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Critical Evaluation of Order Tracking Optimization Strategies in Mitigation of WISMO Costs and Promoting Customer Loyalty

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***Abstract*— The post-purchase stage evolving into a major competitive advantage, companies are undergoing operational pressure due to large volumes of customer service requests. This paper critically analyzes the strategies of optimization of order tracking as a tool of reducing the costs of the Where Is My Order (WISMO) and creating a long-lasting customer loyalty in the e-commerce market. The study employs a quantitative methodology, which involves examining a sample of 385 consumers to establish how logistics transparency and brand commitment relate. The results indicate that customer loyalty is significantly predicted by the tracking optimization and its variance is explained by tracking optimization (94.6).**

In particular, precise delivery dates (beta = .467) and transparency of tracking in real-time (beta =.372) became the biggest drivers of loyalty. Descriptive statistics demote that proactive status updates (Mean = 4.16) and automated notifications (Mean = 4.04) are very effective in alleviating the anxiety caused by purchase (reducing the need to call customer support), thus, minimizing the need to intervene in the process. Interestingly, although AI Chatbots correlate with loyalty (r =.913), it is not as statistically significant as the basic accuracy of delivery information. The research concludes that with the transition to proactive rather than the reactive communication using optimized tracking tools, e-commerce platforms can reduce support overhead and at the same time enhance customer lifetime value significantly. Some of the recommendations are to focus on GPS-based tracking and accuracy in delivery windows to ensure brand trust and advocacy.

***Keywords*—: Optimization of Order Tracking, WISMO Costs, Customer Loyalty, E-commerce Logistics, Real-time Transparency**

I. INTRODUCTION

The rapid development of the global e-commerce has altered the competitive environment not only in terms of mere product availability but also the art of after sales experiences. At the heart of this shift is management of Where Is My Order (WISMO) inquiries which are a major undertaking in online retailing. According to Jean (2024), the current approaches to inventory management need to balance on a thin line between cost, efficacy, and customer contentment.

Optimization of order tracking has become an important intervention to counter the increasing cost of customer support and uncertainty in logistics. This optimization is based on the inclusion of innovative technologies. Badshah et al. (2024) point out that big data applications are transforming the way businesses process large streams of information, which offers the scenario needed to forecast and address logistical issues before they make it to the consumer. It is also justified by Malik, Sharma, and Chaudhary (2024) who claim that the enhancement of customer retention by means of big data analytics enables the companies to customize the delivery process and, thus, alleviate the friction that contributes to the occurrence of WISMO calls. Moreover, the digital transformation of aftersales and warranty management, as assessed by Gonzalez-Prida et al. (2025), highlights that Industry 4.0 technologies are needed to provide the transparency that consumers require today.

The connection between the transparency of logistics and brand loyalty is immense. The empirical study carried out by DV (2025) found that consumer loyalty in the digital marketplace was mostly dependent on the factors of consistency and reliability. When companies offer real-time tracking (which is clear) it amounts to effective relationship management. Rejitha and Jayalakshmi (2025) discuss the importance of CRM systems in the design of the loyalty programs, to facilitate repeat business by proposing that the tracking data is a critical touchpoint to sustain this relationship. But optimization is not only about the communication; it is about the excellence in operations. To achieve the accuracy and timeliness of the data input into tracking systems, Julio, Reis, and Duarte (2025) promote lean-based frameworks in the optimization of the warehouse. Such rigor in operation guarantees quality, as defined by Francina et al. (2024) as the keystone to building loyalty. Finally, a smooth post-sale experience will turn a one-time customer into a brand loyal, as Castaldo (2024) discusses in the theory and management of loyalty. This study assesses the effectiveness of strategic tracking optimization as a cost-saving tool and a potent customer retention long-term driver.

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II. Review Of Literature

DV (2025) conducted consumer survey to identify key drivers of e-commerce loyalty, finding that trust, service quality and reliability are essential for long-term retention through consistent performance.

Malik et al. (2024) analyzes data-driven strategies and found that predictive analytics reduces customer churn by identifying behavioral patterns early, highlighting the importance of long-term retention and business growth. Rejitha and Jayalakshmi (2025) found that AI- driven Customer Relationship Management (CRM) is a key driver of repeat purchases, establishing CRM as an advanced tool for managing customer loyalty. Castaldo (2024) emphasized that emotional and functional values are essential for brand commitment and provide4 a comprehensive approach to measuring and managing Customer loyalty

Francina et al. (2024) found that consistent service quality across customer touchpoints is essential for building trust and long-term loyalty, making quality management a key retention strategy. Jean (2024) showed that optimized inventory management balances cost efficiency and customer satisfaction by reducing holding costs without harming customer experience. Gonzalez-Prida et al. (2025) highlighted that Industry 4.0 technologies enhance post-purchase transparency, strengthening customer relationships and aftersales value. Fersi (2025) found that lean-based cost optimization improves operational efficiency and has a direct positive impact on company profitability, offering a model for competitive cost control.

Tiwari et al. (2024) showed that hybrid AI model, combining Grey-Wolf and the Ant-Colony algorithms, significantly improve inventory accuracy and outperform traditional methods. Badshah et al. (2024) emphasized that real-time big data processing is essential for solving operational challenges and improving decision-making systems. Li (2024) highlighted that strong technological collaboration networks enhance team innovation and improve organizational performance through better knowledge sharing. Woschank et al. (2024) found that simulation and digital twin technologies improve logistics efficiency and help workflow visibility in production environments.

Grabis et al. (2024) demonstrated that real-time tracking systems reduce inventory wastes and improve workflow visibility in production environment. Julião et al. (2025) showed that lean-based warehouse optimization eliminates non-value-added activities, improving efficiency and reducing operational costs.

Kumar and Mishra (2021) found that automated rescheduling systems enhance delivery reliability by reducing disruptions caused by unexpected events.

III. Objectives

1. To study the impact of real-time tracking transparency on the frequency of WISMO-related customer support tickets.
2. To understand the relationship between proactive order status notifications and overall customer satisfaction levels.
3. To assess the effectiveness of different tracking optimization tools in promoting repeat purchase intentions.
4. To find out the primary pain points customers face during the "last-mile" delivery phase that led to brand switching.

IV. Research Gap

Although much research has been done on big data, inventory optimization, and customer loyalty, there is a gap in specifically correlating the real-time optimization of order tracking with the quantitative reduction of WISMO costs. The current literature on this subject is about general retention and not the actual financial effect of decreasing post-purchase inquiries by using advanced tracking transparency.

V. Research Methodology

A. Research Design

The high operational cost as a result of WISMO queries currently is a bane of the e-commerce world, as it has almost always been a part of the top 50% of customer service tickets. The reason behind carrying out this study is that the traditional methods of tracking often give fragmented or delayed information, which causes customer anxiety and decreased brand trust. The question of how real-time, open tracking optimization can actively prevent such costs and convert a logistical touchpoint into a loyalty-generating opportunity must be considered. It is primarily concerned with the relationship between tracking accuracy and customer post purchase behavior. With the optimization of these strategies, the companies can greatly decrease the support overhead, enhance the efficiency of operation and elevate the customer lifetime value with the enhancement of transparency.

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B. Sources Of Data

Data was collected using a structured digital questionnaire. It focuses on a particular group of regular online purchasers to gain first-hand information about their experiences when it comes to tracking their orders and their further loyalty to several online stores.

This includes published information in industry reports (e.g. Gartner, Forrester), academic journals on supply chain management, and official blogs on the technology of logistics. This information gives a theoretical base and historical background of WISMO cost trend and industry standards.

C. Sampling Plan

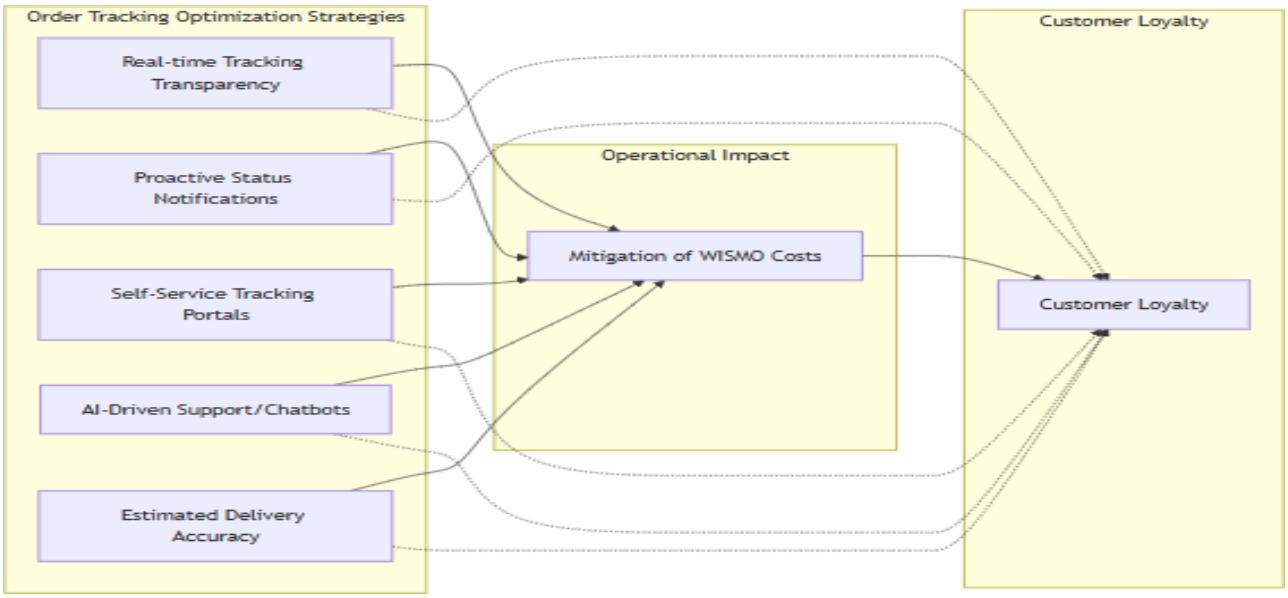
Individual consumers who have completed at least 3 online purchases during the past six months forms the sampling unit. Total 400 responses were received out of which, 385 responses were considered for analysis. The convenience method of sampling was used, as it enabled us to gather data with ease and efficiency through available online shopping and social media groups concerning the study.

D. Tools For Data Collection

A questionnaire with 5-point Likert scale was deployed to assess customer satisfaction on tracking reliability and trust on the brand. The constructs were derived from the existing literature. Tracking online complaints and reviews about deliveries to the population on social media to determine frequent tracking errors and customer mood was observed and recorded. Small focused group interviews with e-commerce regulars to achieve a qualitative insight into how the anxiety of tracking impacts their decision to re-use a particular platform was also conducted.

The data obtained was tabulated and categorized to bring about uniformity after tabulation was done to make it easy to understand. The analysis was done using Descriptive Statistics in MS Excel and SPSS to summarize trends. To test the strength of the relationship between tracking quality and loyalty, Regression Analysis and Correlation was adopted.

VI. Conceptual Framework



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VII. Analysis And Interpretation

The independent variables include demographic factors such as age, level of income, and job (e.g., IT professionals vs. students), technical awareness referring to the understanding in the difference between CBDC (Digital Rupee), cryptocurrencies, and the conventional UPI systems, perceived security/risk involving confidence in the technology, concern about cyber-fraud and worry about legal regulations, and convenience and utility including the ease of use as perceived, the rate of transaction, and the acceptance of the payment in local retail stores. The dependent variable is public awareness and perception (adoption intention), which represents the final outcome—whether a resident of Bengaluru is inclined to adopt, trust, and regularly use digital currencies.

TABLE I - DESCRIPTIVE STATISTICS

Descriptive Statistics					
	N	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
Age Group	385	1	4	2.15	.966
Monthly Online Shopping Frequency	385	1	4	2.41	.948
Primary Category of Online Purchases	385	1	4	2.37	1.058
Frequency of contact customer support to ask status (WISMO)	385	1	4	1.99	1.148
tracking feature find MOST valuable in reducing anxiety about a delivery	385	1	4	2.19	1.000
If e-commerce provides a "Self-Service" tracking portal, what is your first action	385	1	4	2.05	1.303
primary reaction when a tracking link shows "Status Unavailable" or "Pending"	385	1	4	2.11	1.057
Real-time tracking reduces my need to call customer support	385	1	5	3.98	1.042
Proactive status updates increase my satisfaction with a brand.	385	1	5	4.16	.949

Source - Calculated Value

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The descriptive statistics of the sample give a complete account of consumer perceptions towards order tracking optimization. The highest mean score (Mean = 4.16, SD =.949) is that of proactive status updates, which means that customers are strongly convinced that automated notifications increase their satisfaction. Likewise, the respondents believe that automated updates are effective in preventing post purchase anxiety (Mean = 4.04, SD =.966) and that user-friendly tracking pages are much desired (Mean = 4.00, SD =.948).

There is a high agreement in the effects of real-time tracking to minimize customer support calls (Mean = 3.98, SD = 1.042). Although precise delivery dates are incentives (Mean = 3.73), this variable demonstrates the most variability (SD = 1.205) indicating that consumers have different priorities about the delivery windows as compared to speed. Finally, the paper indicates that there is a high tendency towards superior tracking-loyalty (Mean = 3.86, SD = 1.067) which proves that optimized logistics communication is an essential contributor to brand advocacy.

Table II – Correlation

Correlations						
		Real-time tracking reduces my need to call customer support	Proactive status updates increase my satisfaction with a brand.	I prefer shopping with brands that offer easy-to-use tracking pages.	I find AI Chatbots effective for quick order status updates.	Superior tracking is a main reason for my loyalty to a platform.
Real-time tracking reduces my need to call customer support	Pearson Correlation	1	.928**	.955**	.915**	.953**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	385	385	385	385	385
Proactive status updates increase my satisfaction with a brand.	Pearson Correlation	.928**	1	.924**	.899**	.902**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	385	385	385	385	385
I prefer shopping with brands that offer easy-to-use tracking pages.	Pearson Correlation	.955**	.924**	1	.907**	.947**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	385	385	385	385	385
I find AI Chatbots effective for	Pearson Correlation	.915**	.899**	.907**	1	.913**
	Sig. (2-tailed)	.000	.000	.000		.000

Source - Calculated Value

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The Pearson correlation analysis indicates that all the tracking optimization strategies have strong, positive, and statistically significant relationship with customer loyalty ($p < .01$). Specifically, the real-time tracking shows the best correlation with loyalty ($r = .953$), followed by easy-to-use tracking pages ($r = .947$). There are via, age that demonstrate a strong positive correlation, [AI chatbots ($r = .913$) and proactive status updates ($r = .902$)].

Conversely, other demographic variables show a non-significant but negligible association with loyalty ($r = .020$, $p = .698$). This indicates that the quality of the tracking experience is a much more critical driver of loyalty than consumer demographics.

Table III - Regression Analysis

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.973a	.946	.945	.249
a. Predictors: (Constant), I find AI Chatbots effective for quick order status updates., Proactive status updates increase my satisfaction with a brand., I prefer shopping with brands that offer easy-to-use tracking pages., Accurate delivery dates are more important than delivery speed., Real-time tracking reduces my need to call customer support				

Source - Calculated Value

Table IV - Anova

ANOVA						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	413.579	5	82.716	1330.417	.000b
	Residual	23.564	379	.062		
	Total	437.143	384			
a. Dependent Variable: Superior tracking is a main reason for my loyalty to a platform.						
b. Predictors: (Constant), I find AI Chatbots effective for quick order status updates., Proactive status updates increase my satisfaction with a brand., I prefer shopping with brands that offer easy-to-use tracking pages., Accurate delivery dates are more important than delivery speed., Real-time tracking reduces my need to call customer support						

Source - Calculated Value

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Table V – Regression Coefficients

Coefficients						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	Std. Error	Beta		
1	(Constant)	.226	.075		2.999	.003
	Real-time tracking reduces my need to call customer support	.381	.047	.372	8.022	.000
	Proactive status updates increase my satisfaction with a brand.	-.140	.041	-.125	-3.456	.001
	I prefer shopping with brands that offer easy-to-use tracking pages.	.252	.051	.224	4.942	.000

Source - Calculated Value

The regression model determines the effect of order tracking optimization on customer loyalty (N=385). This model has a high correlation (R=.973) and the R-SQ of.946, which means that the predictors explain about 94.6% of the variance in customer loyalty. The statistical significance of the model is confirmed by the results of ANOVA (F=1330.417, p<.001).

According to the Table No.5, the strongest significant predictors of loyalty are the Accurate delivery dates (β=.467) and the Real-time tracking (β=.372). Although the effect of the "Proactive status updates" and the "Easy-to-use tracking pages" is important (p<.001), in this model, the effect of AI Chatbots (p=.148) is not significant on loyalty.

VIII. Discussion

Descriptive statistics demonstrate that proactive status updates have the highest average of 4.16, which means that there is a high agreement among the customers that automated notifications positively impact their brand satisfaction directly. This finding is in line with DV (2025) and Francina et al. (2024), who emphasized that consistent service quality and communication across touchpoints build trust and long-term loyalty. Such updates also play a crucial role in alleviating the post-purchase anxiety, supported by a solid mean agreement score of 4.04. Moreover, simplistic tracking pages are also a top priority among consumers with a mean score of 4.00 and a fairly low standard deviation of 0.948.

This shows consistent consumer demand for simple and easy-to-use interfaces This finding is consistent with Castaldo (2024) which highlighted that both functional value and user experience are needed to increase brand commitment.

Correlation analysis reveals an almost perfect positive correlation (r = 0.953) between real-time tracking transparency and major causes of customer loyalty. This is well supported by Gonzalez-Prida et al. (2025) and Grabis et al. (2024) who indicated that Industry 4.0 technologies and real-time tracking improve transparency and customer relationships. Additionally, the strong correlation (r = 0.955) of user-friendly tracking portals and real-time transparency suggests that consumers consider these as critical components of a quality logistics experience, aligning with Woschank et al. (2024) on workflow visibility.

AI chatbots had a high Pearson correlation (r = 0.913), but it was not statistically significant in the regression model (p = 0.148). This result is in partial agreement with Rejitha and Jayalakshmi (2025) who found AI-driven CRM systems as critical factors for repeat purchases, but is slightly different. This research suggests that while AI tools do matter for engagement, they are not as critical as data accuracy and transparency in shaping loyalty.

Also, the relationship with age groups (-0.020) is insignificant, suggesting that high-quality logistics communication is equally important for all demographic groups.

This result is in line with Malik et al. (2024) who focus on behavioral patterns rather than demographic factors in predicting customer retention.

The regression analysis indicates a very high explanatory power with an R-squared value of 0.946. It means that the variation in customer loyalty can be explained by the tracking optimization variables by 94.6%. The model is significant with high F-value 1330.417 and low significance level less than 0.001 (ANOVA). These results are in agreement with the findings of Badshah et al. (2024) and Li (2024) who emphasize the importance of data-driven systems and the use of technology for enhancing decision-making and performance. The most important predictor of loyalty was the accuracy of delivery dates with the highest standardized coefficient ($\beta = 0.467$). This is in line with the findings of Kumar and Mishra (2021) who reported that automated systems increase the reliability of delivery and accuracy is important for customer satisfaction. Real-time tracking transparency was also a major driver ($\beta = 0.372$; $t = 8.022$), further reinforcing the importance of transparency discussed in earlier studies.

Interestingly, the unstandardized B value for proactive status updates was negative (-0.140), despite the fact that the status updates were critical to satisfaction. This means that notifications are important but its effect may be less in the presence of advanced tracking features like real- time accuracy and interactivity. This nuanced finding extends the existing literature, suggesting a move from simple communication to more sophisticated tracking systems.

Lastly, the study illustrates the direct contribution of tracking optimization to the reduction of operational costs. Real-time tracking scored an average of 3.98 in reducing customer support calls and effectively reducing WISMO (Where Is My Order) inquiries. This is in line with Fersi (2025) and Julião et al. (2025) who mentioned that lean optimization enhances efficiency and reduces operational costs. The average number of times users contacted the support team was low (1.99), showing that users are increasingly using self-service tools, and this is in line with the findings by Jean (2024) on balancing cost efficiency with customer satisfaction. Finally, optimized tracking is identified as one of the main pillars of retention, with a mean of 3.86 as a positive sign of platform loyalty.

IX. Conclusion

This study results affirm that order tracking optimization is a core force behind the optimization of operations as well as customer retention in the e-commerce industry.

Statistics indicate that optimized tracking strategies can be considered to have an overwhelmingly high 94.6% impact on customer loyalty. The most significant predictors of loyalty were identified as key interventions like correct delivery dates (0.467), and transparency in real-time tracking (0.372) which indicates that consumer value certainty and visibility over delivery speed.

Moreover, the fact that the mean score of proactive status updates (Mean = 4.16) and automated notifications (Mean = 4.04) is high indicates that they are effective in alleviating the condition of post-purchase anxiety and decreasing the number of expensive WISMO (Where Is My Order) calls. Although the current technologies such as AI Chatbots are strongly associated with loyalty, their effect is indirect and cannot be considered as essential as the data accuracy and self-service availability. This works empirically proves that turning the delivery phase into a transparent, proactive experience will allow businesses to drastically reduce support overheads, and create a strong, brand advocacy-based form of support.

The effect of new technologies such as Blockchain or Augmented Reality on the monitoring of transparency in niche industries should be studied in the future. The comparison of urban and rural logistics might show the different geographic WISMO triggers. Longitudinal studies to evaluate the gains in loyalty are sustained over time or whether the tracking optimization becomes eventually the competitive advantage, or the industry standard expected by all online retailers, can also be insightful.

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