

Service Quality Dimensions of Digital Banking and Satisfaction Levels of Gig Workers: An Empirical Study in Southern Rajasthan

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Abstract:

This study examines the influence of service quality dimensions of digital banking on the satisfaction levels of gig workers in Southern Rajasthan. The gig economy relies heavily on digital financial services for timely income receipts and transaction management. Using a descriptive research design, primary data were collected from 186 gig workers across selected districts of Southern Rajasthan through a structured Likert-scale questionnaire. The study focuses on accessibility, security, convenience, and transaction efficiency as key service quality dimensions. Statistical tools including descriptive statistics and multiple regression analysis were employed. The findings reveal that gig workers exhibit high overall satisfaction with digital banking services. Security and transaction efficiency emerge as significant predictors of satisfaction, while accessibility and convenience, though positively perceived, do not independently influence satisfaction. The study highlights the importance of strengthening secure and efficient digital banking systems to support the financial stability of gig workers. The findings offer practical insights for banks and digital service providers aiming to enhance service quality for the growing gig workforce.

Keywords: Digital banking service quality, Gig workers, Customer satisfaction, Security, Transaction efficiency.

1. INTRODUCTION

The rapid expansion of digital banking has transformed the way financial services are delivered, particularly for individuals engaged in flexible and technology-driven employment models. Gig workers, who depend on short-term contracts and digital platforms for income generation, rely extensively on digital banking services for receiving payments, managing transactions, and ensuring financial continuity. In this context, the quality of digital banking services plays a crucial role in shaping user satisfaction.

Digital banking offers convenience, speed, and accessibility, reducing dependence on physical bank branches. For gig workers, whose earnings are often fragmented and time-sensitive, efficient digital banking services are not merely a convenience but a necessity. However, the effectiveness of these services depends on various quality dimensions, including security, ease of access, user convenience, and transaction efficiency.

The present study is situated in Southern Rajasthan, a region witnessing a steady rise in gig-based employment across urban areas. Despite increasing adoption of digital banking, empirical evidence examining how service quality dimensions influence gig workers' satisfaction remains limited. Understanding these relationships is essential for designing banking solutions that cater to the unique financial needs of gig workers.

Therefore, this study seeks to examine the influence of key digital banking service quality dimensions on the satisfaction levels of gig workers in Southern Rajasthan, contributing to both academic literature and practical decision-making in digital financial services.

2. REVIEW OF LITERATURE

The growing reliance on digital banking has fundamentally altered the way individuals access and manage financial services, particularly within non-traditional employment arrangements such as the gig economy. Digital banking service quality has increasingly been examined as a multidimensional construct that shapes users' satisfaction, trust, and continued usage intentions. Recent studies emphasise that as digital banking matures, users' expectations shift from basic functionality towards reliability, security, and seamless transaction performance.

(Alalwan et al., 2022) Accessibility continues to be recognised as a foundational dimension of digital banking service quality. Studies conducted in developing and emerging economies suggest that consistent system availability and ease of access enhance users' confidence in digital platforms.

(Kumar & Prakash, 2023) However, contemporary research indicates that accessibility alone no longer guarantees higher satisfaction, as users tend to perceive access as a minimum requirement rather than a differentiating factor. This shift reflects the increasing normalisation of digital banking usage across diverse user groups.

(Patil & Rana, 2023) Security remains one of the most influential determinants of satisfaction in digital banking environments. Recent empirical evidence highlights that concerns related to data privacy, cyber fraud, and unauthorised access significantly affect users' trust and overall satisfaction .

(Raza et al., 2021) As digital transactions become more frequent and financially consequential, perceived security has emerged as a decisive factor in sustaining long-term engagement. Users who perceive digital banking platforms as secure are more likely to report higher satisfaction and continued usage intentions .

(Shaikh et al., 2022) Convenience, often associated with system usability and interface design, has also been widely examined in recent literature. Studies indicate that intuitive navigation, simplified processes, and reduced cognitive effort contribute positively to users' experiences .

(Singh and Srivastava, 2024) Nevertheless, several scholars argue that convenience functions as a supporting dimension rather than a primary driver of satisfaction. When digital banking platforms fail to deliver reliable performance or adequate security, the positive effects of convenience tend to diminish .

(Hassan, Shukur and Razali, 2023) Transaction efficiency has gained increasing prominence in recent digital banking research, particularly among users who rely on frequent and time-sensitive transactions. Efficiency, reflected through transaction speed, accuracy, and successful completion, has been identified as a strong predictor of satisfaction .

(Farooq et al., 2022) For gig workers, delays or transaction failures can directly affect income stability, making efficiency a critical service quality dimension. Empirical studies consistently report that efficient transaction processing significantly enhances satisfaction and trust in digital banking systems .

Despite the expanding body of literature on digital banking service quality, research focusing specifically on gig workers remains limited. Most recent studies continue to examine salaried employees or general consumers, with relatively little attention given to the unique financial behaviours of gig workers. The gig workforce often experiences irregular income patterns and depends heavily on digital payment systems, creating distinct expectations regarding security and transaction efficiency. This study

addresses this gap by empirically examining how digital banking service quality dimensions influence satisfaction among gig workers in Southern Rajasthan, thereby contributing region-specific and occupation-specific insights to the existing literature.

3. METHODOLOGY

The study adopts a descriptive research design to analyse the relationship between digital banking service quality dimensions and gig workers’ satisfaction. The study area comprises urban districts of Southern Rajasthan, including Udaipur, Rajsamand, Dungarpur, Banswara, Pratapgarh, and Chittorgarh. The target population includes gig workers engaged in platform-based employment. A sample of 186 respondents was selected using a purposive non-probability sampling technique. Primary data were collected using a structured questionnaire with Likert-scale statements measuring accessibility, security, convenience, transaction efficiency, and satisfaction.

Descriptive statistics were used to assess general perceptions, while multiple regression analysis was employed to examine the influence of service quality dimensions on satisfaction. All statistical analyses were conducted while preserving the original data structure and values.

The questionnaire consisted of 25 Likert-scale items covering accessibility, security, convenience, transaction efficiency, and satisfaction. Responses ranged from strongly disagree to strongly agree. The measurement items were designed to capture perceptions related to ease of access, data protection, usability, transaction speed, and overall satisfaction.

4. DATA ANALYSIS AND INTERPRETATION

4.1 Likert Statement

The following were opinion of the respondents collected with the help of Likert Statement.

Table Error! No text of specified style in document..1: Opinion of the Respondents

| S.No | Statement | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Mean | Std. Deviation |
|----------------------|---|-------------------|----------|---------|-------|----------------|------|----------------|
| Accessibility | | | | | | | | |
| 1 | I can access my digital banking services anytime without difficulty. | 2 | 3 | 14 | 116 | 51 | 4.05 | .590 |
| 2 | Digital banking applications work smoothly on my device. | 0 | 6 | 15 | 111 | 54 | 4.06 | .611 |
| 3 | Logging into digital banking platforms is easy and hassle free. | 1 | 4 | 18 | 112 | 51 | 4.03 | .614 |
| 4 | Digital banking services are available whenever I need them. | 1 | 6 | 14 | 119 | 46 | 4.01 | .587 |
| 5 | I rarely face technical issues while accessing digital banking services. | 0 | 5 | 14 | 126 | 41 | 4.00 | .557 |
| Security | | | | | | | | |
| 6 | I feel confident that my personal information is secure in digital banking platforms. | 0 | 3 | 13 | 114 | 56 | 4.10 | .585 |
| 7 | Digital banking services adequately protect me from fraud and | 0 | 2 | 22 | 98 | 64 | 4.10 | .655 |

| S.No | Statement | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Mean | Std. Deviation |
|------|---|-------------------|----------|---------|-------|----------------|------|----------------|
| | unauthorised access. | | | | | | | |
| 8 | I trust the security systems used by digital banking applications. | 0 | 1 | 11 | 115 | 59 | 4.13 | .565 |
| 9 | I feel safe while performing financial transactions through digital banking. | 1 | 3 | 15 | 126 | 41 | 4.00 | .557 |
| 10 | Digital banking platforms provide sufficient security features to protect my account. | 0 | 2 | 9 | 110 | 65 | 4.17 | .571 |
| | Convenience | | | | | | | |
| 11 | Digital banking services are easy to use and understand. | 0 | 4 | 19 | 122 | 41 | 3.98 | .580 |
| 12 | The layout and navigation of digital banking apps are user friendly. | 0 | 5 | 18 | 109 | 54 | 4.05 | .623 |
| 13 | Completing transactions through digital banking requires minimal effort. | 1 | 2 | 17 | 117 | 49 | 4.03 | .620 |
| 14 | Digital banking services save my time compared to visiting a bank branch. | 2 | 1 | 22 | 104 | 57 | 4.05 | .643 |
| 15 | Overall, digital banking makes managing my finances convenient. | 0 | 2 | 25 | 111 | 48 | 3.99 | .627 |
| | Transaction Efficiency | | | | | | | |
| 16 | Digital banking transactions are processed quickly. | 0 | 1 | 15 | 105 | 65 | 4.14 | .607 |
| 17 | Money transfers through digital banking are completed without delays. | 0 | 2 | 15 | 110 | 59 | 4.11 | .600 |
| 18 | Digital banking transactions are usually successful on the first attempt. | 0 | 1 | 11 | 112 | 62 | 4.15 | .572 |
| 19 | I receive transaction confirmations promptly after completing payments. | 0 | 2 | 12 | 106 | 66 | 4.16 | .595 |
| 20 | Digital banking services allow me to complete transactions smoothly without errors. | 0 | 3 | 14 | 108 | 61 | 4.12 | .604 |
| | Satisfaction | | | | | | | |
| 21 | I am satisfied with the digital banking services I currently use. | 0 | 1 | 1 | 74 | 110 | 4.46 | .516 |
| 22 | Digital banking services meet my expectations for managing financial transactions. | 0 | 0 | 1 | 83 | 102 | 4.42 | .510 |
| 23 | My overall experience with digital banking services has been positive. | 0 | 1 | 2 | 66 | 117 | 4.49 | .521 |

| S.No | Statement | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Mean | Std. Deviation |
|------|---|-------------------|----------|---------|-------|----------------|------|----------------|
| 24 | I feel satisfied using digital banking services for my gig-related income and payments. | 0 | 0 | 6 | 69 | 111 | 4.44 | .559 |
| 25 | I would continue using digital banking services in the future. | 0 | 0 | 2 | 78 | 106 | 4.44 | .519 |

4.2 Descriptive Statistics

Table Error! No text of specified style in document..2: Descriptive Statistics

| | Satisfaction | Transaction Efficiency | Security | Convenience | Accessibility |
|----------------|--------------|------------------------|----------|-------------|---------------|
| Mean | 4.57 | 4.25 | 4.22 | 4.14 | 4.15 |
| Std. Deviation | 0.27 | 0.38 | 0.35 | 0.38 | 0.36 |

The descriptive statistics indicate that gig workers report a high level of satisfaction with digital banking services, with a mean score of 4.57 and a low standard deviation of 0.27, reflecting consistent positive perceptions across respondents. Transaction efficiency records a strong mean value of 4.25 with moderate variability, suggesting that timely and smooth transactions are widely experienced and appreciated. Security also shows a high mean score of 4.22, indicating that respondents generally feel confident about the safety of their financial information, while the relatively small standard deviation points to stable opinions. Convenience and accessibility display mean values of 4.14 and 4.15 respectively, highlighting favourable perceptions, though their slightly higher dispersion suggests more varied experiences among users. Overall, the descriptive results demonstrate that all dimensions of digital banking services are viewed positively by gig workers, with satisfaction emerging as the most strongly rated outcome.

4.3 Regression Analysis

Table Error! No text of specified style in document..3: Model Summary

| R | R ² | Adjusted R ² | Standard error of the estimate |
|------|----------------|-------------------------|--------------------------------|
| 0.30 | 0.09 | 0.07 | 0.26 |

The model summary reveals a correlation coefficient of 0.30, indicating a moderate relationship between the combined predictors and gig workers' satisfaction. The R square value of 0.09 shows that approximately 9 percent of the variation in satisfaction is explained by accessibility, security, convenience, and transaction efficiency. After adjusting for the number of predictors, the adjusted R square remains close at 0.07, suggesting a stable model with modest explanatory power. The standard error of the estimate, at 0.26, indicates a reasonable level of prediction accuracy.

Table Error! No text of specified style in document..4: ANOVA

| Model | df | F | p |
|------------|----|------|------|
| Regression | 4 | 4.42 | .002 |

The ANOVA results confirm the overall validity of the regression model, as the F value of 4.42 is statistically significant at the 0.01 level. This demonstrates that the independent variables, when considered together, significantly influence gig workers’ satisfaction with digital banking services.

Table Error! No text of specified style in document..5: Summary of Coefficient

| Model | Unstandard. Coef. B | Standard. Coef. Beta | Std. Error | t | p |
|------------------------|---------------------|----------------------|------------|-------|-------|
| Constant | 3.31 | | 0.47 | 6.98 | <.001 |
| Accessibility | 0.06 | 0.08 | 0.05 | 1.08 | .281 |
| Security | 0.15 | 0.19 | 0.06 | 2.67 | .008 |
| Convenience | -0.04 | -0.06 | 0.05 | -0.83 | .41 |
| Transaction Efficiency | 0.13 | 0.19 | 0.05 | 2.59 | .01 |

The coefficient analysis provides deeper insight into individual predictor effects. Security shows a positive and statistically significant influence on satisfaction, with a beta coefficient of 0.19 and a p value of 0.008, indicating that stronger perceptions of safety and protection enhance overall satisfaction. Transaction efficiency also exhibits a positive and significant effect, reflected by a beta value of 0.19 and a p value of 0.01, underscoring the importance of quick and error free transactions. Accessibility has a positive coefficient but does not reach statistical significance, suggesting that while ease of access is valued, it does not independently drive satisfaction when other factors are considered. Convenience displays a small negative coefficient that is not statistically significant, indicating that ease of use alone does not substantially alter satisfaction levels in the presence of security and efficiency considerations.

Regression Equation

Based on the regression analysis, the estimated equation explaining gig workers’ satisfaction with digital banking services is expressed as:

$$\text{Satisfaction} = 3.31 + 0.06(\text{Accessibility}) + 0.15(\text{Security}) - 0.04(\text{Convenience}) + 0.13(\text{Transaction Efficiency}).$$

This equation indicates that, holding other variables constant, improvements in security and transaction efficiency lead to noticeable increases in satisfaction, whereas accessibility and convenience do not exert a statistically meaningful independent effect.

5. HYPOTHESIS TESTING

The null hypothesis related to accessibility was accepted, as the p-value exceeded 0.05, indicating that accessibility does not have a statistically significant effect on gig workers’ satisfaction. The null hypothesis concerning security was rejected, since the p-value was below 0.05, confirming that security significantly influences satisfaction. Similarly, the null hypothesis related to convenience was accepted, suggesting no significant impact on satisfaction. In contrast, the null hypothesis associated with transaction efficiency was rejected, demonstrating a significant and positive influence on gig workers’ satisfaction.

Table Error! No text of specified style in document..6: Hypotheses Result

| S.No | Hypothesis | p-value | Decision |
|------|--|---------|----------|
| 1 | H ₀₁ : There is no significant impact of accessibility of digital banking services on the satisfaction of gig workers. | 0.281 | Accepted |
| 2 | H ₀₂ : There is no significant impact of the security of digital banking services on the satisfaction of gig workers | 0.008 | Rejected |
| 3 | H ₀₃ : There is no significant impact of the convenience of digital banking services on the satisfaction of gig workers. | 0.410 | Accepted |
| 4 | H ₀₄ : There is no significant impact of transaction efficiency of digital banking services on the satisfaction of gig workers. | 0.010 | Rejected |

The null hypotheses related to accessibility and convenience were accepted, indicating no significant effect on satisfaction, while the null hypotheses related to security and transaction efficiency were rejected, showing a significant influence on gig workers' satisfaction.

6. FINDINGS

6.1 Findings related to Gig Workers' Satisfaction

1. Most respondents expressed strong agreement that they are satisfied with the digital banking services they currently use.
2. A large proportion agreed that digital banking meets their expectations for managing financial transactions related to gig work.
3. Respondents generally reported positive overall experiences with digital banking platforms.
4. High levels of agreement were observed regarding continued use of digital banking services in the future, indicating sustained satisfaction.
5. Very few respondents expressed disagreement with satisfaction-related statements, suggesting minimal dissatisfaction.

6.2 Findings related to Accessibility

1. The majority of gig workers agreed that they can access digital banking services anytime without difficulty.
2. Most respondents felt that digital banking applications function smoothly on their devices.
3. A high level of agreement was reported regarding ease of logging into digital banking platforms.
4. Respondents generally agreed that banking services are available whenever required.
5. Some variation in responses was observed regarding technical issues, indicating occasional access-related challenges for a smaller group.

6.3 Findings related to Security

1. A strong majority of respondents agreed that their personal information is secure on digital banking platforms.
2. Most gig workers expressed confidence in the ability of digital banking services to protect them from fraud and unauthorised access.
3. High agreement levels were recorded for trust in security systems used by banking applications.
4. Respondents largely felt safe while performing financial transactions digitally.
5. Very limited disagreement was observed across security-related statements, highlighting widespread confidence in digital banking safety.

6.4 Findings related to Convenience

1. Most respondents agreed that digital banking services are easy to use and understand.
2. A substantial proportion found the layout and navigation of banking applications to be user friendly.
3. Many respondents agreed that transactions can be completed with minimal effort.
4. Digital banking was perceived as time saving when compared to visiting physical bank branches.
5. Despite positive agreement levels, responses varied slightly, suggesting differences in perceived convenience among users.

6.5 Findings related to Transaction Efficiency

1. A large majority of gig workers agreed that digital banking transactions are processed quickly.
2. Respondents reported high agreement that money transfers are completed without unnecessary delays.
3. Most participants indicated that transactions are usually successful on the first attempt.
4. Prompt receipt of transaction confirmations was widely acknowledged.
5. Very few respondents expressed disagreement with efficiency-related statements, indicating consistent satisfaction with transaction performance.

7. CONCLUSION

The study concludes that digital banking services play a vital role in supporting the financial activities of gig workers, with overall satisfaction levels remaining high. While accessibility and convenience are positively perceived, they function more as baseline expectations rather than decisive factors influencing satisfaction. Security and transaction efficiency stand out as the most influential dimensions, emphasising that gig workers prioritise safe and swift financial transactions due to the direct link between banking performance and their income stability. The findings underscore the importance of strengthening trust and operational reliability in digital banking systems to sustain and enhance user satisfaction within the gig economy.

8. SUGGESTIONS

Digital banking providers should continue to strengthen security protocols to reinforce user trust and protect sensitive financial data. Greater emphasis should be placed on improving transaction speed to ensure timely income transfers for gig workers. Systems should be optimised to minimise transaction failures and delays that may disrupt earnings. Clear and immediate transaction confirmations should be maintained to reassure users. Regular security updates and transparent communication about safety features can further enhance confidence. Banks should monitor emerging fraud risks specific to gig workers and design targeted protection mechanisms. Although accessibility is already high, service uptime should be ensured during peak usage hours. Simplifying login procedures without compromising security can improve user experience. User interfaces should remain intuitive to support convenience, even if it is not a key satisfaction driver. Continuous user feedback mechanisms can help identify minor usability issues. Training materials or in app guidance can assist new gig workers in navigating digital banking platforms. Partnerships with gig platforms may enable smoother integration of payment systems. Customer support services should be responsive to transaction related issues faced by gig workers. Data analytics can be used to track transaction bottlenecks and improve efficiency. Banks should tailor digital products to the income patterns of gig workers. Offering alerts for payments and balance updates can enhance financial control. Finally, ongoing evaluation of service performance can ensure that digital banking continues to meet the evolving needs of the gig workforce.

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