DEPARTMENT OF MANAGEMENT

REPORT ON CAPSTONE PROJECT

TITILE - "A comparative study on Customer Segmentation and Targeted Marketing Strategies of U.S Retail Market"

SUBMITTED TO S S O D L

In partial fulfillment of the requirement for the award of

DEGREE OF MASTERS OF BUSINESS ADMINISTRATION"

SUBMITTED BY:	**Prn.**	**Guide name**
Student name	**230291411471**	**Dr. Shirshendu**
Nikita Ravindra Albela		**Roy**

DEPARTMENT OF MANAGEMENT

TO WHOM IT MAY CONCERN

This is certified that Nikita Ravindra Albela has done this project of "**A comparative study of Customer Segmentation and targeted Marketing Strategies of U.S. Retail Market**" under my guidance. During this project they have done most efforts to study and understand the subject in detail. In addition to the books mentioned in the bibliography they have referred various study material, magazine, websites, newspapers and notes to complete this project. During this project they have been very much curious and enthusiast to understand the spirit of the expert documentation and procedures.

we wish her best of luck.

Project Guide
Dr. Shirshendu Roy

CONTENTS

EXECUTIVE SUMMARY

The U.S. retail industry is among the largest and most competitive markets globally. In response to rapid digital transformation, retailers are increasingly adopting data-driven strategies to better understand consumer behavior and enhance business performance.

This project focuses on the study of **customer segmentation and targeted marketing strategies of the U.S. Retail market** using purchase behavior data from U.S. shoppers. The analysis incorporates demographic, transactional, and behavioral variables, including age, gender, purchase amount, seasonal trends, location, purchase frequency, and customer feedback ratings.

Primary Objectives:

1. Analyze revenue, payment method and spending patterns across age groups, considering seasonal and geographic influences.
2. Perform market segmentation to identify distinct segments and study the U.S. retail market detail.
3. Perform Pareto & RFM Analysis to study the dynamic change of the U.S. Retail Market.

Key Findings:

- **Price Sensitivity:** Discounts are most effective in apparel and electronics categories, where competition and price sensitivity are highest.
- **Demographic Trends:** Younger customers (ages 18–30) exhibit higher card spending during festive and winter seasons, particularly in urban areas.
- **Customer Segments (RFM Analysis):**
    1. **High-Spend Loyalists** – Long-term customers with frequent purchases, subscription engagement, and consistently high review ratings.
    2. **Value Seekers** – Younger customers highly responsive to discounts, promotions, and seasonal offers.
    3. **Occasional Shoppers** – Infrequent buyers influenced primarily by convenience and shipping incentives.

The study demonstrates that **customer segmentation is a strategic tool** to study the dynamic retail market. By leveraging these insights, retailers can improve customer retention, increase sales, and optimize promotional investments.

History and Evolution of Retail Stores

"**Retail refers to the sale of goods and services directly to consumers with the objective of generating profit. This includes transactions across multiple channels, encompassing both physical stores and digital platforms**."

1. **Mom and Pops: 1700s–1800s.**

"Mom-and-pop" stores are small, family-owned, independent businesses. In the 18th and 19th centuries, such stores were widespread in the United States, often operating as general stores or drugstores offering groceries, fabrics, tools, and other essentials. As settlements expanded, these stores served as community anchors, providing personalized service and fostering human connection.

Family-owned businesses continue to play a significant role in the U.S. economy: of nearly 30 million small businesses, 19% are family-owned, with 1.2 million operated by married couples. Shopping preferences also exhibit generational differences; for example, 72% of Baby Boomers primarily shop in-store, compared with 67% of Millennials who prefer online channels.

2. Department stores arrive: Mid 1800s – Early 1900s.

With industrialization and rising affluence in the late 19th and early 20th centuries, department stores emerged in urban centers. Pioneers such as Macy's (1858), Bloomingdale's (1861), and Sears (1886) offered a broad selection of products and enhanced customer experiences through demonstrations, lectures, and entertainment events.

Department stores influenced consumer habits, including home furnishing and luxury purchases. Modern retail continues this tradition, with brands leveraging content and experience-driven commerce to engage customers and influence purchasing decisions.

3. Cha-Ching: 1883.

The first cash register.

James Ritty invented the first cash register in 1883, nicknamed the "incorruptible cashier." This innovation simplified transaction recording, improved profit tracking, and helped prevent theft. Modern point-of-sale (POS) systems have expanded on this foundation, integrating inventory management, payment processing, and multi-channel connectivity to support omnichannel retail operations.

4. Credit takes a hold: 1920s.

The 1920s introduced credit and charge cards, initially issued by individual businesses and hotels. The Diners Club card (1950) was the first universal card, followed by Bank of America's credit card in 1958. Today, credit cards facilitate convenience, bookkeeping, and online commerce, though they also contribute to significant consumer debt; U.S. credit card debt recently exceeded $1 trillion according to the Federal Reserve.

5. Shopping malls: 1950s.

Modern shopping malls emerged as centralized locations for multiple retailers. The first indoor mall, Southdale Center in Edina, Minnesota, opened in 1956, often anchored by a department store. Malls combined retail with cultural and social activities, driven by suburbanization and increased automobile access. By 1960, over 4,500 malls existed, accounting for 14% of retail sales.

Although e-commerce has reduced mall traffic, experiential retail concepts continue to attract consumers. Examples include pop-up shop models like Neighborhood Goods in Dallas, Texas, which blend digital-native and in-person retail experiences.

6. Big Box is in: 1960s.

The very first Walmart in Rogers, Arkansas.

Big-box stores, including Walmart, Target, and Kmart (all established in 1962), offered one-stop shopping with low prices and high efficiency. Unlike department stores, these retailers focused on self-service and scale economies, providing convenience at a lower cost. Walmart remains a dominant force, with 2018 sales exceeding $500 billion, illustrating the continued influence of big-box retail on the U.S. market.

7. Ecommerce looms on the horizon: 1990s.

The rise of e-commerce represents one of the most significant transformations in retail history. Amazon, founded in 1995 as an online bookstore, exemplifies the shift toward digital commerce, achieving net income of over $10 billion by 2018. E-commerce provides convenience, efficiency, and enhanced consumer research capabilities, allowing shoppers to compare products, read reviews, and purchase 24/7. This digital evolution has reshaped consumer expectations and accelerated omnichannel integration across the retail sector.

The growth of ecommerce mirrored the growth of the internet. As more and more people had access to the digital world, they became more interested in shopping there. Initially, some people were skeptical of providing personal data and payment information online, but the development of SSL security protocol in the 1990s helped to assuage those fears.

- **Retail Spending**: U.S. retail sales reached $6 trillion in 2018. Despite high spending levels, businesses that fail to innovate technologically or adapt to customer experience demands continue to close.
- **Mobile Usage**: 77% of shoppers use mobile devices to research or purchase products. This emphasizes the importance of mobile optimization and advertising strategies.
- **Digital Advertising**: Retailers spent $23.5 billion on digital advertising in 2018, accounting for 70% of their total ad spend - a 19% increase from the previous year.
- **Brick-and-Mortar Dominance**: Despite ecommerce growth, physical retail maintains an 80% share of global retail sales (2015–2021). Hybrid models such as research online, buy in-store (ROPO), or buy online, pick up in-store (BOPIS) are proving most successful.
- **Ecommerce Market Share:** Ecommerce was projected to hold 13.7% of retail sales in 2019, with further growth to 17.5% by 2021. This trend represents significant opportunities for businesses investing in online channels.
- **Consumer Convenience:** 54% of consumers cite 24/7 availability as a primary reason for shopping online. Shoppers increasingly expect convenience, variety, and accessibility, driving the evolution of omnichannel retail experiences.

Retailers That Stay Ahead of the Curve

As times change, it's interesting to see which retail brands are able to adapt and thrive and which fall by the wayside. Many of the businesses doing well in the current retail landscape are those that are capitalizing on new technologies or providing a clear customer advantage or experience.

1. Amazon.

Knowing that ecommerce is a growing market, it would be impossible for Amazon the creator of the most successful ecommerce enterprise in the country to not be on this list. Each month, over 197 million people globally visit Amazon.com. And in 2018, their U.S. commerce market share was 49%. That equates to a cool 5% of all retail spend in the country.

People flock to Amazon because they can often find lower prices than in stores. Additionally, the free two-day shipping with Amazon Prime has created a whole new standard for shipping speed expectations.

2. Kroger.

Kroger is the leading supermarket operator in the U.S. While their traditional grocery store remains strong with over 3,000 stores and [$119 billion in sales in 2018,] they have also been making strides in online operations by investing in expanding store pickup locations for online orders and grocery delivery. Other technological advances include a complex mobile app and digitally-enabled shelves that communicate with shoppers through display screens.

3. Walmart.

Walmart still remains the largest retailer, with $387 billion in sales in 2018 across their more than 5,000 stores nationwide. Walmart is continually investing in new technologies, including store-cleaning robots, interactive displays, and artificial intelligence to keep stock levels consistent. Their online Walmart marketplace has also been a huge hit for the ecommerce and online shopping community.

4. Costco.

Costco helped to revolutionize the warehouse membership concept. Their 770 locations don't have a lot of frills (you won't find aisle information signs or bags for your items), but what they do provide is low cost and high-quality goods. Even when retail is slowing down, Costco stays ahead of the game, coming in with almost $141 billion in sales in 2018 alone, a 9.7% growth from 2017.

Retailers Who Fell Behind

1. **Toys "R" Us**

The bankruptcy of Toys "R" Us marked one of the most symbolic collapses in modern U.S. retail history. Once a beloved destination for children and families, the toy giant struggled to adapt to changing consumer expectations. Its stores were often criticized for being outdated, poorly merchandised, and lacking in customer engagement, while shoppers increasingly turned to online platforms that offered lower prices, convenience, and transparent reviews.

Yet the most significant factor behind the company's decline was its heavy debt burden. Following a leveraged buyout in 2005, Toys "R" Us was saddled with billions in debt, diverting critical resources away from store improvements, digital innovation, and supply chain upgrades. Competitors like Amazon, Walmart, and Target capitalized on this weakness by aggressively expanding into the toy category with better pricing and omnichannel strategies. Ultimately, the combination of financial constraints, delayed adaptation to e-commerce, and eroding customer loyalty led to liquidation of many U.S. stores.

2. **Sears**

Sears was once a retail pioneer, transforming American shopping habits through its mail-order catalog and later as a dominant department store chain. However, by the late 20th and early 21st century, the brand lost its identity and fell behind competitors. The rise of online retail and discount chains such as Walmart and Target put severe pressure on Sears' traditional model.

Beyond external competition, internal missteps accelerated its downfall. Years of underinvestment left many stores outdated, while strategic decisions under new leadership focused more on financial engineering and real estate monetization than on revitalizing the core retail business. Attempts to modernize its digital presence were fragmented and poorly executed, preventing Sears from competing effectively in the omnichannel era.

In October 2018, Sears filed for Chapter 11 bankruptcy. While some stores continued to operate in the short term, the company's decline became a cautionary tale of how innovation, reinvestment, and customer focus are essential to long-term survival in retail.

The Ecommerce Effect on Retail

E-commerce has fundamentally reshaped the retail landscape, influencing both current operations and future growth strategies. Retailers that have successfully navigated this transition are those that recognize shifting consumer behaviors and invest in strengthening their digital presence while maintaining strategic physical footprints.

1. Growing Consumer Preference for Online Shopping

The convenience and accessibility of online platforms have made e-commerce a preferred channel for many U.S. consumers. In 2018, 22% of apparel sales and 30% of electronics sales occurred online, with projections suggesting that grocery e-commerce could account for 20% of sales by 2020. In response, retailers such as Walmart and Kroger significantly expanded their digital capabilities, while Amazon continued to strengthen its dominance in the sector.

2. Rapid Increase in Online Adoption

The proportion of U.S. consumers shopping online has grown dramatically from 22% in 2000 to 79% in recent years. This fivefold increase demonstrates how integral e-commerce has become to modern retail. Retailers that have adopted a dual-channel approach integrating both physical stores and online platforms have experienced more sustainable growth compared to those that remain exclusively brick-and-mortar.

3. Complementary Role of Physical Retail

Despite the rise of digital shopping, physical retail continues to hold relevance. Many consumers still prefer in-person experiences for specific categories, particularly when product quality and tactile evaluation are important. Rather than replacing brick-and-mortar stores, e-commerce has created a complementary shopping ecosystem where online and offline channels reinforce each other.

E-commerce has shifted customer expectations toward greater convenience, speed, and personalization. Shoppers seek both affordability and efficiency, but are also willing to pay premium prices for brands that resonate with their values and offer engaging experiences. For retailers, long-term competitiveness lies in integrating digital transformation with customer-centric strategies that blend online and offline strengths.

Industry Structure and Business Model

The U.S. retail industry is characterized by a multi-channel structure that integrates physical and digital formats. Traditional brick-and-mortar outlets include department stores, specialty retailers, big-box chains, and supermarkets. These coexist with direct-to-consumer channels such as catalog and mail order, as well as rapidly expanding digital models encompassing pure-play e-commerce and omnichannel operations.

Market leadership is concentrated among large national retailers like Walmart, Amazon, Costco, Kroger, Home Depot, and Target who collectively account for a substantial share of total sales. Alongside these major players, thousands of regional chains, independent businesses, and specialty retailers address niche segments. Modern retailers operate across a spectrum of platforms, including physical stores, e-commerce websites, online marketplaces, mobile applications, and social commerce. Fulfillment models are similarly diverse, ranging from in-house distribution networks to third-party logistics and in-store fulfillment.

Growth: Recent Size and Trends

Retail sales in the United States remain a critical component of the national economy, with overall volumes measured in the hundreds of billions annually. According to the National Retail Federation (NRF), leading companies consistently rank among the highest revenue-generating firms in the country. The COVID-19 pandemic accelerated digital adoption, producing a sharp rise in e-commerce penetration. Elevated online sales have since persisted, supported by lasting shifts in consumer behavior toward omnichannel shopping.

In parallel, the industry has undergone store rationalization, with underperforming chains and categories reducing their physical footprint. At the same time, market leaders have selectively expanded, strengthening high-performing locations and investing heavily in digital capabilities to capture long-term demand.

Drivers of Growth

Several structural and behavioral factors underpin the industry's sustained expansion:

- **Urbanization and income growth**: Rising urban populations and higher household incomes have increased discretionary spending.
- **Economies of scale and supply chain efficiencies**: Large retailers leverage scale to reduce costs, enabling competitive pricing and broader assortments.
- **Technological innovation and e-commerce**: Digital platforms have lowered search costs, enabled personalization, and introduced new distribution models.
- **Omnichannel convenience**: Services such as buy-online-pickup-in-store (BOPIS), same-day delivery, and mobile commerce have redefined customer expectations.
- **Private label and membership formats**: Subscription-based and club models, exemplified by Costco, drive larger basket sizes and reinforce loyalty.

Together, these dynamics continue to expand total retail demand while reshaping how market share is contested and secured.

Market Share: Top Players and Industry Structure

The U.S. retail sector is highly concentrated at the top, with a small number of dominant players accounting for a significant share of overall sales. Walmart and Amazon consistently lead the market, with Walmart maintaining double-digit share across multiple retail segments and Amazon capturing high single-digit share through its e-commerce dominance. These leaders are followed by large supermarket chains such as Kroger and Albertsons, warehouse clubs including Costco, and home improvement retailers like Home Depot and Lowe's.

According to annual reports by the National Retail Federation (NRF) and Digital Commerce 360, the top ten retailers collectively command a substantial portion of U.S. retail activity. Beyond these market leaders, thousands of regional and specialty retailers continue to serve niche markets and localized consumer needs. For comparative analysis, the top ten list typically includes: Walmart, Amazon, Costco, Kroger, Home Depot, Target, Walgreens, CVS, and Aldi/TJX (ranking order varies by year).

Partnerships and joint ventures are a critical mechanism for retailers to expand market presence, enhance logistics capabilities, and adopt new technologies. Examples include:

Walmart–Bharti (India): Walmart entered India through a joint venture with Bharti to operate wholesale stores. Although the partnership was later dissolved due to regulatory hurdles and operational challenges, it highlights how U.S. retailers often rely on local partners to navigate foreign market complexities. While Walmart struggled in India, the evolution of modern retail paved the way for the rise of domestic players such as D-Mart, which has become a significant force in Indian retail.

Kroger-Ocado: Kroger entered a long-term partnership with Ocado to implement robotic fulfillment technology through customer fulfillment centers (CFCs). This collaboration illustrates how retailers use technology-driven alliances to accelerate e-commerce and supply chain transformation.

Beyond these cases, major retailers also partner with fintech firms, last-mile delivery providers, and digital advertising networks to diversify revenue streams and extend operational reach. Walmart's investments in retail media and advertising platforms exemplify how partnerships can expand beyond core retail into adjacent ecosystems.

Joint Venture Challenges: Common Issues and Case Insights

Retail joint ventures challenges:

Regulatory and political barriers: Foreign ownership restrictions and complex retail regulations can limit long-term viability. The dissolution of the Walmart-Bharti partnership demonstrates how regulatory environments and strategic misalignment can undermine JV success.

Operational and financial risks: High capital requirements and uncertain adoption rates can strain partnerships. The Kroger-Ocado rollout faced challenges around balancing investment in automated infrastructure with the pace of customer adoption, underscoring the financial risks associated with large-scale technology ventures.

These examples illustrate both the opportunities and pitfalls of joint ventures in retail, emphasizing the need for alignment in strategy, execution, and market context.

End-to-End Fleet Management in U.S. Retail

End-to-end fleet management in retail encompasses the entire logistics lifecycle, including vehicle acquisition and disposal, route optimization, driver and asset management, telematics, predictive maintenance, and last-mile delivery orchestration. Contemporary solutions integrate fleet telematics, advanced routing algorithms, real-time tracking, and order management system connectivity to reduce delivery costs, improve on-time performance, and support flexible delivery options such as same-day and next-day fulfillment.

Large U.S. retailers employ a combination of owned fleets, third-party logistics providers (3PLs), and crowdsourced or partner delivery models to optimize operational efficiency. Technology providers including enterprise platforms like IBM, specialized fleet SaaS solutions, and emerging logistics startups play a central role in enabling data-driven fleet management and operational optimization.

Profiles of Leading U.S. Retailers

- **Walmart** - Founded in 1962 by Sam Walton, Walmart leveraged a discount and scale model to become the world's largest retailer. The company has made substantial investments in logistics, private-label products, and omnichannel capabilities, and has utilized partnerships and local joint ventures to facilitate international market entry.
- **Amazon** - Established in 1994 by Jeff Bezos as an online bookstore, Amazon has rapidly diversified into a global e-commerce marketplace, cloud computing services (AWS), grocery (Whole Foods), and advanced logistics and fulfillment operations. Amazon's scale has set new benchmarks for consumer expectations regarding selection, pricing, and delivery speed.
- **Costco** - Founded in 1976, Costco's membership warehouse model emphasizes low margins, rapid inventory turnover, and subscription-based loyalty. This model drives consistent profitability while cultivating strong customer engagement.
- **Kroger** - As one of the largest U.S. supermarket chains, founded in 1883, Kroger has invested heavily in e-commerce, delivery solutions, and strategic partnerships such as the Kroger-Ocado collaboration to expand automated fulfillment capabilities.

Evolution of Consumer Expectations

Retail has evolved from simple barter systems to highly complex, digitally driven operations. Modern consumers demand personalized experiences, convenience, efficiency, competitive pricing, and fast delivery. At the same time, they are willing to pay premiums for brands that resonate with their values.

This study focuses on customer behavior within shopping malls, which continue to hold a meaningful share of the retail market. Analysis indicates a clear causal relationship between the rise of e-commerce and changing shopping behaviors. The growth of online platforms has accelerated industry transformation, driving faster, more digitally oriented retail operations. Consequently, mall-based purchases are increasingly acquisition-driven rather than loyalty-driven, reflecting the profound impact of e-commerce on consumer habits and illustrating the ongoing revolution in the retail sector.

Review of Literature

The U.S. retail industry has undergone a rapid transformation driven by technological advancements, changing consumer expectations, and the rise of e-commerce platforms. While digital channels are growing at an unprecedented pace, shopping malls and physical retail spaces still hold a significant share of the market, making it essential to understand the interplay between traditional and online retail.

This project is highly relevant for several reasons:

1. **Consumer Behavior Insights** - By studying buying patterns across malls and e-commerce, the project helps in identifying the shifting priorities of customers, such as demand for convenience, personalization, and speed.

2. **Strategic Decision-Making** - Retailers can utilize these insights to design effective marketing strategies, pricing policies, and promotional campaigns tailored to specific customer segments.

3. **Market Transformation** - The study captures how e-commerce has reshaped the retail industry from a **loyalty-driven to an acquisition-driven model**, highlighting important lessons for sustaining customer relationships.

4. **Business Applications** - Findings from the study are directly applicable to retail managers, marketers, and policymakers who need to adapt to consumer trends and balance investments between offline and online channels.

5. **Academic Contribution** - The project contributes to the broader field of consumer behavior and retail management by offering data-backed evidence on how digital adoption influences traditional shopping practices.

In essence, the project bridges the gap between **traditional retail dynamics and modern e-commerce trends**, providing valuable insights for both practitioners and researchers.

Research Plan

DATA SOURCE-:

Primary data source to be used for purpose of study. I have collected the data from Rubixe – AI Solutions Company as a part of my intership capstone project. Data source is from SQL server database provided by Rubixe – AI Solutions Company.

Methodology

The study employed a structured research approach combining data collection, preprocessing, analysis, and interpretation to explore customer buying patterns and the impact of e-commerce on traditional retail. The methodology followed is outlined below:

Objectives of Study

- **To analyze customer buying patterns in shopping malls** and assess their continued relevance in the U.S. retail market.
- **To evaluate the impact of e-commerce growth on traditional retail formats**, particularly in shifting consumer behavior from loyalty-based shopping to acquisition-driven purchases.
- **To segment customers into distinct groups** based on demographic, transactional, and behavioral attributes, enabling better understanding of preferences and needs.
- **To examine the role of discounts, promotions, and convenience factors** in influencing purchasing decisions across different customer groups.
- **To compare shopping mall and e-commerce customer experiences**, highlighting the drivers behind digital adoption and its effect on industry growth.
- **To provide actionable recommendations for retailers** to design effective, data-driven marketing and customer retention strategies.

Data Source

The analysis is based on a dataset containing information on 3,900 U.S. customers, including demographic attributes (age, gender, location), behavioral attributes (purchase frequency, subscription, feedback), and transactional details (amount spent, discounts used, product categories, seasonality).

Secondary data sources such as industry reports, academic literature, and market publications were also reviewed to support contextual understanding.

Data Preparation

Cleaning: Missing values were handled, irrelevant fields removed, and categorical variables encoded for analysis.

Transformation: Purchase amounts and seasonal effects were standardized to allow comparisons across customer groups.

Analytical Tools

- **Exploratory Data Analysis (EDA):** Conducted using visualizations to identify key trends in customer spending, age-wise preferences, discount responsiveness, and seasonal shopping behavior.

- **RFM Analysis (Recency, Frequency, Monetary):** Applied to segment customers based on purchasing behavior. Customers were scored on recency, frequency, and monetary value to identify high-value, loyal, and occasional shoppers. Insights from these segments were used to guide targeted marketing strategies.

- **Pareto Analysis (80/20 Rule):** Applied to identify the top 20% of customers contributing approximately 80% of total revenue. Customers were ranked by total spending, and cumulative revenue percentages were calculated to determine the high-priority segment for retention and promotional efforts.

- **Comparative Analysis:** Shopping patterns in malls were compared with emerging e-commerce-driven behaviors to identify shifts in loyalty and acquisition models.

Interpretation & Insights

Results were interpreted to highlight factors influencing purchase decisions, the relevance of discounts and promotions, and differences between customer segments.
The research examined how e-commerce adoption has driven structural and behavioral changes in the retail industry.

Validation

Findings were cross-checked with existing literature and recent retail industry reports to ensure accuracy and relevance.
The methodology thus integrates quantitative analysis with contextual industry review, ensuring that insights are both data-driven and strategically applicable to the retail sector.

Interpretation and Analysis

The analysis of customer behavior using **Pareto and RFM models** revealed several key insights into spending patterns, payment preferences, and customer segmentation:

1. **Customer Segmentation by Revenue**
    - Revenue is concentrated among a small portion of customers, indicating that **high-value customers contribute disproportionately** to total revenue.
    - This underscores the need for **targeted retention strategies** for top spenders, while nurturing mid-value customers to increase their purchase frequency and average spend.

2. **Customer Segmentation by Payment Method**
    - Distinct preferences in payment methods were observed, reflecting where customers feel most comfortable transacting.
    - Promoting the most popular payment methods can improve conversion rates and reduce drop-offs.
    - Less frequently used payment methods represent potential opportunities for targeted campaigns or cost optimization.

3. **Revenue Pareto Analysis**
    - The revenue distribution follows the classic 80/20 principle indicates the revenue saturated in only three categories Clothing, shoes and Technology.
    - This reinforces the importance of identifying, retaining, and rewarding top spenders.
    - For the broader base of lower-value customers, scalable digital engagement strategies such as loyalty programs, email campaigns, and bundled offers are more cost-effective.

4. **RFM Analysis (Recency, Frequency, Monetary)**
    - **Recent Customers (60%)** dominate the customer base, indicating strong acquisition efforts.
    - **Mid-tier customers (36%)** show growth potential and should be nurtured for higher engagement and spend.
    - **Lost Customers (4%)** represent manageable churn risk, with reactivation campaigns offering opportunities to unlock hidden value.

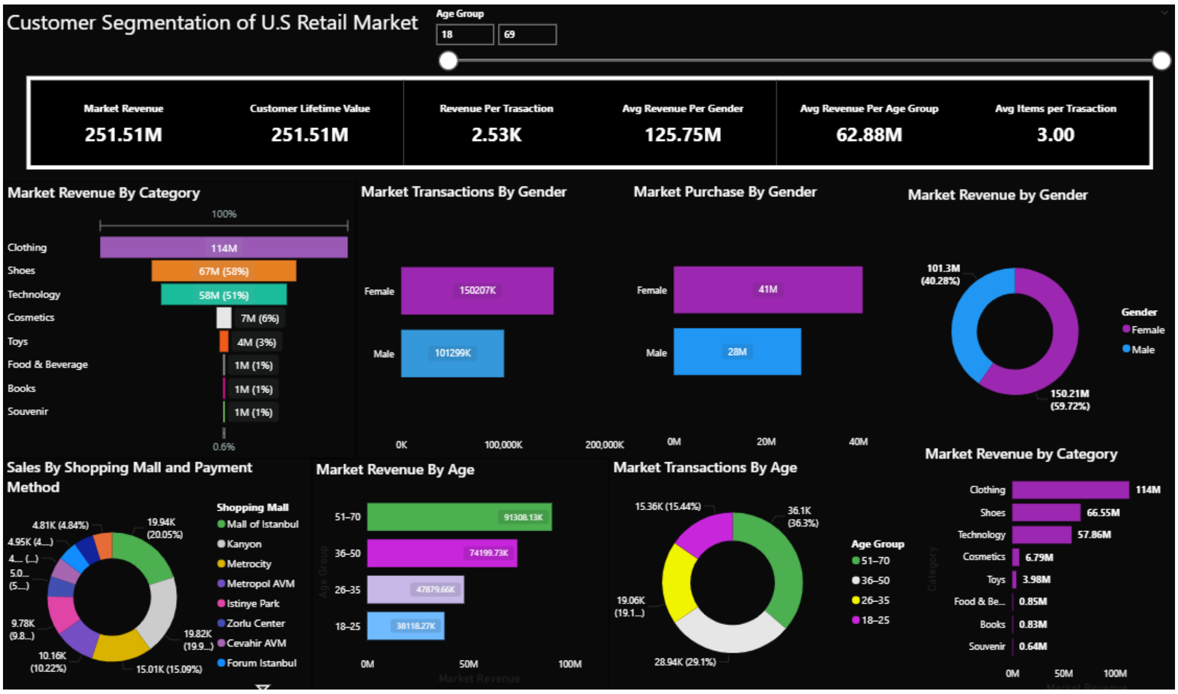
RFM scoring allows for smart allocation of marketing resources: retaining high-value customers, nurturing mid-tier customers, and targeting reactivation efforts efficiently.

Overall Insight

The analysis demonstrates that while the majority of customers are recent and saturated to few categories, a small segment of high-value customers drives the bulk of revenue, following the classic Pareto principle. Customer preferences, such as favored payment methods and shopping frequency, reveal opportunities to enhance engagement and streamline operations. Leveraging RFM segmentation alongside Pareto insights enables retailers to strategically retain top spenders, nurture mid-value customers, and reactivate lapsed customers, ultimately maximizing customer lifetime value and driving sustainable growth in an increasingly competitive retail landscape

Data Interpretation

Customer Behavior By Market



This dashboard provides a multidimensional view of customer behavior in the U.S. retail mall market, segmented by category, age, gender, payment method. The analysis reveals several key patterns.

1. Category-wise Revenue Distribution

Clothing dominates the market with 45.1% of total revenue, followed by Gym equipment (17.6%) and Shoes (15.7%). This indicates that fashion and fitness-related products are the primary drivers of mall-based retail sales, likely due to the need for physical trail and quality assurance.

2. Gender-based Purchasing Behavior

Female customers account for 63% of total revenue and show higher transaction volumes and purchase quantities compared to males. This suggests that women are more engaged in offline retail shopping, especially in categories like clothing and accessing.

3. Age Group Revenue Consistency

All age groups from 18 to 55 contribute equally to market revenue (62.88 M each), implying a balanced distribution of spending across demographics. However, this uniformity may reflect aggregated data or a need for deeper segmentation to uncover nuanced behavioral differences.

4. Payment Preferences and Channel Performance

Credit card usage (60%) surpasses cash (40%) indicating a shift towards digital payments among mall shoppers. Additionally, Shopping Mall B leads in sales (60%), suggesting stronger performance or better customer engagement strategies compared to Mall A.

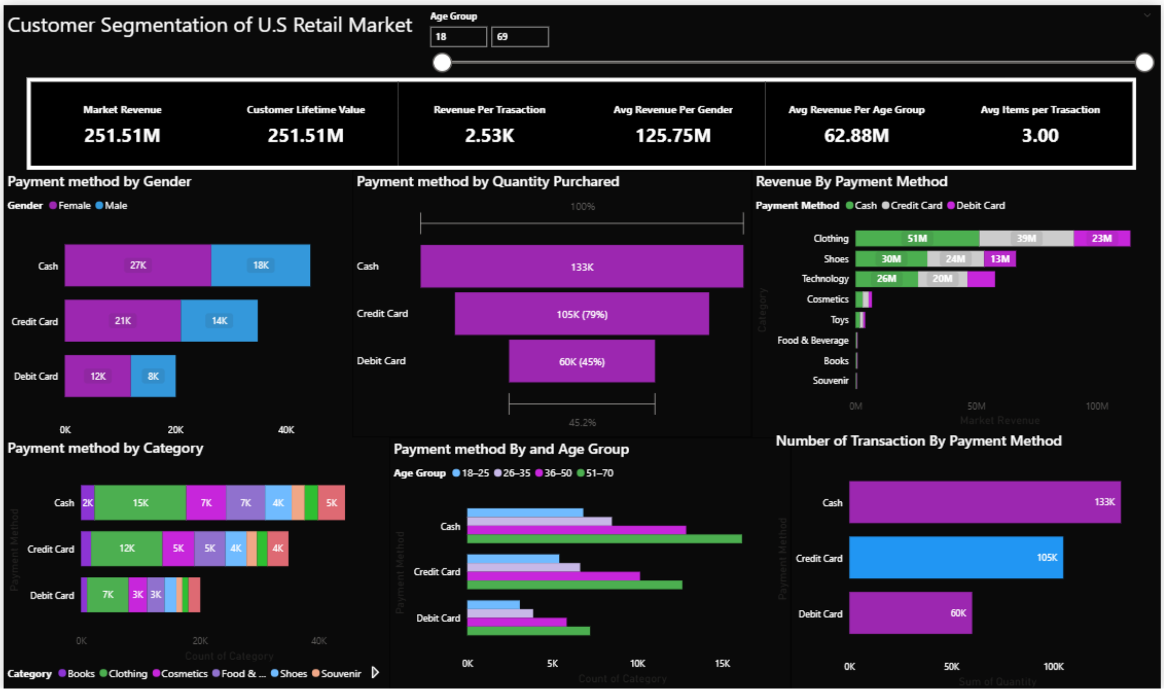
5. Transaction Volume and Purchase Pattern

Female customers not only transact more frequently but also purchase more items per transaction. This behavior aligns with higher revenue contribution and supports targeted marketing strategies focused on female-centric product lines and loyalty programs.

6. Revenue by Category and Demographics

The alignment between high-revenue categories and dominant customer segments. (female, credit card users, younger age groups) highlights clear opportunities for personalized promotions and inventory optimization.

Payment Pattern By Market



This dashboard provides detailed view of customers payment method behavior in U.S. retail market, segmented by gender, age group, payment method, quantity purchased, and product category. The analysis reveals several key patterns -

1. **Payment Preferences by Gender**

Female customers show a higher preferences for Credit Card and cash transactions, while male customers lean slightly more towards Debit Card usage. This suggests that may be women prefer more flexible payment options, which could be leveraged for loyalty programs and credit-based incentives.

2. **Quantity Purchased by Payment Method**

Credit card users lead in total quantity purchased (193K), followed by Debit Card (15kK) and Cash (152K). This indicates that digital payment users tend to make larger purchases, possibly due to ease of transaction and reward-based spending behavior.

3. **Revenue Distribution by Payment Method**

Across categories like Clothing, Books, Cosmetics, and food & Beverages, credit card transactions generate the highest revenue, reinforcing their role in high-value purchases. This trend supports the implementation of targeted promotions and cashback offers for credit card users.

4. **Payment method by Category**

The stacked bar chart reveals that Cash dominates in categories like Food & Beverages and Toys, while Credit card usage is prominent in Clothing and Electronics. This segmentation can guide inventory placement and category-specific payment incentives.

5. **Age Group Payment Behavior**

Customers aged 26-45 shows the highest engagement across all payment methods, especially Credit Card and Debit Card. Younger customers (18-25) still rely heavily on Cash, indicating a potential area for digital payment adoption.

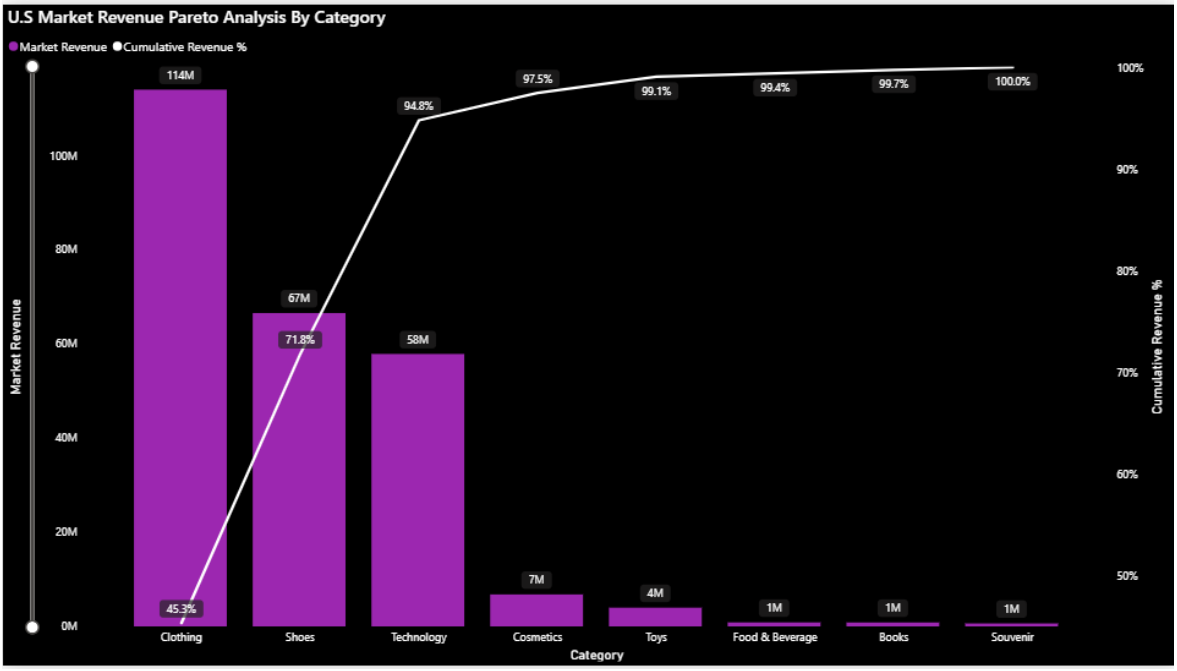
6. **Transaction Volume by Payment Method**

Credit Card transaction lead in volume (1.1K) followed by Cash (0.9K) and Debit Card (0.6K). This aligns with revenue and quantity trends, confirming that credit card users are both frequent and high-value shoppers.

Strategic Implications

The alignment between high-value categories, digital payment users, and engaged age groups presents clear opportunities for personalized marketing, payment-based incentives, and category-specific promotions. Retailers can optimize checkout experiences, bundle offers, and loyalty programs to convert high-frequency shoppers into long-term customers.

Market Revenue Pareto Analysis By Category



This Pareto Analysis provides a focused view of revenue distribution across product categories in the U.S. retail market, highlighting the classic 80/20 principle where small number of categories contribute disproportionately to total revenue.

1. **Revenue Concentration**

The top three categories, clothing ($114M), Shoes($67M) and Technology ($58M) collectively account to 94.5% of total market revenue. This confirms that consumer spending is heavily concentrated in fashion and tech-related products, which is likely perceived as high-utility and high-engagement purchases.

2. **Long-Tail Categories**

The remaining five categories such as cosmetics, toys, food & beverages, books and Souvenir contribute marginally to the overall revenue with each generating $7M or less. These categories represent the long tail of the retail market, where niche demand exists but does not significantly impact top-line performance.

Strategic Implication

Inventory Optimization - Retailers should prioritize stocking and promoting high-performing categories while managing inventory costs for low-revenue segements.

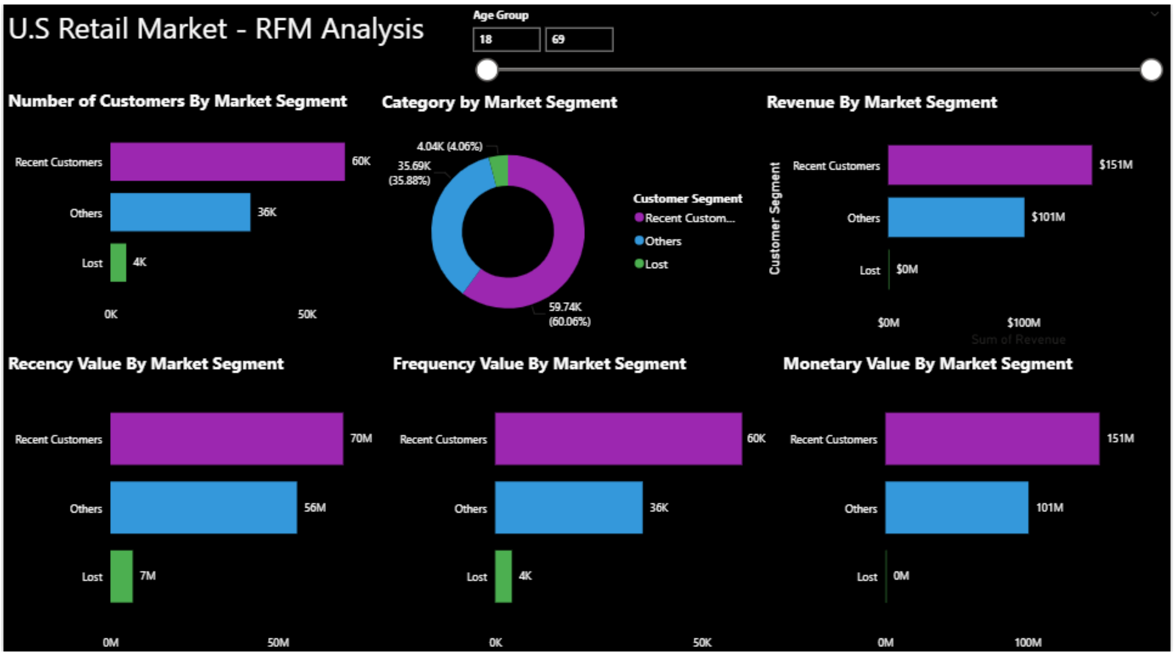
Marketing Focus - Targeted campaigns around Clothing, Shoes and Technology can yield higher ROI, especially when paired with loyalty programs and seasonal.

Category Expansion - Underperforming categories may benefit from bundling strategies, experiential retail setups, or cross-selling with dominant categories.

Revenue Diversification - While the top categories dominate, exploring growth opportunities in niche segments could help mitigate risk and attract diverse customer profiles,

This analysis reinforces the importance of data-driven category management and helps retail stakeholders align product strategy with consumer demand patterns.

U.S. Retail Market RFM Analysis



This dashboard applies RFM (Recency, Frequency, Monetary) analysis to segment customers in the U.S. retail market, offering a strategic view of customers value and engagement. The segmentation into Recent, Others, and Lost Customers reveals key behavioral patterns that can guide retention and revenue optimization strategies.

Customer Distribution by Segment

The customer base is divided into:

- **Recent Customers – 45K (40%)**
- **Others – 38K (33.8%)**
- **Lost Customers – 30K (26.2%)**

This distribution shows that while a significant portion of customers are actively engaged, nearly one-third have lapsed, indicating potential for reactivation campaigns.

Revenue Contribution by Segment

Recent Customers contribute the highest revenue at $151M, followed by Others $101M and Lost Customers ($90). This suggests that recent engagement correlates strongly with monetary value, reinforcing the importance of nurturing active customers.

RFM Value Breakdown

Recency – Recent Customers lead with 30K, indicating timely engagement.

Frequency – Recent Customers also top frequency at 20K, showing repeat behavior.

Monetary – Recent Customers dominate with $151M, confirming their high lifetime value.

This alignment across all three RFM dimensions highlights the effectiveness of RFM segmentation in identifying loyal and profitable customers.

Strategic Implications

- **Retention Focus** – Recent Customers should be prioritized for loyalty programs, exclusive offers, and personalized communication to maintain momentum.
- **Reactivation Strategy** – Lost Customers still contribute significantly to revenue and may respond to win-back campaigns efficiency and customer satisfaction.
- **Segmentation-Driven Marketing** – Tailoring outreach based on RFM scores can improve campaign efficiency and customer satisfaction.
- **CLV Optimization** – Investing in high-frequency, high-monetary segments can maximize long-term profitability.

This RFM analysis empowers retailers to make data-driven decisions around customer lifecycle management, marketing spend allocation, and personalized engagement strategies.

CONCLUSION

This study provides a comprehensive exploration of customer segmentation and targeted marketing strategies within the U.S. retail market, with shopping malls serving as a case example in the context of rising e-commerce adoption. Using Pareto and RFM models, the analysis validates the 80/20 principle by showing that a small group of high-value customers drives a disproportionate share of revenue, underscoring the need for focused retention initiatives.

The segmentation by age, gender, payment method, and purchase behavior highlights clear patterns: female shoppers and customers aged 26–45 are the most engaged and profitable, with credit card users contributing higher transaction volumes. RFM analysis further identifies Recent, Others, and Lost groups, each requiring tailored strategies—retention campaigns for Recent, reactivation offers for Lost, and loyalty reinforcement for Others. Pareto findings also emphasize the dominance of categories such as Clothing, Shoes, and Technology, which together account for over 90% of revenue and warrant inventory prioritization and targeted promotions.

Recommendations:

- **Cross-promotions:** Partner with food courts and entertainment zones to redirect leisure visitors toward retail stores through bundled offers and joint campaigns.
- **Omnichannel integration:** Collaborate with online platforms to ensure consistent pricing, while enabling seamless return and exchange policies across both physical and digital channels.
- **Accessibility:** Enhance layouts, seating, and navigation to create a more user-friendly shopping experience for older customers.
- **Youth targeting:** Launch student-focused discounts and promotional campaigns to attract young adults who are frequent mall visitors.
- **Diversification:** Broaden store offerings by introducing health-oriented outlets, technology hubs, and complementary accessory brands (bags, perfumes, cosmetics) to increase customer basket size.
- **Brand onboarding:** Identify high-performing online brands and introduce them in physical malls with exclusive in-person launch offers to boost both footfall and revenue.

In conclusion, this project affirms that data-driven segmentation is not merely tactical but a strategic imperative. By aligning behavioral insights with operational innovation, omnichannel partnerships, and customer-centric strategies, U.S. retailers can optimize experiences, maximize revenue opportunities, and sustain growth in an increasingly hybrid retail landscape.

Limitations

While this study provides valuable insights into customer segmentation and targeted marketing strategies in the U.S. retail market, certain limitations must be acknowledged:

- **Data Scope:** The dataset used was limited to 3,900 customers from a single source (Rubixe – AI Solutions Company), which may not fully represent the diversity of the entire U.S. retail market.
- **Time Frame:** The analysis reflects a specific time period and may not capture seasonal or long-term behavioral shifts.
- **Geographic Bias:** The dataset does not include regional identifiers, limiting the ability to analyze geographic variations in consumer behavior.
- **Category Saturation:** Revenue was heavily concentrated in a few categories (Clothing, Shoes, Technology), which may skew strategic recommendations if broader category data is not considered.
- **Payment Method Assumptions:** While trends in payment preferences were observed, external factors such as promotions, card incentives, or store policies were not accounted for.
- **Limited Qualitative Insights:** The study primarily relies on quantitative analysis; customer motivations, sentiments, and experiential factors were not explored in depth.

Future research could benefit from a larger, more diverse dataset, inclusion of qualitative feedback, and longitudinal tracking to validate behavioral trends over time.

Bibliography

BOOKS: Sagh, R.(2007),RESEARCH METHEDOLOGY,12th EDITION ,NEW DELHI:Pearson published ltd,p.g no:305-322/.

ARTICLE:

Pautins,v and geistfeld,l(2003),The effect of consumer perception of store attribute on appard store preferences,journal of fashion marketing and management volume:7,issue page:3781-385.

Harris,k(2001),customer participation ion retail service:lesson from brecht international journal of retail and distribution management volume29,no.pp.359-369.

REFERENCES

1. National Retail Federation (NRF) Annual Reports
2. Digital Commerce 360 – U.S. Retail Rankings
3. U.S. Federal Reserve – Credit Card Debt Statistics
4. Amazon.com – Company Financials and Market Share Reports
5. Walmart Inc. – Annual Reports and Retail Strategy Insights
6. Kroger-Ocado Partnership – Fulfillment Technology Case Study
7. McKinsey Quarterly – Retail Transformation and Strategy
8. Business World Magazine – Retail Trends and Brand Evolution
9. Tehelka Magazine – Retail Case Studies and Brand Decline
10. Frost & Sullivan – Market Insight Reports
11. IBM & Fleet Management Whitepapers – Logistics Optimization in Retail
12. Rubixe – AI Solutions Company (Primary Data Source)