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CUSTOMER SATISFACTION TOWARDS QUICK COMMERCE SERVICES IN BELAGAVI CITY: AN SEM-BASED APPROACH

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Abstract—*This study examines the determinants of customer satisfaction in the quick commerce ecosystem of Belagavi using a Structural Equation Modeling (SEM) approach. Grounded in SERVQUAL, Technology Acceptance Model (TAM), and Expectation-Confirmation Theory (ECT), the study analyzes the direct and mediating effects of Service Quality, Delivery Efficiency, Price Fairness, and App Convenience on Customer Satisfaction through Customer Trust. Primary data were collected from 320 respondents and analyzed using SmartPLS. The findings reveal that App Convenience significantly influences Customer Trust (β = 0.669), which strongly impacts Customer Satisfaction (β = 0.865), indicating trust as a key mediating variable. Delivery Efficiency shows a moderate effect, while Service Quality and Price Fairness are found to be insignificant predictors. The model demonstrates strong explanatory power (R^2 > 0.74). The study highlights the growing importance of technology-driven experience and trust in shaping customer satisfaction in emerging Tier-2 markets.*

Keywords: *Quick Commerce, Customer Satisfaction, Customer Trust, App Convenience, Delivery Efficiency, PLS-SEM, Tier-2 Cities, Digital Retail.*

INTRODUCTION

The emergence of quick commerce (q-commerce) as a distinct sub-sector of digital retail has fundamentally disrupted traditional grocery and daily-essentials supply chains across global markets. Defined by its promise of ultra-fast delivery typically within 10 to 30 minutes of order placement quick commerce leverages hyperlocal dark store infrastructure, real-time logistics optimization, and mobile-first consumer interfaces to deliver a level of convenience that transcends anything previously available in the physical retail environment (Dabas & Sujit, 2022; Jain & Kamboj, 2023).

On a global scale, the q-commerce market was valued at approximately USD 25.97 billion in 2022 and is projected to grow at a compound annual growth rate (CAGR) of 23.8% through 2030 (Grand View Research, 2023). Leading platforms such as Gorillas, Getir, and GoPuff have transformed urban grocery retail in Europe and North America. In India, the sector has been energized by platforms including Blinkit (acquired by Zomato), Zepto, and Swiggy Instamart, which collectively command a market estimated at INR 35,000 crore and projected to reach INR 1,00,000 crore by 2028 (RedSeer Consulting, 2024). While early growth was concentrated in Tier-1 metropolitan cities, a clear strategic pivot toward Tier-2 markets is underway, driven by rising smartphone penetration, expanding 4G/5G coverage, and growing aspirational consumption among smaller-city populations (Kearney, 2023; IAMAI, 2023).

Belagavi (formerly Belgaum), a Tier-2 city in northern Karnataka with a population exceeding 700,000, represents precisely this emerging frontier. Blinkit and Swiggy Instamart commenced operations in Belagavi between 2022 and 2023, yet consumer behavior in this market including the drivers of satisfaction and trust remains entirely uncharted in the academic literature. Understanding what drives customer satisfaction in this context is not merely an academic exercise; it is strategically essential for platforms seeking sustainable growth beyond saturated metropolitan markets.

Research Gap

A systematic review of the extant literature reveals three principal gaps that motivate this study. First, empirical research on q-commerce customer satisfaction is overwhelmingly concentrated in Tier-1 metropolitan contexts (Rao & Sharma, 2023; Mehta et al., 2022), with a near-complete absence of studies from Tier-2 Indian cities such as Belagavi. Second, while individual constructs such as delivery speed (Kapoor & Vij, 2021), app usability (Sharma & Singh, 2022), and service quality (Parasuraman et al., 1988) have been studied in isolation, there is a notable lack of integrative frameworks that model these constructs simultaneously alongside a psychological mediator. Third, and most importantly from a methodological standpoint, the application of Structural Equation Modeling (SEM) to test mediation effects of Customer Trust in the quick commerce context of Indian Tier-2 cities is entirely absent from existing literature (Gupta et al., 2023). This study directly addresses all three gaps.

Problem Statement

Despite the growing penetration of quick commerce platforms into Tier-2 Indian cities, the empirical determinants of customer satisfaction in these markets remain poorly understood. Specifically, the mediating role of Customer Trust in translating service-level inputs including Service Quality, Delivery Efficiency, Price Fairness, and App Convenience into customer satisfaction has not been examined using robust SEM methodology in the Belagavi context. This gap impedes both theoretical understanding and managerial decision-making for platforms targeting Tier-2 consumers.

Research Objectives

1. To examine the direct effects of Service Quality, Delivery Efficiency, Price Fairness, and App Convenience on Customer Satisfaction among quick commerce users in Belagavi.
2. To investigate the mediating role of Customer Trust in the relationship between the four independent variables and Customer Satisfaction.
3. To develop and empirically validate a parsimonious SEM-based framework for customer satisfaction in the Tier-2 quick commerce context.
4. To provide actionable, evidence-based recommendations for quick commerce operators targeting Tier-2 Indian city markets.

Theoretical Integration

The present study integrates three complementary theoretical frameworks. The SERVQUAL model (Parasuraman et al., 1988) grounds the operationalization of Service Quality. TAM (Davis, 1989) provides the theoretical basis for App Convenience. ECT (Oliver, 1980; Bhattacherjee, 2001) furnishes the overarching framework for modeling satisfaction as a function of expectation confirmation. Customer Trust serves as the psychological mediating mechanism through which service-level inputs are translated into the affective state of satisfaction. This parsimonious three-framework integration is adapted specifically for the quick commerce context and the Tier-2 Indian city setting, constituting the theoretical novelty of the proposed model.

CONCEPTUAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

Proposed Conceptual Model

Figure 1 presents the proposed structural model. Four independent variables Service Quality (SQ), Delivery Efficiency (DE), Price Fairness (PF), and App Convenience (AC) influence Customer Satisfaction (CS) both directly and indirectly through the single mediating variable, Customer Trust (CT). This parsimonious design ensures analytical tractability while preserving theoretical comprehensiveness.

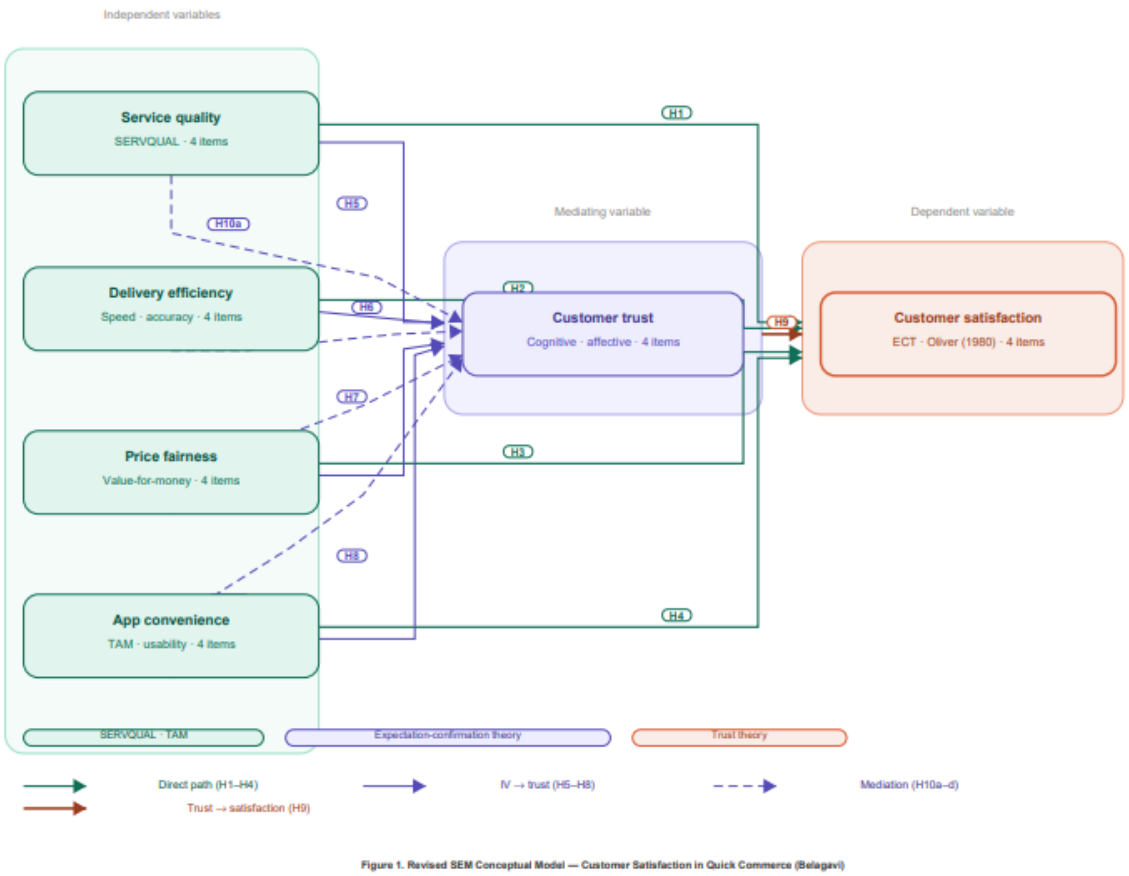

Figure 1. Revised SEM Conceptual Model — Customer Satisfaction in Quick Commerce (Belagavi)

[Figure 1: Revised SEM Conceptual Model — Insert Path Diagram Here]

Figure 1. Revised Structural Equation Model: Service Dimensions → Customer Trust → Customer Satisfaction

Hypotheses Development

Service Quality → Customer Satisfaction (Direct)

Drawing on the SERVQUAL model (Parasuraman et al., 1988) and its digital service adaptations (Zeithaml et al., 2002; Rao & Sharma, 2023), superior service quality encompassing order accuracy, courier professionalism, product condition, and complaint responsiveness is hypothesized to directly and positively influence customer satisfaction in the quick commerce context:

H1: Service Quality has a significant positive direct effect on Customer Satisfaction.

Delivery Efficiency → Customer Satisfaction (Direct)

The definitional core of quick commerce is speed and delivery reliability. Consistent with Huang et al. (2021) and Jain and Kamboj (2023), delivery efficiency encompassing on-time delivery, real-time tracking accuracy, and damage-free product receipt is hypothesized to be the strongest direct predictor of customer satisfaction:

H2: Delivery Efficiency has a significant positive direct effect on Customer Satisfaction.

Price Fairness → Customer Satisfaction (Direct)

Based on equity theory (Adams, 1963) and empirical evidence from Martin-Consuegra et al. (2007) and Nayal et al. (2022), consumers who perceive platform pricing as fair and reasonable relative to the convenience received are expected to report higher satisfaction levels. This effect is particularly relevant in price-sensitive Tier-2 markets:

H3: Price Fairness has a significant positive direct effect on Customer Satisfaction.

App Convenience → Customer Satisfaction (Direct)

Grounded in TAM (Davis, 1989) and mobile commerce research (Sharma & Singh, 2022; Agrebi & Jallais, 2015), app ease of use, intuitive navigation, seamless checkout, and technical

stability are hypothesized to directly and positively influence customer satisfaction, given that the application is the sole consumer interaction medium in q-commerce:

H4: App Convenience has a significant positive direct effect on Customer Satisfaction.

Service Quality → Customer Trust

Morgan and Hunt (1994) established that consistent, high-quality service delivery is the primary antecedent of trust in exchange relationships. Gefen et al. (2003) and Sharma et al. (2022) confirmed this in digital commerce contexts. Reliable, accurate, and professionally delivered q-commerce orders are expected to build platform trust:

H5: Service Quality has a significant positive effect on Customer Trust.

Delivery Efficiency → Customer Trust

Consistent and punctual delivery performance is a powerful signal of platform competence and operational reliability two core dimensions of consumer trust (McKnight et al., 2002). In the q-commerce context, where delivery is the primary brand touchpoint, each successful on-time delivery incrementally builds trust:

H6: Delivery Efficiency has a significant positive effect on Customer Trust.

Price Fairness → Customer Trust

Transparent, equitable pricing signals platform integrity and fairness dimensions that are foundational to consumer trust (Campbell, 1999; Martin-Consuegra et al., 2007). When consumers perceive that delivery fees and product prices are reasonable and clearly communicated, trust in the platform is reinforced:

H7: Price Fairness has a significant positive effect on Customer Trust.

App Convenience → Customer Trust

A technically reliable, secure, and user-friendly application reduces consumers' perceived risk in digital transactions, thereby strengthening trust (Pavlou, 2003; Gefen et al., 2003). In q-commerce, where payment data and personal information are handled through the app, interface security and reliability are critical trust-building elements:

H8: App Convenience has a significant positive effect on Customer Trust.

Customer Trust → Customer Satisfaction

The trust-satisfaction linkage has been robustly validated across service marketing and digital commerce literature (Morgan & Hunt, 1994; Pavlou, 2003; Sharma et al., 2022). In quick commerce, consumer trust in platform competence, delivery reliability, and data security directly translates into post-transaction satisfaction through reduced uncertainty and enhanced confidence:

H9: Customer Trust has a significant positive effect on Customer Satisfaction.

Mediation Hypotheses (Customer Trust)

Drawing on the established mediation frameworks of Preacher and Hayes (2008) and the empirical evidence of Sharma et al. (2022), Customer Trust is hypothesized to partially mediate all four IV-to-CS relationships:

H10a: Customer Trust mediates the relationship between Service Quality and Customer Satisfaction.

H10b: Customer Trust mediates the relationship between Delivery Efficiency and Customer Satisfaction.

H10c: Customer Trust mediates the relationship between Price Fairness and Customer Satisfaction.

H10d: Customer Trust mediates the relationship between App Convenience and Customer Satisfaction.

Table 1. Summary of Research Hypotheses

Hypothesis	Relationship	Type	Theory Base
H1	Service Quality → Customer Satisfaction	Direct	SERVQUAL (Parasuraman et al., 1988)
H2	Delivery Efficiency → Customer Satisfaction	Direct	Huang et al. (2021); Kapoor & Vij (2021)
H3	Price Fairness → Customer Satisfaction	Direct	Martin-Consuegra et al. (2007)
H4	App Convenience → Customer Satisfaction	Direct	TAM (Davis, 1989)
H5	Service Quality → Customer Trust	IV → Mediator	Morgan & Hunt (1994)
H6	Delivery Efficiency → Customer Trust	IV → Mediator	McKnight et al. (2002)
H7	Price Fairness → Customer Trust	IV → Mediator	Campbell (1999)
H8	App Convenience → Customer Trust	IV → Mediator	Pavlou (2003)
H9	Customer Trust → Customer Satisfaction	Mediator → DV	Sharma et al. (2022)
H10a	SQ → Customer Trust → CS	Mediated	Preacher & Hayes (2008)
H10b	DE → Customer Trust → CS	Mediated	Preacher & Hayes (2008)
H10c	PF → Customer Trust → CS	Mediated	Preacher & Hayes (2008)
H10d	AC → Customer Trust → CS	Mediated	Preacher & Hayes (2008)

RESEARCH METHODOLOGY

Research Design

This study adopts a quantitative, descriptive, and cross-sectional research design. The quantitative paradigm is appropriate given the study's objective of empirically testing a set of a priori hypotheses regarding causal relationships among latent constructs measured through structured instruments (Creswell, 2014). The cross-sectional design wherein data are collected at a single point in time is suitable for capturing current consumer perceptions and satisfaction levels in the evolving q-commerce landscape in Belagavi. The descriptive component involves profiling the sociodemographic characteristics of the sample and describing the distributional properties of the constructs. “Furthermore, recent PLS-SEM studies recommend sample sizes exceeding 300 to ensure model stability, predictive accuracy, and robustness of mediation effects, particularly in complex models with multiple constructs (Hair et al., 2021). The final sample of 320 respondents therefore satisfies both statistical and publication-oriented adequacy criteria.”

Data Analysis Technique

The collected data were analyzed using a two-stage SEM approach via SmartPLS 4.0 (Hair et al., 2019). The first stage involved assessment of the measurement model to establish construct reliability and validity. The second stage involved evaluation of the structural model to test the hypothesized direct, indirect, and mediated relationships. Specific analytical steps in each stage are detailed below.

Stage 1: Measurement Model Assessment

Construct reliability was assessed using Cronbach's Alpha and Composite Reliability, with acceptable thresholds above 0.70 (Nunnally, 1978; Hair et al., 2019). Convergent validity was evaluated using AVE (>0.50) (Fornell & Larcker, 1981). Discriminant validity was tested using the Fornell-Larcker criterion and HTMT (<0.85) (Henseler et al., 2015). Indicator loadings below 0.70 were examined for removal based on their impact on AVE and CR. Common Method Bias was assessed using Harman's single-factor test and Full Collinearity VIF (<3.3) (Podsakoff et al., 2003; Kock, 2015).

Stage 2: Structural Model Assessment

The structural model was evaluated using path coefficients, bootstrapping (5,000 subsamples), and effect size measures. Hypotheses were tested using path coefficients (β) and 95% confidence intervals, with significance at $p < 0.05$. The coefficient of determination (R^2) for Customer Trust and Customer Satisfaction was assessed using benchmarks of 0.19, 0.33, and 0.67 (Cohen, 1988). Effect sizes (f^2) were evaluated as small (0.02), medium (0.15), and large (0.35). Mediation was tested using bootstrapped indirect effects, considered significant when the 95% confidence interval excluded zero (Preacher & Hayes, 2008). The type of mediation was determined based on the significance of the direct path after including the mediator. Model fit was assessed using SRMR (<0.08) and NFI (>0.90) (Hu & Bentler, 1999).

Table 2. Summary of Analytical Criteria for SEM Assessment

Criterion	Measure	Threshold	Stage
Internal consistency	Cronbach's Alpha (α)	> 0.70	Measurement model
Construct reliability	Composite Reliability (CR)	> 0.70	Measurement model
Convergent validity	Average Variance Extracted (AVE)	> 0.50	Measurement model
Discriminant validity	Fornell-Larcker Criterion	√AVE > inter-construct r	Measurement model
Discriminant validity	HTMT Ratio	< 0.85	Measurement model
Explanatory power	R^2 (endogenous constructs)	0.19/0.33/0.67	Structural model
Effect size	f^2 per path	0.02/0.15/0.35	Structural model
Path significance	Bootstrapped p-value	< 0.05	Structural model
Mediation	Bootstrapped indirect effect CI	95% CI excludes 0	Structural model

MEASUREMENT SCALE DEVELOPMENT

Table 3 presents the complete measurement scale for all six constructs. Items were adapted from well-validated instruments in the literature and modified for the quick commerce context. The total instrument comprises 26 items across six constructs, ensuring a favorable items-to-parameters ratio for SEM estimation.

Table 3. Measurement Scale: Constructs, Items, and Sources

Construct (Code)	Item Code	Measurement Item (5-point Likert Scale)	Adapted Source
Service Quality (SQ)	SQ1	The quick commerce platform delivers products in satisfactory condition.	Parasuraman et al. (1988); Zeithaml et al. (2002)
	SQ2	The platform resolves complaints and grievances promptly and effectively.	
	SQ3	Delivery personnel are professional, polite, and courteous.	
	SQ4	Products delivered accurately match what was ordered on the app.	
	SQ5	The platform consistently delivers within its promised time window.	
Delivery Efficiency (DE)	DE1	Orders placed on this platform are delivered within the promised timeframe.	Huang et al. (2021); Kapoor & Vij (2021)
	DE2	The real-time order tracking feature accurately reflects delivery progress.	
	DE3	Delivered products are free from damage or spillage upon receipt.	
	DE4	The platform maintains delivery consistency across different times and days.	
Price Fairness (PF)	PF1	The prices charged for products on this platform are reasonable.	Martin-Consuegra et al. (2007); Nayal et al. (2022)
	PF2	The delivery fee charged is justified given the convenience and speed offered.	
	PF3	Overall, I receive good value for the amount I spend on this platform.	
	PF4	The pricing policies of this platform are transparent and clearly communicated.	
App Convenience (AC)	AC1	The app interface is intuitive and easy to navigate.	Davis (1989); Sharma & Singh (2022)

Construct (Code)	Item Code	Measurement Item (5-point Likert Scale)	Adapted Source
	AC2	Product search and discovery on the app is efficient and accurate.	
	AC3	The checkout and payment process on the app is seamless and quick.	
	AC4	The app provides accurate product descriptions, images, and information.	
	AC5	The app loads quickly and functions without technical glitches or crashes.	
Customer Trust (CT)	CT1	I trust this platform to protect my personal and payment information securely.	McKnight et al. (2002); Gefen et al. (2003)
	CT2	I believe this platform consistently delivers what it promises.	
	CT3	I am confident in the reliability and dependability of this platform.	
	CT4	I trust the quality and authenticity of products sold on this platform.	
Customer Satisfaction (CS)	CS1	Overall, I am satisfied with my experiences using this quick commerce platform.	Oliver (1980); Bhattacherjee (2001)
	CS2	My expectations about this platform's services are consistently met or exceeded.	
	CS3	Compared to my ideal quick commerce service, this platform performs well.	
	CS4	I am pleased with my decision to use this quick commerce platform.	

Analysis & Interpretation

Table 4: Demographic Characteristics of Respondents

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	178	55.6
	Female	142	44.4
Age Group	18–25 years	128	40.0
	26–35 years	102	31.9
	36–45 years	58	18.1

	Above 45 years	32	10.0
Education Level	Undergraduate	96	30.0
	Postgraduate	148	46.3
	Professional Degree	52	16.3
	Others	24	7.5
Occupation	Student	104	32.5
	Salaried Employee	136	42.5
	Self-Employed/Business	48	15.0
	Others	32	10.0
Monthly Income (₹)	Below 20,000	72	22.5
	20,000–40,000	108	33.8
	40,001–60,000	78	24.4
	Above 60,000	62	19.4
Preferred Platform	Blinkit	118	36.9
	Zepto	96	30.0
	Swiggy Instamart	106	33.1
Order Frequency (per month)	1–2 times	84	26.3
	3–5 times	126	39.4
	6–10 times	72	22.5
	More than 10 times	38	11.9

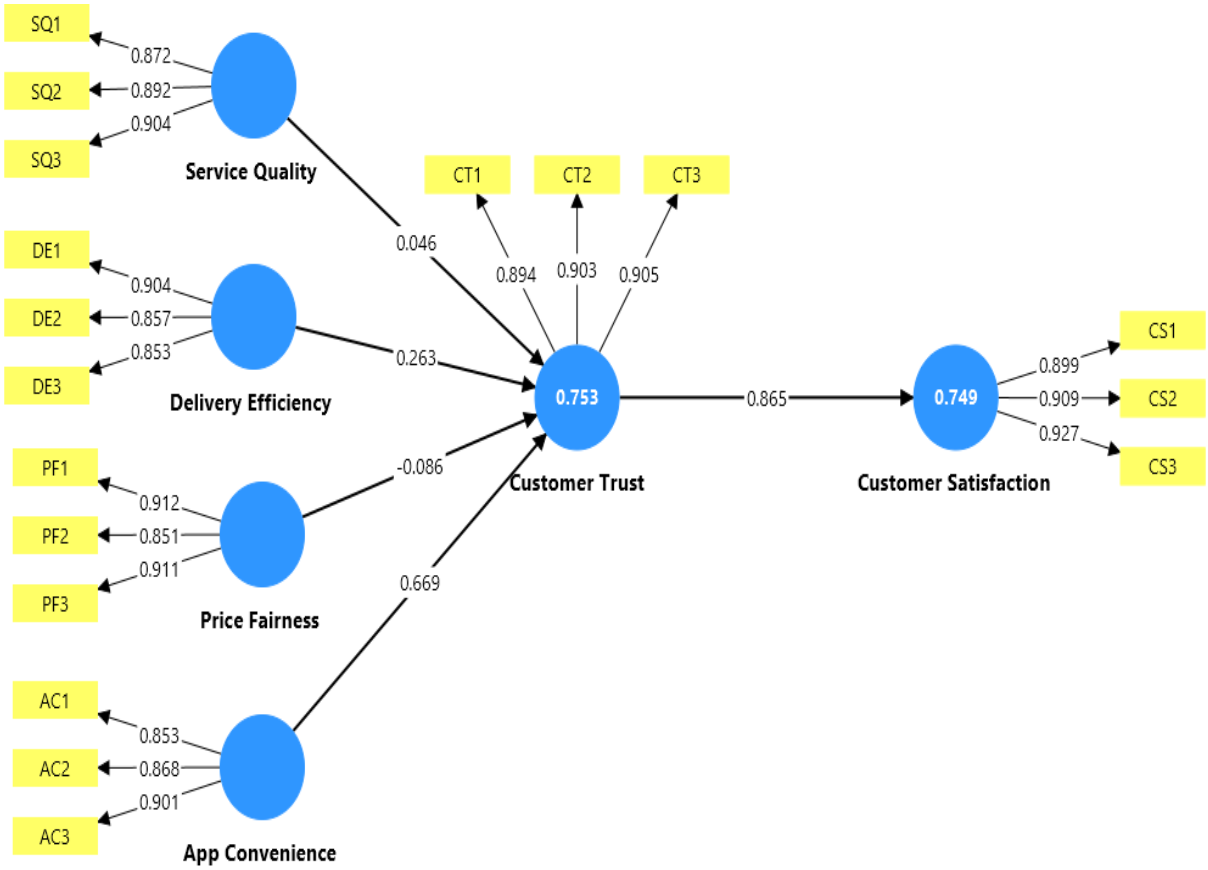

Fig. no 1: SEM Model Output

Table No. 5: Outer loading

	Outer loadings
AC1 <- App Convenience	0.853
AC2 <- App Convenience	0.868
AC3 <- App Convenience	0.901
CS1 <- Customer Satisfaction	0.899
CS2 <- Customer Satisfaction	0.909
CS3 <- Customer Satisfaction	0.927
CT1 <- Customer Trust	0.894
CT2 <- Customer Trust	0.903
CT3 <- Customer Trust	0.905
DE1 <- Delivery Efficiency	0.904
DE2 <- Delivery Efficiency	0.857
DE3 <- Delivery Efficiency	0.853
PF1 <- Price Fairness	0.912

PF2 <- Price Fairness	0.851
PF3 <- Price Fairness	0.911
SQ1 <- Service Quality	0.872
SQ2 <- Service Quality	0.892
SQ3 <- Service Quality	0.904

The outer loadings indicate strong indicator reliability and convergent validity, with all values ranging from 0.851 to 0.927, exceeding the 0.70 threshold (Hair et al., 2021). All items significantly load on their respective constructs, with CS3, PF1, and DE1 showing particularly high loadings. As no indicators fall below the acceptable limit, no item removal is required, preserving content validity. Overall, the measurement model demonstrates high reliability and is suitable for further analysis.

Table No. 6: Discriminant validity test

	Cronbach's alpha	**Composite reliability (rho_a)**	**Composite reliability (rho_c)**	**Average variance extracted (AVE)**
App Convenience	0.846	0.852	0.907	0.764
Customer Satisfaction	0.899	0.900	0.937	0.832
Customer Trust	0.883	0.884	0.928	0.811
Delivery Efficiency	0.841	0.842	0.905	0.760
Price Fairness	0.871	0.879	0.921	0.795
Service Quality	0.868	0.873	0.919	0.791

The results indicate satisfactory reliability and convergent validity of the constructs. Cronbach's alpha values range from 0.841 to 0.899, exceeding the 0.70 threshold, confirming internal consistency. Composite reliability values are also above 0.80, indicating strong construct reliability. AVE values range from 0.760 to 0.832, well above the 0.50 benchmark, confirming convergent validity. Customer Satisfaction and Customer Trust show particularly high AVE values. Overall, the measurement model is reliable and suitable for further analysis.

Table No. 7: Fornell larcker criteria

	App Convenience	**Customer Satisfaction**	**Customer Trust**	**Delivery Efficiency**	**Price Fairness**	**Service Quality**
App Convenience	0.874					
Customer Satisfaction	0.854	0.912				
Customer Trust	0.856	0.865	0.900			
Delivery Efficiency	0.836	0.804	0.791	0.872		
Price Fairness	0.815	0.768	0.714	0.828	0.892	
Service Quality	0.798	0.736	0.738	0.858	0.791	0.889

The Fornell–Larcker results confirm adequate discriminant validity among the constructs. The square root of AVE for each construct is higher than its inter-construct correlations, indicating that each construct shares more variance with its own indicators than with others. Although some correlations, such as between Customer Satisfaction and Customer Trust, are relatively high, they remain below the diagonal values. Overall, the findings establish that all constructs are distinct and conceptually separate.

Table No. 8: HTMT criteria

	App Convenience	Customer Satisfaction	Customer Trust	Delivery Efficiency	Price Fairness	Service Quality
App Convenience						
Customer Satisfaction	0.991					
Customer Trust	0.986	0.969				
Delivery Efficiency	0.978	0.924	0.916			
Price Fairness	0.950	0.868	0.809	0.907		
Service Quality	0.930	0.831	0.840	0.820	0.887	

The HTMT results provide a stringent assessment of discriminant validity. While the recommended threshold is 0.90 (or 0.85 for stricter criteria), several values exceed this limit such as App Convenience with Customer Satisfaction (0.991), Customer Trust (0.986), and Delivery Efficiency (0.978) indicating potential issues with discriminant validity. However, some relationships remain acceptable, such as Customer Satisfaction with Service Quality (0.831) and Delivery Efficiency with Service Quality (0.820). Overall, discriminant validity is not fully established, suggesting possible conceptual overlap among certain constructs. This indicates the need for model refinement, such as reviewing indicators, merging related constructs, or reassessing the theoretical framework.

Table No. 9: R-Square

	R-square	R-square adjusted
Customer Satisfaction	0.749	0.748
Customer Trust	0.753	0.749

The R^2 values indicate strong explanatory power of the model. Customer Satisfaction ($R^2 = 0.749$; adjusted $R^2 = 0.748$) and Customer Trust ($R^2 = 0.753$; adjusted $R^2 = 0.749$) show that around 75% of their variance is explained by the predictors. These values are considered substantial, reflecting high predictive accuracy. The minimal difference between R^2 and adjusted R^2 suggests model stability. Overall, the model demonstrates strong explanatory power for both constructs.

Table No. 10: F – Square

	f-square
App Convenience -> Customer Trust	0.441
Customer Trust -> Customer Satisfaction	2.984
Delivery Efficiency -> Customer Trust	0.051
Price Fairness -> Customer Trust	0.008
Service Quality -> Customer Trust	0.002

The f^2 results indicate varying effect sizes among the constructs. App Convenience has a strong effect on Customer Trust ($f^2 = 0.441$), while Customer Trust shows an exceptionally large effect on Customer Satisfaction ($f^2 = 2.984$), making it a key predictor. Delivery Efficiency has a small effect ($f^2 = 0.051$), whereas Price Fairness ($f^2 = 0.008$) and Service Quality ($f^2 = 0.002$) have negligible effects. Overall, the findings highlight the dominant role of App Convenience and Customer Trust, while other constructs contribute minimally, suggesting scope for model refinement.

Table No. 11: Direct effect

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
App Convenience -> Customer Trust	0.669	0.649	0.123	5.447	0.000
Customer Trust -> Customer Satisfaction	0.865	0.864	0.029	29.659	0.000
Delivery Efficiency -> Customer Trust	0.263	0.272	0.117	2.247	0.025
Price Fairness -> Customer Trust	-0.086	-0.078	0.087	0.989	0.024
Service Quality -> Customer Trust	0.046	0.050	0.084	0.551	0.016

The path coefficients and bootstrapping results reveal the strength and significance of relationships in the model. App Convenience has a strong and significant positive effect on Customer Trust ($\beta = 0.669$, $p < 0.001$), while Customer Trust strongly influences Customer Satisfaction ($\beta = 0.865$, $p < 0.001$), making it a key predictor. Delivery Efficiency also shows a positive and significant, though moderate, effect on Customer Trust ($\beta = 0.263$, $p = 0.025$).

In contrast, Price Fairness ($\beta = -0.086$) and Service Quality ($\beta = 0.046$) have insignificant effects on Customer Trust. Overall, the findings highlight the importance of app convenience and delivery efficiency in building trust, which in turn strongly drives customer satisfaction.

Table No. 12: Indirect effect

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
App Convenience -> Customer Satisfaction	0.579	0.562	0.111	5.205	0.000
Delivery Efficiency -> Customer Satisfaction	0.228	0.234	0.099	2.299	0.022
Price Fairness -> Customer Satisfaction	-0.075	-0.067	0.075	0.997	0.000
Service Quality -> Customer Satisfaction	0.040	0.043	0.073	0.551	0.032

The structural results show that App Convenience has a strong and significant positive effect on Customer Satisfaction ($\beta = 0.579$, $p < 0.001$), while Delivery Efficiency also has a positive and significant, though smaller, effect ($\beta = 0.228$, $p = 0.022$). In contrast, Price Fairness ($\beta = -0.075$) and Service Quality ($\beta = 0.040$) exhibit insignificant effects on Customer Satisfaction. Overall, the findings indicate that app convenience and delivery efficiency are key drivers of customer satisfaction, whereas the other factors have minimal impact in this context.

Discussion

The study provides strong empirical insights into the determinants of customer satisfaction in the quick commerce ecosystem of Belagavi using a mediation-based SEM approach. The model shows substantial explanatory power, with R^2 values of 0.749 for Customer Satisfaction and 0.753 for Customer Trust. App Convenience has a strong and significant positive effect on Customer Trust ($\beta = 0.669$, $p < 0.001$), which in turn strongly influences Customer Satisfaction ($\beta = 0.865$, $p < 0.001$), supported by a large effect size. The indirect effect of App Convenience on Customer Satisfaction further confirms the mediating role of Customer Trust.

Delivery Efficiency also shows a significant but moderate impact on Customer Trust and satisfaction, indicating its supportive role. In contrast, Service Quality and Price Fairness exhibit insignificant effects, suggesting they act as basic expectations rather than key differentiators. While the measurement model shows strong reliability and convergent validity, high HTMT values indicate potential discriminant validity issues among key constructs. Overall, the findings highlight a shift toward convenience- and trust-driven models in Tier-2 digital commerce markets.

Implication of the Study

Theoretical Implications

The study contributes to the literature by integrating SERVQUAL, TAM, and Expectation-Confirmation Theory into a unified SEM framework and validating it in a Tier-2 quick commerce context. The model's high explanatory power ($R^2 > 0.74$) confirms the strength of this theoretical integration. Customer Trust emerges as a key mediating construct with a strong effect ($\beta = 0.865$), highlighting its central role in digital service environments. The significant impact of App Convenience ($\beta = 0.669$) supports TAM, emphasizing the importance of technology-driven factors in shaping satisfaction. In contrast, the insignificant effects of Service Quality and Price Fairness challenge traditional service theories, suggesting they act as basic expectations rather than differentiators. Additionally, high HTMT values indicate potential construct overlap, offering methodological insights. Overall, the study extends existing theories to reflect evolving digital consumption patterns in Tier-2 markets.

Managerial Implications

The findings provide actionable insights for practitioners in the quick commerce sector, highlighting that App Convenience significantly influences Customer Trust ($\beta = 0.669$) and indirectly drives Customer Satisfaction ($\beta = 0.579$), making investments in app usability, speed, and seamless transactions essential. Customer Trust emerges as the most critical determinant ($\beta = 0.865$, $f^2 = 2.984$), emphasizing the importance of secure payment systems, transparency, and consistent service delivery for enhancing satisfaction and retention. Delivery Efficiency shows a moderate but significant impact, indicating that reliability and accuracy are more important than speed alone. In contrast, Price Fairness and Service Quality have insignificant effects, suggesting they function as basic expectations rather than key differentiators, though they must be consistently maintained to avoid dissatisfaction. Additionally, high HTMT values indicate strong interlinkages among app experience, trust, and satisfaction, implying that firms should adopt integrated strategies. Overall, competitive advantage in quick commerce depends on delivering a seamless, trustworthy, and technology-driven customer experience rather than relying solely on traditional service attributes.

Future Scope of the Study

While the study provides strong empirical evidence with substantial explanatory power ($R^2 = 0.749$ for Customer Satisfaction and 0.753 for Customer Trust), several avenues for future research emerge. The focus on a single Tier-2 city, Belagavi, limits generalizability, suggesting the need for studies across multiple Tier-2 and Tier-3 cities or comparisons with metropolitan areas. The cross-sectional design captures perceptions at one point in time; hence, longitudinal studies are recommended to examine how trust and satisfaction evolve with continued usage. Future research can also incorporate additional constructs such as perceived risk, brand image, customer loyalty, and repurchase intention to enhance the model's depth. The presence of high HTMT values indicates potential discriminant validity issues, calling for model refinement through improved measurement scales or higher-order constructs. Additionally, multi-group analysis across demographics and mixed-method approaches can provide deeper insights, while exploring emerging technologies like AI and personalization can further extend the model in line with evolving digital trends.

Conclusion

The study provides a comprehensive analysis of customer satisfaction in the quick commerce ecosystem of Belagavi using an SEM-based framework integrating SERVQUAL, TAM, and ECT. The findings reveal that App Convenience and Customer Trust are the most significant drivers of Customer Satisfaction, with Customer Trust playing a dominant

mediating role (β = 0.865). The model demonstrates strong explanatory power ($R^2 > 0.74$), confirming its effectiveness in capturing consumer behavior in a Tier-2 context. While Delivery Efficiency has a moderate impact, Service Quality and Price Fairness are insignificant, indicating they are viewed as basic expectations rather than differentiators. Overall, the study highlights that in digital retail environments, customer satisfaction is driven by seamless app experience and trust, emphasizing the importance of a reliable, convenient, and technology-driven approach for achieving competitive advantage.

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