MTN Nigeria Customer Churn Intelligence Report – Q1 2025

OUTLINE

This report presents a detailed analysis of customer churn behavior for MTN Nigeria in Q1 2025. It captures how the dataset was created, the analytical process followed, key findings, visual insights, and practical recommendations for reducing churn and improving customer retention. These are the sections for this report below:

- Introduction
- Story of Data
- Data Splitting and Preprocessing
- Pre-Analysis
- In-Analysis
- Post-Analysis and Insights
- Data Visualizations & Charts
- Recommendations and Observations
- Conclusion
- References & Appendices

INTRODUCTION

Objective of the Project

To identify drivers of customer churn and retention within MTN Nigeria's subscriber base using a synthetic dataset built with real-world product information. This analysis aims to provide actionable strategies for improving customer experience and reducing churn.

Problem Being Addressed

Telecommunication companies lose millions in revenue yearly due to customer churn. Understanding patterns in churn, especially based on service usage, device types, and customer profiles, can help MTN proactively address pain points and improve loyalty.

Author: **Oluwademilade Adeniyi** | LinkedIn | Twitter

Key Datasets and Methodologies

Data Source: Custom dataset using real MTN devices, data plans, and pricing from MTN eShop.

Methods: Synthetic data generation, EDA in Excel, dashboard development, churn classification.

STORY OF DATA

Data Source

- Devices, plans, and pricing from MTN's official eShop.
- All other variables were generated synthetically to simulate real subscriber behavior in Nigeria.

Data Collection Process

- Devices and plans scraped and compiled manually.
- Customer attributes and churn behaviors designed using logic consistent with real-world telecom patterns.

Data Structure

Each row represents one customer and contains demographic information, device & subscription type, data usage habits, and churn status.

Important Features and Their Significance

- Subscription Plan: MTN data/voice plan subscribed to.
- Device Type: Smartphone, feature phone, etc.
- Price: Cost of device or plan.
- Usage Metrics: Minutes, Data, SMS usage percentages.
- Churn Reason: Driver for leaving (e.g., high cost, poor network).
- Total Revenue: Derived field showing total value per user (unit price × quantity).

Author: **Oluwademilade Adeniyi** | LinkedIn | Twitter

DATA SPLITTING AND PREPROCESSING

Data Cleaning

- Validated pricing formats.
- Removed any illogical churn records (e.g., churned but zero usage).

Handling Missing Values

- None missing fields.

Data Transformations

- Created revenue field by multiplying price with usage volume.
- Converted numerical fields to currency.

Data Splitting

- Independent Variables: Age, Gender, Device, Subscription Type, Usage behavior.
- Dependent Variable: Churn status (Stayed, Churned, Joined).

Industry Context

This dataset is centered around customer interactions with MTN Nigeria's products and services. It covers behavior patterns, device preferences, subscription habits, and churn indicators. The insights will help uncover how customers use data, why they leave, and where MTN can improve retention and service offerings.

Stakeholders

- CEO, Executive Directors, Marketing Department and Sales Managers.

Value to the Industry

It's about reducing churn through personalized experiences, competitive pricing, and network reliability. When a company can retain users longer, increase average revenue per customer, and offer plans that truly match customer needs, that's a win.

Author: **Oluwademilade Adeniyi** | [LinkedIn](#) | [Twitter](#)

PRE-ANALYSIS

Identify Key Trends

- Majority of churned customers were prepaid users with low engagement.
- Users with high data consumption and expensive devices tended to stay.

Potential Correlations

- High churn among customers with low ecosystem usage.
- Churn reason is strongly linked to price sensitivity and better offers from competitors.

Initial Insights

- Personalized loyalty offers could retain high-risk churn segments.
- Customers using MTN's digital ecosystem (e.g., MoMo, apps) had lower churn rates.

IN-ANALYSIS

Unconfirmed Insights

- Price complaints might be linked to perceived value, not just cost.
- Users with low interaction across MTN apps showed more churn tendencies.

Recommendations

- Bundle app usage into loyalty rewards.
- Improve targeting of customers with entry-level devices.

Analysis Techniques Used in Excel

- Pivot Tables
- Time-Series Analysis
- Filtered Slicers

Author: **Oluwademilade Adeniyi** | LinkedIn | Twitter
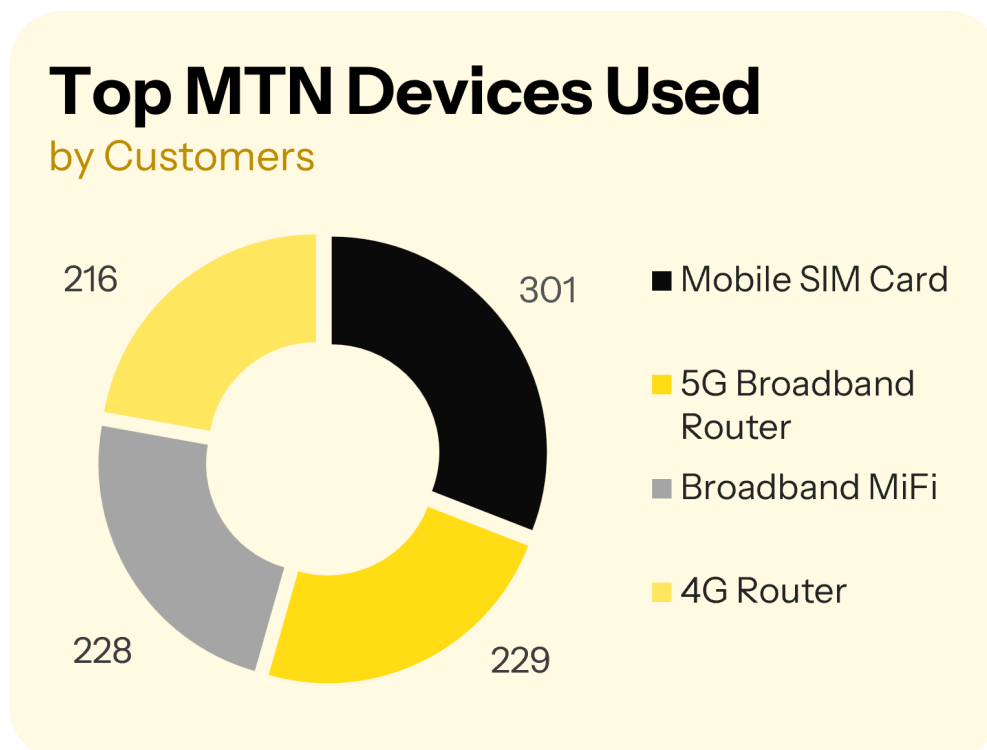
POST-ANALYSIS AND INSIGHTS

Key Findings

- Most common churn reasons: "High Call Tariff", followed by "Better Offers from Competitors".
- The most loyal customers used high-priced devices and were heavy data users.
- Postpaid subscribers had significantly lower churn rates than prepaid.

Comparison with Initial Findings

- Price was an even stronger churn driver than expected.
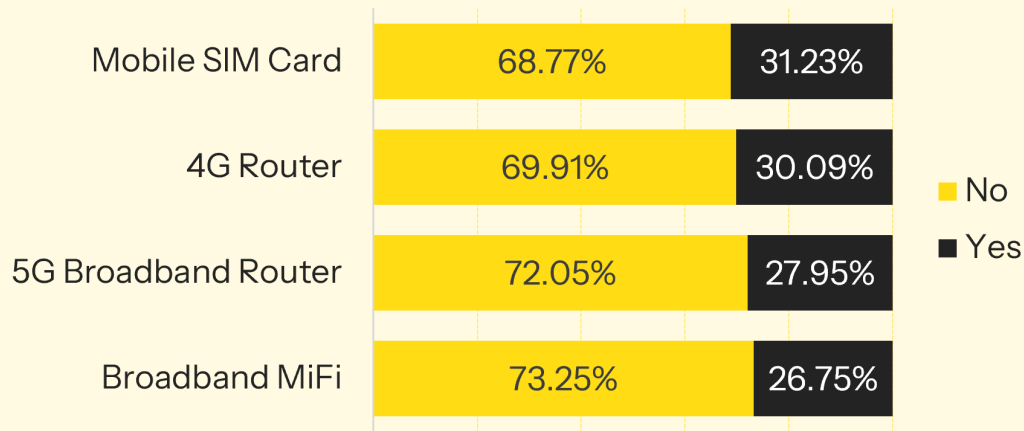- Ecosystem usage emerged as a retention tool — not previously considered.

DATA VISUALIZATIONS & CHARTS

Top MTN Devices Used
by Customers

216
301
228
229

- Mobile SIM Card
- 5G Broadband Router
- Broadband MiFi
- 4G Router

*The **Mobile SIM Card** is the most used device for doing data plans.*

Author: **Oluwademilade Adeniyi** | LinkedIn | Twitter

Churn Rate
by Device

Device	No	Yes
Mobile SIM Card	68.77%	31.23%
4G Router	69.91%	30.09%
5G Broadband Router	72.05%	27.95%
Broadband MiFi	73.25%	26.75%

Legend: ■ No ■ Yes
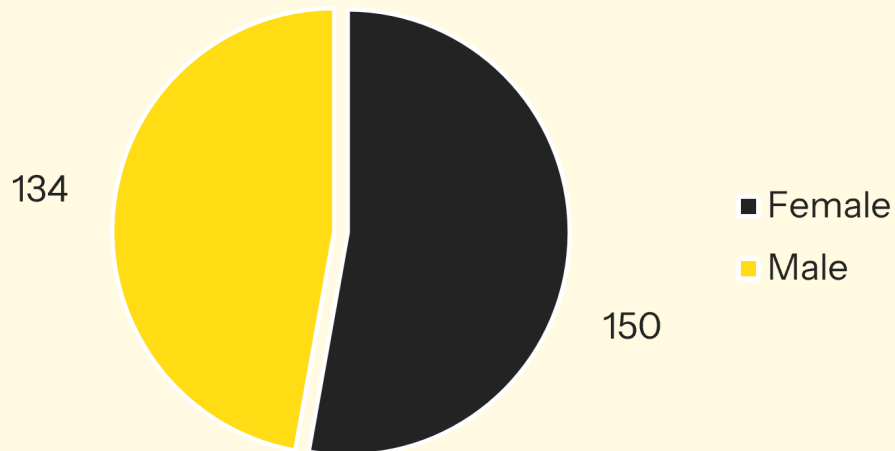
*The **Mobile SIM Card**, followed by the **4G Router**, has the highest churn rates.*

Churn Distribution
by Gender

- Male: 134
- Female: 150

Legend: ■ Female ■ Male

*The **Female** gender is more churned than the **Male**.*

Author: **Oluwademilade Adeniyi** | LinkedIn | Twitter

RECOMMENDATIONS AND OBSERVATIONS

Actionable Insights

- Launch targeted retention campaigns for prepaid and low-data customers.
- Promote ecosystem usage through incentives.
- Introduce more affordable devices or financing options.

Optimizations or Business Decisions

- Reduce churn by bundling services into value plans.
- Improve customer segmentation using device and usage patterns.

Unexpected Outcomes

- Even customers with average service quality stayed if they used multiple MTN platforms.

CONCLUSION

Key Learnings

- Ecosystem engagement is a strong predictor of retention.
- Device pricing and plan affordability are major churn drivers.
- Personalization and segmentation can greatly improve loyalty efforts.

Limitations

- Lack of granular data on promotional impacts.
- No detailed analysis of shipping cost breakdowns.
- Customer behavior trends (e.g., repeat purchases) require further study.

Future Research

- The data is synthetic and may not capture all edge-case behaviors.
- No direct behavioral history (calls to customer service, etc.)

Author: **Oluwademilade Adeniyi** | LinkedIn | Twitter

REFERENCES & APPENDICES

Dataset

Download Dataset on Kaggle: [Kaggle Dataset](#)

GitHub Repo

View Full Report & Dashboard: [GitHub Repo](#)

Contact

For questions or collaboration, reach out to: adeniyioluwademilade@gmail.com.

Author: **Oluwademilade Adeniyi** | [LinkedIn](#) | [Twitter](#)