Consumer Satisfaction and Preference toward Blinkit versus Traditional Grocery Stores: An Empirical Study in Bhopal City.

Abstract:

The explosive rise of quick commerce platforms like Blinkit has had a profound effect on how we purchase groceries in cities across emerging markets (Chakraborty et al., 2022). This research investigates how consumers have adopted q-commerce, their levels of satisfaction with this platform, and its competition with traditional Kirana stores in Bhopal (Kaur et al., 2021). A total of 202 urban residents participated in this study's cross-sectional, quantitative approach to collect primary data. When the dataset was analyzed again, it had an overall high satisfaction index regarding the q-commerce platform (94.85%). Using a multiple linear regression model to examine predictors of consumer satisfaction, product availability (β=0.875, $p<0.001$) and convenience (β=0.315, $p<0.001$) were found to be the strongest predictors of overall consumer satisfaction with q-commerce; pricing was found to be negatively correlated with overall consumer satisfaction (β=-0.200, $p<0.001$). Additionally, 51% of respondents reported decreased visits to Kirana stores. These results indicate that traditional grocery retailers will need to develop localized digital delivery options to overcome the structural disadvantages created by q-commerce platforms (Al Amin et al., 2021).

Key words:-

Quick Commerce; Consumer Satisfaction; Retail Transformation; Multiple Regression; Kirana Stores; Blinkit

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Introduction

Understanding the Indian retail ecosystem landscape since 2020 had never been so complicated; however, together with the rapid digitization of consumer goods and the rise of q-commerce (Ray et al., 2019) since 2020, this journey continued. The most significant development has been the formation of mobile delivery services that guarantee delivery of orders within a few minutes (Zhao and Bacao, 2020). For example, Blinkit, by utilizing well-built digital interfaces and technologically advanced last-mile delivery options, has risen to become one of the major players in the market. In contrast to the traditional, independent Kirana stores that have been the backbone of Indian neighborhoods for many years (Grewal et al., 2020), the small independent retailers that established themselves in their communities through their close relationship with their customers, their physical location, their relationships with customers and their use of informal credit networks for supplying goods to customers have always provided resistance to market forces. Today's rapid rise of q-commerce will disrupt this. Moreover, extrapolating consumer buying behavior from mega cities into Tier-2 cities such as Bhopal does not yield conclusive evidence, thus raising the fundamental research question posed in this study: what are the true determinants of customer satisfaction, and how does the structural change created by q-commerce affect customer dependency on Kirana stores? (Dash et al., 2021).

Literature Review

Transition from traditional retailing to quick commerce: Retailers switched from having set shipping dates for e-commerce to now offering same-day delivery (quick commerce). The predominant theme of today's discussions is hyper-local delivery networks, which disrupt the supply chain and create new challenges for traditional retail channels. In particular, quick delivery offers heightened expectations from consumers (Eger et al.; 2021).

Technology acceptance & factors influencing satisfaction: This research paper uses the Technology Acceptance Model (TAM) as its theoretical framework. The two constructs of PU (Perceived Usefulness) & PEOU (Perceived Ease of Use) respective measure speed, availability, application user interface/user experience (UI/UX) (Bauerová&Klepek, 2018; Troise et al., 2021). Moreover, based on recent academic contributions, research shows that Gen Z & Millennials prioritize instant gratification over strict price-driven value based on their digital-native backgrounds (Kaur et al.; 2021).

Resilience & vulnerability of institutions: While digital channels continue to grow, retailers using a conventional retailing model continue to hold significant market share based on the relational capital of existing customers.

Traditional retailers are experiencing structural technology gaps & outdated last mile delivery as their biggest risks to continued success. Researchers have recommended that independent grocers establish hybrid digital business models in order to survive (Wang & Somogyi, 2018).

The current body of research mainly investigates the use of rapid delivery services in urban areas (Tier 1), while little research has been conducted on how these disruptive technologies emerge in rapidly growing Tier 2 cities. Additionally, it is well known that conventional brick-and-mortar retailers are becoming more susceptible to rapid delivery services, but comparatively few studies have quantitatively assessed what service levels are sufficient for consumers to switch their loyalty from local Kirana retailers to q-commerce companies. Thus, this research will attempt to fill that void by examining the relationship between digital hyper-convenience and traditional relational capital in relation to Bhopal using the contextual sociocultural conditions of the city.

Research Objectives

The primary purpose of this empirical study is to evaluate the shifting paradigm of grocery retailing in Bhopal City by analyzing consumer adoption of quick commerce platforms compared to traditional physical stores. Specifically, the study aims:

1). To measure the overall level of consumer satisfaction with quick commerce delivery platforms among digitally active urban residents.
2).To evaluate the impact of key service dimensions—specifically product availability, convenience, delivery speed, and pricing—on overall consumer satisfaction.
3). To determine whether demographic variables, such as age cohort and occupational status, create significant variance in the adoption and usage frequency of q-commerce services.
4). To assess the systemic impact of quick commerce adoption on consumer visitation frequency and purchasing behavior at traditional neighborhood Kirana stores.

Research Hypotheses

Drawing upon the theoretical framework of technology acceptance and the identified service dimensions, the following hypotheses were formulated for empirical testing to understand consumer behavior toward quick commerce platforms:

H1: Delivery speed has a significant positive influence on overall consumer satisfaction with quick commerce platforms.
H2: Platform convenience has a significant positive influence on overall consumer satisfaction with quick commerce platforms.
H3: Product availability has a significant positive influence on overall consumer satisfaction with quick commerce platforms.
H4: Pricing has a significant negative influence on overall consumer satisfaction with quick commerce platforms.
H5: There is a significant variance in the adoption of, and overall satisfaction with, quick commerce platforms across different age cohorts.
H6: Occupational status significantly dictates the usage frequency of quick commerce services.

Research Methodology

Research Design and Sampling Procedure: The study adopted a descriptive and cross-sectional approach (quantitative research). The target population of this research was digitally active individuals residing in urban areas of Bhopal. Convenience sampling was used to obtain a sample of N=202 that met the required criteria for the study as specified by Dash et al (2021).

Data Collection Tool: Data were collected by means of a structured self-administered questionnaire containing demographic questions, behavioural measures of service usage, and rating of service quality on five dimensions: speed; convenience; availability; price; and overall satisfaction each measured on a 5-point Likert scale (1 = strongly disagree; 5 = strongly agree) (Tandon et al., 2018).

Data Analysis Procedures: The data were analysed using Python statistical software (Pandas, SciPy, Statsmodels); descriptive statistics provided summary statistics (aspects of the distribution of each variable) and assessed the distributional characteristics of the variables. To assess the reliability of the scales (serving as outcomes of interest) in the study, Cronbach's alpha, composite reliability (CR), and average variance extracted (AVE) were calculated. The inferential analyses included Pearson correlations; analyses of variance (ANOVA); independent samples t-test; and ordinary least squares (OLS) multiple regression. Multicollinearity among the independent variables was assessed using the variance inflation factor (VIF) (Hair et al., 2019).

As part of our Preliminary Data Analysis, initial screening was done on all raw data. The purpose of this screening is to identify and remediate any missing or largely unengaged responses to ensure that the integrity of the structure of the final dataset is maintained. Additionally, a pilot study was conducted using a small number (< 10) from target population to determine whether the instrument used had face validity, was clear, and demonstrated a logical flow before the full implementation. Statistical hypothesis testing was conducted at a 95% level of confidence ($p < 0.05$). Ethical guidelines have been maintained throughout this investigation (e.g., all individuals provided informed consent) and anonymizing participant personally identifiable information helps reduce any social desirability bias that may exist and increases the likelihood of participants providing objective responses.

Results

Demographic Characteristics

The sample consisted largely of young, digitally active consumers: 63.37% were aged 18–25, and 74.26% identified as students. The majority of respondents (83.17 per cent) had awareness of q-commerce platforms, with 'fast delivery' (36.14 per cent) being the key adoption driver – (Ray et al., 2019).

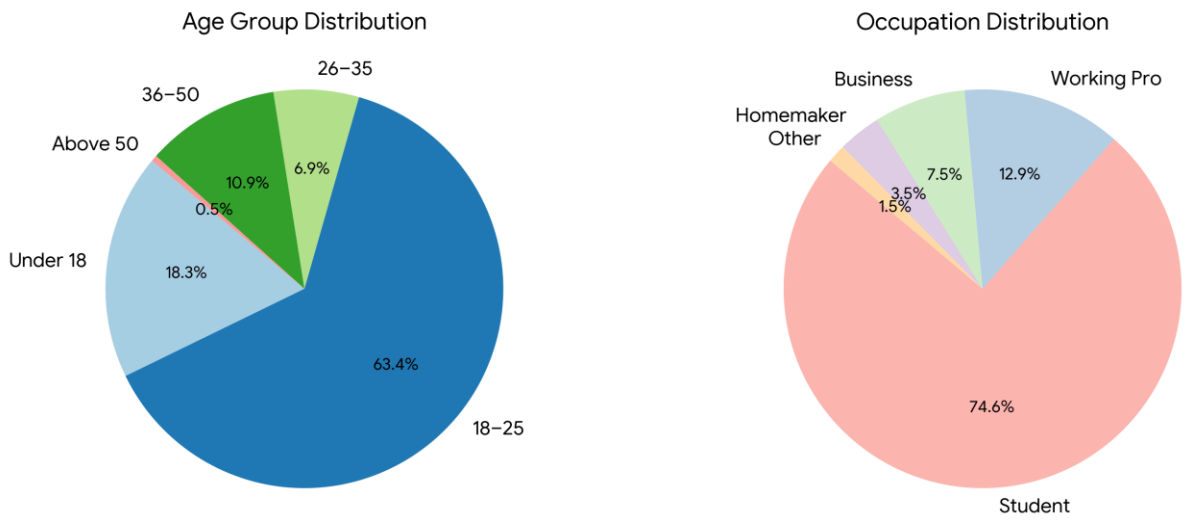
Table 1. Demographic Characteristics (N = 202)

Variable	Category	Frequency (N)	Percentage (%)
Age Group	Under 18	37	18.32
	18–25	128	63.37
	26–35	14	6.93
	36–50	22	10.89
	Above 50	1	0.50
Occupation	Student	150	74.26
	Working Professional	26	12.87
	Business Owner	15	7.43

Inference: *The demographic distribution is heavily concentrated among young adults (63.37% in the 18–25 bracket) and students (74.26%). This indicates that the primary adopters of 10-minute delivery services in this Tier-II city are digitally native youth who prioritize convenience and speed in their consumption habits.*

As illustrated in Figure 1, the demographic profile displays the distribution of our respondents across age groups.

Figure 1: Demographic Characteristics



Reliability and Validity Analysis

Table 2. Reliability and Convergent Validity

Metric	Value	Threshold	Interpretation
Number of Items	7	-	-
Cronbach's Alpha (α)	0.866	> 0.70	Excellent internal consistency
Composite Reliability (CR)	0.903	> 0.70	Highly reliable construct
Average Variance Extracted (AVE)	0.608	> 0.50	Adequate convergent validity

Inference: *Results from the survey instrument are indicative of very strong internal consistency because they achieve a Cronbach's Alpha of 0.866 and Composite Reliability of 0.903 which are substantially greater than an acceptable level of 0.70. In addition to these strong internal consistency results, the Average Variance Extracted (AVE) is also at least adequate as indicated by its value of 0.608 (Hair et al., 2019) and thus provide evidence that the constructs utilize in the research are reliable in measuring what they are intended to measure.*

Descriptive Statistics and Satisfaction Index

Table 3. Item-Level Descriptive Statistics

Survey Item	Mean	SD	Min	Max	Variance
Speed	4.55	0.50	4	5	0.25
Convenience	4.51	0.50	4	5	0.25
Availability	4.23	0.83	3	5	0.70
Pricing	4.05	0.57	3	5	0.33
Overall Satisfaction	4.74	0.44	4	5	0.19

Inference: *Across all service dimensions, respondents provided high ratings with average scores greater than four point zero (4.0) out of five—for the dimensions rated highest providing average scores in operation at Four Point Seven Four (4.74) and lowest for pricing at four point zero five (4.05)—which shows that consumers were satisfied with the operation of the services (e.g., speed & convenience), but were still a little less accepting than expected of the additional costs associated with those services.*

As illustrated in Figure 2, the service dimensions (Speed, Convenience, Availability, Pricing, Satisfaction) exhibit a strong performance profile.

Figure 2: Service Dimensions (Mean Scores)

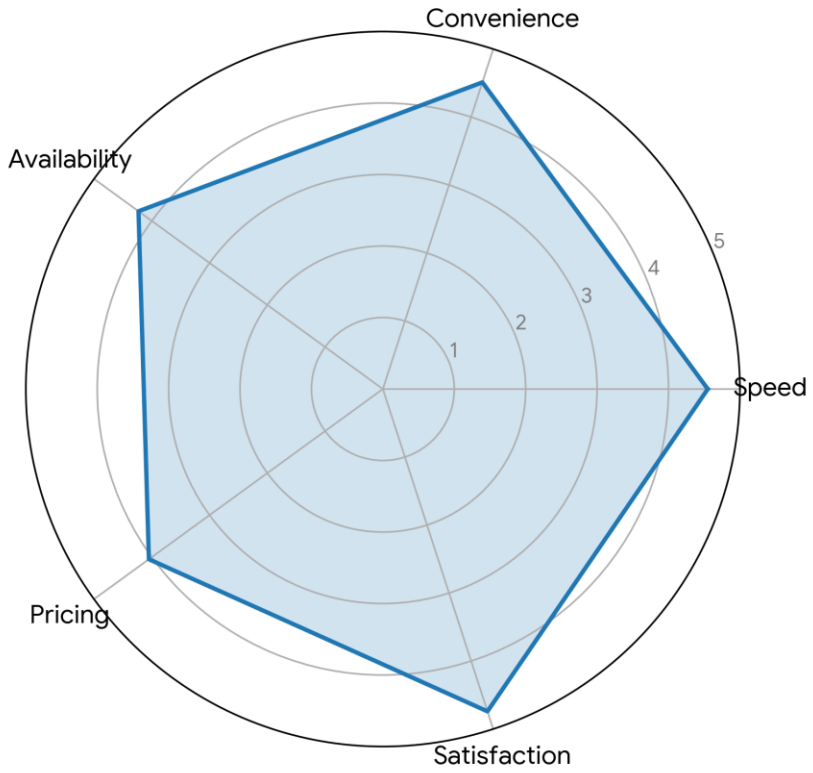


Table 4. Satisfaction Index Results

Metric	Result
Mean Satisfaction Score	4.74 / 5.0
Composite Satisfaction Score	958 / 1010
Satisfaction Index (%)	94.85%
Classification	Very High

Inference: *The measured satisfaction index of 94.85% was classified as being within the 'Very High' classification. As this value is an excessively favourable representation, and communicates an exceptionally high level of market acceptance and operational effectiveness of q-Commerce platforms for those surveyed in the research study, there are significant business opportunities for q-commerce solutions in this demographic group.*

Correlation Analysis

Table 5. Pearson Correlation Matrix

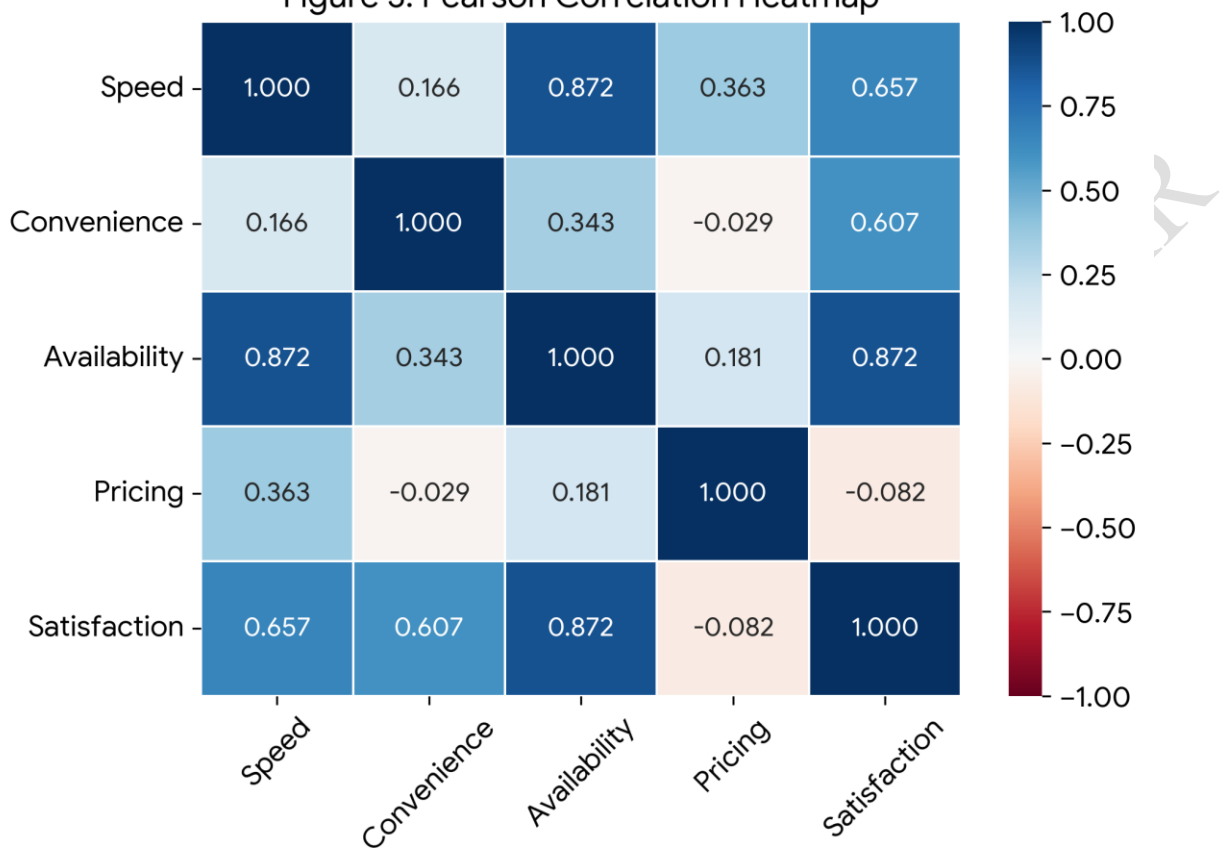
Variables	1	2	3	4	5
1. Speed	1.000				
2. Convenience	0.166*	1.000			
3. Availability	0.872***	0.343***	1.000		
4. Pricing	0.363***	-0.029 (ns)	0.181*	1.000	
5. Satisfaction	0.657***	0.607***	0.872***	-0.082 (ns)	1.000

Note: *** $p < 0.001$; * $p < 0.05$; ns = not significant.

Inference: *The correlation matrix shows there are high to very high correlations ($r = 0.872$) and ($r = 0.657$) for availability and speed respectively compared to overall satisfaction; however, pricing ($r = -0.082$) data shows a weak and statistically insignificant negative relationship to overall satisfaction, indicating that the utility derived from the platform exceeds any concerns regarding pricing.*

As illustrated in Figure 3, the correlation heatmap highlights the relationships between Speed, Convenience, Availability, Pricing, and Satisfaction.

Figure 3: Pearson Correlation Heatmap



Regression Analysis

Table 6. Regression Model Summary

R	R^2	Adjusted R^2	Std. Error
0.956	0.914	0.912	0.130

Inference: *The regression model demonstrates high explanatory power, with an R^2 value of 0.914 indicating that 91.4% of the variance in overall consumer satisfaction is explained by the independent variables, while the adjusted R^2 of 0.912 confirms the robustness of the model.*

Table 7. ANOVA Results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	3.330	4	0.833	521.784	<0.001
Residual	3.330	197	0.017		
Total	38.614	201			

Inference:*The ANOVA results confirm the statistical significance of the regression model ($F = 521.784$, $p < 0.001$), validating that the selected variables collectively provide a reliable and significant framework for predicting consumer satisfaction in the context of this study.*

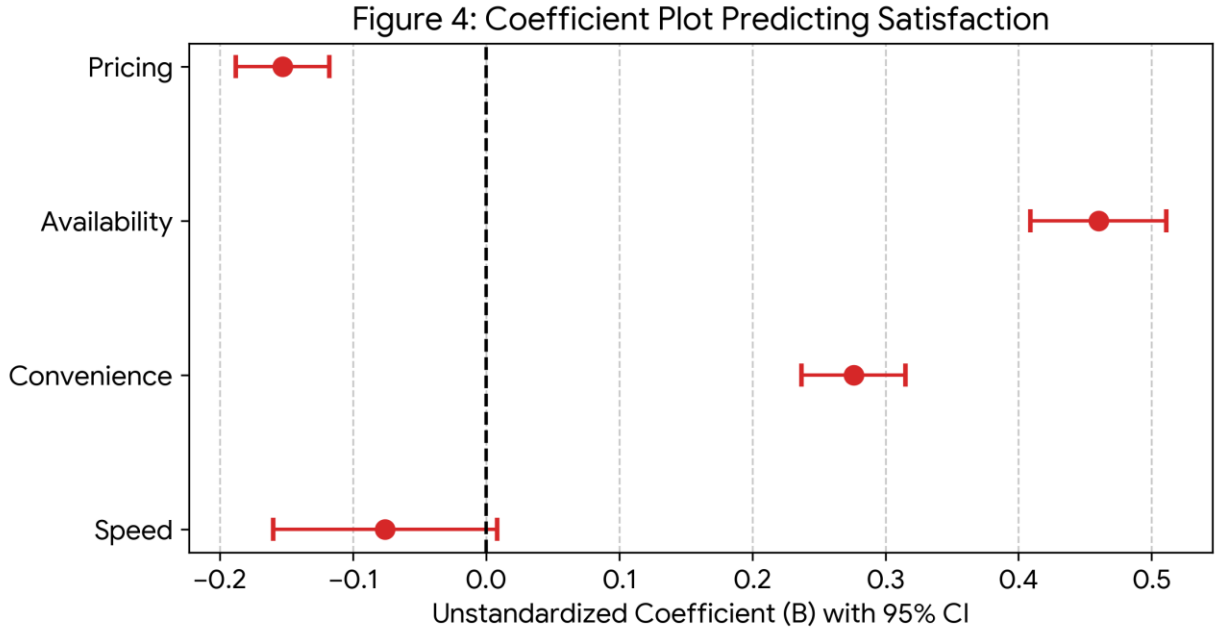
Table 8. Regression Coefficients

Predictor	Unstandardized B	Std. Error	Standardized β	t-value	p-value	VIF

(Constant)	2.518	0.144	-	17.537	<0.001	-
Speed	-0.076	0.043	-0.087	-1.758	0.080	5.54
Convenience	0.276	0.020	0.315	13.545	<0.001	1.24
Availability	0.460	0.026	0.875	17.870	<0.001	5.48
Pricing	-0.153	0.018	-0.200	-8.501	<0.001	1.27

Inference: *Satisfaction has significant positive correlations to Availability (β=0.875; p<0.001) and Convenience (β=0.315; p<0.001) that are strong predictors. Prices also correlate negatively with Satisfaction (β=-0.200; p<0.001). Speed shows a general correlation to Satisfaction; however, after including all variables simultaneously in a multivariate model, the correlation between Speed and Satisfaction becomes marginally non-significant (p=0.080) due to the moderate correlation between Speed and Availability (VIF=5.54), indicating that when products are readily accessible within one's locality, speed of arrival will not be the decisive baseline metric.*

As illustrated in Figure 4, the forest plot visualizes the regression coefficients and their confidence intervals.



Discussion

Evaluation of Service Dimensions and Consumer Satisfaction (H1 to H4) The multiple linear regression analysis provides a granular breakdown of how individual operational elements dictate overall user satisfaction, yielding distinct conclusions for Hypotheses 1 through 4.

- **Product Availability (H3) and Convenience (H2):**There is strong empirical evidence for Hypotheses 3 and 2. Product availability is the highest positive driver of customer satisfaction (β=0.875, p<0.001), while platform convenience is also important (β=0.315, p<0.001). As such, a key element of the value proposition of quick commerce is high levels of stock availability and seamless utility.

- **Pricing (H4):**Pricing has been found to have a statistically meaningful negative correlation with consumer's overall satisfaction (β=-0.200), which supports Hypothesis 4. Hence, while there is a considerable degree of utilization of q-commerce by consumers, they still remain conscious about product pricing and additional delivery charges. Nevertheless, the overall high level of satisfaction with the q-commerce service (94.85%) indicates that the value perceived from the service is greater than the consumer's concern with price.

- **Delivery Speed (H1):**It is worth noting that the final multivariate model did not support Hypothesis 1. Delivery speed does show a general relationship with satisfaction; however, this becomes marginally non-significant (p=0.080) when considered with all other variables in the model. This phenomenon can be

attributed to the moderate correlation found between speed and product availability (VIF=5.54). This indicates that when products are available in a local area, the baseline delivery speed is not a strong stand-alone indicator of satisfaction.

Rejection of Demographic Variance (H5 and H6) The statistical analyses for demographic variables challenge traditional assumptions regarding digital native exclusivity, leading to the rejection of both Hypotheses 5 and 6.

- **Age Cohorts (H5):**Statistical insignificance (p=0.428, F=0.964) from the ANOVA of hypothesis #5 (variance between age cohorts) indicates that q-commerce is increasingly being adopted uniformly between age cohorts, as opposed to continuing to be strictly a youth-oriented activity (Eger et al., 2021).

- **Occupational Status (H6):** Similarly, Hypothesis 6 was rejected, as statistical testing (t=-0.463, p=0.646) confirmed that occupational necessity does not dictate usage frequency.

Perception of Functionality over Price The findings of the regression analysis show that functionality & utility significantly outweigh price in determining customer satisfaction. This shows there is an ever-increasing premium being placed on convenience as part of consumer thinking in India, such that the immediate physical proximity to a retailer—the historic primary benefit of a traditional Kirana store—is becoming increasingly less relevant (Chakraborty et al., 2022).

Hybrid Consumption Patterns The research also describes overall patterns of change in the way urban consumers interact with their surroundings, with 51% of people saying that they are visiting local Kirana stores less often than they did before. As a result, the traditional retail industry is undergoing fundamental changes across all channels. Abolishing traditional retail will almost certainly not happen, but there will be a mixture of online and offline purchasing methods developing. Consumers are outsourcing their immediate purchases to places like Blinkit, while still continuing to use local stores to make purchase decisions that were made ahead of time (Al Amin et al. 2021).

Practical Implications and Limitations

Outcomes of The Findings

The results show that traditional retailers can improve their competitive advantage with lower cost digital solutions including WhatsApp-based catalogues to show product offerings and provide visibility into products through digital systems to reduce asymmetric information between retailer and consumer. Additionally, increased development of neighborhood delivery networks will help the local Kirana store deliver the growing consumer demand for convenience and quick fulfilment. For quick commerce companies, a partnership with local Kirana retailers may be a viable operational model. By incorporating local retailers into their platform ecosystems, quick commerce companies will be able to deliver more products to local consumers while improving their last mile delivery capabilities while at the same time, reducing the high cost associated with maintaining independent dark store networks. As such, both traditional retailers and quick commerce companies will have access to mutually beneficial collaboration.

Limitations and Future Research Directions

The study has several limitations in that the research was confined to produce delivered to Bhopal City which may limit generalizability to other areas of India and to other demographic groups. Also, the sample used convenience sampling so that the respondents were predominantly young and digitally connected. As a result, the findings should be interpreted strictly in the context of the particular sample, and not as representative of Indian consumers as a whole. Future research should use probability sampling and multiple city and regional samples to improve the external validity of the sampled population. Longitudinal research could provide insight into how consumer attitudes towards, consumer satisfaction with, and consumer behaviour, will change over time as quick commerce becomes more mainstream. Finally, comparative studies between multiple quick commerce platforms and traditional retailer business models could increase understanding of the changing retail environment.

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