



ROBERT H. SMITH SCHOOL OF BUSINESS

BUMK776: Action Learning Project

T Mobile



From Acquisition to Loyalty: Data Insights for Sustainable Growth

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Honor Pledge:

We pledge on our honor that we have not given or received any unauthorized assistance on this project.

Executive Summary

This report explores the key factors influencing customer retention within T-Mobile's customer base, with a primary focus on the reasons customers join the service and the impact of word-of-mouth (WOM) sentiment. The study aims to provide actionable insights to enhance customer retention strategies and long-term loyalty. To achieve these objectives, a linear regression model was applied, using retention likelihood as the dependent variable. Key independent variables include primary reason for joining, WOM sentiment, subscription costs, tenure, and demographic factors.

The analysis found that customers who joined T-Mobile for Reason 3 had 2.941% more likelihood of retention, while those who joined for Reason 8 had a decrease in the possibility of 5.753%. Word-of-mouth (WOM) sentiment was the strongest predictor of retention – negative sentiment drastically reduced the possibility of retention by at least 41.142%, while positive sentiment improved it by 8.221%. To enhance retention, T-Mobile should target high-retention segments through success-story-driven marketing and refine messaging for low-retention customers to set realistic expectations. Additionally, leveraging positive WOM through an online advocacy community and user-generated content campaigns can strengthen customer loyalty and minimize attrition.

Objective of Analysis

T-Mobile is one of the largest telecommunications companies in the U.S. According to the *Mobile Network Provider – US 2024* Mintel report (Mintel, 2024), more than 25% of new customers are dissatisfied with their service and are actively seeking a new provider. Additionally, over 30% of new customers switch providers for better pricing or promotional incentives. Building on these insights, this analysis examines the key factors influencing customer retention within T-Mobile's subscriber base. Specifically, it explores how various drivers – such as the primary reason for joining the service and word-of-mouth (WOM) sentiment – affect a customer's likelihood of staying subscribed. By identifying these factors, the study aims to provide actionable insights to strengthen customer retention strategies and enhance long-term loyalty.

The following key objectives guide this study:

1. **Examine the psychological and behavioral factors affecting customer retention** – The analysis aims to determine whether a customer's initial motivation for joining T-Mobile influences their likelihood of remaining subscribed. By identifying the factors associated with higher or lower retention rates, this study provides insights into customer motivations, expectations, and long-term engagement trends.
2. **Assess the impact of word-of-mouth sentiment on retention rates** – Given the significant role that customer perceptions and experiences play in influencing brand loyalty, this study investigates how and to what extent positive and negative WOM sentiments affect retention. Understanding this relationship will help T-Mobile develop

strategies to mitigate negative customer experiences and leverage positive sentiment to strengthen brand advocacy.

3. **Controlling for additional demographic and service-related factors affecting retention** – While not the primary focus of the study, we accounted for other customer attributes such as age, monthly subscription cost, account tenure, and interaction with customer service to ensure a well-constructed model. Controlling these variables allowed us to isolate the primary drivers of customer retention more effectively.

Data Processing and Modeling

The dataset was cleaned and structured to ensure all key fields were usable and structured to suit the purposes of our analysis. The word-of-mouth (WOM) sentiment variable was standardized into four categories (Very Positive, Positive, Negative, Very Negative), with all missing values handled. The age attribute and the primary reason for joining were converted into categorical variables to allow meaningful comparisons across customer segments. We also identified and resolved inconsistencies before sorting the data, resulting in a clean dataset ready for modeling.

We used a linear regression model to estimate each customer's retention likelihood (rated on a 0–10 scale). Several independent variables were included in the model, with special focus on primary reason for joining and word-of-mouth sentiment – these were hypothesized to have the strongest influence on retention. The primary reason for joining offers insight into customers' expectations, while its effect on retention likelihood indicates the extent to which those expectations are satisfied—an essential factor in shaping marketing strategies. While it was expected that positive word-of-mouth would lead to retention and negative word-of-mouth would lead to churn, the magnitudes of their impact are a crucial learning.

In addition, we controlled for factors such as monthly subscription cost, account tenure (in days), age, high likelihood of contacting customer care, and military status (veteran vs. non-veteran) to account for their potential effects on a customer's decision to remain subscribed. Frequent interactions with customer care were expected to negatively impact retention, as they may signal dissatisfaction and increase the likelihood of churn. Similarly, higher monthly subscription costs were anticipated to discourage long-term commitment, particularly among price-sensitive customers. Military status was included as an exploratory factor without a strong prior expectation of its effect on retention. However, differences in brand loyalty or usage patterns were considered possible due to T-Mobile's military-specific plans. Account tenure (in days) was hypothesized to have a positive effect, as longer-tenured customers are generally more loyal and less likely to churn. Lastly, age was categorized into groups, with older customers expected to exhibit higher retention rates due to stronger brand loyalty, while younger customers were presumed more likely to switch to competitors. Additionally, T-Mobile's senior plans and discounts were expected to influence this relationship.

Results and findings

By analyzing the regression coefficients and their significance, we aimed to determine which factors have the strongest impact on customer retention. The analysis yielded two key findings.

Exhibit 1 Regression Results

Multiple R-squared: 0.6422		Adjusted R-squared: 0.6387		
F-statistic: 181.7 on 22 and 2227 DF		p-value: < 2.2e-16		
Variable	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	8.542	0.305	28.032	< 2e-16 ***
AGE25-34	0.177	0.321	0.554	0.580
AGE35-44	0.304	0.312	0.973	0.331
AGE45-54	0.466	0.311	1.496	0.135
AGE55-64	0.796	0.306	2.6	0.009 **
AGE65+	0.900	0.303	2.965	0.003 **
AGEPrefer not to answer	0.632	0.309	2.048	0.041 *
HIGH_PROP_TO_CALL_CAREY	-0.005	0.075	-0.067	0.947
MONTHLY_SUBSCRIPTION_COST	-0.001	0.000	-2.483	0.013 *
MILITARYSTATVeteran	-0.124	0.138	-0.904	0.366
ACCOUNT_TENURE_DAYS	-0.004	0.001	-2.953	0.003 **
Reason 2	0.107	0.112	0.955	0.340
Reason 3	0.294	0.125	2.348	0.019 *
Reason 4	-0.035	0.273	-0.129	0.897
Reason 5	0.187	0.140	1.334	0.182
Reason 6	0.027	0.165	0.163	0.870
Reason 7	0.192	0.226	0.85	0.395
Reason 8	-0.575	0.209	-2.751	0.006 **
Reason 9	-0.188	0.334	-0.563	0.574
Reason 10	0.081	0.165	0.493	0.622
WOM_All negative	-6.146	0.167	-36.83	< 2e-16 ***
WOM_All positive	0.822	0.081	10.133	< 2e-16 ***
WOM_Mostly negative	-4.114	0.118	-34.822	< 2e-16 ***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

First, among the reasons for joining, only two variables showed significant effects. Customers who joined for Reason 3 had a retention likelihood that was 0.2941 (or 2.941%) higher than the baseline (Reason 1). In contrast, those who joined for Reason 8 exhibited a significantly lower retention likelihood, estimated to be 0.5753 (or 5.753%) lower than the baseline. This suggests that subscribers motivated by Reason 3 were more likely to stay, whereas those who joined due to Reason 8 were more prone to churn. Other reasons for joining did not show a statistically significant effect, indicating that the impact of Reasons 3 and 8 on retention is particularly notable.

The second key finding is the profound impact of word-of-mouth (WOM) sentiment. Customer sentiment expressed through word-of-mouth emerged as the strongest predictor of retention. Compared to the "Mostly Positive" sentiment group (the baseline for comparison),

customers with completely negative sentiment had a significantly lower retention likelihood, with an estimate of -6.1427 (or 61.427% lower). Even customers with mostly negative sentiment showed a strong negative effect, with an estimate of -4.1142 (or 41.142% lower). Conversely, customers with entirely positive sentiment were more likely to remain subscribed, with an estimate of 0.8221 (8.221% higher), but this increase is marginal compared to the negative sentiments. These results highlight how damaging negative word-of-mouth can be, while positive feedback strongly reinforces loyalty. Although negative word-of-mouth sentiment comes from a smaller segment of customers, its impact on churn is disproportionately large, highlighting the need for businesses to manage and address customer sentiment proactively.

Studies show that around 21% of customers lose trust in a brand due to negative word-of-mouth (Vaghasiya, K. 2025), which can translate into reduced loyalty and higher attrition. T-Mobile should proactively address such feedback – responding quickly to negative comments or complaints improves customer satisfaction and boosts retention. In contrast, positive sentiment reinforces retention – for instance, businesses that leverage referral programs (a form of positive word-of-mouth) have seen roughly 19% increases in customer retention rates. (Nielsen 2021)

Recommendations

Based on our analysis, we recommend the following strategies to improve customer retention for T-Mobile. Our recommendations are divided into two parts: one focusing on reasons to join and the other on word-of-mouth (WOM) sentiment to address key factors influencing retention.

Recommendations on reasons to join

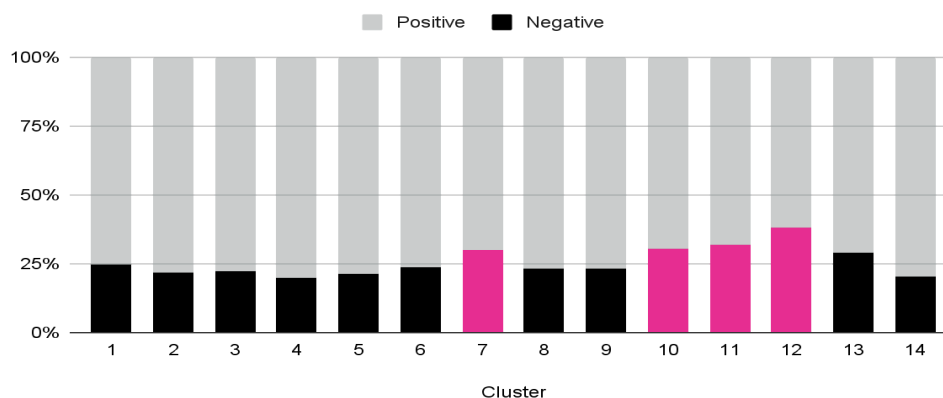
- To improve retention, T-Mobile should focus on attracting high-retention customers (Reason 3) through targeted advertising that highlights long-term value. Incorporating real customer success stories in narrative-driven campaigns and video testimonials can reinforce credibility and strengthen brand loyalty.
- To reduce churn, T-Mobile must target low-retention customers (Reason 8) by aligning marketing messages with their expectations to prevent unrealistic assumptions. Optimizing ad spend to minimize outreach to this segment, while reframing messaging to emphasize retention-driving factors, can improve customer satisfaction and long-term engagement.

Recommendations on word-of-mouth sentiment

- An effective strategy is to build an online advocacy community where satisfied customers can share their positive experiences. This platform can serve as a hub for testimonials, reviews, and stories that highlight the benefits of services offered. By fostering a sense of belonging among customers, the platform can help shift negative WOM from dissatisfied customers and cultivate a community of brand advocates.

- Another powerful approach is to leverage user-generated content (UGC) campaigns that showcase long-term customer success stories. These campaigns can be particularly compelling because they provide real-life examples of how your product or service has made a lasting impact. By featuring these stories in marketing materials, social media, or even dedicated campaigns, you can create a sense of authenticity and trust among potential customers.
- Addressing dissatisfaction directly in clusters with negative WOM is critical to improve LTC in existing customers. Prioritize customer feedback from clusters 7, 10, 11, and 12 (Figure 1). A proactive approach of addressing these concerns promptly and transparently shows that customers' feedback and satisfaction are valued, helping to shift negative WOM in dissatisfied customers, avoiding churn in the long run.

Sentiment Across Clusters



(Figure 1)

These recommendations align acquisition messaging, reduce churn through proactive engagement, and leverage peer influence to enhance retention. T-Mobile's journey from acquisition to loyalty hinges on understanding and addressing these issues. By integrating these strategies, it can sustainably grow customer loyalty while minimizing attrition risks.

References

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