Unveiling Market Analysis: Analysing Spending Behaviour and Identifying Opportunities for Growth

DATA ANALYTICS

PROJECT REPORT

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1. INTRODUCTION

1.1 Overview

Market research is essential during the planning phases of any start-up. On a basic level, market research is the collection and analysis of data related to a business's target market. Market research can entail everything from information on competitors' products to the interpretation of demographic data related to potential customers.

The main purpose of market research is to gain an understanding of customer needs and wants in an effort to reveal potential business opportunities. When you have a clear picture of what your target market is and what it wants, you can more effectively design your marketing mix to engage that demographic. Here we are analysing the dataset and making useful visualisation to interpret meaningful outcomes helpful for business and better understanding for the user.

1.2 Purpose

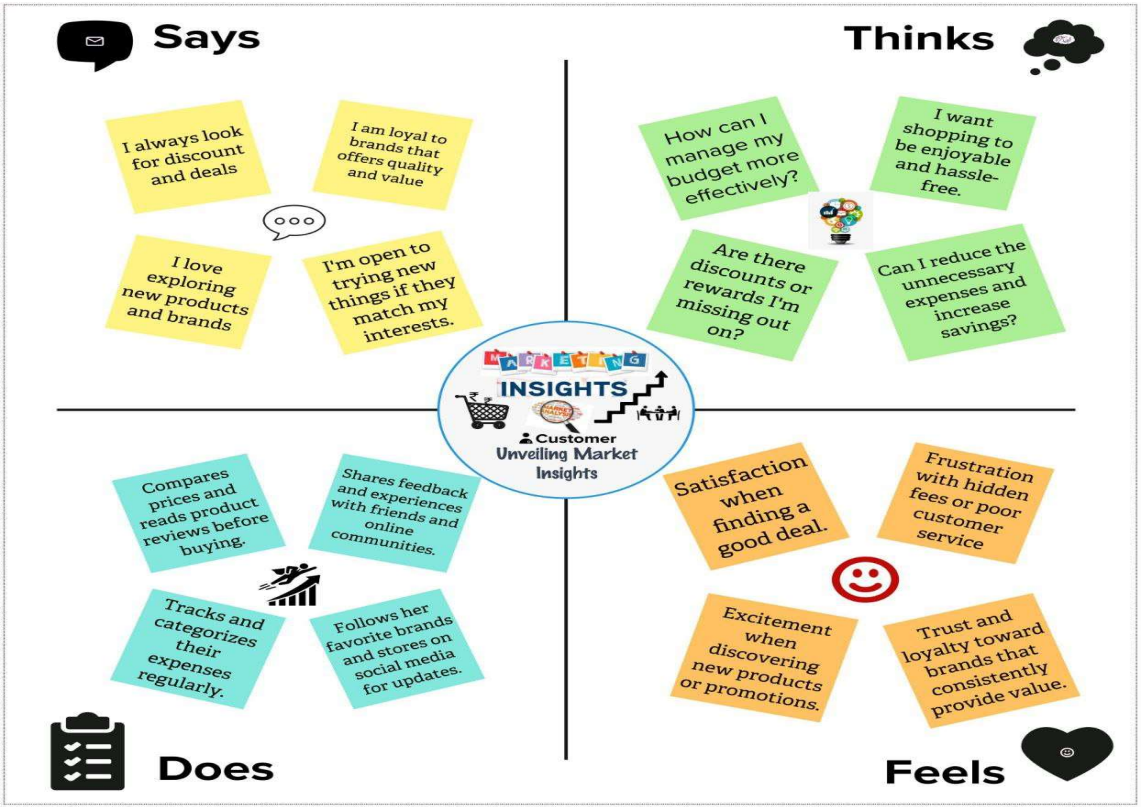
- With our visualisation we are able to visualize vast amounts of data at a glance and in a better way. It helps to understand the data better to measure its impact on the business and communicates the insight visually to internal and external audiences.

- Our visualisation can also help businesses identify which factors affect customer behaviour; pinpoint areas that need to be improved or need more attention; make data more memorable for stakeholders understand when and where to place specific products; and predict sales volumes

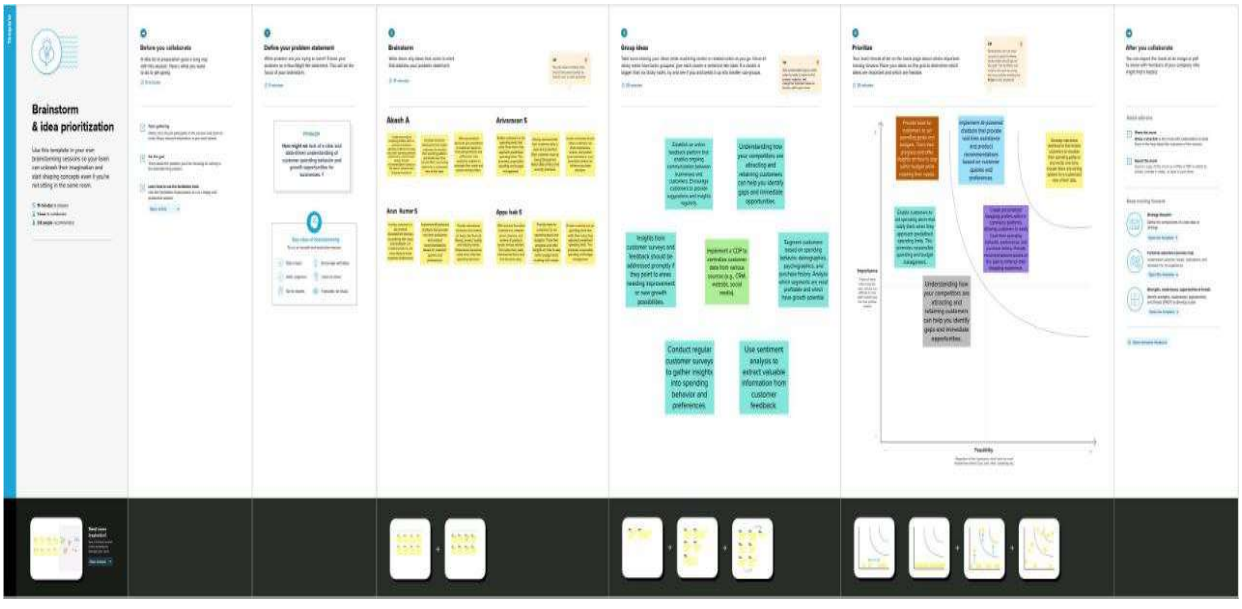
- It helps to explore, represent and monitor any information by using visual elements like charts, graphs and maps and provide an accessible way to see and understand trends, outliers and patterns in data.

2.PROBLEM DEFINITION & DESIGN THINKING

2.1 Empathy Map



2.2 Ideation & Brainstorming Map



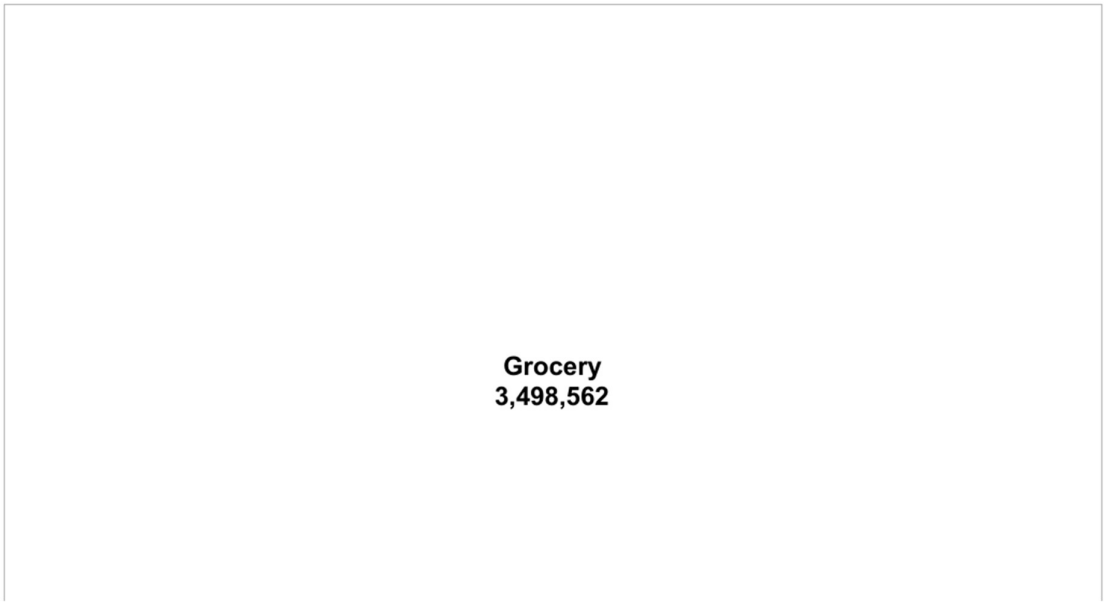
3. RESULTS

Dashboard

Story

Story 1

Kpi - Grocery	Kpi - Milk	Kpi - Fresh	Detergents Paper and Grocery for each Region. Color shows details about Detergents Paper and Grocery.	% of Total Milk and Region. Color shows details about Region. Size shows % of Total Milk.	Frozen and Delicassen for each Channel. Color shows details about Frozen and Delicassen.	Detergents Paper and Delicassen for each Region. Color shows details about Detergents Paper and Delicassen.



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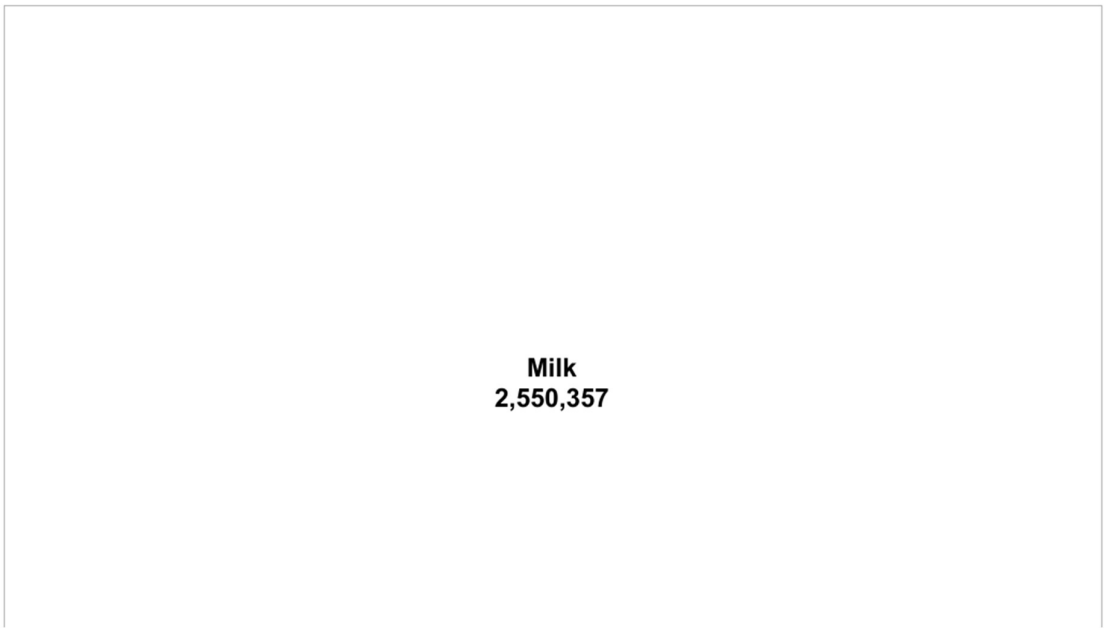

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Fresh
5,280,131

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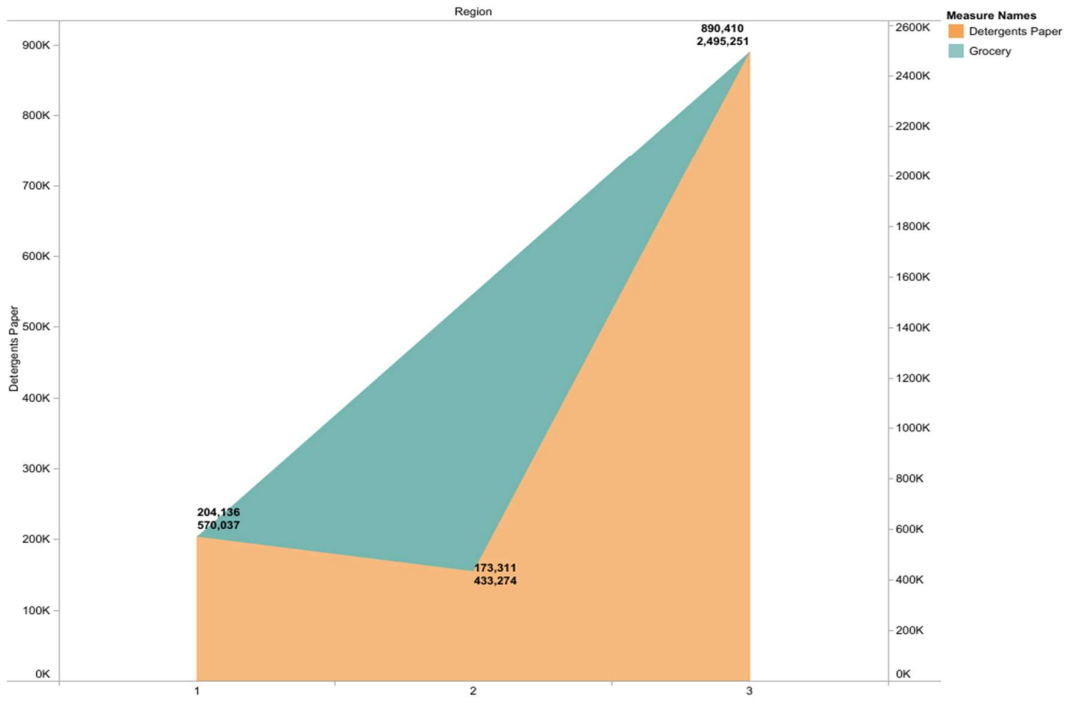

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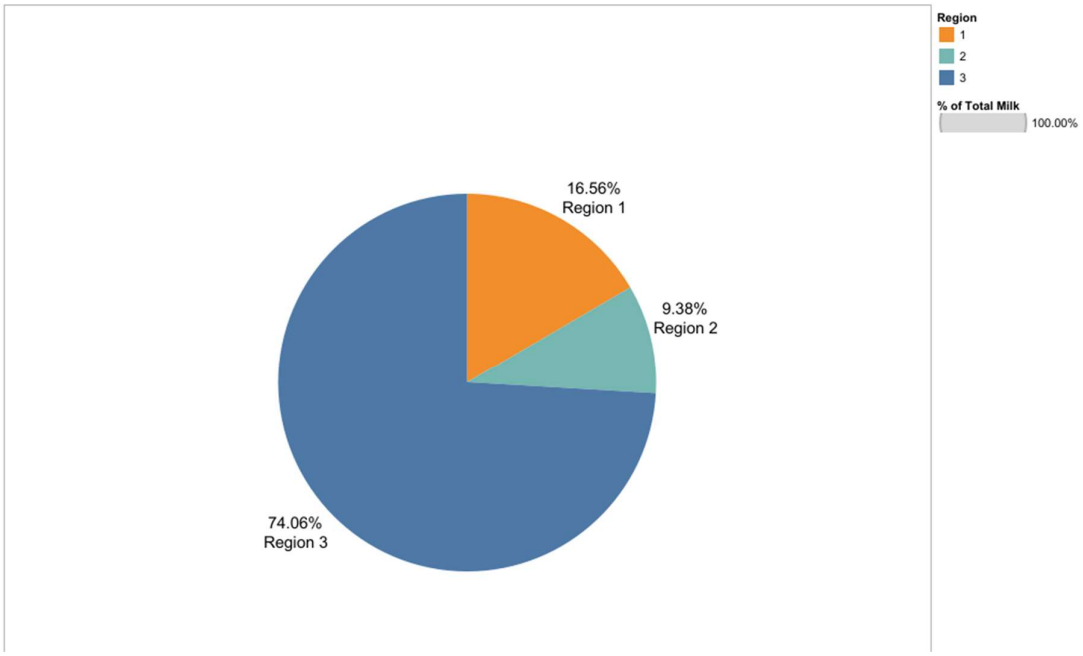

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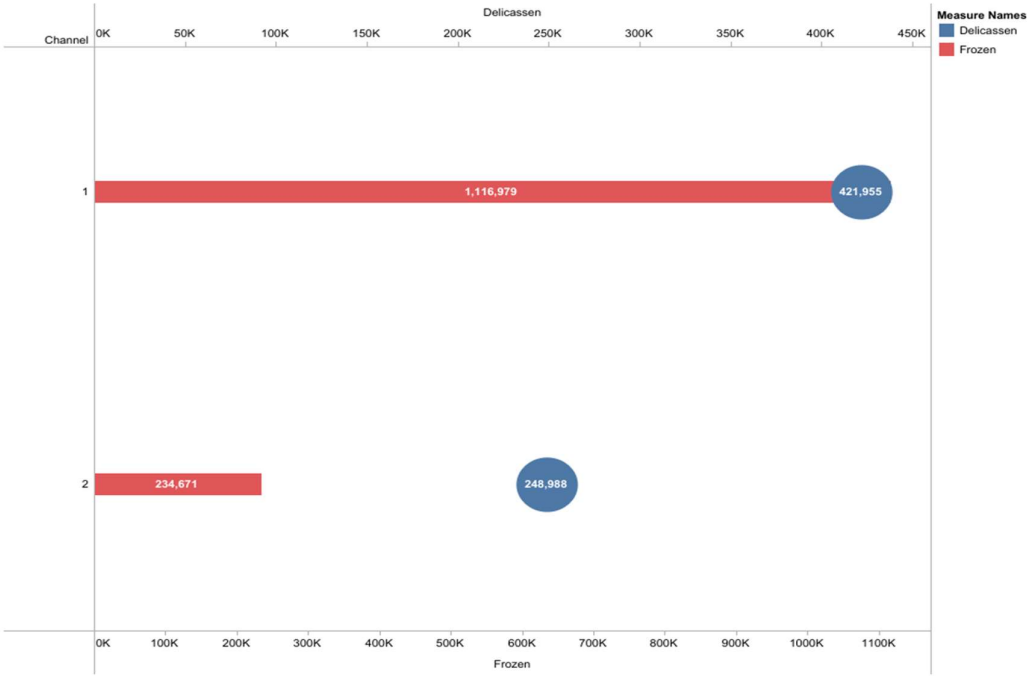

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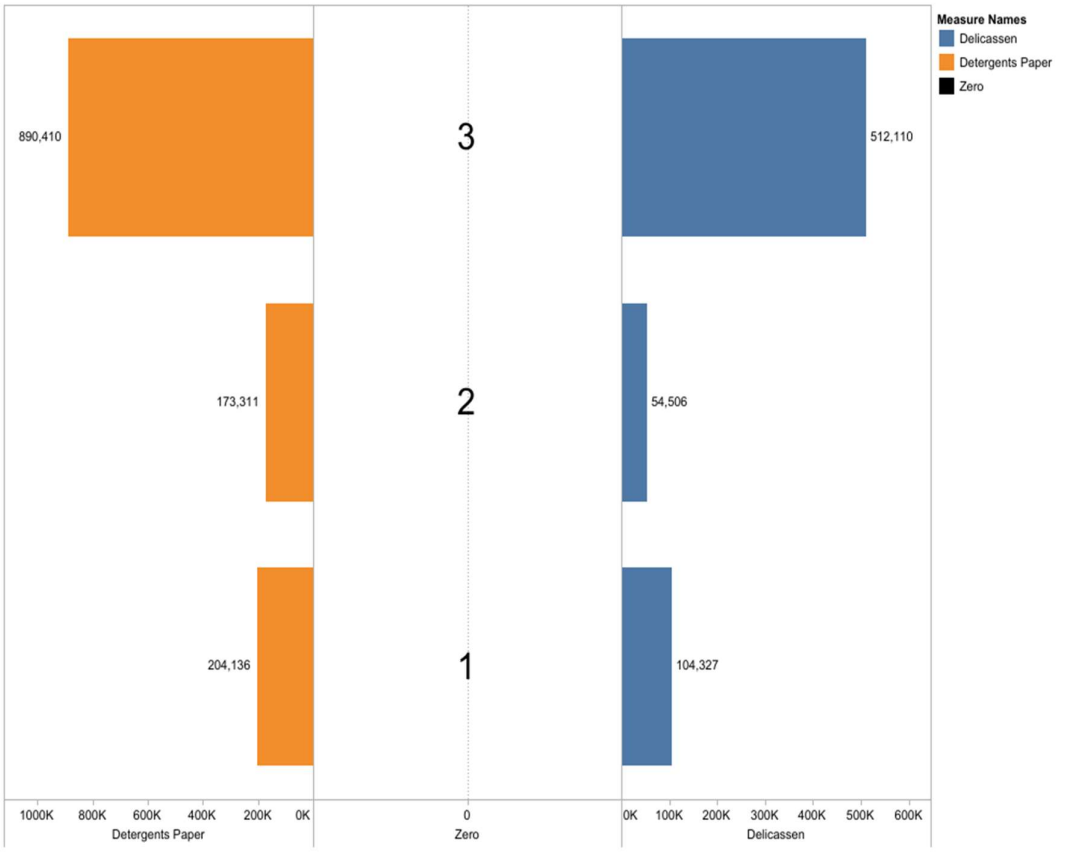

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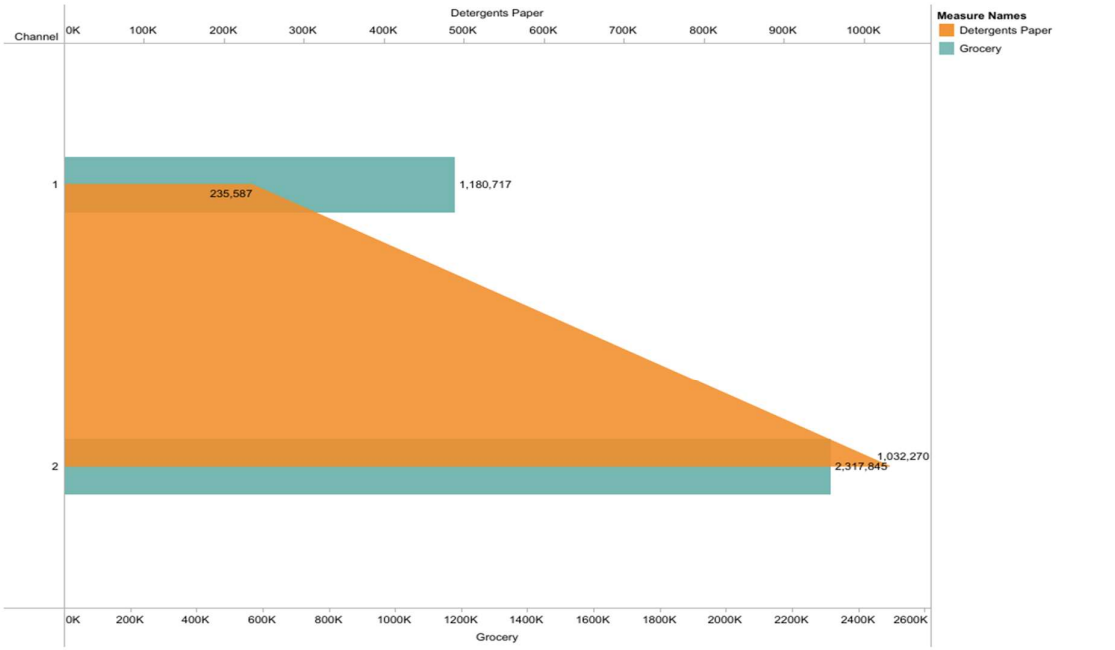

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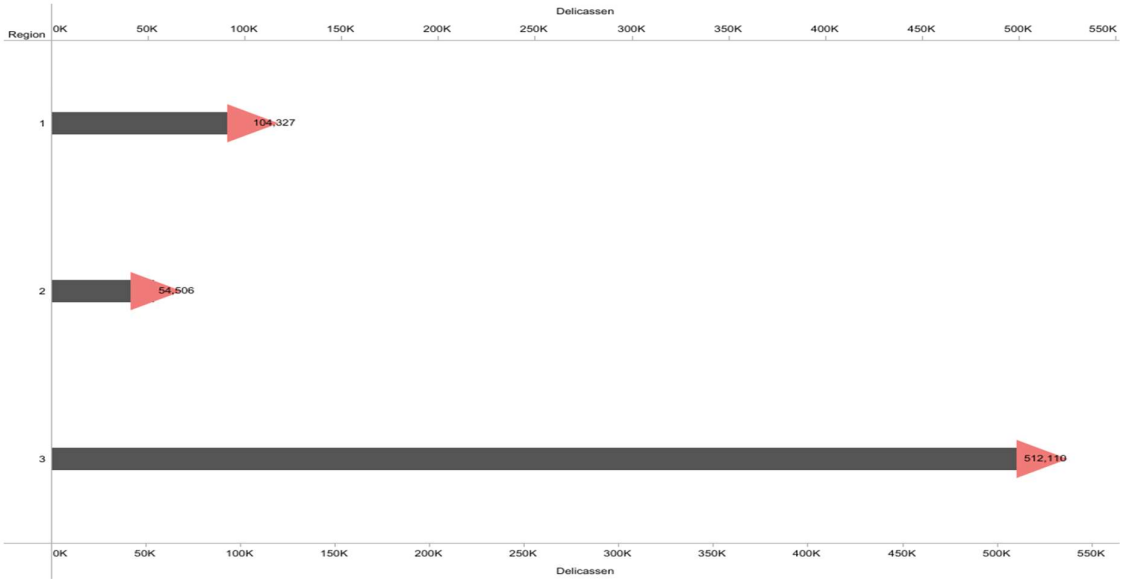

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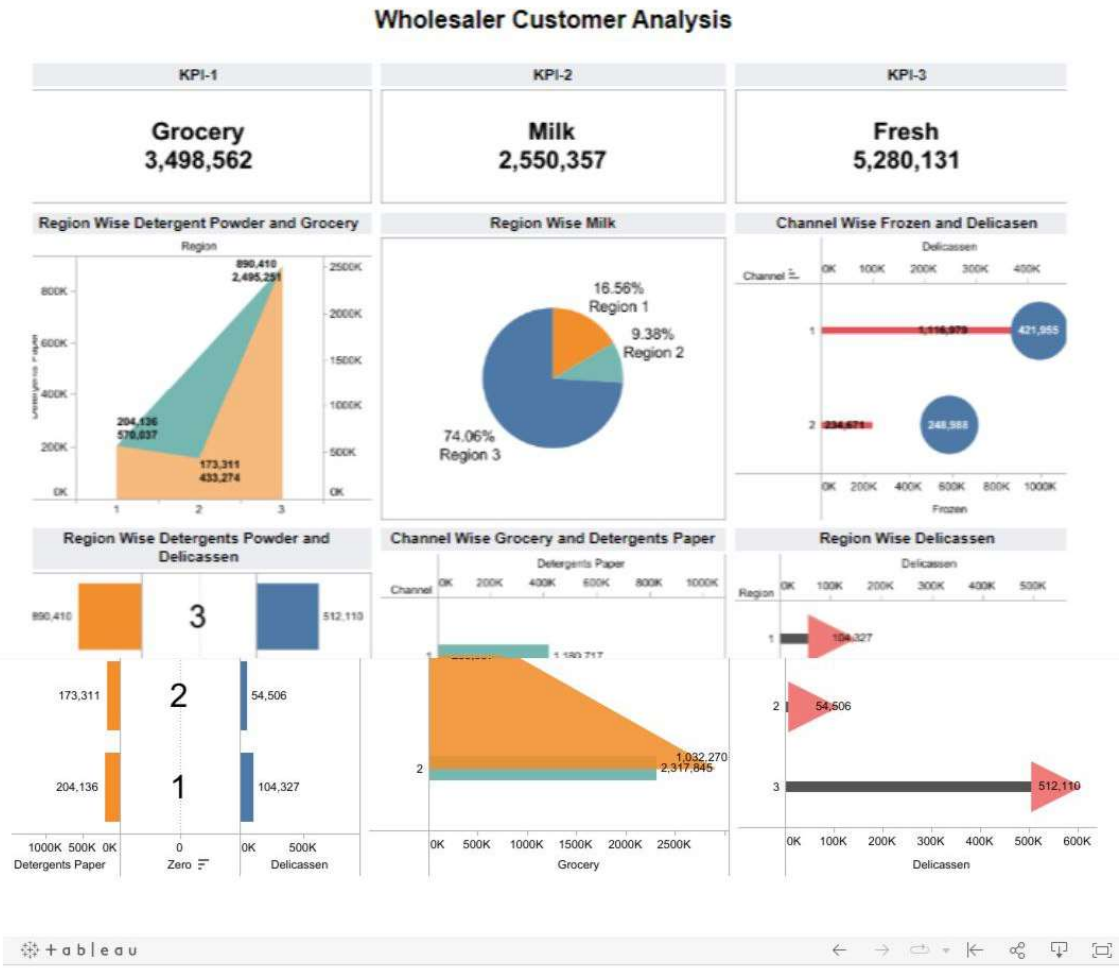

4. ADVANTAGES AND DISADVANTAGES

Advantages:

- With our visualisation we are able to visualise vast amounts of data at a glance and in a better way. It helps to understand the data better to measure its impact on the business and communicates the insight visually to internal and external audiences.
- Our visualisation can also help businesses identify which factors affect customer behaviour; pinpoint areas that need to be improved or need more attention; make data more memorable for stakeholders understand when and where to place specific products; and predict sales volumes

- It helps to explore, represent and monitor any information by using visual elements like charts, graphs and maps and provide an accessible way to see and understand trends, outliers and patterns in data.
- One can understand interpretation at glance
- Easy to understand

Disadvantages:

- incomplete/null data values give incorrect results
- Incorrect data warehouse gives unreliable visualisation, its future trends cannot be trusted
- Large dataset is difficult to export/import
- Small data set have limitations with respect to analysis and visualisation
- It gives assessment not exactness – While the information is exact in foreseeing the circumstances, the perception
  of similar just gives the assessment.

5. APPLICATIONS

The results derived from the proposed visualisation dashboard can be applied in various business and economic decision-making processes of a company. These visuals can be studied to analyse trends and patterns related to market and customer mood. The organization can forecast their profit based on previous revenue and sales data findings .The visualisations can be applied to understand demand versus supply economics to address customer needs effectively. The data can be useful to investors and other shareholders to identify product categories which have the highest share in the market. The visualisations can also be applied to understand market dynamics of various regions spread across multiple countries and states.

6. CONCLUSION

Based on the analysis of the customer spending behaviour dataset, the visualisations reveal crucial insights regarding the selling quantity of products, which are influenced by factors such as channel and region. Notably, the Fresh emerges as the highest-selling product in all regions, suggesting a strong demand. To capitalise on this trend, it is recommended to enhance sales and increase the quantity of these products accordingly.

Furthermore, the Butterfly chart for Detergent Powder and Delicassen it provide valuable information about future selling. The data indicates that both Detergent paper and Delicassen categories are projected to yield similar profits. However, a noteworthy finding is that the both categories are Region 1 and Region 2 is very less when compared with Region 3. This emphasises the need for proactive measures to mitigate the anticipated profit decrease in both region, while focusing on sustaining and optimising profits in Region 1 and Region 2.

By leveraging these findings and proactively responding to the changing market dynamics, businesses can strategically allocate resources, adapt their product offerings, and tailor their marketing strategies to maximize revenue and profitability.

7. FUTURE SCOPE

Advancements in latest computer technologies have opened a world full of possibilities for data analysis and visualisations. The dashboards can be embedded with artificial intelligence and machine learning logics to identify trends based on previous market fluctuations and provide real world market forecasts. The proposed solution can be bettered with the ability to synchronise real time data into visualisation dashboards as it is generated enabling businesses to make quick decisions. Newer data analysis techniques such as data sonification can also be incorporated to provide another dimension to presentation and understanding of data.