

Impact of Data Breaches on Plastic Money Users

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ABSTRACT

Plastic money has increased the number of transactions through bank accounts. Due to the use of plastic money the most of the transactions are taken place through the bank accounts directly and this will definitely reduce the supply of black money and quota notes circulation in the society. the main Objectives of this study is to analyse the consequences of data breaches on plastic money and to study the steps to be taken to avoid data breaches. Data breaches expose personal information to unauthorized individuals, violating privacy and potentially leading to unwanted contact or harassment. It also affects Credit score impact Bank account access, Legal penalties, Emotional distress, Identity theft and Financial losses. This indicates that data breaches deeply affect the people in to financial losses.

Keywords: Data breaches, financial losses, Legal penalties, violating privacy

1. INTRODUCTION

Plastic money is considered as best payment tool while compared with paper money transactions. In plastic money there is a no risk to carry the cash to make payment. Most of the peoples have very much satisfied with plastic money usage and its benefits. According to this survey the majority of the people are ready to accept the replacement of paper money with the plastic money due to its speedier and secured way of payment. The respondents have showed the positive perception towards the plastic money and its acceptance; this will play an important role in the economic development of the country. Plastic money has increased the number of transactions through bank accounts. Due to the use of plastic money the most of the transactions are taken place through the bank accounts directly and this will definitely reduce the supply of black money and quota notes circulation in the society. Plastic money transaction helps in increase the flow of tax to the government. The ultimate benefit of increased plastic money transaction will result in the development of the country.(Kiran & Harshitha, n.d.)

2. PLASTIC MONEY

Plastic money is referred to the mode of payment for goods and services bought; through use of specific cards made of plastic (hence, plastic money) which will substitute the use of currency notes at the time of purchase/payment. As it is made up of plastic and performs the functions of legal tender money, it is called as Plastic Money. Plastic money facilitates buying and selling much easier without carrying and handling cash both for the buyer (cardholder) and the vendor (merchant). Plastic money includes both debit card and credit card.(A Mary Diana, n.d.)

3. DEFINITIONS OF PLASTIC MONEY

“Plastic money is a term that is used in reference to the hard plastic cards we use every day in place of actual bank notes, different forms such as debit card, credit card, store card, prepaid cash card, etc.”

According to the Cambridge Business English Dictionary, “A credit card or other card that can be used to pay for things or get money from the bank”

“Plastic currency or plastic money it is a term increasingly being used to refer to all forms of credit cards, debit cards, retailer cards, diner cards and other types of plastic cards which we use daily instead of actual currency notes.”(Limbore et al., n.d.)

There are also some downsides to using plastic money. One is that it is extremely easy to overspend when not using cash. It is also important to be careful where you use your card, as some places (like ATMs) can be more vulnerable to fraud. Overall, though, the use of plastic money in India is an incredibly positive development.

It is convenient, easy to use, and more secure than carrying large amounts of cash. However, the card- based usage has picked up only during the last decade. Payment by cards is now becoming a much-preferred way for making retail payments in the country. Thus, plastic card is a payment tool which offers a customer an opportunity of non-cash payment for goods and services and are designed to facilitate small value retail payments by offering a substitute for bank notes and coins and thus to set off traditional payment instruments.(Mehta & Sinha, 2023)

4. REVIEW OF LITERATURE

Kavitha, M. (2023) People are using plastic money for various purposes. In this article the researcher found various factors influencing customers while using plastic money. There are convenient, online payments, spending less, offers, theft minimized, Anytime/Anywhere usage, credit facility and cash management. These factors are influencing customers and they feel satisfied while using plastic money. The main factors are convenience, cash management and theft minimized. Finally, it concludes that customers are satisfied while using plastic money.

(Sugiono & Nugraheni, 2023)The research shows that it is most appropriate to divide users of cashless payments in e-commerce into three groups. Generation Z who are employed are the primary features of the first group. The second is older Millennial Generation cluster characterized by older males in supervisory roles and higher expenses than other groups. The findings also indicate that Generation Z Early Adopters, third cluster, has begun adopting electronic transactions for security purposes. Additionally, each group agreed to adopt electronic transactions for easy of use reasons.

Recent days, most of the banks are giving broadened offices to its clients. Out of different offices plastic cash is taking lead and has ended up the most prevalent and helpful mode of managing an account office among the clients. The point of this paper was to get it the choice and inclination of buyers towards the utilization of charge and credit card. Moreover they consider tries to discover out the particular regions that customers favor to spend more through these cards and which is their favored card for installment. The paper makes a difference to understanding the variables impacting ownership of charge and credit cards and card holders' demeanor towards it. These papers make an endeavor to ponder the state of mind of card holders towards charge card and credit cards.(Bhadaniya & Ankleshwaria, 2024)

(Talafta, 2024)Payment systems in the e-commerce industry have undergone substantial changes to cater to the needs of businesses and consumers in the ever-changing world of online commerce. This abstract examines the complex dynamics of e-commerce payment systems, which involve several technologies and processes that aim to enable secure, efficient, and user-friendly transactions on the internet. The emergence of digital wallets, cryptocurrencies, and sophisticated fraud protection techniques underscores the ongoing innovation in this domain. An essential aspect of this transformation is the focus on improving the speed of transactions, minimizing expenses, and guaranteeing the security of data. Payment systems must also manage intricate legal frameworks and cater to diverse consumer preferences across different geographical areas. The growth of e-commerce necessitates payment systems with strong adaptability and integration capabilities. These systems must provide smooth user experiences, adhere to international standards, and effectively manage new cybersecurity concerns. The continuous progress in payment technology demonstrates a wider movement towards increased accessibility and convenience, highlighting the crucial role these systems play in the digital economy.

(Goyal, n.d.)The implementation of electronic payment systems has far-reaching consequences for the Indian economy. One of the most major effects has been the proliferation of e-commerce and online transactions. With the proliferation of digital payment methods, online shopping has grown in popularity, propelling the e-commerce sector and increasing overall consumption. Furthermore, reduced cash usage has had a positive impact on the economy, including enhanced transparency, efficiency, and tax compliance. Electronic payment systems have contributed to the reduction of the informal economy, the elimination of black money, and the promotion of a more organized financial system. Furthermore, the use of digital payment systems has helped to increase financial inclusion by giving previously underserved people access to formal banking services. Electronic payment systems have helped bridge the divide between the banked and unbanked populations by promoting mobile-based payment solutions such as UPI and PMJDY, allowing millions of people to engage in the formal economy.(Irfan et al., 2024) Results show clear and significant differences between categories of banks as well as where people spend. Analysis shows a clear difference between government and private banks in the following areas: First, in issuing debit and credit cards and consumer spending. Second, Ecommerce, POS, and ATM withdrawals. It was found that debit card issuance varies significantly by bank type, while credit card issuance does not.

5. OBJECTIVES OF THE STUDY

To analyse the consequences of data breaches on plastic money

To study the steps to be taken to avoid data breaches

HYPOTHESES OF THE STUDY

There is no significant impact of data breaches on plastic money

IMPACT OF DATA BREACHES ON PLASTIC MONEY USERS

The Data breaches are affect the plastic money users in different way and it subsequent influence over spending pattern is analyzed from regression analysis.

Table 1 Model Summary for Data breaches				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.807 ^a	.600	.593	3.811
a. Predictors: (Constant), DB7, DB1, DB3, DB5, DB6, DB2, DB4				

Source : Computed data

From the above table , it shows that $R=.807$ R square = .600 and adjusted R square .593. This indicates that the Data breaches variable stimulates 60% variance over the spending pattern. The cumulative influence of all the data breaches variables on spending pattern determined by Anova table

Table 2 ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6733.866	7	961.981	72.239	.000 ^b
	Residual	6724.069	463	14.523		
	Total	13457.934	470			
a. Dependent Variable: spending pattern						
b. Predictors: (Constant), DB7, DB1, DB3, DB5, DB6, DB2, DB4						

Source : Computed data

It was presented in the above table that $F = 72.239$, $\text{Sig}=.000$ indicates that data breaches strongly affects the spending pattern of people. The following co-efficient table shows the individual influence of each variable clearly

Table 3 Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	14.527	1.100		13.207	.000
	Credit score impact	.790	.245	.123	3.225	.001
	Unauthorized purchases	1.011	.453	.135	2.234	.026
	Bank account access	.507	.203	.115	2.513	.008
	Legal penalties	.460	.220	.159	2.856	.043
	Emotional distress	1.062	.266	.110	2.234	.015

	Identity theft	2.156	.390	.312	5.528	.000
	Financial losses	3.359	.285	.545	11.768	.000
a. Dependent Variable: spending pattern						

Source : Computed data

It was shown in the above table that Credit score impact (Beta=.123, t=3.225, p=.001), Unauthorized purchases (Beta=.135, t=2.234, p=.026), Bank account access (Beta=.115, t=2.513, p=.008) Legal penalties (Beta=.159, t=2.856, p=.043), Emotional distress (Beta=.110, t=2.234, p=.015), Identity theft (Beta=.312, t=5.528, p=.000), Financial losses (Beta=.545, t=11.768, p=.000) are significant at 5% level. This indicates that data breaches deeply affect the people in to financial losses.

STEPS TO BE TAKEN TO AVOID DATA BREACHES

- **Identify the breach:**
 - Recognize the signs of a data breach, such as unusual activity, unauthorized access, or system downtime.
- **Contain the breach:**
 - Take immediate action to stop the breach from spreading, such as isolating affected systems, shutting down applications, or changing passwords.
- **Secure the scene:**
 - Preserve evidence by documenting the breach, including system logs, network traffic, and any other relevant information.
 - 2. Assessment and Investigation:
- **Gather evidence:**
 - Collect and analyze data from various sources, including system logs, network traffic, and security devices.
 - 3. Notification and Communication:
- **Establish a communication plan:**
 - Develop a clear and concise communication plan to keep stakeholders informed throughout the incident response process.
 - 4. Remediation and Prevention:
- **Implement remediation measures:**
 - Address the vulnerabilities that allowed the breach to occur, such as patching software, strengthening security protocols, and improving access controls.
- **Review and improve security protocols:**
 - Conduct a thorough review of your security protocols and procedures to identify areas for improvement and implement necessary changes.
- **Conduct post-incident activities:**
 - Review the incident response process to identify lessons learned and make improvements for future incidents.

6. FINDINGS AND CONCLUSIONS

Data breaches affecting credit and debit card users can lead to financial losses, identity theft, and damage to credit scores, as hackers can steal sensitive information to make unauthorized purchases or open new accounts in the victim's name. Data breaches expose personal information to unauthorized individuals, violating privacy and potentially leading to unwanted contact or harassment. It also affects Credit score impact Bank account access, Legal penalties, Emotional distress, Identity theft and Financial losses. This indicates that data breaches deeply affect the people in to financial losses. Finally, it concludes that the various measures to be taken to avoid data breaches, such as gather evidence, Establish a communication plan, Implement remediation measures, Review and improve security protocols, Conduct post-incident activities.

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