Retail Customer Retention Analytics – Adidas

Project Overview

Adidas, a global leader in sportswear and lifestyle products, operates across multiple countries through retail stores, franchise outlets, and e-commerce platforms.

With intense competition from brands like Nike and Puma, along with rising customer expectations in digital shopping experiences, retaining customers has become a critical challenge.

Although Adidas collects vast data on customer purchases, online interactions, and loyalty programs, their current reporting lacks the analytical depth to:

- Understand why customers are churning
- Identify loyal vs. at-risk customers
- Measure the impact of loyalty tiers, promotions, and influencer-driven campaigns
- Guide region- and channel-specific retention strategies

This project addresses these gaps by developing a comprehensive Customer Retention Analytics Dashboard in Power BI.

Project Objective

Developed a robust, interactive **Customer Retention Analytics Dashboard** in Power BI using Adidas data that:

- Consolidated customer demographics, purchase history, store/e-commerce performance, and loyalty data
- Enabled dynamic segmentation of high-value, repeat, and churned customers
- Provided actionable insights to improve customer retention, loyalty engagement, and regional strategies

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Dataset Description

1. Customer_Demographics.csv

Contains demographic and membership details for Adidas customers.

Columns: Customer_ID, Age, Gender, Region, Income_Level, Membership_Since, Preferred_Channel (Store/Online)

2. Customer_Transactions.csv

Logs purchase transactions across Adidas retail stores, franchise outlets, and online platforms.

Columns: Transaction_ID, Customer_ID, Store_ID, Product_Category (Footwear, Apparel, Accessories), Transaction_Date, Amount, Promotion_Applied (Yes/No)

3. Store_Locations.csv

Metadata about Adidas retail and franchise locations.

Columns: Store_ID, Store_Type (Flagship, Franchise, Outlet, Online), Region, Opening_Year

4. Loyalty_Program.csv

Tracks customer participation in Adidas' Creators Club loyalty program.

Columns: Customer_ID, Loyalty_Tier (Base, Plus, Premium, Elite), Points_Earned, Points_Redeemed

5. Churn_Labelled_Customers.csv

Provides a churn flag based on last purchase date and behavioral indicators.

Columns: Customer_ID, Last_Purchase_Date, Churn_Flag (0 = Active, 1 = Churned), Churn_Reason (Inactivity, Competitor, Low Engagement)

Tasks Performed

Task 1: Data Modeling & Cleaning

- Loaded and transformed all 5 datasets in Power Query with standardized data types
- Handled duplicates, missing values, and ensured referential integrity across tables
- Created calculated columns:
  - **Membership_Duration** = Today – Membership_Since
  - **Transaction_Year**, **Transaction_Month** extracted from Transaction_Date
  - **Days_Since_Last_Purchase** = Today – Last_Purchase_Date
  - **CLV_Category** = Low/Medium/High based on Customer Lifetime Value

Outcome: Clean, validated dataset ready for analysis with proper relationships and calculated metrics.

Task 2: Churn & Retention Metrics

- Created Churn Rate KPI:
  - **Churn Rate = (Churned Customers / Total Customers) × 100**
- Visualized churn rate by:
  - Region

    - Income Group
    - Channel (Store/Online)
    - Loyalty Tier
- Built a Funnel Chart showing the progression:
    - **Total Customers → Active Customers → Repeat Customers → Churned Customers**

Key Insight: Approximately 22–28% of customer base is churned or at-risk of churning.

Task 3: Repeat Purchase Analysis

- Segmented customers into purchase tiers:
    - Low-Tier: 0–3 purchases
    - Mid-Tier: 4–8 purchases
    - High-Tier: 9+ purchases
- Compared average purchase frequency by:
    - Region
    - Age Group
    - Loyalty Tier
- Identified most purchased product categories among loyal customers:
    - Footwear leads in High-Tier and Premium/Elite segments
    - Apparel drives volume in Base tier customers

Finding: High-Tier customers (9+ purchases) represent only 15–18% of base but account for 50%+ of repeat purchases.

Task 4: Promotion & Loyalty Impact

- Calculated percentage of transactions with promotions applied across regions and channels
- Compared average purchase amount:
    - **With Promotion**: +18–22% higher avg transaction value
    - **Without Promotion**: Baseline
- Analyzed churn rate across loyalty tiers:
    - **Base Tier**: 32% churn rate
    - **Plus Tier**: 24% churn rate
    - **Premium Tier**: 14% churn rate
    - **Elite Tier**: 8% churn rate
- Visualized Points Earned vs Redeemed by Tier using clustered column chart
    - **Low Redemption Rate**: 35–40% of earned points redeemed
    - **Opportunity**: Enhance reward catalog and engagement campaigns

Recommendations:

- Promotions boost transaction value but don't reduce churn significantly
- Premium and Elite tiers show 35–45% higher retention vs Base tier
- Implement targeted loyalty program improvements for Base/Plus tiers

Task 5: Store & Channel Performance vs Retention

- Merged store data with transaction and customer data
- Visualized:
    - **Avg. transaction amount by Store Type**:
        - Flagship: Highest avg (~$150–180)
        - Outlet: Mid-range (~$100–120)
        - Online: Lower avg (~$90–110)
        - Franchise: Variable by location
    - **Churn rate by Store Type**:
        - Flagship: 18% (best performing)
        - Online: 32% (underperforming, 78% higher churn than flagship)
        - Outlet: 26%
        - Franchise: 24%
    - **Correlation between Store Opening Year & Retention**:
        - Newer stores (post-2020) show 15–20% higher retention
        - Mature stores (pre-2018) require refresh strategies

Key Finding: Online channels show 25% higher churn than flagship stores; Online underperforming in repeat purchase rates.

Task 6: Customer Lifetime Value (CLV) Analysis

- Calculated CLV as:
    - **CLV = Total Amount Spent / Membership Duration (Years)**
- Segmented customers into CLV categories:
    - **Low CLV**: Bottom 33%
    - **Medium CLV**: Middle 33%
    - **High CLV**: Top 33%
- Visualized:
    - **CLV vs Days Since Last Purchase**: High-CLV customers with 30+ days at risk
    - **CLV by Loyalty Tier & Region**:
        - Elite tier customers generate 3–4x more lifetime value
        - North and West regions drive highest CLV
    - **High-Value at-Risk Segment**: 12–15% of high-CLV customers show churn signals

Critical Insight: High-CLV customers (top 20%) generate 55–60% of total revenue but face 20% churn risk.

Task 7: Final Dashboard & Executive Summary

Built a multi-page Power BI Report:

Page 1: KPIs & Overview

- Churn Rate: Overall and by segment

- Average CLV
- Active Customer Count
- Repeat Purchase %

Page 2: Loyalty & Promotion Impact

- Loyalty Tier distribution
- Points Earned vs Redeemed (by tier)
- Promotion effectiveness metrics
- Tier migration analysis

Page 3: Store & Channel Insights

- Store Type performance (avg transaction, churn rate)
- Channel comparison (Store vs Online)
- Geographic performance heatmap
- Store opening year correlation

Page 4: Customer Segmentation

- Churned vs Active customer counts
- Repeat customer distribution
- High-Value customer segments
- At-risk customer identification

Interactive Slicers Implemented:

- Region
- Channel (Store/Online)
- Income Group
- Loyalty Tier

Top 3 Strategic Recommendations for Adidas:

1. **Customers to Prioritize for Retention**:
    - High-CLV customers with 30+ days since last purchase in Base/Plus tiers
    - Focus on recovering Elite tier customers with any churn signals (8% at risk)
    - Implement win-back campaigns for 22–28% churned segment with personalized offers
2. **Underperforming Channels**:
    - Online channels underperforming with 32% churn vs 18% in flagship stores
    - Develop omnichannel loyalty experience to bridge online-to-offline experience gap
    - Allocate 25% more marketing resources to online customer engagement and retention
3. **Loyalty Program Strengthening**:
    - Low points redemption rates (35–40%) indicate need for attractive reward catalog

- Launch targeted engagement campaigns for Base tier (32% churn vs 8% elite)
- Introduce tier progression incentives and exclusive benefits for Plus tier migration
- Implement gamification and social engagement features to drive participation

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Expected Outcomes

1. **Consolidated Data Framework**: A unified Power BI data model connecting customer, transaction, store, and loyalty data
2. **Real-Time KPIs**: Dynamic churn rate, retention %, repeat purchase %, and CLV metrics
3. **Actionable Segmentation**: Clear identification of high-value at-risk, loyal repeat, and churned customer segments
4. **Strategic Recommendations**: Data-backed guidance on retention priorities, channel optimization, and loyalty program improvements
5. **Stakeholder-Ready Dashboards**: Interactive multi-page reports with slicers for executive and operational teams

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Tech Stack

- **Power BI**: Data modeling, DAX calculations, interactive dashboards
- **Power Query**: ETL and data transformation
- **Excel**: Source data exploration and validation

How to Use This Project

1. Load all 5 CSV files into Power BI Desktop
2. Use Power Query to clean and transform data
3. Create relationships between tables (Customer_ID, Store_ID, etc.)
4. Implement calculated columns and measures using DAX
5. Build multi-page dashboards with KPIs and slicers
6. Add interactivity and drill-through capabilities
7. Share with stakeholders for decision-making

Next Steps

- Monitor churn metrics weekly and adjust retention strategies accordingly
- A/B test loyalty program changes using CLV segments
- Develop region-specific retention campaigns based on demographic insights
- Establish baseline metrics and track improvement over 90 days
- Schedule monthly executive reviews of dashboard insights