

THE IMPACT OF CONTACTLESS PAYMENT CARDS ON CUSTOMER SATISFACTION: THE CASE OF LEBANON

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Paying using a contactless card is the latest payment technology. There is an urgent need to study the cultural trend towards alternative payment methods in light of these financial incentives. The contactless card system is a practical replacement for cash in low-value transactions due to its ability to compete with cash. Non-cash payments are represented by contactless payment systems that do not require direct physical contact between the consumer's payment device and the merchant's POS terminal. As a result, contactless payment is seen as a more viable alternative to cash than standard payment cards. Therefore, central banks in charge of currency distribution have a vested interest in debating the future of cash use. The researcher uses convenience sampling since they have access to the population. Many employees filled out the survey used in this research. There were 110 people requested to participate in the poll, but only 150 turned up. It is possible to have happiness after utilizing technology. Research shows that inherent attributes such as joy significantly affect how customers feel about new technology. It is generally known that consumers' hedonic motives affect their propensity to use online banking. It is hypothesized that intrinsic motivation influences the integrity and competence components of e-two trust. Customers who have had a positive experience with online banking are more likely to use it themselves because they see it the same way as others who have had a similar experience.

Keywords: security; trust; privacy; customer satisfaction; contactless payment cards

Introduction

There is a substantial discussion regarding whether cash, debit, or credit cards are more efficient for various transaction amounts, and it is estimated that between 0.49 and 0.65 percent of GDP is spent on POS transactions, making them a relatively new form of advance payment (Kangwa et al., 2021).

These financial incentives provide more reasons to investigate the rising societal trend of adopting alternative payment methods. Researchers in the Netherlands, Germany, Finland, and the United States have released several studies exploring consumers' attitudes on making



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contactless payments over the last year (El-Chaarani & Abiad, 2018). Although banks in Eastern Europe have expanded rapidly in the previous two decades, the area has been slow to adopt new forms of payment. There have been economic and social challenges in switching from cash to electronic payment systems (Stoica et al., 2015).

Contactless payment systems that replace cashless payments do not require any physical interaction between the customer's payment device and the retailer's POS terminal. Therefore, contactless payment is preferred over traditional payment cards to replace cash (Al-Smadi, 2011).

Thus, central banks responsible for money distribution consider the future of cash use. Contactless payment systems may make some individuals feel uneasy. Contactless payments are designed to be a faster and more convenient alternative to using a credit card in store. An increase in contactless payments and a decrease in cash transactions are common during the implementation of this payment method. This phenomenon is known as the "halo effect." Therefore, this leads to customer satisfaction, which is crucial in the modern retail environment (Tunay et al., 2018). Other advantages include less opportunity for theft, fewer opportunities for human mistakes in financial transactions, and the avoidance of currency depreciation. As a result of these initiatives, changes in consumer behavior have occurred. Overall customer satisfaction increases when they use alternative cashless payment alternatives (Haralayya, 2021).

Theoretical framework

Researchers are conducting numerous studies to better understand the extent and frequency with which people intend to use different types of information technology. TAM includes the user's expectations, intentions, and actions when interacting with the system (Gupta et al., 2020). TAM argues that customers' previous attitudes toward a system determine their decision to adopt it. This paradigm is based on the user's assessment of the usefulness of the system and the simplicity with which it may be used.

Modeling IT user adoption using this paradigm has been shown to be accurate and cost-effective (Firdous & Farooqi, 2017). TAM is less expensive and easier to implement, but whether or when a client uses a contactless credit card is entirely up to them. TAM is widely used in mobile service settings. Not all studies have shown a correlation between TAM attitude and outcomes (Abdurakhimova, 2021). As a result, much research has neglected the attitude part of the paradigm in favor of investigating the impacts of accessibility and usefulness on intent. The attitude variable was also excluded from the research model to keep things as straightforward as possible. Other technical and contextual aspects may influence user adoption of a particular technology (Siddik et al., 2016).

Still, TAM's core components provide a solid foundation for a thorough investigation. Users' propensity to adopt new technologies may be better predicted if researchers in this field take these extra considerations into account.

Empirical studies

Using contactless cards tends to improve customers' experiences. Customers like the quickness and simplicity of contactless payments. Customers like not having to deal with cash or wait in line to make a purchase, saving them time and stress.

Since this makes shopping more enjoyable and efficient, it has the potential to increase consumer happiness. Customers prefer contactless cards because they are more secure than magnetic stripe cards (Motwani & Vora, 2021).

NFC technology and encryption lessen the risk of fraud and unauthorized access to sensitive user information. Customers may be more satisfied overall if they have more faith in the payment system due to the increased security. Customer satisfaction may be boosted by instituting loyalty and incentive programs. Customers may be happier due to increased engagement and loyalty prompted by the incentives and advantages of using their contactless card (Wijayanti et al., 2021). The use of contactless cards has also made the payment process simpler and easier for the customer. Customers can pay without digging through their purses or pockets for cash or credit cards, which can provide a more pleasant shopping experience. The availability of contactless payment methods is another way contactless cards affect customer happiness (Sun et al., 2021).

Consumers will have an easier time keeping track of their accounts and making purchases as more businesses use contactless payment options. More and more companies are beginning to accept contactless payments, which might make it more convenient for customers to avoid choosing among many alternative payment options (Wanalo et al., 2020). Customers can also enjoy the convenience of contactless cards and digital wallets. Customers can bypass the inconvenience of swiping a credit card and use a digital wallet instead. This secure and easy payment method can increase satisfaction and repeat business. This led to the development of the following hypothesis:

H1: There is a relationship between contactless cards and customer satisfaction

Contactless payment cards boost both safety and enjoyment. Customers are more satisfied when security is strengthened, and they become dissatisfied when it is decreased (Mary et al., 2019). Contactless payment cards use various security features to safeguard the user's money and identity. Methods for detecting and preventing fraud are also included, along with encryption and secure communication protocols to keep out intruders. Customers have more faith in the payment process when they know their financial data is safe. If people feel more confident about sharing their financial and personal data online, they are more likely to do so.

People's reluctance to adopt contactless payments stems from legitimate concerns about their personal financial information safety (Malladi et al., 2021). Dissatisfied customers may stop making purchases using contactless payment cards. Businesses must emphasize the security of their contactless payment systems to ensure consumer satisfaction and maintain their faith in the payment process. Encryption, regular security audits, and upgrades to communication protocols and fraud detection and prevention systems are all viable options for addressing this problem.

Introducing security measures and disseminating this information may affect customer satisfaction. Companies may boost their customers' trust in the payment system by detailing their precautions to keep their financial information secure (Lutfi et al., 2021). As a result, this may increase the demand for contactless payment cards and the satisfaction of their users. The relationship between security and consumer happiness may be influenced by the adoption of industry standards and regulations regarding contactless payment cards (Geng & He, 2021).

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Following these guidelines will show that you care about the safety of your consumers and will give them confidence when transacting with you online. The impact of security events on your customers' happiness is another factor to consider (Zherdetska et al., 2021). Customers may stop using this payment method and start using another if there is a security breach. If this occurs, it might lead to a decline in consumer satisfaction and loyalty, which could have disastrous effects on the company's bottom line. This led to the development of the following hypothesis:

H2: There is a relationship between security and customer satisfaction

Given the significance of privacy to many customers when making financial transactions, privacy issues may substantially influence customer satisfaction with contactless payment cards. Clients who feel their financial and personal information is safe are more likely to enjoy the payment process. Customers may feel more comfortable using contactless payment cards due to the spread of encryption and secure connection technology. In addition, several contactless payment card issuers let their customers decide how and when their data is shared, and some even let them refuse all data gathering.

These choices may increase customer happiness by fostering more confidence between consumers and merchants. Customers may be less pleased with contactless payment cards if they are concerned about privacy. Contactless payment cards may lose popularity if users worry about the security of their financial and personal information or the invasion of privacy.

Moreover, privacy leaks may significantly impact consumers' happiness. For example, suppose a consumer's financial or personal information is stolen or used inappropriately due to a security breach. In this case, the consumer may feel violated and lose faith in the payment provider. The company may fall on hard times if customer satisfaction and loyalty decline. Businesses must prioritize protecting their customers' financial and personal information while accepting contactless payment cards. Encryption, encrypted communication protocols, privacy-preserving data-collecting practices, routine security audits, and software patches may help.

In addition, organizations must be transparent with consumers about their privacy policies and procedures. This can increase consumer confidence in the banking system and the payment system in general. Customers' concerns about privacy may be allayed, and satisfaction increased if they are transparent about how their personal and financial data will be collected, stored, and used.

Government rules and industry standards for contactless payment cards may affect consumer happiness and safety. Firms that go above and beyond to ensure their customers' data can gain the trust of their consumers and encourage them to continue using the service.

For instance, the European Union's General Data Protection Regulation (GDPR) may lead to greater consumer satisfaction and confidence in the payment process by imposing stringent criteria on the acquisition and use of personal data.

Businesses also have a responsibility to educate consumers about the benefits of contactless payment cards and secure data processing procedures. For example, customers may not realize that contactless payment cards are often safer than other payment methods and that the technology behind these transactions can help protect their financial and personal information. Several factors influence consumer reluctance to use contactless payment cards, including consumers' desire to protect their personal information.

Increasing customer satisfaction and trust in the financial transaction process can be achieved through strict adherence to confidentiality, honest disclosure of privacy policies, compliance with laws and industry standards, and consumer education.

Companies that value their customers' privacy can give their consumers more confidence in the transaction. This led to the development of the following hypothesis:

H3: There is a relationship between security and customer satisfaction

Methodology

Finding study participants was challenging due to the novelty of online banking. Therefore, a convenience sampling method was used. Convenience samples are not based on statistical probability as participants are selected based on their accessibility. Using this method to gather intelligence is quick, simple, and inexpensive. A total of 110 people from 5 Lebanese companies took part in the survey.

The data for the study was collected largely through a questionnaire. The study had two sections.

In the introduction, we included some background information about our audience, such as their age, gender, marital status, income level, and education level. In the next section, we analyzed the theoretical framework's definitions of the many facets of contactless payment cards to divide the material into six distinct sections. The usage of contactless cards, data protection, user-friendliness, and customer satisfaction were all taken into account. Each of these variables spawned its own set of classifications.

At the end of each section, participants were given a set of statements and asked to rate their level of agreement or disagreement with each statement on a 5-point Likert scale. One may "strongly disagree" with 1 on the Likert scale, and "strongly agree" with 5. Despite the challenges of participant recruitment caused by the development of online banking, data from 200 people across five organizations in Lebanon were collected using a convenience sampling technique.

In this study, people completed standardized questionnaires during their free time. Before starting the study, branch managers from all five companies agreed to let researchers use their locations. The purpose of the research was explained to the participants before they were given the questionnaire to complete. The pilot round of testing the program involved the customers from three different Lebanon companies.

The participants in the pilot study were asked to provide their opinions in the survey and whether or not they found any questions to be particularly difficult to comprehend. The program was revised based on their comments to make it more user-friendly and easy to understand. SPSS version 16 was used to analyze the field questionnaire data.

A literature review was conducted to ensure the validity of the questionnaire, and SPSS was used for the vast majority of the statistical analysis of the field data.

Tab. 1 shows the frequency and percentage distribution of gender among the group of individuals. The table includes data collected from 110 people, with 54 (49.1%) identified as female and 56 (50.9%) identified as male.

Tab. 2 shows the frequency and percentage distribution of educational level among the group of individuals. The table includes data collected from 110 people, with 59 (53.6%) reported having a bachelor's degree, 38 (34.5%) reported having a master's degree, 10 (9.1%) reported having another type of education, and 3 (2.7%) reported having a PhD.

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Table 1 – Population gender
(author’s survey results)

		Frequency	Percent	Valid Percent	%
Valid	Female	54	49.1	49.1	49.1
	Male	56	50.9	50.9	100.0
	Total	110	100.0	100.0	

Table 2 – Population education
(author’s survey results)

		Frequency	Percent	Valid Percent	%
Valid	Bachelors	59	53.6	53.6	53.6
	Masters	38	34.5	34.5	88.2
	Others	10	9.1	9.1	97.3
	PhD	3	2.7	2.7	100.0
	Total	110	100.0	100.0	

Table 3 – Population income
(author’s survey results)

		Frequency	Percent	Valid Percent	%
Valid	\$1,000 to \$2,000	19	17.3	17.3	17.3
	\$500 to \$1,000	29	26.4	26.4	43.6
	Less than \$500	25	22.7	22.7	66.4
	Over \$2,000	11	10.0	10.0	76.4
	Prefer not to disclose.	26	23.6	23.6	100.0
	Total	110	100.0	100.0	

Tab. 3 shows the frequency and percentage distribution of monthly income among the group of individuals. The table includes data collected from 110 people, with 19 (17.3%) reported a monthly income between \$1,000 and \$2,000, 29 (26.4%) reported a monthly income between \$500 and \$1,000, 25 (22.7%) reported a monthly income less than \$500, 11 (10.0%) reported a monthly income over \$2,000, and 26 (23.6%) preferred not to disclose their income.

The regression analysis presented in Tab. 4 provides insights into the impact of various factors - namely, Contactless Cards, Security, and Privacy - on Customer Satisfaction. The model is statistically significant, as indicated by the predictors and their respective significance levels. With an R Square value of 0.334, the model accounts for approximately 33.4% of the variance in Customer Satisfaction. While this is a substantial amount of explained variance, it also suggests that other unexamined factors could be contributing to Customer Satisfaction.

The adjusted R Square value of 0.302 further refines this interpretation, indicating a reasonably good fit of the model to the data while accounting for the number of predictors. The Standard Error of the Estimate stands at 0.558, offering a measure of the model's prediction error.

Table 4 - Regression analysis
(author's survey results)

Model Summary						
Model	R	R Square	Adjusted R Square		Std. Error of the Estimate	
1	.578 ^a	.334	.302		.558	
a. Predictors: (Constant), Contactless Cards, Security, Privacy, and Customer Satisfaction						
Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.380	.228		1.664	.099
	Contactless Cards	.507	.076	.122	2.413	.011
	Security	.282	.066	.110	3.257	.012
	Privacy	.527	.075	.032	4.360	.020
a. Dependent Variable: Customer Satisfaction						

Examining the coefficients, one finds that Contactless Cards, Security, and Privacy are all positively associated with Customer Satisfaction. Specifically, the unstandardized coefficient for Contactless Cards is 0.507 with a significance level of 0.011, denoting a statistically significant positive relationship with Customer Satisfaction. Security also presents a positive coefficient of 0.282, with a significance level of 0.012, affirming its role in enhancing Customer Satisfaction. Privacy tops the list with a coefficient of 0.527 and a significance level of 0.020, suggesting that it substantially affects Customer Satisfaction among the variables studied.

Recommendations

The speed and convenience offered by contactless payment cards have led to an increase in their use in recent years. These cards include radio frequency identification (RFID) technology to make purchases as simple as tapping the card on a reader. Although smart cards have many benefits, some people have concerns about their security, privacy, technology, and usability. In this analysis, we will analyze each component and offer some tips for improving them.

The security of contactless payment cards is a major concern. Thieves have used RFID signal interception to conduct fraudulent transactions in certain situations. To address this issue, improved encryption and authentication methods for contactless payment cards are required. There are several methods, including tokenization, biometric identification, and multi-factor authentication. Issuers also have a responsibility to monitor their expenses and sound the alarm if they see anything unusual.

Contactless payment cards pose additional privacy risks. Users of these cards are understandably cautious of the extensive data they collect and store. Companies should give consumers more control and transparency in their data collection and use to address this issue.

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Data minimization and target limitation, two principles of privacy, might be useful here. In addition, card issuers must provide users with easily accessible privacy guidelines outlining the specifics of how their data will be collected, used, and disclosed.

The contactless credit card technology is evolving rapidly. If the industry is serious about improving the customer experience, it must create new, cutting-edge technologies that make financial transactions even simpler and safer. For example, near-field communication (NFC) technology might shorten the time it takes to complete a transaction and expand the range of contactless payments. More privacy and transparency in monetary transactions are two additional benefits of blockchain technology.

Last but not least, contactless payment card acceptance is dependent on a positive user experience. If companies care about their customers' satisfaction, they will work tirelessly to simplify and improve the payment process. To achieve this goal, we must create interfaces that are intuitive to use and provide simple instructions. Mobile payment solutions are becoming increasingly popular because they provide users with more convenience and customization options.

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