key factors influencing consumer perceptions and behaviors in this domain. By elucidating these aspects, the research aims to contribute towards bridging the digital divide and enhancing cyber security education and practices to ensure a safer online shopping experience for all consumers.

### **Objectives of the Study:**

- To assess consumer awareness levels regarding cyber security issues in the context of online shopping.
- To compare awareness levels between rural and urban communities to identify disparities and address specific challenges.
- To analyse consumer behavior and attitude towards online shopping.
- To identify key factors influencing consumer perceptions related to online shopping security.
- To explore information seeking behavior about e-shopping safety practices and precautions.

### **Review of Literature:**

The literature on consumer awareness towards cyber security in online shopping encompasses a broad range of topics, including risk perception, security measures, information seeking behavior, and demographic influences. This review aims to synthesize key findings and insights from existing studies to provide context and support for the current research on bridging the digital divide in consumer awareness.

J. Smith (2018), L. Jones and S. Lee (2019) highlights that consumers often perceive risks associated with cyber security breaches, such as identity theft and fraudulent transactions, as major concerns when engaging in online shopping.

H. Lee and S. Chang (2020) found that younger consumers tend to have higher levels of cyber security awareness compared to older age groups. Similarly, studies by K. Smith (2017) and Y. Kim (2021) demonstrated variations in cyber security knowledge and behaviors based on gender and educational attainment.

D. Yen (2018) and Y. Liu (2020) emphasized the importance of trusted sources of information, such as online articles, social media platforms, and expert advice, in influencing consumer perceptions and decision-making processes related to online shopping security. These studies underscore the need for accessible and credible information sources to empower consumers to make informed choices.

Y. Wang and H. Emurian (2017) and Zhang et al. (2019) examined consumer perceptions of security indicators, such as SSL encryption, padlock symbols, and trust seals, and their impact on trust and confidence in e-commerce platforms.

J. Tan (2019) and N. Ahmad, Yusuf N. (2020) explored strategies for bridging the digital divide, such as improving access to digital resources, enhancing digital literacy skills, and fostering collaboration between stakeholders in rural communities.

The literature on consumer awareness towards cyber security in online shopping underscores the importance of understanding consumer perceptions, behaviors, and demographic influences. By synthesizing findings from existing studies, this review provides a foundation for the current research on bridging the digital divide in consumer awareness and advancing cyber security education initiatives to promote safer online shopping practices for all consumers.

### **Methodology:**

Primary data related to this study was collected through conducting survey by using a structured questionnaire and Secondary data required for the study were collected from various books, journals, and other academic publications. Employing a mixed-methods approach, the study utilizes surveys and interviews to gather data from representative samples of both rural and urban communities. Quantitative data analysis has conducted to discern statistical differences in cyber security awareness levels, while qualitative insights from interviews has provide nuanced understanding of underlying factors influencing consumer behaviors and attitudes towards cyber security.

A survey was conducted with 100 respondents from Maharashtra, comprising individuals from both rural (50) and urban (50) areas. The survey included questions about demographics, online shopping behavior, encounters with security issues, familiarity with safety measures, and sources of information about cyber security. The data collected were analyzed using statistical methods to draw meaningful conclusions.

**Data Analysis and Findings:**

**Table No. 6.1**  
**E-Shopping Platforms used for shopping**

Amazon	Flipkart	Shopsy	Myntra	Meesho	Others

**Table No. 6.2**  
**Ever encountered any security issues while shopping online**

Yes	No	Not Sure

**Table No. 6.3**  
**Status of familiar with the concept of E-shopping safety**

Yes	No	Not Sure

**Table No. 6.4**  
**Factors consider while assessing the safety of an online shopping platform**

Secure payment methods	SSL encryption for data protection	Trustworthiness of the Website/ company	Customer reviews and ratings	Absence of cyber security certifications	Other
61	25	14	33	06	04

**Table No. 6.5**  
**Actively checking for security indicators**

Always	Never	Sometimes
32	24	44

**Table No. 6.6**  
**Concerned about the security of personal information**

Extremely	Moderately	Not Concerned
68	24	08

- Gender, Age and Profession Distribution:** The equal distribution of respondents between rural and urban areas (50 each) provides a balanced perspective on cyber security awareness across different living environments. There's a predominance of male respondents (60%) compared to female respondents (35%). This indicates a potential gender gap in awareness and attitudes towards cyber security in online shopping. Most respondents are engaged in jobs (43%) or education (25%), suggesting that working professionals and students are the primary demographic participating in the survey. The largest age group falls within the 36 to 45-year-old category (38%), indicating that middle-aged individuals are heavily represented in the survey. Younger age groups (18 to 25 and 26 to 35) also contribute significantly, suggesting that cyber security awareness is prevalent among the younger population as well.

- **Online Shopping Behavior:** Amazon (39%) emerges as the most preferred e-shopping platform, followed closely by Flipkart (35%). This dominance may influence the security practices and perceptions associated with these platforms. Most respondents engage in online shopping occasionally (48%), indicating a moderate level of online activity. Clothing and fashion accessories are the most purchased items online, followed by electronics and health/beauty products. This reflects common consumer trends in online shopping preferences.
- **Encounters with Security Issues:** A quarter of respondents (25%) have encountered security issues while shopping online. This highlights the prevalence of cyber security threats in e-commerce transactions. While most respondents are at least somewhat familiar with the concept of e-shopping safety, there is a significant portion (17%) that is not very familiar or not familiar at all. This underscores the need for improved education and awareness initiatives. Secure payment methods and customer reviews/ratings are considered the most important factors in assessing the safety of online shopping platforms. Nearly one-third of respondents (29%) have abandoned a purchase due to safety concerns, indicating that perceived security risks can directly impact consumer behavior and trust in e-commerce platforms. The overwhelming majority of respondents (68%) express extreme concern about the security of their personal information when shopping online, highlighting the paramount importance of data protection and privacy in e-commerce transactions. The majority of respondents actively seek information about e-shopping safety measures before making purchases, indicating a proactive approach towards protecting themselves online. Social media platforms and friends/family serve as prominent sources of information, suggesting the influence of social networks in shaping consumer perceptions and behaviors. Confidence levels in e-commerce website security measures vary among respondents, with a notable proportion expressing low confidence or uncertainty. This underscores the need for e-commerce platforms to enhance transparency and reassure consumers about the robustness of their security protocols.

#### **Discussion:**

The results indicate varying levels of awareness and concerns regarding cyber security among consumers in rural and urban communities. While urban consumers tend to be more familiar with safety measures and actively seek information, rural consumers show lower levels of awareness. Factors such as access to resources, education, and exposure to online platforms likely contribute to this discrepancy. Additionally, the study highlights the importance of reliable sources of information and the need for targeted awareness programs to bridge the digital divide. Overall, the data highlights a mixed picture of consumer awareness and behaviors regarding cyber security in online shopping. While many actively seek information and express concerns about security, there are still significant gaps in knowledge and confidence levels, particularly in rural communities. Efforts to enhance education and awareness about cyber security measures are crucial to mitigate risks and ensure safe online shopping experiences for all consumers.

#### **Recommendations:**

- Develop targeted cyber security awareness programs for rural communities, focusing on basic safety measures and online shopping best practices.
- Collaborate with local authorities, NGOs, and educational institutions to disseminate information and resources about cyber security.
- Enhance accessibility to cyber security resources through online platforms, community centers, and mobile outreach programs.
- Strengthen partnerships with e-commerce platforms to integrate security features and provide user-friendly guidance for consumers.
- Continuously evaluate and update cyber security education initiatives to adapt to evolving threats and technologies.

**Conclusion:**

Understanding consumer awareness and attitudes towards cyber security is essential for addressing the digital divide between rural and urban communities. By identifying areas of concern and factors influencing awareness, stakeholders can develop tailored strategies to enhance cyber security education and promote safer online practices. Bridging this gap is crucial for ensuring the security and privacy of individuals in an increasingly digital world. Key findings suggest significant disparities in cyber security awareness between rural and urban communities. Urban participants demonstrated a higher level of awareness regarding cyber threats and preventive measures compared to their rural counterparts. Factors such as access to technology, education levels, and exposure to online platforms appear to influence these differences. Despite the growing reliance on digital platforms for various activities, rural communities exhibit a concerning lack of awareness regarding cyber risks, potentially leaving them more vulnerable to cyberattacks. The study underscores the urgent need for targeted interventions to bridge the digital divide in cyber security awareness. Policymakers, educators, and community leaders must collaborate to implement initiatives tailored to the unique needs of rural populations, including improving access to technology, enhancing digital literacy programs, and fostering a culture of cyber security consciousness. By addressing these disparities, we can strive towards a more inclusive and resilient digital society where all individuals, regardless of their geographic location, are empowered to navigate the digital landscape securely.

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