



RELISH RETAIL STORE

CUSTOMER SHOPPING BEHAVIOUR ANALYSIS

Overview

The data analysis aims to explore customer purchasing behavior on Relish Retail Store which is an e-commerce platform that provides a diverse selection of items such as groceries, home decor, books, apparel, and electronics.

Relish Stores operates exclusively online and ships orders to customers in 5 countries spanning various continents. Customers from 3 select their preferred delivery methods and 5 payment channels.

Furthermore, Relish Retail manages a customer loyalty program with categories like Regular, New, and Premium, enabling the rewarding of customers during seasonal sales like Easter, Mid-year, and End of year promotions

The task is to identify trends, patterns, and insights. By conducting an in-depth analysis that will provide better understanding of the customers preference and then optimize the company's marketing strategies, and improve overall business performance.

Problem Statement

To increase sales and revenue by identifying the factors that influence customer shopping behaviour.

Objectives

The analysis will answer and address the following key questions and areas:

- Quantity Sold
- Total Revenue:
- Revenue by Age Categories
- Revenue by Product category
- Customer distribution by country.
- Gender distribution by age
- Customer distribution across segments
- Customer distribution by income
- Customer Payment and shipping preferences
- Top 7 Favourite
- Top 10 best-selling categories
- Top 20 most profitable products
- Monthly Sales trend

An in-depth analysis will be conducted on customer activities and an interactive dashboard will be created to track customers' shopping behaviours hence offering valuable insights into their needs.

Scope

This analysis covers the sales activities from March 2023 to February 2024, and focuses on customer purchasing behavior within the e-commerce platform.

It includes the analysis of customer demographics, address, customer feedback product preferences, purchase history, and engagement metrics.

Methodology and Tools

Data for the analysis were collected from the e-commerce platform's transactional database and provided by Quantum Analytics.

Various data analysis techniques were employed to interpret and extract meaningful insights from the collected data. Microsoft PowerBI and Power Query were tools used to analyze and create the interactive dashboard.

Data Exploration

I familiarized myself with the provided dataset. This initial step includes examining and understanding the raw data to uncover initial findings, identify patterns, detect anomalies, within the data.

Data Cleaning and Transformation

Data cleaning was done using Power Query in POWERBI, where I converted the Transaction ID, Customer ID, Phone, and Rating columns to text data type.

```
= Table.TransformColumnTypes(#"Changed Type",{{"Customer_ID", type text}, {"Transaction_ID", type text}, {"Phone", type text}, {"Ratings", type text}})
```

I verified that there are no null or missing values and changed revenue and cost column to \$ currency and reduced the decimal

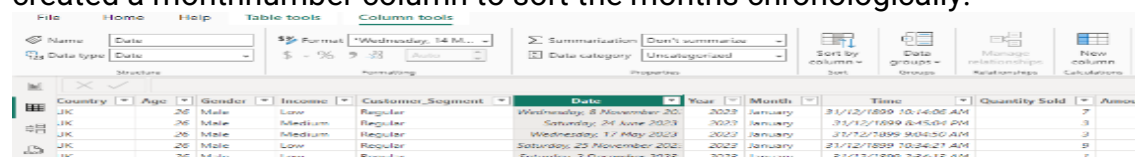
Age Column

To gain a clear understanding of the customer dynamics, an Age column " measure was developed.

```
Age_column = IF('Relish Retail'[Age] <=27,"Gen-Z",IF('Relish Retail'[Age]<=45,"Millennials","Boomers"))
```

Month / Monthname Column

There were errors in the month column so i created a new month column and also created a monthnumber column to sort the months chronologically.



Country	Age	Gender	Income	Customer_Segment	Date	Year	Month	Time	Quantity Sold	Amount
UK	26	Male	Low	Regular	Wednesday, 8 November 2023	2023	January	31/12/1899 10:14:06 AM	7	
UK	26	Male	Medium	Regular	Saturday, 24 June 2023	2023	January	31/12/1899 6:45:04 PM	3	
UK	26	Male	Medium	Regular	Wednesday, 11 May 2023	2023	January	31/12/1899 9:04:30 AM	3	
UK	26	Male	Low	Regular	Saturday, 25 November 2023	2023	January	31/12/1899 10:24:21 AM	9	
UK	26	Male	Low	Regular	Saturday, 2 December 2023	2023	January	31/12/1899 2:34:15 AM	7	

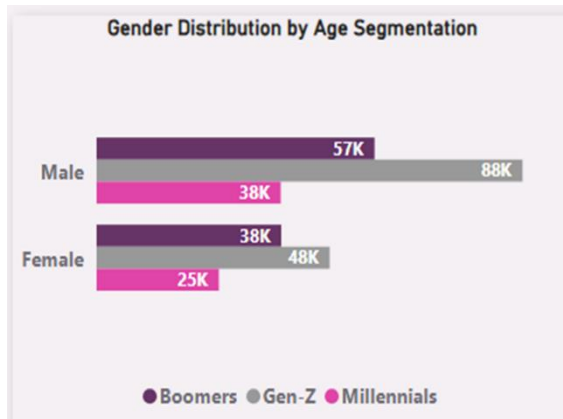
```
Month1 = FORMAT('Relish Retail'[Date],"MMMM")
```

```
MonthNumber = FORMAT('Relish Retail'[Date],"YYYYMM")
```

Insights & Recommendation

The following are the insights found upon analyzing the database

Customer distribution by Age segments and Gender



1. The majority of customers (46%) fall within the Gen-Z demography, with the highest purchasing power.

2. In all three demographics, males outperformed, making up 56% of the total customer base.

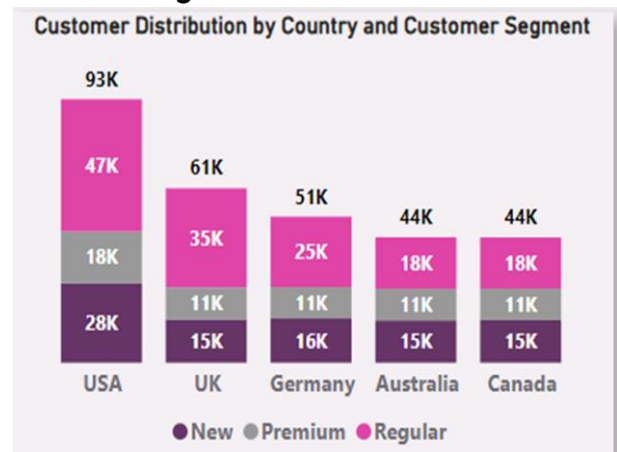
This suggests that **Millennials and females** are the least active demographics, exhibit lower levels of engagement indicating a need to enhance their purchasing influence.

Recommendation

- Targeted marketing strategies can engage Millennials by offering exclusive deals and using social media
- Understanding female customers' needs is crucial, including curating products and inclusive advertising.
- Incorporating user feedback and adapting to market trends can attract and retain these demographics, balancing the customer base and driving growth

Customer Distribution across countries and customer segments

3. Customers from the United States constitute 32% of the distribution, with the United Kingdom closely trailing at 21%, followed by Germany at 17%, and both Australia and Canada at 15%.
4. Amongst the five countries, Regular customer segmentation has the highest percentage at 52%, followed by New customers at 30%, and Premium customers at 28%.

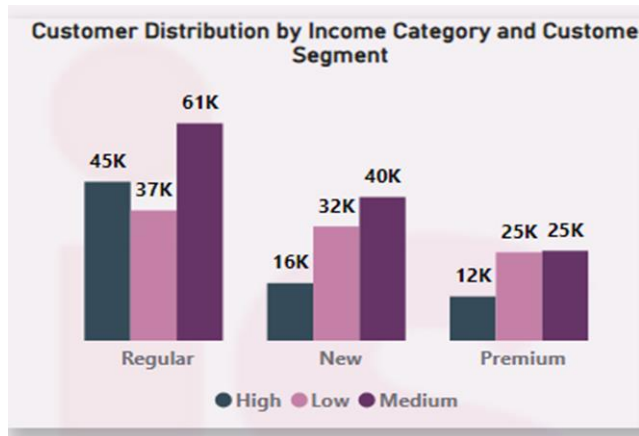


This data suggests that we should prioritize our **focus on the Premium customers in the three least performing countries: Australia, Canada, and Germany.**

Recommendation

- Focusing on Premium customers in underdeveloped markets like Australia, Canada, and Germany can drive growth and loyalty.
- Personalized marketing, exclusive offers, and data analytics are key strategies. Tailoring products to meet Premium customer needs can create a competitive edge.

Customer distribution by income



5. The analysis reveals that customers with medium income accounted for 39% of the revenue, while low-income earners contributed 33% and high-income earners made up 28%.

This distribution suggests that Relish should not solely focus on high-

income customers, as a significant portion of their revenue is derived from **medium and low-income earners**.

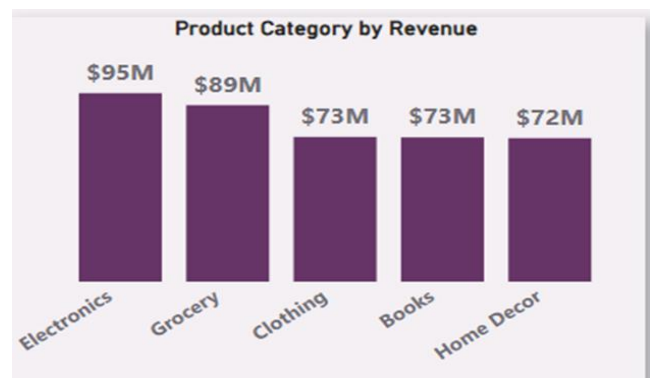
Recommendation

- By understanding the needs and preferences of these diverse income segments, Relish can tailor their products and marketing strategies to better serve each demographic, ultimately enhancing overall customer satisfaction and loyalty.
- Additionally, offering tiered pricing or value-added services could attract a broader audience, ensuring a more balanced revenue stream and fostering long-term growth.

Product Category by Revenue Generation

6. The Electronics category yielded the highest revenue, accounting for 23.6%, with Grocery following closely at 21.1%, and Books, Home Décor, and Clothing each contributing 18.1%.

To boost revenue, a strategic focus on driving sales within **the Books, Home Décor, and Clothing categories** is recommended.

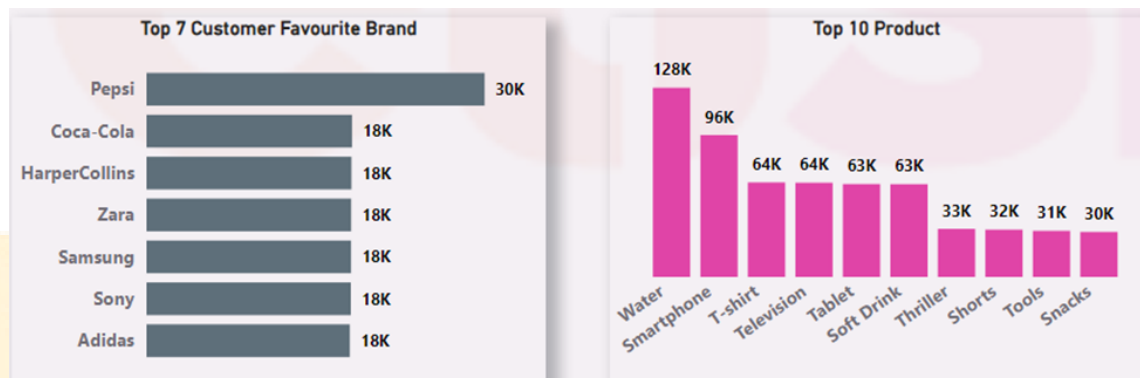


Upon closer examination, customers within these categories reported a significant 30% negative feedback rate, highlighting areas that require enhancement.

Recommendation

- Implementing detailed feedback mechanisms to understand the specific issues faced by customers is crucial.
- Identifying these pain points will allow the company to develop targeted solutions.
- Furthermore, offering promotions, bundling deals, and loyalty rewards in the Books, Home Décor, and Clothing segments could incentivize higher purchase rates.

Favourite brands/ Profitable products

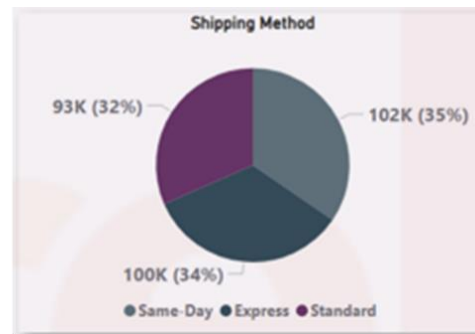
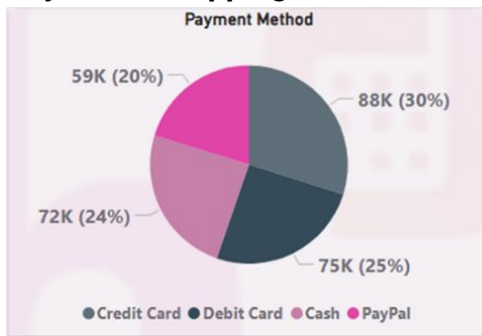


7. Smartphones, led by Samsung and Sony, dominate with a 42% preference and \$25M in profitability. Televisions and Tablets each contributed \$16M in revenue
8. Thriller books from HarperCollins are highly favored in the Books category, while Non-fiction, Fiction, and Literature genres prove most profitable.
9. Although Home Décor products are not top favorites, Kitchen, Lighting, and Tools each secured \$8M in profit.

Recommendations

- To enhance revenue, female clientele should be targeted through the promotion of Home Décor brands.
- Focus on elevating sales of Thriller books to align with the profitability of other book genres.
- Leverage social media campaigns and influencer partnerships to highlight the unique features and trends in Home Décor, particularly focusing on the Kitchen, Lighting, and Tools sub-categories.

Payment / Shipping Methods

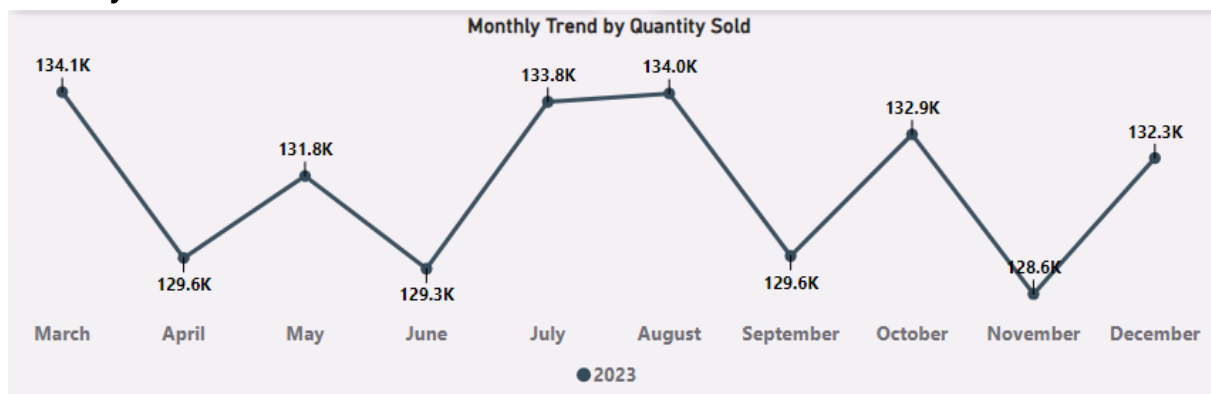


10. Same-Day delivery option attracted the highest number of customers, totalling 101,541 (35%), closely followed by the Express service with 99,600 customers (34%), and the Standard delivery with 92,770 customers (32%).
11. The majority of customers favoured Credit Card payments, constituting 30% of the total, while payments made through Debit Card accounted for 26%, Cash payments for 24%, and PayPal transactions for 20%.
12. A relatively even distribution was observed across all shipping and payment methods.

Recommendation

- To optimize revenue generation, it is recommended to introduce incentives for customers opting for standard shipping and utilizing PayPal for payments.
- Implement a loyalty program, personalized marketing, and gather feedback for customer satisfaction.

Monthly Sales Trend 2023



13. In 2023, the months of March and August stood out with the highest sales volumes, reaching 134,000 units each.
14. In contrast, April, June, September, and November witnessed a significant decline compared to the previous months.
15. The sales data highlights a variance of roughly 300,000 units between the months with the highest and lowest sales figures, indicating room for growth in the less productive months.

16. Analysis also indicates that promotional events such as Easter in March, mid-year promotions in July, and end-of-the-year sales in December had a positive impact on boosting sales during these periods.

Recommendation

- To capitalize on these insights, Relish should strategically plan additional promotional events or marketing campaigns during the months with lower sales.
- For instance, introducing a back-to-school campaign in August or a spring clearance sale in April could stimulate consumer interest and drive up sales figures.
- Moreover, leveraging data analytics to better understand customer behavior and preferences during these months can enable more targeted and effective marketing efforts.

Conclusion

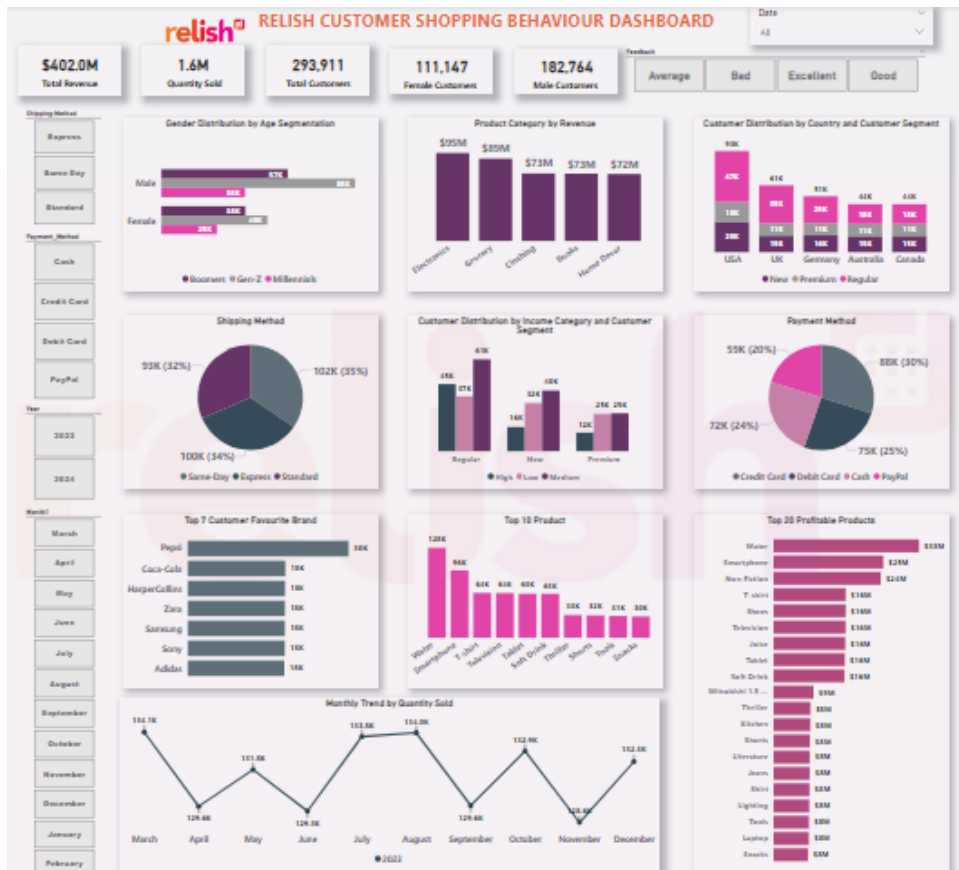
Based on the findings, it is clear that understanding customer demographics, preferences, and purchase behavior is vital for targeted marketing and personalized customer experiences.

By leveraging these insights, the e-commerce platform can tailor marketing campaigns, optimize product offerings, and enhance customer engagement to drive revenue growth and improve customer satisfaction.

Collaboration with influencers, high-quality content, and personalized promotions can enhance customer engagement and drive growth.

Additionally, offering seasonal promotions and discounts can attract more customers and encourage repeat purchases.

Investing in robust customer support, such as live chat and 24/7 helplines, can significantly improve customer trust and satisfaction.



relish