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A STUDY ON THE USE OF REG-TECH FOR PRIVACY PROTECTION IN DIGITAL PAYMENTS AT CHENNAI

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ABSTRACT

In the growing digital era, the usage of digital payments platforms and mobile wallets has rapidly increased. As the increase in the digital payment, there is need to increase in the privacy and data protection of the users. This study investigates the role of Reg-Tech (Regulatory Technology) in the digital payment. The aim of this study is to identify the awareness, effective use and challenges faced by the users in the application. In this research, the data was collected through the google form questionnaire and the chi-square test is used in this paper. The result shows the knowledge and difficulties of the privacy features.

Keywords; Privacy Protection, Data Security, User Awareness, Digital Transaction Safety and Regulatory Compliance.

1. INTRODUCTION

In this rapidly growing digital age, digital payments have become a part of life. Whether payment of bills and buys or bill payments, human beings rely heavily on digital modes like Google Pay, Phone-Pe, and Paytm. The geographical area taken for this study is Chennai City. There are the benefits of speed and convenience, but in the bargain are serious concerns about privacy and data security. Individuals share sensitive financial and private information, and most of them do not even know how secure their information really is in such transactions. This is where Reg-Tech or Regulatory Technology steps in. Most of them doesn't aware of Reg-Tech, it is a subset of Fin-Tech. Financial Technology is used for the customer innovation but Reg-Tech is used for the regular check of compliance and whether the technology is under the regulation or not and make the necessary action regarding the compliance and enhance the features according to the modern development. Reg-Tech uses advanced technologies including blockchain, artificial intelligence, and data analytics to allow financial platforms to meet regulatory requirements and protect user information in a better manner. The Regulatory Technology provides services like data encryption, biometric verification, real-time fraud detection, consent management systems and AI-powered compliance tools. This technology measures the user perception of data safety, data breaches, trust level of users. But most don't even know how these technologies work or if they actually keep their data safe. This study would like to know regarding the use of Reg-Tech for protection of electronic payment privacy, i.e., in Chennai. The result shows how the users trust the technology and aware of it.

OBJECTIVES

- To identify the level of awareness about Reg-tech driven privacy tools among digital payment users.
- To analyse the perceived effective use of Reg-Tech in protecting personal and transaction data.
- To Study the challenges user face in understanding or using privacy features.

STATEMENT OF THE PROBLEM

In the growing modern world, the advancement of technologies is increasing rapidly. As much the technology increases the data privacy also increase to protect the data of the users. Now a days payments are mostly made in digital form, the need for protection is increased by the increase in the user number. There is a huge concern about the privacy and security of personal data. The Reg-Tech (Regulatory Technology) plays a vital role in the privacy and security in digital payment. Most of the users are unaware about this technology how efficiently safeguarding the personal and transactional data. The user-awareness application gap is a serious concern.

2. LITERATURE REVIEW

1. Growth of Digital Payments and Privacy Concerns

The rapid expansion of digital payments has transformed the way consumers transact, especially in urban regions like Chennai. According to Sharma and Singh (2020), the increased dependency on mobile wallets and UPI-based payments has led to a higher exposure of personal and financial data, raising privacy concerns. Users are often unaware of where and how their data is stored and used, making privacy protection a growing issue in the Indian digital ecosystem.

2. Introduction to Reg-Tech and Its Functions

Regulatory Technology (Reg-Tech) has emerged as a vital solution to help financial service providers comply with data protection laws and regulations. Arner et al. (2017) described Reg-Tech as the application of technology to improve regulatory processes, especially compliance and reporting. In the context of digital payments, it involves tools that automate security checks, detect fraud, and ensure adherence to privacy laws like GDPR and India's DPDP Act.

3. Role of Reg-Tech in Ensuring Privacy

A study by Zetzsche et al. (2018) highlighted that Reg-Tech plays a critical role in monitoring data use and ensuring privacy through real-time analysis and reporting systems. Technologies like blockchain and AI have enhanced the capabilities of Reg-Tech to track user data flow and prevent unauthorized access. This is particularly important for digital wallets and payment gateways dealing with large volumes of transactions daily.

4. User Awareness of Privacy Tools in Digital Payments

There is limited awareness among users about the privacy technologies embedded in digital payment platforms. Rani and Rao (2021) found that most users in metro cities like Chennai use apps like Paytm and PhonePe without fully understanding how their data is being protected. Lack of digital literacy and trust in brand reputation are major reasons for this gap.

5. Effectiveness of Reg-Tech in India's Payment Ecosystem

While Reg-Tech has proven effective in developed countries, its integration in India is still evolving. According to Bhattacharya and Rajan (2020), Indian fintech firms are slowly adopting Reg-Tech solutions but face challenges such as regulatory uncertainty, lack of skilled workforce, and high implementation costs. These factors impact the consistent application of privacy measures across platforms.

3. RESEARCH METHODOLOGY

RESEARCH DESIGN - Descriptive Research Design is used for this Study to understand the level of awareness, effectiveness, and challenges and Reg-Tech in protecting user privacy in digital payments.

RESEARCH TYPE - A quantitative research approach is adopted, using a structured questionnaire with likert-scale statements. This method allows for systematic data collection and statistical analysis of responses.

RESEARCH AREA - Chennai City

SAMPLE SIZE - The sample size taken for this study is 130, due to time limitation.

DATA COLLECTION

- The primary data are collected through a structured questionnaire.
- The secondary data are collected through websites, journal and online.

STATISTICAL TOOL

The statistical tools used for this study is

- Simple Percentage Analysis
- Chi-Square Test

LIMITATIONS OF THE STUDY

- The study is limited to one city (Chennai), so results may not be generalized to all of India.
- It depends on self-reported data, which may include biases.
- It does not evaluate the back-end technical functioning of Reg-Tech solutions used by platforms.

DATA ANALYIS AND INTERPRETATION

SIMPLE PERCENTAGE ANALYSIS

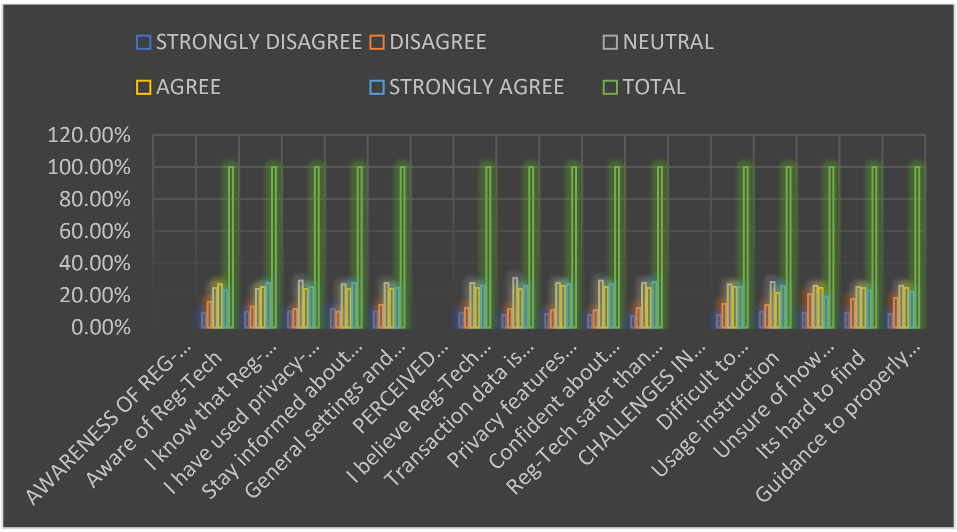
QUESTIONS	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE	TOTAL
AWARENESS OF REG-TECH AND PRIVACY						
Aware of Reg-Tech	9.23%	16.15%	24.62%	26.92%	23.08%	100.00%

I know that Reg-Tech is used for protect user privacy	10.00%	13.08%	23.85%	25.38%	27.69%	100.00%
I have used privacy-related features	10.00%	11.54%	29.23%	23.85%	25.38%	100.00%
Stay informed about protection	11.54%	10.00%	26.92%	23.85%	27.69%	100.00%
General settings and Reg-Tech privacy tool apps	10.00%	13.85%	27.69%	23.85%	24.61%	100.00%
PERCEIVED EFFECTIVENESS OF REG-TECH						
I believe Reg-Tech keep my personal information safe	9.23%	12.31%	27.69%	24.62%	26.15%	100.00%
Transaction data is secure	7.69%	11.54%	30.77%	23.85%	26.15%	100.00%
Privacy features available	8.47%	10.77%	27.69%	26.15%	26.92%	100.00%
Confident about using digital payments	7.69%	10.77%	29.24%	25.38%	26.92%	100.00%
Reg-Tech safer than those that don't	6.92%	12.31%	27.69%	24.62%	28.46%	100.00%
CHALLENGES IN USING PRIVACY FEATURES						
Difficult to understand the privacy settings	7.69%	14.62%	26.92%	25.38%	25.39%	100.00%
Usage instruction	10.00%	13.85%	28.46%	21.54%	26.15%	100.00%
Unsure of how privacy settings work	9.23%	20.77%	26.15%	24.62%	19.23%	100.00%
Its hard to find	9.23%	17.69%	25.38%	24.62%	23.08%	100.00%
Guidance to properly use	8.46%	18.46%	26.15%	24.62%	22.31%	100.00%

of privacy features						

INTERPRETATION

The percentage analysis reveals that the user awareness and privacy-related features in digital payment is moderate, among the respondent even though the minority of respondent remain unaware. A majority of users believe that Reg-Tech effectively protects the personal and transactional data. Many users find it difficult to understand and privacy settings. And minority of respondent needs guidance to understand this privacy settings. This shows the clear gap between the privacy features and user confidence, and trust in the digital payment platforms.



CHI-SQUARE TEST

HYPOTHESIS

Table 1 - AGE × I AM AWARE OF THEM REG-TECH AND WHAT IT MEANS

Null Hypothesis (H0): There is no association between Age and awareness of Reg-Tech and what it means.

Alternate Hypothesis (H1): There is an association between Age and awareness of Reg-Tech and what it means.

AGE × I AM AWARE OF THEM REG-TECH AND WHAT IT MEANS

		I AM AWARE OF THEM REG-TECH AND WHAT IT MEANS					TOTAL
		1.00	2.00	3.00	4.00	5.00	
AGE	1.00	6	7	5	3	5	26
	2.00	5	7	2	2	12	28
	3.00	4	2	4	6	5	21
	4.00	6	6	6	3	5	26
	5.00	6	5	6	7	5	29
TOTAL		27	27	23	21	32	130

CHI-SQUARE TESTS

	VALUE	DF	ASYMPTOTIC SIG. (2-TAILED)
Pearson chi-square	15.19	16	.511
Likelihood ratio	15.30	16	.503
Linear-by-linear association	.01	1	.931
N of valid cases	130		

Table Value (TV): 26.296

Chi-square Value: 15.19, CV > TV

Interpretation

Since p value is greater than 0.05, hence, null hypothesis is not rejected and accept alternate hypothesis. Therefore, there is no association between Age and awareness of Reg-Tech and what it means.

HYPOTHESIS

TABLE.2 - GENDER × I KNOW THAT REG TECH IS USED TO PROTECT USER PRIVACY IN DIGITAL PAYMENTS

Null Hypothesis (H0): There is no association between Gender and knowledge that Reg-Tech is used to protect user privacy in digital payments.

Alternate Hypothesis (H1): There is an association between Gender and knowledge that Reg-Tech is used to protect user privacy in digital payments

GENDER × I KNOW THAT REG TECH IS USED TO PROTECT USER PRIVACY IN DIGITAL PAYMENTS

		I KNOW THAT REG TECH IS USED TO PROTECT USER PRIVACY IN DIGITAL PAYMENTS					TOTAL
		1.00	2.00	3.00	4.00	5.00	
GENDER	1.00	11	17	19	6	12	65
	2.00	16	11	9	13	16	65
TOTAL		27	28	28	19	28	130

CHI-SQUARE TESTS

	VALUE	DF	ASYMPTOTIC SIG. (2-TAILED)
Pearson chi-square	8.93	4	.063
Likelihood ratio	9.09	4	.059
Linear-by-linear association	.45	1	.502
N of valid cases	130		

Table Value (TV): 9.488

Chi-square Value: 8.93, CV > TV

Interpretation

Since p value is greater than 0.05, hence, null hypothesis is not rejected and accept alternate hypothesis. Therefore, there is no association between Gender and knowledge that Reg-Tech is used to protect user privacy in digital payments

HYPOTHESIS

TABLE.3 - EDUCATION × I HAVE SEEN OR USED PRIVACY RELATED FEATURES IN DIGITAL PAYMENTS APPS

Null Hypothesis (H0): There is no association between Education and having seen or used privacy-related features in digital payments apps.

Alternate Hypothesis (H1): There is an association between Education and having seen or used privacy-related features in digital payments apps.

EDUCATION × I HAVE SEEN OR USED PRIVACY RELATED FEATURES IN DIGITAL PAYMENTS APPS

		I HAVE SEEN OR USED PRIVACY RELATED FEATURES IN DIGITAL PAYMENTS APPS					TOTAL
		1.00	2.00	3.00	4.00	5.00	
EDUCATION	1.00	5	7	11	8	7	38
	2.00	5	6	8	7	9	35
	3.00	7	5	6	2	14	34

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	4.00	3	6	5	3	6	23
TOTAL		20	24	30	20	36	130

CHI-SQUARE TESTS

	VALUE	DF	ASYMPTOTIC SIG. (2-TAILED)
Pearson chi-square	9.71	12	.642
Likelihood ratio	9.96	12	.619
Linear-by-linear association	.03	1	.866
N of valid cases	130		

Table Value (TV): 21.026

Chi-square Value: 9.71, CV > TV

Interpretation

Since p value is greater than 0.05, hence, null hypothesis is not rejected and accept alternate hypothesis. Therefore, there is no association between Education and having seen or used privacy-related features in digital payments apps

HYYPOTHESIS

TABLE.4 - QUALIFICATION × I TRY TO STAY INFORMED ABOUT PRIVACY AND DATA PROTECTION IN PAYMENT APPS

Null Hypothesis (H0): There is no association between Qualification and trying to stay informed about privacy and data protection in payment apps.

Alternate Hypothesis (H1): There is an association between Qualification and trying to stay informed about privacy and data protection in payment apps.

QUALIFICATION × I TRY TO STAY INFORMED ABOUT PRIVACY AND DATA PROTECTION IN PAYMENT APPS

		I TRY TO STAY INFORMED ABOUT PRIVACY AND DATA PROTECTION IN PAYMENT APPS					TOTAL
		1.00	**2.00**	**3.00**	**4.00**	**5.00**	
QUALIFICATION	**1.00**	7	5	9	5	5	31
	2.00	9	7	6	8	4	34
	3.00	9	6	8	1	5	29
	4.00	9	8	4	8	7	36
TOTAL		34	26	27	22	21	130

CHI-SQUARE TESTS

	VALUE	DF	ASYMPTOTIC SIG. (2-TAILED)
Pearson chi-square	9.48	12	.662
Likelihood ratio	11.05	12	.525
Linear-by-linear association	.00	1	.963
N of valid cases	130		

Table Value (TV): 21.026

Chi-square Value: 9.48, CV > TV

Interpretation

Since p value is greater than 0.05, hence, null hypothesis is not rejected and accept alternate hypothesis. Therefore, there is no association between Qualification and trying to stay informed about privacy and data protection in payment apps.

4. FINDINGS

Simple Percentage Analysis:

- Moderate awareness of Reg-Tech: Around 50% of respondents are aware of Reg-Tech and its role in protecting privacy, but a significant portion remains neutral or unaware.
- Users believe Reg-Tech is effective: A majority (50%+) agree that Reg-Tech protects personal and transactional data effectively, boosting confidence in digital payments.
- Privacy tools are underutilized: Despite the presence of features, fewer users report actual usage, suggesting a gap between availability and adoption.
- User education is lacking: Many respondents face difficulty understanding and finding privacy settings, and nearly half feel unsure about how these tools work.
- Guidance is needed: 47% of users express the need for help in using privacy features properly, indicating demand for more user-centric support.

Chi-Square Test Results:

- Age vs Awareness of Reg-Tech: No significant association found ($p = 0.511$). Awareness of Reg-Tech is consistent across different age groups.
- Gender vs Knowledge of Reg-Tech Use: No significant relationship ($p = 0.063$). Both genders showed similar knowledge levels regarding Reg-Tech's privacy protection role.
- Education vs Use of Privacy Features: No significant association ($p = 0.642$). Education level did not influence whether users used privacy features.
- Qualification vs Staying Informed: No significant association ($p = 0.662$). Efforts to stay informed about privacy and data protection were not dependent on educational qualification.

SUGGESTION

- Awareness Campaigns: Run focused awareness programs in digital payment apps to explain what Reg-Tech is and how it protects user data.
- Simplified User Interfaces: Redesign privacy settings in apps to be more intuitive and accessible for users of all education levels.
- In-App Guidance: Introduce pop-up tutorials, tooltips, or short videos within apps explaining the purpose and use of privacy features.
- Customer Support Integration: Embed chat or voice-based support systems that help users manage privacy tools effectively.
- Localized Education: Conduct educational workshops or push notifications in regional languages, especially for semi-urban and less tech-savvy populations.
- Partnership with Regulatory Bodies: Work with regulatory institutions to ensure apps meet transparency standards and publish privacy performance indicators.
- Gamified Learning: Reward users for completing privacy checkups or tutorials within payment apps to increase engagement and adoption.

5. CONCLUSION

The study concludes that the growing awareness and trust in Reg-Tech solution among digital payment users in Chennai, this shows the technology gap in understanding and utilizing privacy-related features effectively and efficiently. The Reg-Tech application used in the digital payment system through this technology the compliance and audit can be regulated under regulation. This application also safeguards the personal and transactional data of the users and modernize the application to the modern requirements. Bridging this awareness gap is crucial for building trust and ensuring secure digital financial experiences.

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