



IMPACT OF LAST-MILE DELIVERY SPEED ON BRAND LOYALTY AMONG GENERATION Z CONSUMERS IN INDIAN E-COMMERCE

Somshekhar Bocharé

RV Institute of Management, Bengaluru, Karnataka

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1. ABSTRACT

The swift transformation of the Indian e-commerce and quick-commerce markets has essentially altered the level of consumer expectations, with the speed of last-mile delivery becoming a key competitive differentiator. The proposed research will examine how ultra-fast delivery and logistical consistency can promote long-term brand loyalty among the consumers of Generation Z in urban India. Using a descriptive and analytical research design, primary data was gathered using a structured questionnaire on a sample of 350 Gen Z shoppers. The data were discussed in terms of the descriptive statistics, Pearson correlation, and multiple regression analysis. The results indicate that there exists a very significant positive correlation between consistent and fast delivery and brand loyalty. Regression analysis results show that delivery measures, namely the anticipation of reduced delivery time and on time delivery consistency, explain a significant 92.8% of the variation in customer retention ($p < 0.001$), and the null hypothesis is thus conclusively rejected. It is important to note that although consumers are so satisfied when the deliveries take longer than expected, they are not willing to pay premium prices to receive deliveries faster than expected and show no significant correlation with long-term loyalty. The research finds that in the case of the digitally native generation Z, ultra-fast delivery has ceased to be a premium luxury to be a baseline operational requirement. To achieve long-term sustainable affective commitment, Indian e-commerce portals need to streamline their supply chains to provide unmatched speed and reliability as a standard service, beyond sporadic convenience driven purchases to create real brand loyalty.

KEYWORDS: Last-Mile Delivery, Brand Loyalty, Generation Z, Quick Commerce, E-commerce Logistics.

2. INTRODUCTION

The dynamic growth of the world and Indian e-commerce sector has fundamentally changed the expectations of consumers shifting their traditional logistical models to hyper-consumer-driven models driven by technological advances (Nandy and Padhy, 2025). At the forefront of this paradigm shift is Generation Z. Being a digitally native demographic, their buying behavior on e-commerce platforms is becoming more influenced by the complex logistical factors that are much beyond the scope of conventional factors such as product assortment or the design of a webpage (Radyi et al., 2024).

Last-mile delivery innovations are the key future of e-commerce logistics (Nagadeepa et al., 2024). This is particularly noticeable as platforms are aggressively competing in the new quick commerce environment, an environment where the very fabric of consumer loyalty is quickly changing (Joshi et al., 2025). Delivery speed is a non-negotiable expectation among the urban Indian consumers of Generation Z. This need to receive immediate satisfaction is so intense and powerful that it threatens to disorganize the traditional local retailing structure, e.g. the neighborhood Kirana stores (Saxena, 2025).

The scholars prove that the quality of e-logistics services is becoming the main factor that predetermines the overall attitude, satisfaction, repurchase intentions, and electronic word-of-mouth (Mallieswari et al., 2023; Ngo et al., 2025; Vu and Nguyen, 2025). The last-mile experience will basically determine user trust and satisfaction, which directly spill over into long-term brand loyalty (Palomino Salazar & Perez Castañeda, 2025). Although the general expectations of last-mile delivery among this cohort are unusually high (Nguyen et al., 2024), the preferences of Gen Z are also very subdued. In addition to speed, cross-generational research suggests that they have a high propensity towards sustainable last-mile delivery practices (Jagoda et al., 2023). They are proactive in thinking about the environmental impacts of last-mile vehicle decisions (Atungulu, 2023) and willing to engage in other more environmentally-friendly logistics models such as crowdshipping (Upadhyay et al., 2024) or the use of centralized collection and delivery points (Bharadwaj, 2025). Moreover, their focus on optimized last-mile logistics is also applied to specific supply chains, including the rapid delivery of organic foods (Kumar et al., 2025). Although these diverse logistical needs, the fundamental question of business is whether ultra-fast delivery ensures retention. Thus, this paper will explore the conclusive effect of the speed of delivery in the final mile on developing true brand loyalty among the Generation Z in the Indian e-commerce market.



3. REVIEW OF LITERATURE

Author and Year	Objective	Methodology	Key Findings	Summary
Upadhyay, C. K., et al. (2024)	To explore Gen Z's willingness to use crowdshipping for sustainable last-mile delivery.	Empirical study using primary data in emerging markets.	Gen Z shows a high propensity to participate in eco-friendly delivery models.	Highlights Gen Z's preference for sustainable logistical solutions in e-commerce.
Nguyen, Q. L., et al. (2024)	To assess Generation Z's specific expectations regarding last-mile delivery services.	Case study approach using regional survey data.	Speed and reliability are primary expectations for young e-commerce consumers.	Underscores the critical role of meeting baseline delivery expectations for youth.
Mallieswari, R., et al. (2023)	To evaluate logistics service quality's effect on Gen Z satisfaction and loyalty.	Quantitative research using a SEM (Structural Equation Modeling) approach.	High logistics quality directly increases post-pandemic customer satisfaction and brand loyalty.	Establishes a direct link between delivery service quality and customer retention.
Ngo, T. T. A., et al. (2025)	To identify how logistics quality shapes Gen Z's repurchase intentions and eWOM.	Analytical study using cross-sectional consumer data.	Superior delivery quality significantly boosts positive online reviews and repeat purchases.	Provides insight into how logistics drive digital advocacy and continued engagement.
Vu, T. P., & Nguyen, D. T. (2025)	To examine the links between e-logistics quality, consumer attitude, and repurchase intention.	Empirical research utilizing structured questionnaire data.	Positive delivery experiences foster favorable brand attitudes and continuous buying behavior.	Highlights attitude as a key mediator between logistics and repurchase intention.
Atungulu, M. (2023)	To investigate how environmental knowledge affects Gen Z's delivery vehicle preferences.	Descriptive study analyzing consumer awareness and choices.	Environmental awareness strongly dictates the preference for green delivery fleets.	Emphasizes the growing importance of eco-friendly last-mile logistics for Gen Z.
Nagadeepa, C., et al. (2024)	To analyze the impact of technological innovations on last-mile e-commerce logistics.	Conceptual review of technological trends in delivery.	Automation and digital tools are exponentially accelerating delivery efficiency and speed.	Provides a technical overview of future innovations shaping the delivery landscape.
Bharadwaj, D. (2025)	To evaluate consumer acceptance of collection and delivery points (CDPs).	Theoretical framework application using primary survey data.	Consumers value CDPs for their convenience and flexibility in the last mile.	Highlights alternative logistical models gaining traction among modern consumers.
Jagoda, A., et al. (2023)	To compare e-customer preferences for sustainable deliveries across different generations.	Comparative analysis using cross-generational survey data.	Younger generations exhibit a noticeably higher demand for sustainable delivery options.	Underscores Gen Z as the primary driver for green logistics adoption.



Palomino Salazar, L. F., & Perez Castañeda, R. G. (2025)	To assess how user experience and trust affect satisfaction and delivery loyalty.	Quantitative research analyzing regional user data.	A seamless delivery experience builds trust, which directly translates to platform loyalty.	Establishes user experience in logistics as foundational to customer retention.
Radyi, S. A. M., et al. (2024)	To identify factors beyond product and design influencing Gen Z purchasing decisions.	Exploratory study examining peripheral e-commerce factors.	Fulfillment logistics and delivery speed heavily outweigh traditional platform aesthetics.	Shifts focus from platform design to logistical efficiency in driving Gen Z sales.
Kumar, V., et al. (2025)	To optimize supply chains by understanding preferences for e-commerce food deliveries.	Analytical study of consumer preferences in niche markets.	Optimized last-mile logistics are crucial for the adoption of online organic food platforms.	Highlights specialized supply chain requirements driven by consumer delivery expectations.
Saxena, A. (2025)	To study the effect of e-commerce delivery models on traditional urban retail.	Descriptive study focusing on Gen Z urban consumer behavior.	Quick commerce adoption by Gen Z significantly disrupts traditional local Kirana store loyalty.	Details the localized market shift caused by ultra-fast delivery expectations.
Nandy, I., & Padhy, R. (2025)	To trace the evolution of themes in technology-focused last-mile delivery systems.	Systematic literature review of technological evolution.	Logistics have fundamentally shifted from operational focus to extreme consumer-centricity.	Provides historical context to the current hyper-focus on consumer delivery experience.
Joshi, S., et al. (2025)	To explore how consumer loyalty is evolving in the modern quick commerce landscape.	Empirical analysis of consumer retention in q-commerce.	Loyalty is increasingly transactional and heavily dependent on consistent, rapid fulfillment.	Underscores the changing paradigms of brand loyalty in the ultra-fast delivery era.

4. RESEARCH GAP

Although the current literature has explored the topic of Gen Z prefers the idea of sustainable logistics and the overall quality of e-commerce services, there is still a notable lack of explicit research on the independent effect of the ultra-fast speed of delivery on the long-term brand loyalty in India, in particular. Available literature tends to confuse the concept of transactional convenience with the concept of a true affective commitment, and it is possible to say that the sustainable retention value of speed-driven quick-commerce models remains largely unexplored among Indian youth.

5. RESEARCH DESIGN

5.1 STATEMENT OF THE PROBLEM

The blistering development of quick commerce in India shifted the consumer expectations, and the speed of the last-mile delivery became a critical competitive differentiator. The research is carried out to explore whether ultra-fast delivery can cause actual brand loyalty among Generation Z or it only leads to a temporary, convenience-driven transaction. This is needed because online stores are putting enormous amounts of funds in logistical infrastructure without fully grasping how it will play

out in the long term as far as customer retention is concerned. The key area of interest in the current study is to analyze how the speed of delivery, customer satisfaction, and persistent repurchase intentions are interrelated among Gen Z consumers in the context of the Indian e-commerce market. Such insights will assist online retailers to maximize the supply chain investments to create a sustainable brand loyalty instead of spurious interaction.

5.2 OBJECTIVES

- **To assess** the current expectations of Generation Z consumers regarding last-mile delivery speed in Indian e-commerce platforms.
- **To find out** the direct impact of ultra-fast delivery services on consumer satisfaction and immediate repurchase intentions.
- **To understand** the relationship between consistent delivery performance and the development of long-term brand loyalty among young shoppers.

5.3 RESEARCH METHODOLOGY

The research methodology defines the systematic approach to



be applied in carrying out this study. It offers a systematic perspective on collecting, examining and extracting data on the e-commerce behaviors of Gen Z. This guarantees reliability, validity, and effectiveness of the research in meeting the defined objectives in terms of speed in delivery and brand loyalty.

This study is based on descriptive and analytical research. It is descriptive since it explains the exact attributes and purchasing patterns of Gen Z consumers. It is analytical in the sense that it analyzes the causal relationship between the measures of speed of delivery and the resultant brand loyalty, and tests these variables using statistical models.

5.4 SOURCES OF DATA

Primary data: Primary data will be gathered personally by the researcher specifically to the purpose of this research. This first-hand data will be collected directly at the identified units of the study population, namely, Generation Z users of e-commerce, which will ensure that the data is very relevant, up to date, and directly corresponds to the specific aims of the study.

Secondary data: Secondary data will be obtained through the publication of previously made materials collected by other people to serve different purposes albeit related. This involves academic journals, industry publications, market research reports, articles, and official e-commerce websites to create a solid theoretical base and create a context of primary findings.

5.5 SAMPLING PLAN

Sampling unit: The sampling unit will be a group of individual Generation Z consumers (aged 18-27) living in urban Indian cities who actively shop online.

Sample size: The research will use a total of 350 responses in an attempt to achieve statistical reliability and valid representation.

Sampling technique: The convenience sampling technique will be used to enable the researcher to collect data effectively among the easily accessible Gen Z respondents that make up the target population.

5.6 TOOLS USED IN DATA COLLECTION.

- **Survey:** Data will be first gathered through the use of a structured questionnaire using a 5-point Likert scale to easily measure respondents attitudes, preferences and loyalty towards the speed of delivery.
- **Observation:** The observational method will allow the researcher to use passive observation of existing trends in e-commerce, the interface of the apps, and user reviews of the digital platforms to supplement the survey data with the real world.
- **Individual focus groups:** Could also be implemented in terms of individual focus group discussions where 5-8 Gen Z shoppers would be interviewed to provide more detailed qualitative information on how they emotionally connect with fast-delivery brands and shopping behaviors.

5.7 PLAN OF ANALYSIS

Raw data obtained will be compiled, classified and tabulated in a systematic way to make it clear. It will then be interpreted and inferred with the help of descriptive statistics, correlation, and regression analysis to determine relationships between variables. To achieve the correct results, these statistical tests will be carried out with the help of MS Excel spreadsheets and SPSS software.

6. CONCEPTUAL FRAMEWORK

Dependent Variable (DV)

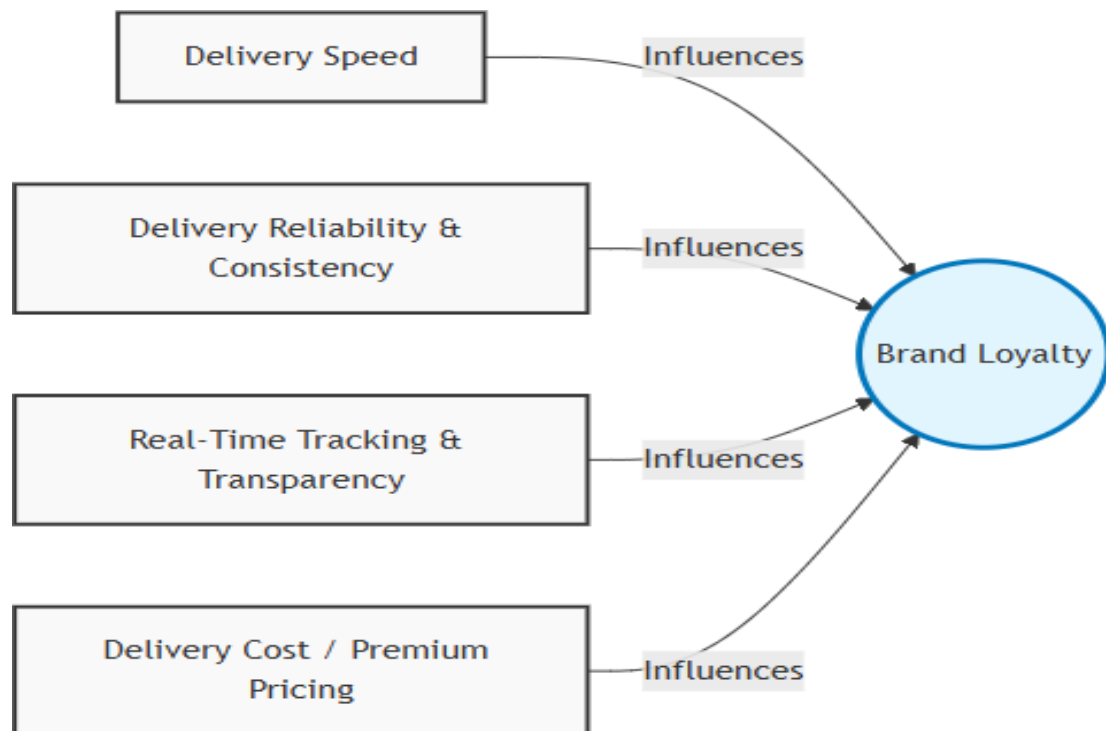
Brand Loyalty

Independent Variables (IVs)

IV 1: Delivery Speed

IV 2: Delivery Reliability and Consistency IV 4: Delivery Cost / Premium Pricing

IV 3: Real-Time Tracking and Transparency



consumers in the Indian e-commerce sector.

7. RESULTS

Null Hypothesis (H0): There is no significant impact of last-mile delivery speed on brand loyalty among Generation Z

Alternative Hypothesis (H1): Last-mile delivery speed has a significant positive impact on brand loyalty among Generation Z consumers in the Indian e-commerce sector.

7.1 REGRESSION ANALYSIS

Variables Entered/Removed			
Model	Variables Entered	Variables Removed	Method
1	I expect e-commerce platforms to continuously improve and shorten their delivery times, typically reaction when e-commerce platform charges an extra fee for "express" or "priority" delivery, If a platform does not offer an express delivery option at checkout, I am likely to abandon my cart and shop elsewhere, I regularly choose my primary e-commerce app solely because they consistently deliver my orders on time, every time	.	Enter
a. Dependent Variable: Consistent, ultra-fast delivery is the single most important factor that makes me a loyal, long-term customer of an e-commerce brand			
b. All requested variables entered.			

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.963a	.928	.927	.293

a. Predictors: (Constant), I expect e-commerce platforms to continuously improve and shorten their delivery times, typically reaction when e-commerce platform charges an extra fee for "express" or "priority" delivery, If a platform does not offer an express delivery option at checkout, I am likely to abandon my cart and shop elsewhere, I regularly choose my primary e-commerce app solely because they consistently deliver my orders on time, every time

ANOVAa

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	381.905	4	95.476	1110.947	.000b
	Residual	29.650	345	.086		
	Total	411.554	349			

a. Dependent Variable: Consistent, ultra-fast delivery is the single most important factor that makes me a loyal, long-term customer of an e-commerce brand

b. Predictors: (Constant), I expect e-commerce platforms to continuously improve and shorten their delivery times, typically reaction when e-commerce platform charges an extra fee for "express" or "priority" delivery, If a platform does not offer an express delivery option at checkout, I am likely to abandon my cart and shop elsewhere, I regularly choose my primary e-commerce app solely because they consistently deliver my orders on time, every time

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.188	.078		-2.398	.017
	If a platform does not offer an express delivery option at checkout, I am likely to abandon my cart and shop elsewhere	.076	.046	.076	1.654	.099
	I regularly choose my primary e-commerce app solely because they consistently deliver my orders on time, every time	.442	.050	.434	8.877	.000
	typically reaction when e-commerce platform charges an extra fee for "express" or "priority" delivery	.030	.021	.021	1.427	.155
	I expect e-commerce platforms to continuously improve and shorten their delivery times	.513	.037	.479	13.708	.000

a. Dependent Variable: Consistent, ultra-fast delivery is the single most important factor that makes me a loyal, long-term customer of an e-commerce brand



Interpretation

The multiple regression results show that the overall model is highly significant ($F = 1110.947$, $p < 0.001$). The independent variables are strong predictors of dependent variable, that is, 92.8% of the variance in brand loyalty is explained ($R\text{-square} = 0.928$). In particular, the demand of shorter delivery times ($p < 0.001$) and the uniformity of on-time delivery ($p < 0.001$) are very important positive predictors of long-term customer

loyalty.

Since the overall level of significance is far lower than the standard level of significance, 0.05, we reject the Null Hypothesis (H_0) and accept the Alternative Hypothesis (H_1). In conclusion, the speed and consistency of last-mile delivery have a positive influence on brand loyalty among Generation Z consumers in the Indian e-commerce industry.

7.2 CORRELATION

Correlations						
		Delivery Speed	Delivery Reliability and Consistency	Delivery Cost / Premium Pricing	Real-Time Tracking and Transparency	Brand Loyalty
Delivery Speed	Pearson Correlation	1	.946**	.031	.891**	.914**
	Sig. (2-tailed)		.000	.560	.000	.000
	N	350	350	350	350	350
Delivery Reliability and Consistency	Pearson Correlation	.946**	1	.025	.903**	.939**
	Sig. (2-tailed)	.000		.647	.000	.000
	N	350	350	350	350	350
Delivery Cost / Premium Pricing	Pearson Correlation	.031	.025	1	.038	.052
	Sig. (2-tailed)	.560	.647		.480	.334
	N	350	350	350	350	350
Real-Time Tracking and Transparency	Pearson Correlation	.891**	.903**	.038	1	.939**
	Sig. (2-tailed)	.000	.000	.480		.000
	N	350	350	350	350	350
Brand Loyalty	Pearson Correlation	.914**	.939**	.052	.939**	1
	Sig. (2-tailed)	.000	.000	.334	.000	
	N	350	350	350	350	350

** . Correlation is significant at the 0.01 level (2-tailed).

Interpretation

Pearson correlation matrix indicates that there is a strong positive relationship with high level of significance between delivery metrics and brand loyalty. In particular, the regular on-time delivery ($r = .939$, $p < .001$) and anticipations of shorter delivery time ($r = .939$, $p < .001$) are closely correlated with long-term customer loyalty. Moreover, the possibility of leaving a

cart without an express option has a high correlation with loyalty ($r = .914$, $p = .001$). On the other hand, there is no significant correlation between the premium delivery charges and the loyalty ($r = .052$, $p = .334$). In general, the first factor that influences Gen Z brand loyalty is the provision of reliable, ultra-fast delivery, not the pricing response.



7.3 DESCRIPTIVE STATISTICS

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Age Group	350	1	4	2.36	.798
Gender	350	1	4	1.54	.635
Occupation	350	1	4	1.79	.927
Frequency of purchasing on e-commerce or quick-commerce platforms	350	1	4	1.92	.882
which product category is ultra-fast delivery (under 30 minutes) is most important	350	1	4	1.65	.936
your baseline expectation for standard e-commerce delivery times	350	1	4	2.25	.804
typically reaction when e-commerce platform charges an extra fee for "express" or "priority" delivery	350	1	4	2.27	.759
I expect e-commerce platforms to continuously improve and shorten their delivery times	350	1	5	3.98	1.013
If a platform does not offer an express delivery option at checkout, I am likely to abandon my cart and shop elsewhere	350	1	5	3.53	1.093
How satisfied are you with your overall shopping experience when an order arrives earlier than the promised delivery window	350	1	5	4.40	.846
How likely are you to immediately place another order with an app that just successfully delivered your previous order within 15 minutes	350	1	5	3.69	1.078
A single instance of a delayed delivery significantly reduces my trust and satisfaction with that specific e-commerce brand	350	1	5	3.76	1.062
I regularly choose my primary e-commerce app solely because they consistently deliver my orders on time, every time	350	1	5	3.67	1.066
I am willing to pay a slightly higher price for a product on Platform A over Platform B if Platform A guarantees a faster delivery speed	350	1	5	3.35	1.167
Consistent, ultra-fast delivery is the single most important factor that makes me a loyal, long-term customer of an e-commerce brand	350	1	5	3.81	1.086
Valid N (listwise)	350				



Interpretation

The descriptive statistics (N=350) indicate that Generation Z has strong preferences in terms of fast e-commerce delivery. The largest recorded mean is that of customer satisfaction whereby an order is received earlier than the promised time (M = 4.40, SD = 0.846) hence creating an immense positive sentiment and high consensus between respondents. Moreover, respondents have strong expectations that platforms will always be able to reduce the delivery time (M = 3.98, SD = 1.013) and that constant, ultra-fast delivery is a key factor in the long-term brand loyalty (M = 3.81, SD = 1.086).

On the other hand, the least agreement among Likert variables and the most variance (M = 3.35, SD = 1.167) are the willingness to pay a premium price of products in order to receive faster delivery. This implies that unlike the degree of absolute speed and consistency that is desired by Gen Z, it is becoming more of a practical and standard baseline expectation instead of a luxury that they must pay a premium to acquire.

8. DISCUSSIONS

- The key observation here is that a large number of the 350 respondents were aged between 18 and 21 years and this active involvement of the core demographic of Generation Z in the Indian e-commerce ecosystem.
- The fastest delivery time (less than 30 minutes) was found to be most critical among the groceries and daily requirements by about 60 percent of the surveyed young consumers.
- The descriptive data shows that there is a strong tendency of users of Generation Z to abandon their shopping cart in case an express delivery option is not explicitly offered at the checkout.
- The maximum achieved mean score of 4.40 out of 5 shows that the consumers are being immensely satisfied when their orders are delivered earlier than the stipulated delivery schedule.
- Participants indicated a high expectation, in that a mean score of 3.98 indicated that people believed that e-commerce platforms needed to constantly innovate in order to reduce their average standard delivery fulfillment times.
- With such a solid mean score of 3.81, it is evident that the respondents have agreed to a great extent that consistent and ultra-fast delivery is the ultimate factor that has made them long-term brand loyalists.
- The lowest agreement mean of 3.35 which indicates that speed is becoming more and more a right rather than a luxury recorded the lowest agreement mean.
- The multiple regression model was found to be highly significant in overall model and the F-statistic of 1110.947 is highly significant.
- As shown by the regression summary, the independent variables of delivery have been able to explain a colossal 92.8 percent of the overall variance of generation Z brand loyalty.
- Based on the level of regression significance, which was considerably lower than the 0.05 level, the null hypothesis was strongly rejected in favor of the alternative hypothesis on the topic of delivery speed.
- The Pearson correlation matrix revealed an astonishingly

high positive correlation of 0.939 between a consistent performance in on-time performance delivery and long-term customer loyalty among e-commerce customers.

- Also, there is a very high positive coefficient of expectation of shorter delivery times of a continuous nature and the creation of actual brand loyalty of 0.939.
- The probability of abandoning a cart when express options are missing are strongly related to long-term retention at 0.914.
- A reaction of the consumer in paying high delivery prices was insignificantly correlated with brand loyalty, i.e. retention is highly unattached to delivery cost tolerance.
- It is ultimately confirmed that the speed of last-mile delivery and the logistical consistency have a significant and direct positive effect on keeping Generation Z shoppers.

9. CONCLUSION

The study conclusively demonstrates that speed of delivery at the last mile is one of the basic determinants of brand loyalty among Generation Z consumers in the Indian e-commerce ecosystem. The empirical data clearly rejects the null hypothesis and shows that rapid and constant fulfillment is the determinant of the overwhelming 92.8% of the variance of long-term customer retention. To this digitally native demographic, the ultra-fast delivery, especially that of daily essentials, has shifted as a value-add to a necessity.

Most importantly, the results show a multifaceted operation paradox to e-commerce platforms. Although Gen Z is highly satisfied and intends to buy again immediately when their delivery windows are delayed, their readiness to pay high prices to have this speed is significantly lower, and there is no significant correlation between this willingness and long-term loyalty. As a result, loyalty based on pure convenience can easily be shattered in case platforms cannot ensure logistical stability or even desire to compensate costs with transparent delivery fees.

To achieve sustainable affective commitment, Indian e-commerce and quick-commerce brands need to streamline their supply chains to achieve unmatched speed as a standard service and not as a tiered luxury. Finally, in the hyper competitive digital market, the last mile without sacrificing reliability is the ultimate key to capturing and retaining the Generation Z consumer.

10.SUGGESTIONS

- As a solution to this issue, the e-commerce platforms should incorporate the ultra-fast delivery cost into their base operational budgets instead of charging the Generation Z a premium cost on the door.
- The retailers must at all the time display guaranteed expedited delivery schedules prominently on the product page in order to directly prevent high rate of cart abandonment witnessed within this demographic.
- Supply chain managers should focus on absolute logistical reliability, and consistent on-time delivery, since a failure to meet guaranteed windows shatters trust much more than regular shipping delays.
- Brands are advised to strategically add extra delivery time



to the estimated delivery times to surprise young consumers with earlier deliveries and maximize immediate post delivery satisfaction.

- Fast last-mile providers ought to prioritize their fastest infrastructure with groceries and daily essentials, where consumers need the most urgent delivery.
- Structurally, it is necessary to invest in highly transparent and real-time tracking interfaces to allow psychological reassurance to take place during the critical last-mile transit phase.
- Instead of wholly depending on the traditional product discount system, the digital retail loyalty programs should strictly reward frequent shoppers with prioritized, guaranteed fulfillment.

10. REFERENCES

1. Upadhyay, C. K., Tiwari, V., & Tiwari, V. (2024). Generation "Z" willingness to participate in crowdshipping services to achieve sustainable last-mile delivery in emerging market. *International Journal of Emerging Markets*, 19(9), 2446-2471.
2. Nguyen, Q. L., Van Thuc, P., Thuy, N. T., Tien, N. T. K., & Sang, L. T. (2024). Assessing the expectations of Generation Z customers towards last-mile delivery in E-commerce: A case study in Ho Chi Minh City. *ASIAN JOURNAL OF ECONOMICS*, 3(3), 530-538.
3. Mallieswari, R., Mishra, N., & Jeevitha, R. (2023). Gen Z Perspective of E-Commerce Logistics Service Quality on Home Delivery After Pandemic: Sem Approach to Satisfaction of Customer and Loyalty. *NLDIMSR Innovision Journal of Management Research*, 13-29.
4. Ngo, T. T. A., An, G. K., Dao, D. K., Nguyen, N. Q. N., Nguyen, N. Y. V., & Phong, B. H. (2025). Roles of logistics service quality in shaping generation Z customers' repurchase intention and electronic word of mouth in E-commerce industry. *PloS one*, 20(5), e0323962.
6. Vu, T. P., & Nguyen, D. T. (2025). The links between e-logistics service quality, attitude and repurchase intention of Gen Z in e-commerce. *Journal of Trade Science*, 13(2), 87-109.
7. Atungulu, M. (2023). Investigating the Effect of Knowledge of Environmental Implications on Generation Z Vehicle Choice in Last Mile Delivery Service. Nagadeepa, C., Dyczek, B., Mishra, A. K., Valerii, B., Oleksandr, O., & Sokoliuk, K. (2024). Last-mile delivery innovations: The future of e-commerce logistics. In *Technology-Driven Business Innovation: Unleashing the Digital Advantage*, Volume 1 (pp. 283-296). Cham: Springer Nature Switzerland.
8. Bharadwaj, D. (2025). Collection and delivery points for e-commerce last-mile logistics: a study of consumer acceptance using a unified theoretical framework (Doctoral dissertation, SPA Bhopal).
9. Jagoda, A., Kolakowski, T., Marcinkowski, J., Cheba, K., & Hajdas, M. (2023). E-customer preferences on sustainable last mile deliveries in the e-commerce market: A cross-generational perspective. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, 18(3), 853-882.
10. Palomino Salazar, L. F., & Perez Castañeda, R. G. (2025). Impact of User Experience and Trust on Satisfaction and Their Effect on Loyalty in Last-Mile Delivery Services within Electronic Commerce in Metropolitan Lima, 2025. *GECONTEC: Revista Internacional de Gestión del Conocimiento y la Tecnología*, 13(2).
11. Radyi, S. A. M., Ridzwan, R., Mohamad, N. M., & Abdul Rahman, M. A. (2024). Influences on Generation Z's purchasing decision-making on e-commerce platforms: Beyond products and website design. *International Journal of Academic Research in Business and Social Sciences*, 14(12), 2457-2469.
12. Kumar, V., Sindhwani, R., Zhang, J. Z., & Gaur, J. (2025). Optimizing short food supply chains through understanding consumer preferences for organic foods via e-commerce platforms and last-mile logistics. *British Food Journal*, 127(5), 1788-1809.
13. Saxena, A. (2025). The Impact of E-commerce on Kirana Stores in Urban India: A Gen Z Perspective. Available at SSRN 5497601.
14. Nandy, I., & Padhy, R. (2025). From traditional to consumer-centric: the evolution of themes in technology-focused last mile delivery. *Global Knowledge, Memory and Communication*.
15. Joshi, S., Patil, S., & Gaware, S. (2025). Consumer Loyalty Evolution in the Quick Commerce Era. Available at SSRN 5905824.