

Digital Disruption: Assessing the Impact of E-Service Quality on Payment Banks

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Abstract—The purpose of this study is to look into how e-service performance affects consumers' adoption, usage, and general satisfaction with payment banks in Bangalore. The goal of the research is to better understand the elements that lead to satisfying e-service encounters in order to give payment banks useful information that will improve their business practices and customer service. Convenience sampling method was applied to arrive at a sample size of 200 within the geographical limits of urban Bangalore. Structural equation modelling was applied to test the proposed research model through TAM in adopting UPI payment among the payment bank customers. Usage intention is the most influencing factor on the actual usage within the model. This research can improve and broaden the Technology Acceptance Model (TAM) theoretical framework by offering empirical support for the links among e-service quality, perceived usefulness, perceived ease of use, and customer outcomes in the context of payment institutions. Payment banks have to acknowledge that client acquisition and retention are heavily dependent on the quality of their e-services.

Index Terms—Technology Adoption Model (TAM), Payment banks, E-Service quality, and Customers

I. INTRODUCTION

An array of financial services is provided to a heterogeneous clientele by payment banks, which are a relatively new idea in India and have shown promise as a substitute for conventional commercial banks. These banks have gained a lot of popularity (Alrabei et.al., 2022) since they prioritize digital banking, are easily accessible, and focus on providing basic banking services. However, what actually makes payment banks successful is their ability to offer top-notch e-services that meet customers' evolving expectations in the digital era (Danisman et.al., 2020).

Payment banks are now extensively used due to their digital-first strategy and user-friendliness, making them far more popular than when they originally appeared in India. That said, a key element in evaluating the success of these banks is the effectiveness of their e-services (Kemal, 2019). The researcher intended to explore the answers to the below research questions:

(a) What are the critical dimensions influencing the E-Service Quality of the payment banks?

Studies on the effects of e-services on many businesses have been conducted, but there hasn't been much that really looks at how e-service quality affects payment banks' uptake (Inoue, 2019). In Bangalore, a technologically advanced city, this study attempts to close this gap by examining the factors that affect consumers' decisions to embrace and use payment banks. The technologically astute city of Bangalore lacks information about the specific contribution that e-service performance makes to the success of payment institutions (Suhartanto et.al., 2020). There is a knowledge vacuum regarding the precise contribution that e-service performance makes to payment institutions' profitability, especially when considering Bangalore, a technologically sophisticated metropolis (Sakala & Phiri, 2019).

II. LITERATURE REVIEW

An appropriate theoretical framework for this research is provided by the Technology Acceptance Model (TAM). According to TAM, perceptions of technology's utility and usability have an impact on people's inclinations to utilize it (Ahmad et.al., 2020). Regarding payment banks, perceived utility denotes the degree to which clients feel that utilizing e-

services will enhance their banking encounter, whilst perceived ease of use denotes the perceived simplicity of utilizing the bank's online services (Usman et.al., 2022).

Numerous investigations have looked into the connection between client results in a variety of industries and the quality of e-services. As an example, (Alnemer, 2022) discovered that the adoption of online banking was significantly predicted by perceived utility and convenience of use. In the retail banking industry, showed how e-

service quality improves client happiness and loyalty (Kimiagari & Baei,2022).

There is, however, a dearth of research expressly looking at how e-service quality affects payment bank usage. Customers of payment institutions appreciated accessibility, security, and convenience, according to a preliminary survey done in India by (Ly & Ly, 2022). To learn more about the precise e-service quality factors that influence adoption, more investigation is necessary.

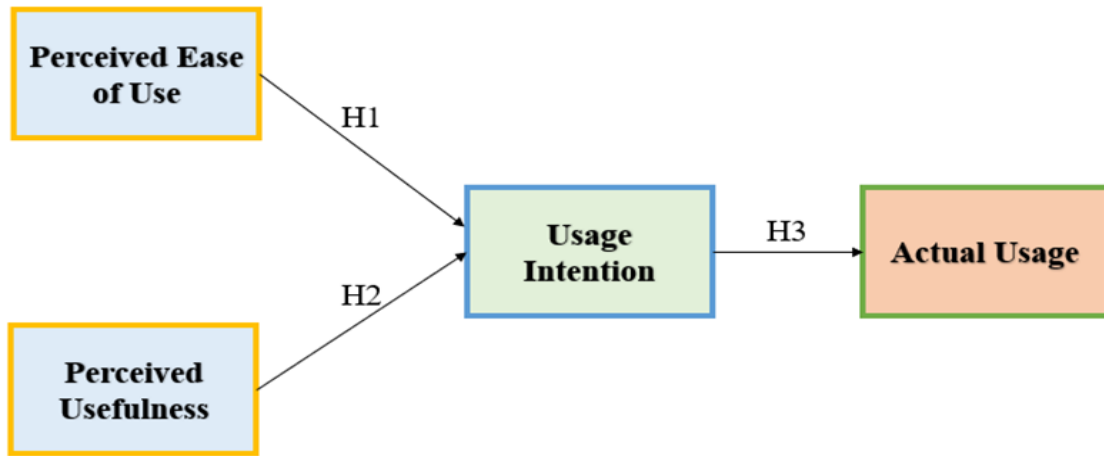


Figure 1: Proposed Research Model

The TAM and current literature are the basis for the following conceptual framework, which is suggested. The framework postulates that customers will adopt payment banks more frequently if they view e-service quality to be positively correlated with perceived usefulness and perceived ease of use (Riza & Hafizi,2019). The below are the framed hypothesis in the study;

H1: Perceived ease of use positively influences usage intention.

H2: Perceived usefulness positively influences usage intention.

H3: Usage intention positively influences actual usage.

According to the literature research, e-service quality is a major factor in payment banks' uptake the UPI modes. Payment banks can create plans to improve their e-services and draw in more consumers by knowing which specific aspects of e-service quality (Aldammagh et.al.,2021) are appreciated by

customers and how they affect perceived utility and simplicity of use.

III. MATERIALS & METHODS

Primary data was gathered by means of online surveys directed towards clients of several payment banks located in Bangalore. The purpose of the study was to gauge consumer satisfaction with several e-service performance metrics, such as transaction speed, customer assistance, mobile app functionality, and website usability. The study was carried out in Bangalore, India's Karnataka state. Bangalore is a major centre for technology, home to an increasing number of tech-savvy people who will probably be among the first to use digital banking services. This study uses a quantitative research approach to look into how Bangalore's adoption of payment banks using UPI applications is affected by the quality of e-services. The customers of the city's payment banks were surveyed in order to gather information. A

structured online survey will be developed to gather data from customers of various payment banks operating in Bangalore. The survey was disseminated through online channels, such as social media and email, targeting customers of payment banks in Bangalore. Convenience sampling was applied to collect the sample size of 200 customers. It is a realistic strategy to contact a significant portion of the target audience that may be interested in responding, even though it might not ensure an entirely representative sample.

The distribution of survey responses and the demographics of the respondents was summed together using descriptive statistics. To test the suggested conceptual framework and evaluate the direct and indirect effects of UPI payment on e-service quality as customer adoption, structural equation modelling, was employed. Multiple correlations between variables can be analysed simultaneously thanks to the strength of SEM as a statistical technique (Zhang et.al.,2021). The study approach will meticulously address ethical

considerations at every stage. To preserve participant privacy, data will be anonymised and kept in a secure location.

IV. RESULTS

The survey results will be summarized using descriptive statistics, and significant links between the performance of the e-service and customer outcomes will be found using inferential statistics, which will be used to test hypotheses. A reliability analysis was conducted on the variables, which consisted of twenty items. The reliability of the questionnaire was deemed good by Cronbach's alpha ($\alpha = 0.89 > 0.70$, $N = 200$). There were 80% male and 20% female customers. The majority of respondents were in the age range of 18 to 40 years. The majority of the customers were graduates who were students and salaries employees.

The measurement model was assessed through confirmatory factor analysis as below.

Table 1: Confirmatory Factor Analysis Summary

Construct	Items	Loadings	Cronbach α	AVE	CR
Perceived Ease of Use	PE1	.840	.776	.611	.893
	PE2	.896			
	PE3	.871			
	PE4	.807			
Perceived Usefulness	PU1	.849	.785	.554	.854
	PU2	.885			
	PU3	.885			
	PU4	.860			
Usage Intention	US1	.991	.869	.572	.819
	US2	.859			
	US3	.853			
	US4	.821			
Actual usage	AU1	.779	.849	.592	.899
	AU2	.834			
	AU3	.891			
	AU4	.889			
Source: Primary Data					

The factor loadings within the items measuring the constructs were above 0.70. The presence of Common-method variance in the data was

statistically tested using Harman's single factor test through unrotated Factor Analysis performed in SPSS. However, the first factor alone contributed

only 28.05% of the total variance, which is much less than the suggested 50% variance explanation threshold. Model fit was assessed using the goodness-of-fit index, the adjusted goodness-of-fit

index, the normed fit index, the comparative fit index, Normed Chi Squares were above the recommended value of 0.9. The Root Mean Square Error was below 0.08.

Table 2: Discriminant Validity – Farnell Larcker Criterion

Constructs	Perceived Ease of Use	Perceived Usefulness	Usage Intention	Actual usage
Perceived Ease of Use	.669			
Perceived Usefulness	.437	.785		
Usage Intention	.562	.328	.732	
Actual usage	.387	.456	.571	.717

Source: Primary Data

The table 2 shows the discriminant validity of the chosen constructs in the model based on Farnell Larcker criterion. This criterion states that a construct's square root of the average variance it extracts must be larger than the correlation it has with any other construct. This criterion, which suggests that diagonal value should be larger than all values in the same row and column.

Table 4.5: Path Analysis Summary

Indicators	Path Coefficients	Mean	SD	t-value	p-Value
Perceived ease of use → Usage Intention	.358	.029	.012	2.478	.002
Perceived usefulness → Usage Intention	.292	.023	.011	2.053	.010
Usage Intention → Actual usage	.544	.024	.015	2.821	.000

Source: Primary Data

The analysis describes that there is a positive influence of Perceived ease of use on usage intention with a beta coefficient of 0.358 statistically significant at 1%. There is a positive influence of Perceived usefulness on usage intention with a beta coefficient of 0.292 statistically significant at 1%. There is a positive influence of usage intention actual usage with a beta coefficient of 0.544 statistically significant at 1%. Therefore, the null hypothesis H1, H2 & H3 are rejected and alternative hypothesis is accepted.

V. DISCUSSION

The study's conclusions offer compelling proof of the effect that e-service quality has on payment institutions' uptake in Bangalore. Perceived utility and perceived usability, mediated by e-service quality, have a major impact on customers' intents to use payment institutions, according to the findings. In this particular context, this validates the predictions

made by the Technology Acceptance Model (TAM). The report also emphasizes the significance of particular e-service quality criteria, including transaction speed, customer assistance, mobile app functionality, and website usability. Payment banks are more likely to draw in and keep consumers if they do well in these areas.

5.1 Implications of study

The results of this investigation can enhance the current corpus of information regarding the quality of e-services and their influence on client uptake. This research can improve and broaden the Technology Acceptance Model (TAM) theoretical framework by offering empirical support for the links among e-service quality, perceived usefulness, perceived ease of use, and customer outcomes in the context of payment institutions. Payment banks have to acknowledge that client acquisition and retention are heavily dependent on the quality of their e-services. Banks may set themselves apart from rivals and

improve client satisfaction by making improvements to their e-service offerings. Payment institutions can benefit from the study by determining the precise e-service quality factors that consumers appreciate the most. Their efforts to enhance features like transaction speed, customer service, mobile app functionality, and website usability can be guided by this data.

5.2 Limitations

It is critical to recognize the study's limitations. A properly representative sample of the target population may not be guaranteed by the convenience sampling technique employed. Furthermore, the study's conclusions might not apply to other areas or populations because it only focuses on Bangalore's clients.

5.3 Future scope of research

The results of this study can be compared to studies carried out in different areas to provide insight into the contextual and cultural elements that affect how customers perceive the quality of e-services. A more thorough knowledge of the effect of e-service quality on payment bank adoption is made possible by longitudinal research's ability to monitor changes in consumer preferences and behavior over time. Future research endeavors may examine the influence of e-service quality on customer outcomes, such as financial behavior, customer happiness, and loyalty, in addition to adoption. Through tackling these constraints and investigating possible directions for further investigation, this study aims to enhance the overall comprehension of the significance of e-service quality in the prosperity of payment banks.

VI. CONCLUSION

Payment banks can enhance client uptake and usage by emphasizing perceived usefulness and ease of use. This can be accomplished by giving individualized services, establishing smooth connectivity with various digital channels, and designing user-friendly interfaces. Reputable online businesses can help foster client loyalty and trust. Payment banks can build enduring relationships with their clients by showcasing their dedication to provide dependable, safe, and practical e-services.

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