

Problems Faced by NFC Payment Users - A Study with Special Reference to Kolenchery, Ernakulam District, Kerala

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Abstract

Near Field Communication (NFC) payment system is a contactless payment technology that allows users to make transactions by simply tapping their mobile devices on a payment terminal. NFC payment systems are becoming increasingly prevalent in various sectors, including retail, transportation, and hospitality, due to their ease of use, speed, and security. NFC payment systems offer several benefits over traditional payment methods, such as cash and cards. With NFC technology, users can make payments without the need for physical cash or cards. This eliminates the need to carry bulky wallets and reduces the risk of losing cash or cards. NFC payments are also contactless, making them a safer payment option during the COVID-19 pandemic. Additionally, NFC payments are faster and more efficient than traditional payment methods, reducing transaction times and increasing business efficiency. To conduct the study researcher uses ANOVA

Key Words: NFC, Payment, Technology, ANOVA

Introduction

One of the most prominent aspects of NFC payments is their ability to facilitate transactions without physical contact. The technology enables two devices – an NFC-enabled payment device like smartphone or card and a payment terminal – to exchange data when they are close to each other. Speed and convenience NFC transactions are typically faster than traditional payment methods. The customer simply has to bring their device close to the terminal, and the transaction completes in seconds. This speed contributes to a smoother and more convenient checkout process. Security NFC payments are generally considered secure. They often incorporate encryption to protect sensitive information such as credit card numbers. Additionally, many smartphones require authentication like fingerprint scan or a passcode before the payment is processed, adding another layer of security. Versatility and integration NFC technology is versatile and can be integrated into a variety of devices, including smartphones, smart watches and payment cards. This integration allows customers to pay with the device that best suits their needs and preferences. Widespread compatibility As NFC technology becomes more prevalent among customers; an increasing number of businesses are adopting NFC-compatible payment terminals. Contactless payments occur at a variety of locations, from large retailers to small local businesses.

Significance of the study

In this paper, we present our assessment on payment systems. After covid pandemic all payments are contactless and new method of payment had been introduced which involve lot of features and made monetary transactions more convenient. Risk is unavoidable and therefore digital payments are subjected to many risks. Majority of people are still unaware about the new methods of digital payments. This study focuses on the beneficial contents and risk factors of

modern methods of payment.

Scope of the study

Scope of the study is limited to Kolenchery Town.

Objectives of the study

- * To find out the problems or difficulties faced by the users of NFC payment system.
- * To find out the concerns of the users regarding the NFC payment system.

Hypothesis

H0: There is no significant relationship between age of the respondents and problems faced by NFC users.

Research methodology

The study uses both primary and secondary data. The collection of primary data was made by distributing the structured questionnaire through google forms. The secondary data was collected from various publications, books, blogs, and various websites. To study the problem, a sample size of 70 was selected. For this purpose of study Kolenchery Town nearby St. Peters College is selected. Convenience sampling technique is used for the study. The data collected through primary source and secondary sources are analyzed using appropriate mathematical & Statistical tools like Percentage analysis and ANOVA test.

Limitations

- NFC system is an advanced payment system and majority of the public is unaware and is mostly adopted by youngsters.
- The data collected from individuals are qualitative in nature that is their views; perception, satisfaction, opinion etc. may change from time to time.

Table 1: Demographic factors of the Respondents

	Frequency	Percentage
Age group	No. of respondents	Percent
21 and below	60	86
22-30	8	12
31-40	1	1
41-50	1	1
Gender		
Male	35	50
Female	35	50
Occupation		
Up to 10 th	6	10
Student	68	97
Employed	2	3

PG/ Professional	6	10
Family Income		
Up to Rs.50,000	21	30
Rs.50,001- Rs.1,00,001	19	27
Rs.1,00,001- Rs.1,50,001	20	29
Above Rs. 1,50,000	10	14
Respondent's concern about NFC payment		
Security	46	66
Privacy	22	31
Theft	2	3
Opinion on NFC payment system is more convenient		
Yes	65	93
No	5	7
Opinion on NFC payment system remove traditional system		
Yes	51	73
No	19	27
Role of NFC payment system in developing overall payment industry		
Increased sales	10	14
Contactless payment	19	27
Time saving	19	27
All of the above	22	32

Source: primary data

HYPOTHESIS TESTING

H0: There is no significant relationship between age of the respondents and problems faced by NFC users.

Analysis of Variance (ANOVA) is a statistical method that separates observed variance data into different components to use for additional tests. A one-way ANOVA is used for three or more groups of data, to gain information about the relationship between dependent and independent variables.

Table 2: Age and Problems faced by NFC users

ANOVA: Age of the respondents and Problems faced by NFC users						
Factors		Sum of squares	Df	Mean Square	F	Sig.
NFC payments are fast and easy to use	Between Groups	4.163	3	1.388	3.366	.024
	Within Groups	27.208	66	.412		
	Total	31.371	69			
NFC payments are more secure than traditional payment systems	Between Groups	2.227	3	.742	1.020	.390
	Within Groups	48.058	66	.728		
	Total	50.286	69			
NFC payments are widely accepted by most retailers	Between Groups	2.818	3	.939	1.158	.332
	Within Groups	53.525	66	.811		
	Total	56.343	69			
NFC payments can be used internationally	Between Groups	2.368	3	.789	1.520	.218
	Within Groups	34.275	66	.519		
	Total	36.643	69			
NFC payments are still new and not widely adopted	Between Groups	2.568	3	.856	1.156	.333
	Within Groups	48.875	66	.741		
	Total	51.443	69			
NFC payments can be done through almost all the smartphones	Between Groups	2.217	3	.739	1.038	.382
	Within Groups	46.983	66	.712		
	Total	49.200	69			
NFC payments have replaced traditional card Payments	Between Groups	3.038	3	1.013	.980	.408
	Within Groups	68.233	66	1.034		
	Total	71.271	69			
The use of NFC payment systems has increased in the past few years	Between Groups	4.135	3	1.378	2.076	.112
	Within Groups	43.808	66	.664		
	Total	47.943	69			

*significant at 5 percent level if F value < 0.05 - Reject Hypothesis

F- Frequency, DF - Degree of Freedom

The mean difference in the problems faced by NFC users among the respondents of different age groups is examined using one-way ANOVA.

F value is not significant at 5% significant level in all factors except NFC payments are fast and easy to use.

FINDINGS Majority of respondents (86%) belong to the age group of less than 21 years.

- Majority of respondents (97%) belong to students' category
- The sample size constitutes 50% of male and remaining 50 % of female categories.
- Majority of respondents (66%) is concerned about the security of NFC payment system.
- Almost all the respondents (93%) agree that NFC payment system is more convenient than traditional payment methods.
- There is no significant relationship between age and problems faced by NFC payment users except NFC system is fast and easy to use.

SUGGESTIONS

- Create awareness regarding NFC payment system as majority of the public are unaware of it.
- The NFC providers should invest in increasing the security features of the system as according to study majority of respondents were concerned about the security of NFC system.

CONCLUSION

The study has been conducted to analyze the problems faced by NFC users with reference to Kolenchery. It has highlighted several key issues that users encounter when using NFC payments. The study has found that the primary problems faced by users are related to security concerns, technical issues, and user experience.

One of the most significant challenges faced by users is the perceived lack of security when using NFC payments. Users are worried about the risk of fraud or theft when making payments, and this is often a major barrier to adoption.

Finally the study found that there is no significant relationship between age and problems faced by NFC users except NFC system is fast and easy to use. Age does not affect the problems faced by NFC users except the aforesaid factor.

Overall, the study suggests that addressing these issues is essential to promote wider adoption of NFC payments. Improving security measures, addressing technical problems, and improving the user experience are all critical steps that must be taken to encourage more widespread use of this technology.

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