Store Analysis

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PowerBI:

https://app.powerbi.com/groups/me/reports/81ce97c9-5482-49ea-8d0d-b941e5d05e26/ReportSection25915b058e76f6be81c2?experience=power-bi

Retail Performance Analysis

Introduction:

In this analysis, we delve into the performance metrics of Aye, a retail company, using a dataset spanning various customer demographics, purchase behaviours, and preferences. The aim is to derive actionable insights to inform business decisions.

Key Metrics Overview:

- Sales Performance: Understanding revenue generation and trends over time.
- Customer Behaviour: Analysing purchasing habits, loyalty, and engagement.

Assumption:

- It is assumed that the store is an online store and does not have a physical place.
- It is assumed that most of the store's products contains snacks.

Data Preparation:

There are two datasets to be analysed, both of which has the same exact variables, before building the BI dashboard, both of the datasets are cleaned (null values removed), appended into a new dataset, and merged together with an addition that for both datasets, a new variable is added which is store, which is used to differentiate the two datasets when merged.

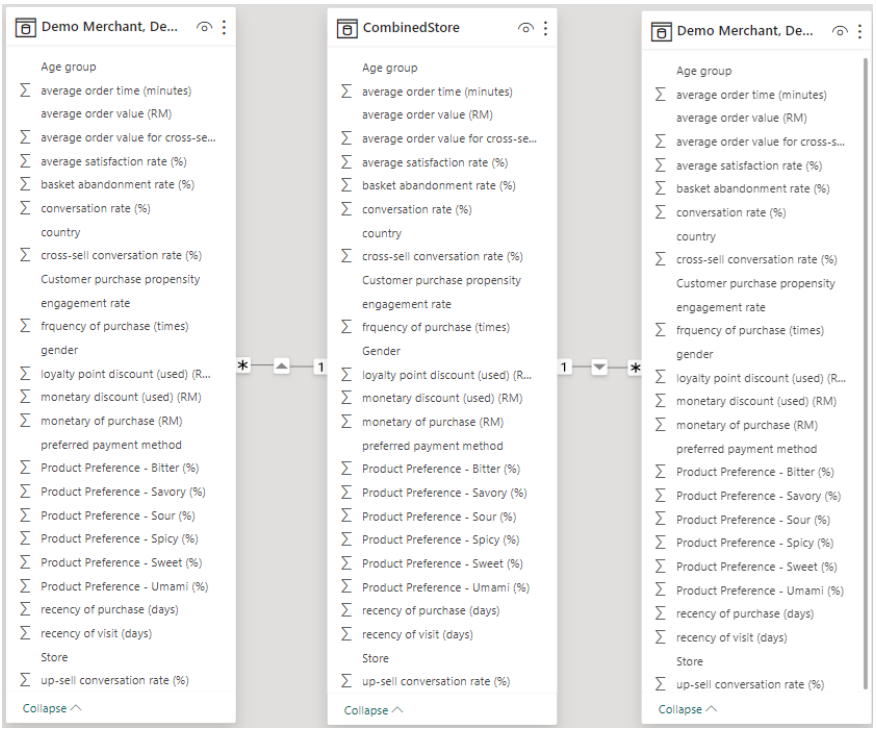

Figure 1: Combined Dataset

This new "Combined Dataset" will be the main source dataset in which the business dashboard will be built on.

Visualizations and Insights:

Overview:

The BI dashboard consists of two pages which the user can freely navigate by clicking on the button on the top of the dashboard, spaces are also left for future development (e.g. page for marketing efficiency, etc.). On both of the pages, user may also filter the dashboard according to which store (Store 1 or Store 2) and according to which Gender.

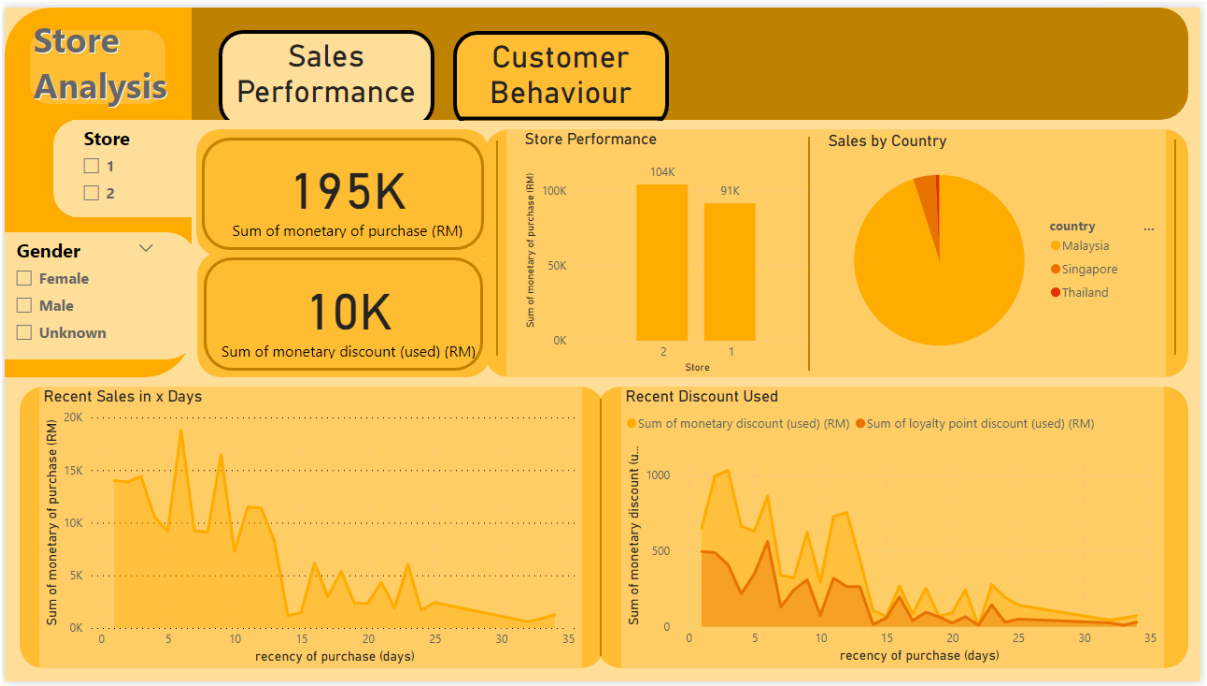

Figure 2: Page 1 BI Dashboard

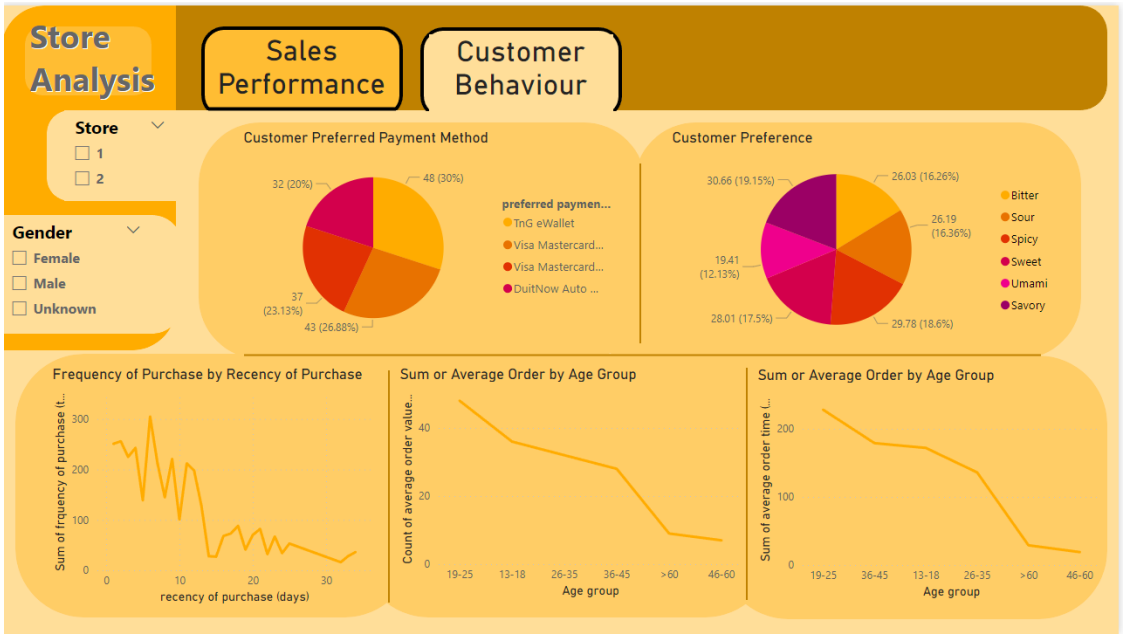

Figure 3: Page 2 BI Dashboard

Page 1 (Sales Performance):

In the first page, the sales performance are analysed:

Figure 4: SalesPerformance_1

The sum of monetary of purchase and Sum of monetary discount is available here for additional information from the dashboard filters (when user clicks on Male gender, the sum of purchase will only show purchases made by Male).

It also shows that the clean revenue (Revenue – Discount) is 195K – 10K = 185K.

Figure 5: Sales Performance_2

The bar chart visualization of the revenue resulting from Store 1 and Store 2, in this visualization, Store 2 beat Store 1 in terms of revenue by 13K RM even though it is later known that Store 2 operates for less days than Store 1.

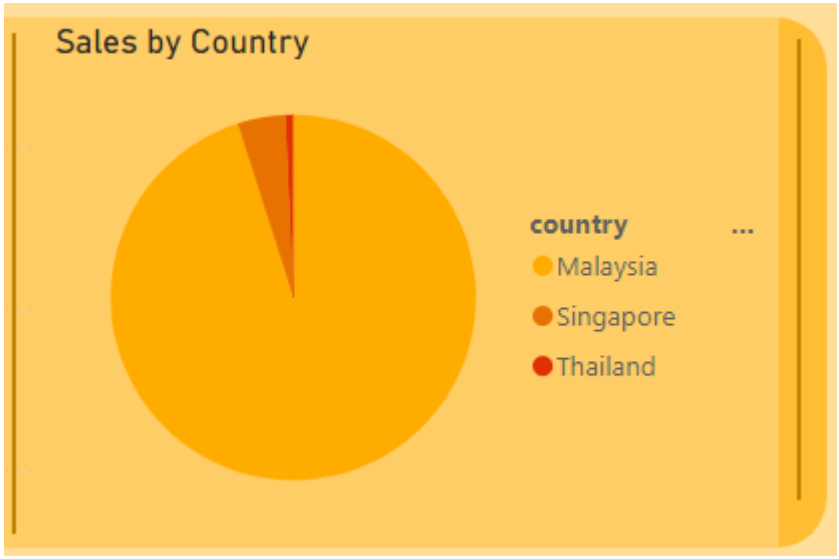

Figure 6: Sales Performance_3

The pie chart above suggests that each store brings revenue the most from Malaysia.

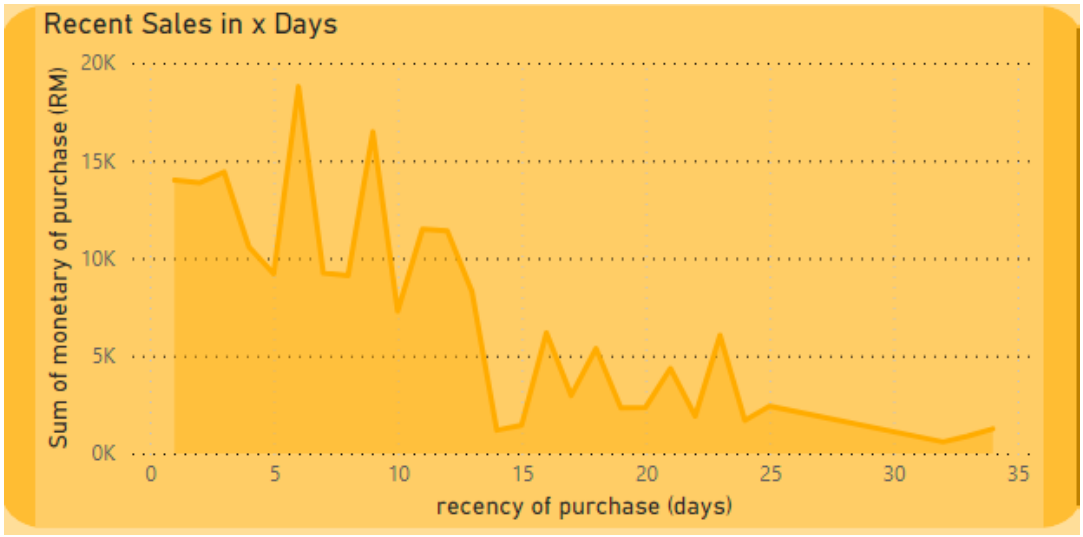

Figure 7: Sales Performance_4

The area chart suggest that combination of the stores did exceptionally well starting from 14 days ago until now.

But if Store 1 is filtered out:

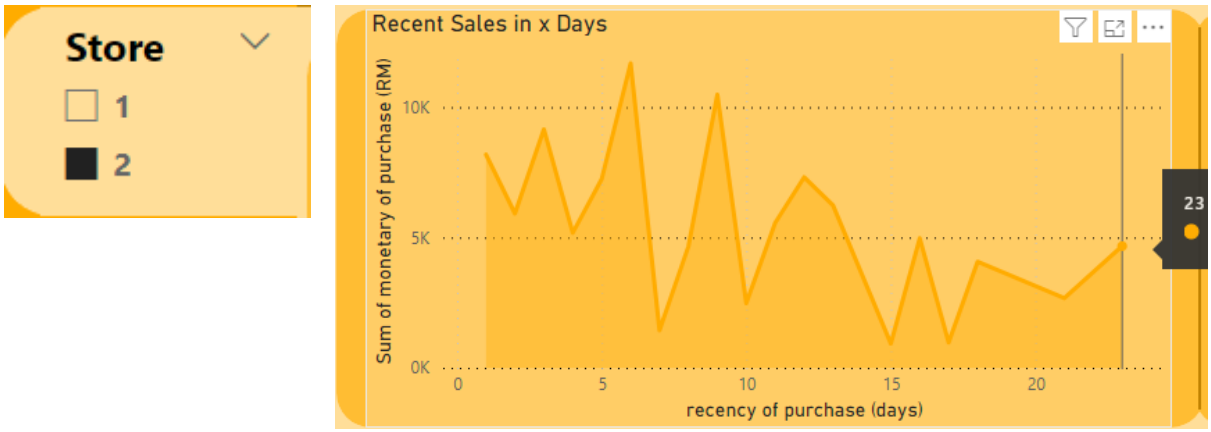

Figure 8: Sales Performance_5

It is seen that Store 2 brings more revenue in average than Store 1, which is why Store 2 has higher revenue than Store 1 seen in figure 5.

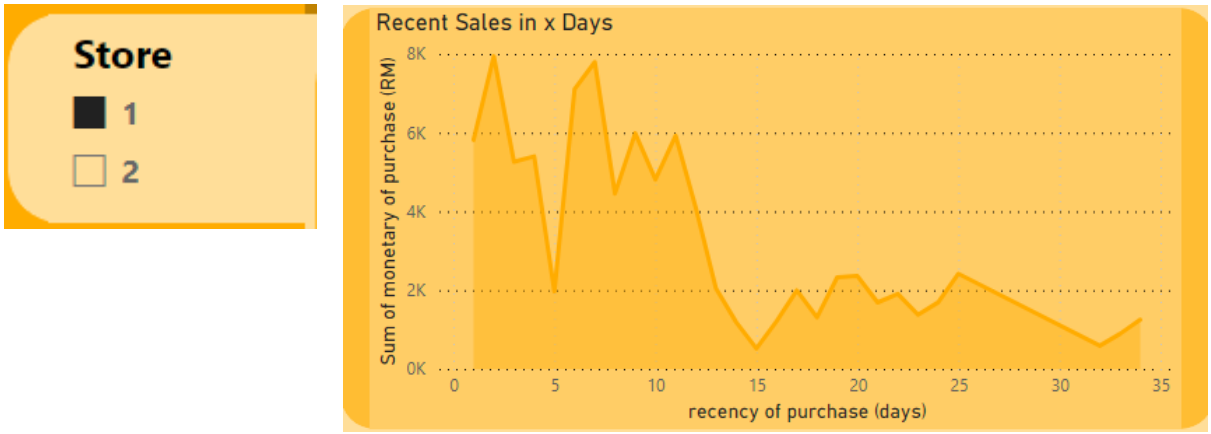

Figure 9: Sales Performance_6

If we filter out Store 2, it can be seen that Store 1's performance skyrocketed 14 days ago, with the reason is hypothesized in the next figure.

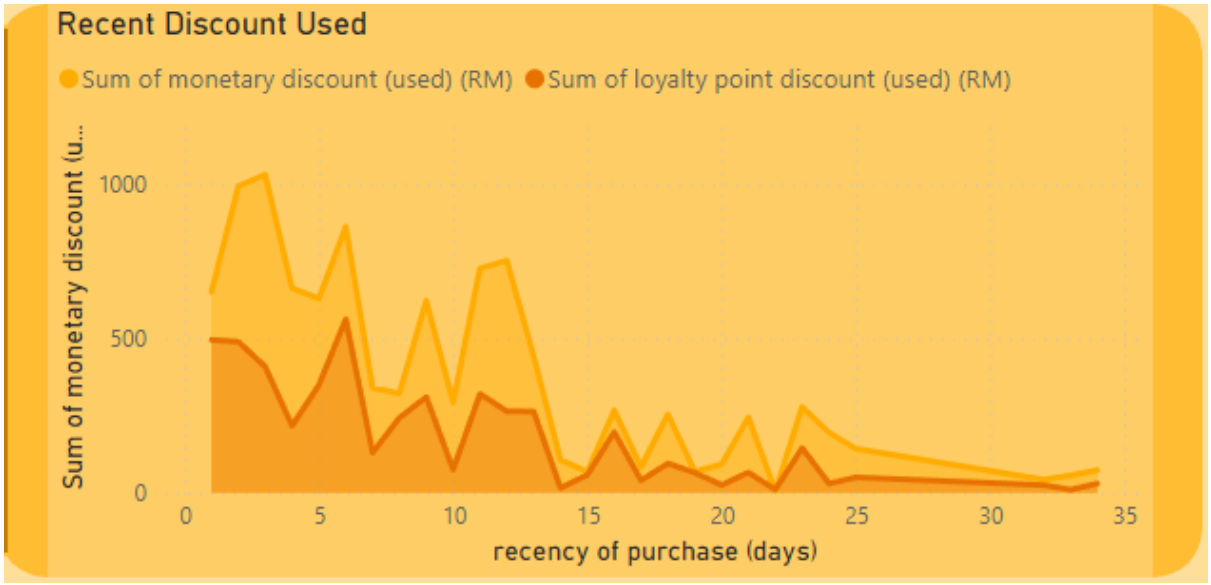

Figure 10: Sales Performance_7

The area chart above shows the sum of discounts used which matches the pattern on Store 1, it is hypothesized that more customers are spending if were provided more discounts especially monetary discounts.

Page 2 (Customer Behaviour):

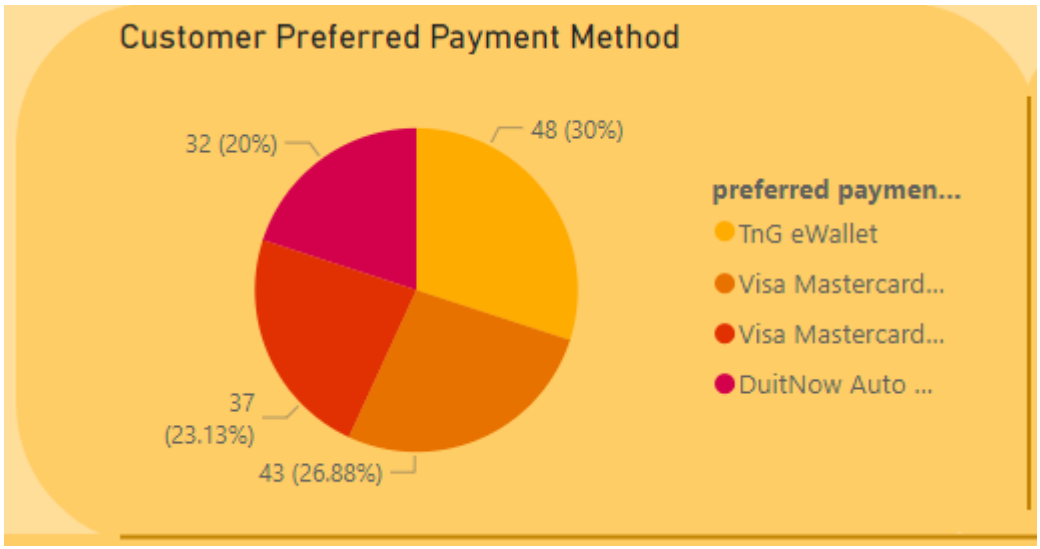

Figure 11: Customer Behaviour_1

The pie chart above shows Customer's preferred payment method, this can be used to market the audience by giving discounts/promotions if the customer is using certain payment methods, which encourages more customer to spend at the store.

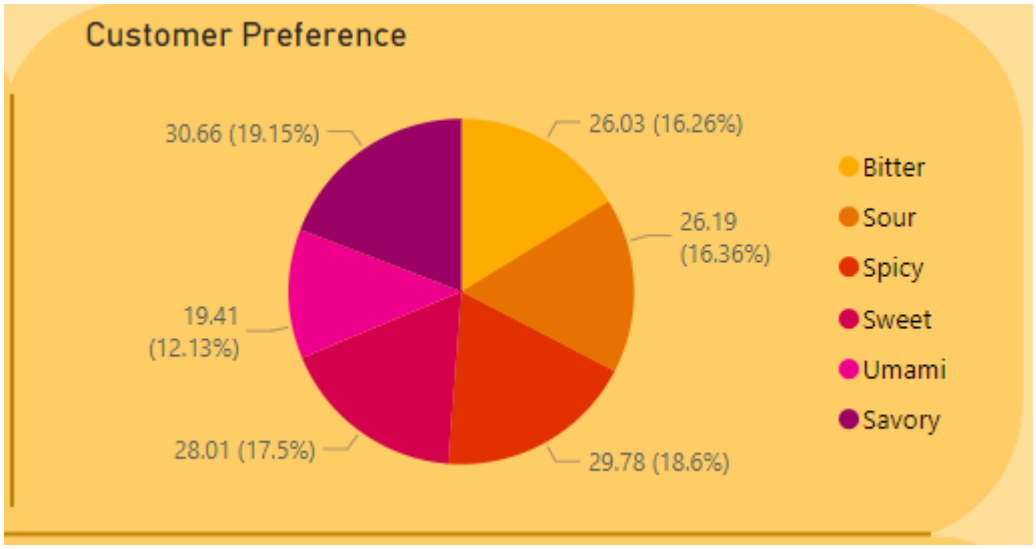

Figure 12: Customer Behaviour_2

The figure above shows that customers preference in the last 30 days (information from figure 9) is almost equal in, with the most preferred is Savory with 30.66% and the least preferred is Umami with 19.41%. This shows that we can increase the store's revenue if more Savory products are provided/given promotions.

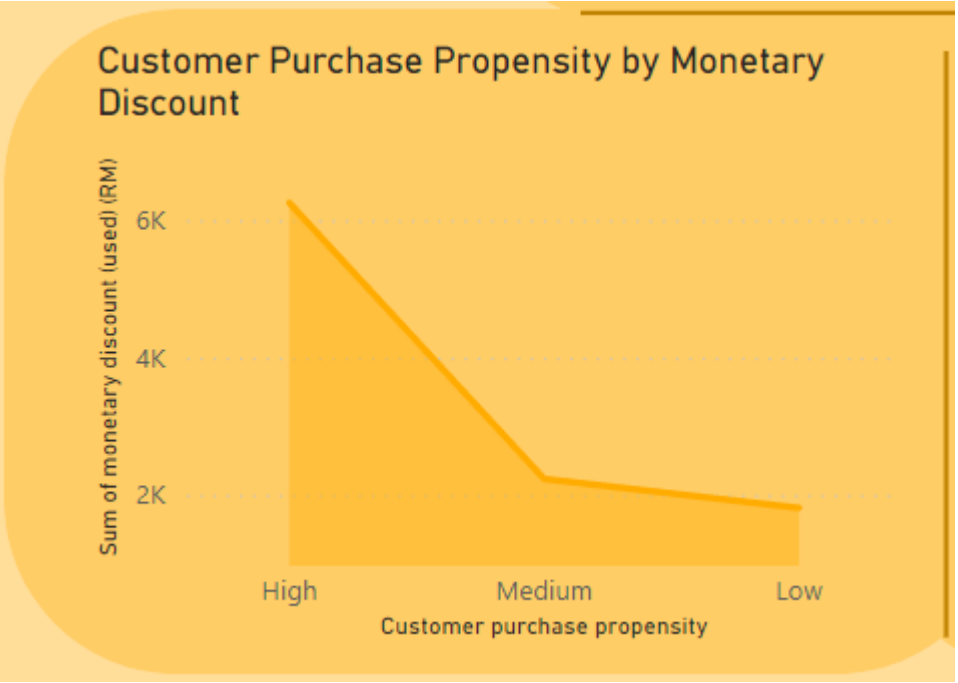

Figure 13: Customer Behaviour_3

From the figure above, it shows that customers are highly likely to buy something the higher the monetary discount.

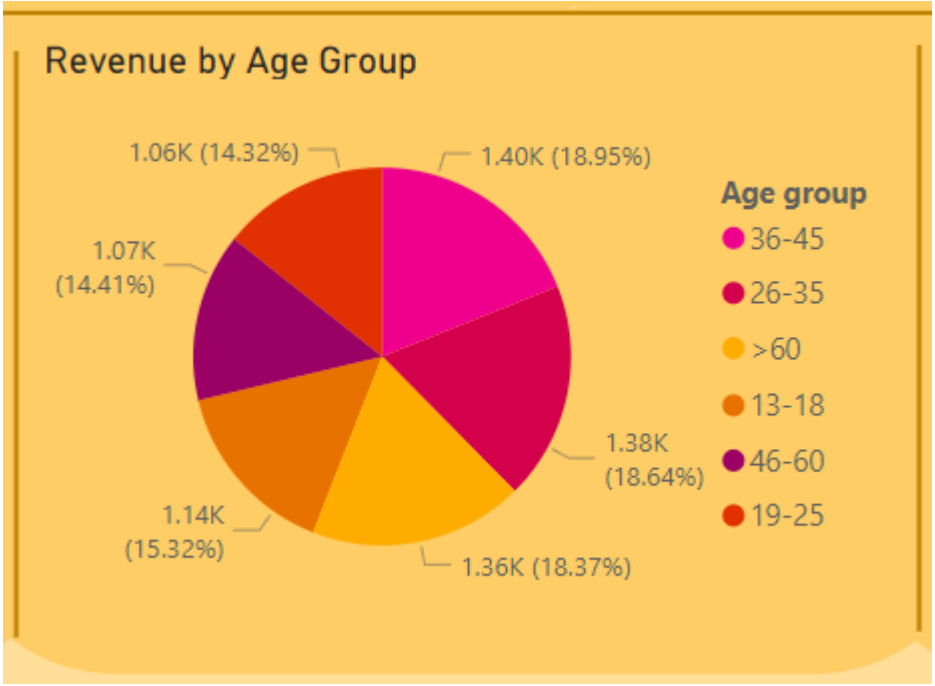

Figure 14: Customer Behaviour_4

The figure above shows the combined store revenue are from the age group of 26-35, 36-45, and >60, meaning that the next marketing campaign might be a good idea make the three age group the target audience, while also keeping a way to entice younger customers.

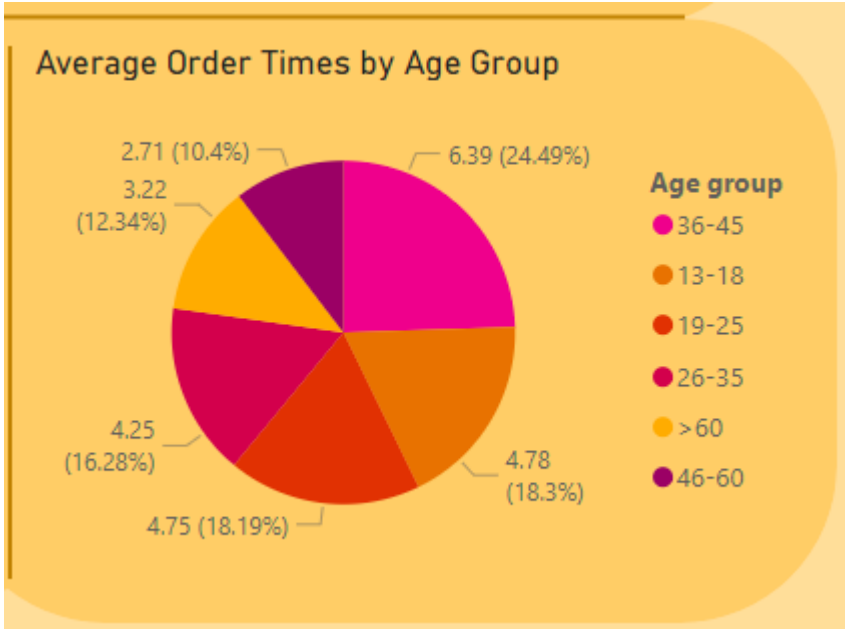

Figure 15: Customer Behaviour_5

The figure above shows average order times by age group, in this figure, almost a quarter of the customers aged 36-45 spends on average 6.39 minutes, and we know from the last figure that this age group is the top spender on the store, with that correlation, it is theorized that the longer the a person spends time on the store, the more likely they will spend on a product, we can test this tactic and use it as an advantage, one example is by rewarding a person by making them browse and look at 10 other products, or etc.

Conclusion:

The analysis of Aye's retail performance provides valuable insights into both sales' performance and customer behaviour, laying the groundwork for informed decision-making and strategic planning. Here are the key takeaways from the analysis:

Sales Performance:

- The combined dataset allowed for a comprehensive overview of revenue generation and trends over time.
- Store 2 outperformed Store 1 in terms of revenue, despite operating for fewer days.
- Both stores primarily generated revenue from customers in Malaysia.
- An increase in discounts correlated with a surge in revenue, suggesting a potential strategy for driving sales.

Customer Behaviour:

- Customer payment preferences varied, providing an opportunity for targeted marketing based on preferred payment methods.
- Savory products were the most preferred category, indicating potential for revenue growth through targeted promotions in this category.
- The analysis revealed a positive correlation between higher monetary discounts and increased purchasing likelihood.
- Targeting age groups such as 26-35, 36-45, and >60 for marketing campaigns could maximize revenue potential.
- Longer average browsing times correlated with higher spending, suggesting an opportunity to incentivize browsing as a strategy to boost sales.

In conclusion, by leveraging insights from sales performance and customer behaviour analysis, Aye can tailor its marketing strategies, product offerings, and discount schemes to maximize revenue and enhance customer engagement. Additionally, ongoing monitoring of these metrics will be crucial for adapting strategies in response to changing market dynamics and customer preferences.

In Addition, deeper analysis can be done by filtering each and every chart to both Store 1 and Store 2 and filter by Gender.