# PERIYAR UNIVERSITY

## 101-ARIGNAR ANNA GOVERNMENT ARTS COLLEGE, ATTUR

### DEPARTMENT OF MATHEMATICS

### III-BSc Mathematics (2023-2024)

INCHARGE: Mr. K. CHINNAIYA, M.Sc., M.Ed., MPhil,

| Team id: NM2023TMID22685 | |
|---|---|
| STUDENT NAME | STUDENT NM id |
| DHIVYABHARATHI G | DA64FE0E1FE085C8CAF4A3454AA94FFC |
| KAVIYA M | 94E5E93FD9E3E44A70B490FB5D253A76 |
| MONALISA C | 38EF43A0E131EF68B4445417B7D58817 |
| SANGEETHA V | 03FA78EDE8122B6B0764D47C3447F3F4 |

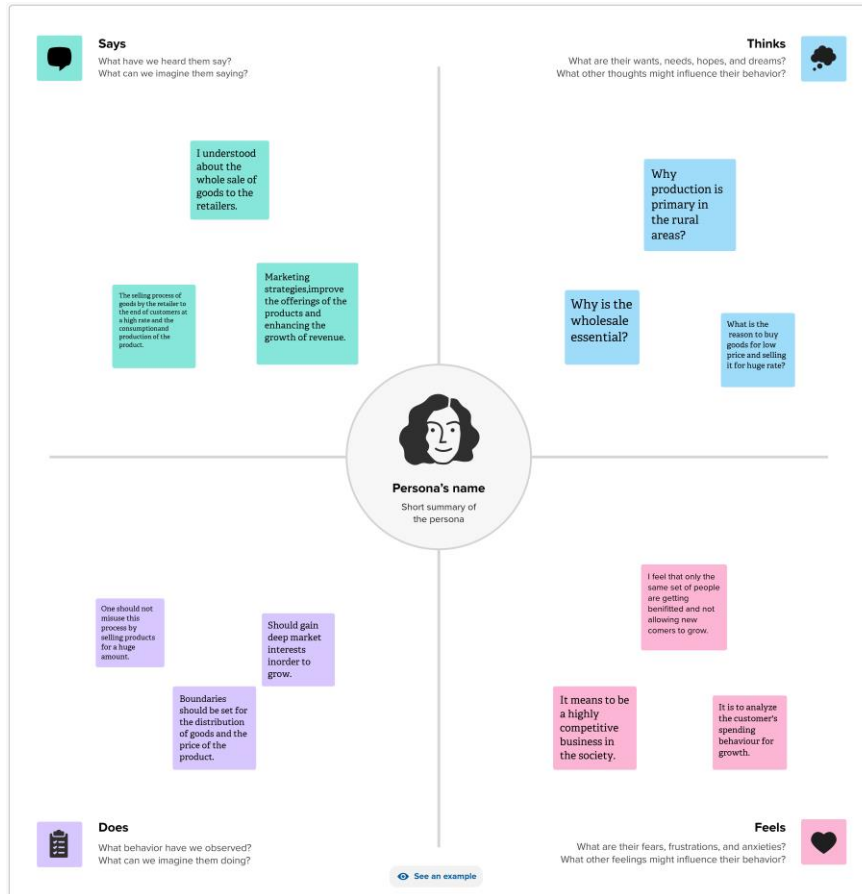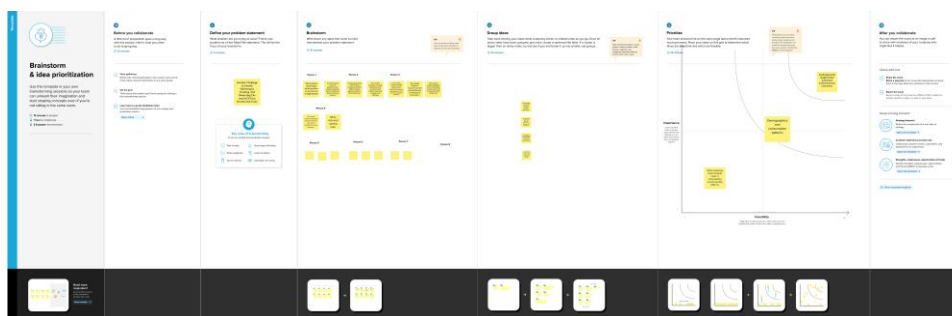| PROJECT TITLE | Unveiling Market Insights: Analysing Spending Behaviour and Identifying Opportunities for Growth |
|---|---|

# 1.INTRODUCTION:

- Wholesaling or distributing is the sale of goods to retailer to industrial, commercial, institutional or other professional businessman to other wholesalers (wholesale businesses) and related subordinated services.
- Wholesaling is buying goods in bulk quantity, usually directly from the manufacturer or source, at a discounted rate
- . The retailer then sells the goods to the end consumer at a higher price, making a profit. The consumption and production of marketed food are spatially separated.
- Production is primarily in rural areas while consumption is mainly in urban areas. In today's highly competitive business landscape, gaining deep market insights is essential for businesses to thrive and grow.
- . This project aims to analyze customer spending behavior and identify opportunities for growth by leveraging data analytics and data-driven decision-making.
- The primary objective of this project is to understand customer spending patterns, preferences, and trends across various dimensions.
- By conducting a comprehensive analysis, businesses can optimize their marketing strategies, improve product offerings, and enhance customer engagement to drive revenue.

# 2.PROBLEM DEFINITION AND DESIGNING THINKING:
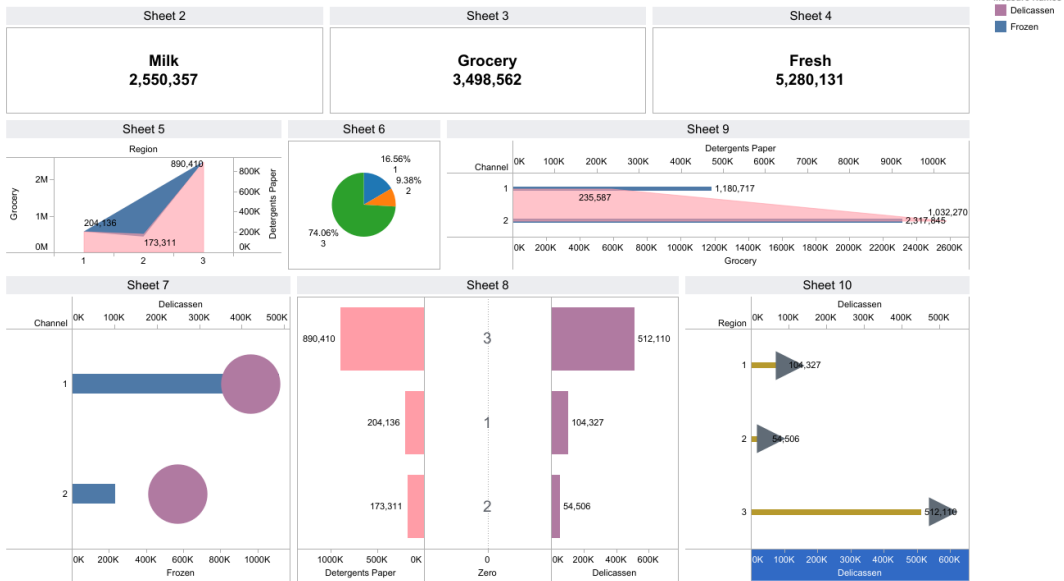
**2.1) Empathy Map**

**Says**
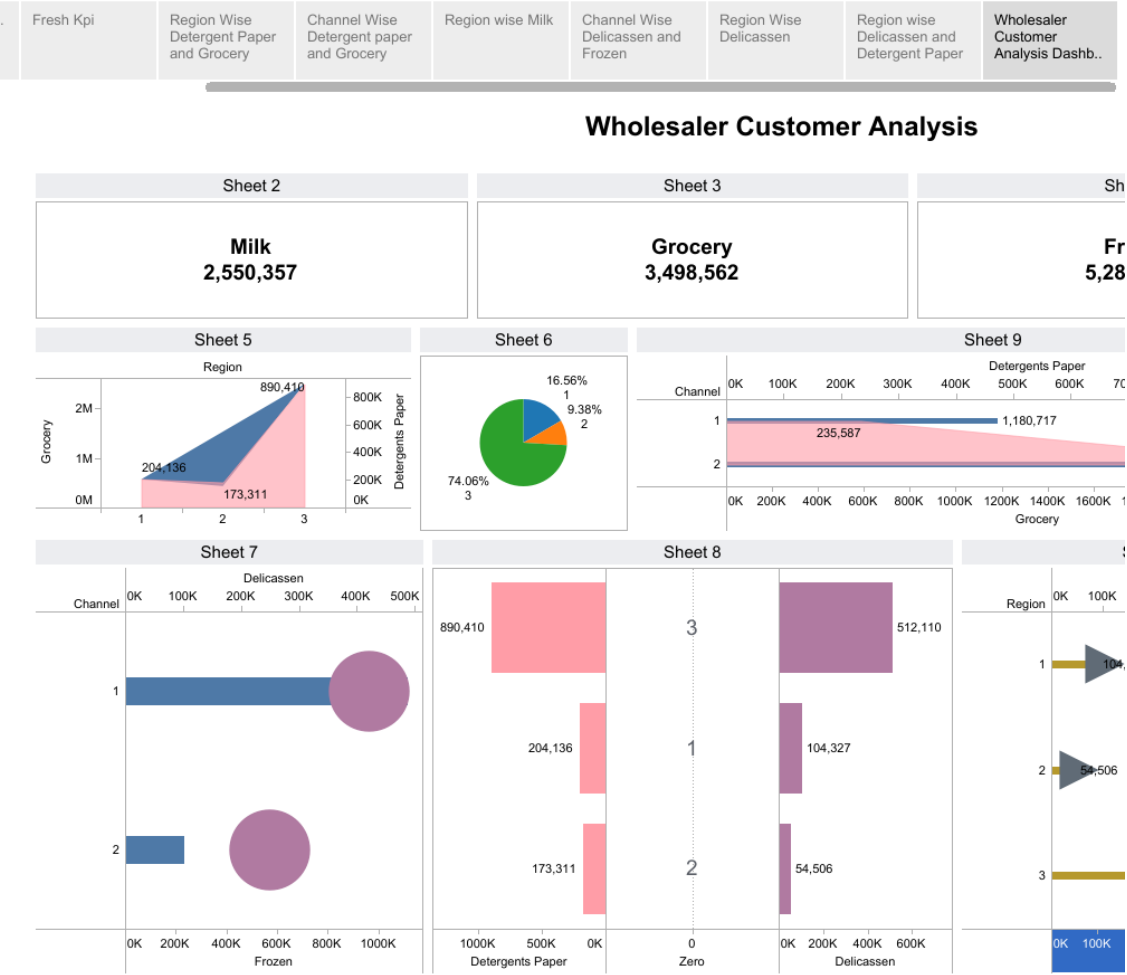What have we heard them say?
What can we imagine them saying?

**Thinks**
What are their wants, needs, hopes, and dreams?
What other thoughts might influence their behavior?

I understood about the whole sale of goods to the retailers.

The selling process of goods by the retailer to the end of customers at a high rate and the consumptionand production of the product.

Marketing strategies,improve the offerings of the products and enhancing the growth of revenue.

Why production is primary in the rural areas?

Why is the wholesale essential?

What is the reason to buy goods for low price and selling it for huge rate?

**Persona's name**
Short summary of the persona

One should not misuse this process by selling products for a huge amount.

Should gain deep market interests inorder to grow.

Boundaries should be set for the distribution of goods and the price of the product.

I feel that only the same set of people are getting benifitted and not allowing new comers to grow.

It means to be a highly competitive business in the society.

It is to analyze the customer's spending behaviour for growth.

**Does**
What behavior have we observed?
What can we imagine them doing?

**Feels**
What are their fears, frustrations, and anxieties?
What other feelings might influence their behavior?

👁 See an example

## 2.2) Brainstorming



# 3.Result

## 3.1) Dashboard

**Wholesaler Customer Analysis**

| Sheet 2 | Sheet 3 | Sheet 4 |
|---|---|---|
| **Milk** **2,550,357** | **Grocery** **3,498,562** | **Fresh** **5,280,131** |

Measure Names
- Delicassen
- Frozen

**Sheet 5**

Region

Grocery: 2M, 1M, 0M
Detergents Paper: 800K, 600K, 400K, 200K, 0K

890,410
204,136
173,311

1  2  3

**Sheet 6**

16.56%
1
9.38%
2
74.06%
3

**Sheet 9**

Detergents Paper
0K 100K 200K 300K 400K 500K 600K 700K 800K 900K 1000K

Channel
1    235,587    1,180,717
2    1,032,270
     2,317,645

Grocery
0K 200K 400K 600K 800K 1000K 1200K 1400K 1600K 1800K 2000K 2200K 2400K 2600K

**Sheet 7**

Delicassen
0K 100K 200K 300K 400K 500K

Channel
1
2

Frozen
0K 200K 400K 600K 800K 1000K

**Sheet 8**

890,410
204,136
173,311

3
1
2

512,110
104,327
54,506

Detergents Paper
1000K 500K 0K

Zero
0

Delicassen
0K 200K 400K 600K

**Sheet 10**

Delicassen
0K 100K 200K 300K 400K 500K

Region
1    104,327
2    54,506
3    512,110

Delicassen
0K 100K 200K 300K 400K 500K 600K

**3.2) Story**

Story 1

## Wholesaler Customer Analysis



# 4)ADVANTAGES AND DISADVANTAGES

**4.1) Advantages:**

- **Informed Decision Making:** Understanding spending behavior allows businesses to make informed decisions. It helps them tailor their strategies to cater to consumer preferences and demands, reducing the risk of making costly mistakes.
- **Market Segmentation:**
- By analyzing spending behavior, you can segment the market into different consumer groups with distinct spending patterns. This enables targeted marketing efforts, which can improve ROI.
- **Competitive Advantage:**
- Knowing how consumers spend can give your business a competitive edge. You can identify gaps in the market and offer products or services that better meet customer needs.
- **Customer Retention:**
- Understanding what motivates customers to spend can help improve customer satisfaction and loyalty, increasing the lifetime value of your customers.
- **Product Development:**
- By analyzing spending behavior, you can identify trends and areas where consumers are underserved. This can inform product development and innovation.


- **4.2) Disadvantages:**


- **Data Collection Costs:**
- Gathering comprehensive data on spending behavior can be expensive, especially if it involves surveys, focus groups, or advanced data analytics.
- **Data Privacy Concerns:**
- Collecting and analyzing consumer spending data can raise privacy concerns. It's important to handle this data responsibly and ensure compliance with data protection regulations.
- **Data Accuracy:**
- The accuracy of the data can be a challenge. Some consumers may not accurately report their spending habits, and data may be skewed by outliers.
- **Complexity:**
- Analyzing spending behavior is a complex process that may require expertise in data analysis, statistics, and market research. Small businesses may struggle with the complexity and cost.
- **Changing Consumer Behavior:**
- Consumer spending behavior is not static. It can change rapidly in response to economic conditions, trends, and external events, making it challenging to predict and adapt to.
- Steps to Analyze Spending Behavior:
- **Define Objectives:**
- Clearly outline what you want to achieve with your analysis, such as understanding consumer preferences, improving marketing strategies, or identifying growth opportunities.
- **Data Collection:**
- Gather data through various sources, including surveys, online analytics, sales data, and social media listening. Ensure the data is accurate and representative.
- **Data Analysis**:

- Use statistical and analytical tools to analyze the data. Identify patterns, trends, and correlations in spending behavior.
- **Segmentation:**
- Divide your market into segments based on spending behavior. This can help you target specific customer groups with tailored strategies.
- **Identify Opportunities:**
- Look for gaps in the market, areas where consumers are underserved, or emerging trends that present growth opportunities.
- **Competitor Analysis:**
- Analyze the spending behavior of your competitors' customers to identify areas where you can outperform them.
- **Customer Feedback:**
- Combine quantitative data with qualitative insights from customer feedback to gain a holistic view of spending behavior.
- **Action Plan:**
- Develop an action plan to capitalize on the identified opportunities, taking into account the advantages and disadvantages mentioned above.
- Monitor and Adapt: Continuously monitor spending behavior, adapt your strategies as needed, and stay responsive to changing market dynamics. In summary, analyzing spending behavior provides valuable insights for businesses but comes with its own set of challenges. The key is to use this data responsibly and strategically to drive growth and better serve customers.

# 5.APPLICATION:

- Clearly define what you want to achieve through this analysis. Are you looking to increase revenue, expand your market share, or enter new markets? Having specific objectives will guide your analysis.
- **Gather Data:** Define Your Objectives:
- Collect relevant data from various sources, including your own sales and customer data, industry reports, market research, and competitor information. This data should encompass spending patterns, demographics, geographic trends, and more.
- **Segment Your Market:**
- Divide your market into different segments based on various criteria such as demographics, psychographics, behavior, and needs. This helps you understand your customer base better and tailor your strategies accordingly.
- **Analyze Spending Behavior:**

- Use data analytics tools to examine spending behavior patterns. Identify trends, preferences, and anomalies. Consider metrics like average transaction value, purchase frequency, customer lifetime value, and customer churn rates.
- **Customer Profiling:**
- Create customer personas based on your data analysis. This will help you understand who your ideal customers are, what motivates their spending decisions, and how to reach them effectively.
- **Competitive Analysis:**
- Study your competitors to gain insights into their strategies, pricing, and customer base. Identify gaps and opportunities where you can outperform them.
- **SWOT Analysis:**
- Conduct a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis of your business. This will help you identify your internal strengths and weaknesses and external opportunities and threats.
- **Identify Growth Opportunities:**
- Based on your analysis, pinpoint areas where you can grow. This could include entering new markets, launching new products or services, expanding your distribution channels, or improving your marketing strategies.
- **Marketing and Sales Strategies:**
- Develop marketing and sales strategies tailored to the insights you've gained. This might involve targeted advertising, pricing adjustments, loyalty programs, or other customer-centric initiatives.
- **Testing and Measurement:**
- Implement your strategies and continually monitor their effectiveness. Use key performance indicators (KPIs) to track progress and make adjustments as needed.
- **Feedback Loop:**
- Encourage feedback from customers and employees. Their insights can provide valuable information on what's working and what needs improvement.
- **Adapt and Evolve:**
- The market is dynamic, and consumer behavior can change rapidly. Stay flexible and be ready to adapt your strategies to evolving trends and customer preferences.
- **Risk Management:**
- Consider potential risks associated with your growth strategies and have contingency plans in place.
- **Long-Term Vision:**
- While identifying short-term growth opportunities is essential, don't lose sight of your long-term vision. Ensure that your actions align with your overarching business goals.
- **Continuous Learning:**
- Stay updated on industry trends, consumer behavior, and emerging technologies. The more you know, the better you can anticipate and respond to changes in the market.
- Remember that this process is not a one-time endeavor. Market analysis and growth identification should be an ongoing part of your business strategy, ensuring that you remain

competitive and adapt to changing market conditions. Set Clear Objectives: Begin by defining your goals and what you want to achieve through the analysis.

# 6)CONCLUSION

- **Set Clear Objectives:** Begin by defining your goals and what you want to achieve through the analysis.
- **Collect Comprehensive Data:** Gather data from various sources, including sales data, market research, and competitor information.
- **Segment the Market:** Divide your market into segments to understand different customer groups better.
- **Analyze Spending Behavior:** Use data analytics to identify spending patterns and customer preferences.
- **Create Customer Personas:** Develop customer profiles to understand your ideal customers and their motivations.
- **Competitive Analysis:** Study your competitors to identify gaps and opportunities.
- **SWOT Analysis:** Evaluate your strengths, weaknesses, opportunities, and threats.
- **Identify Growth Opportunities:** Pinpoint areas for growth, such as new markets, products, or marketing strategies.
- **Develop Strategies:** Create tailored marketing and sales strategies based on your insights.
- **Testing and Measurement:** Implement and monitor your strategies, adjusting them as needed.
- **Feedback Loop:** Gather feedback from customers and employees to improve your offerings.
- **Adapt and Evolve:** Stay flexible and adapt to changing market dynamics and consumer behavior.
- **Risk Management:** Consider potential risks and have contingency plans in place.
- **Long-Term Vision:** Ensure that your actions align with your overarching business goals.
- **Continuous Learning:** Stay updated on industry trends and emerging technologies to remain competitive.
- This comprehensive approach to market analysis and growth identification is a continuous and iterative process that helps businesses stay agile and responsive to market changes. By following these steps, you can uncover valuable insights and seize opportunities for sustainable growth in your market.

# 7.EMBED CODE:

## 7.1) Dashboard Embed Code

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<param name='embed_code_version' value='3' /> <param name='site root' value='' /><param
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name='display_overlay' value='yes' /><param name='display_count' value='yes' /><param
name='language' value='en-US' /><param name='filter' value='publish=yes' /></object></div>
<script type='text/javascript'>          var divElement =
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divElement.getElementsByTagName('object')[0];          if ( divElement.offsetWidth > 800 ) {
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';vizElement.style.minHeight='827px';vizElement.style.maxHeight='927px';vizElement.style.height=(divEl
ement.offsetWidth*0.75)+'px';} else if ( divElement.offsetWidth > 500 ) {
vizElement.style.minWidth='1400px';vizElement.style.maxWidth='1500px';vizElement.style.width='100%
';vizElement.style.minHeight='827px';vizElement.style.maxHeight='927px';vizElement.style.height=(divEl
ement.offsetWidth*0.75)+'px';} else { vizElement.style.width='100%';vizElement.style.height='2177px';}
var scriptElement = document.createElement('script');          scriptElement.src =
'https://public.tableau.com/javascripts/api/viz_v1.js';
vizElement.parentNode.insertBefore(scriptElement, vizElement);          </script>
```

## 7.2) Story Embed Code

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name='name' value='Dashboard_16968423571610&#47;Story1' /><param name='tabs' value='no'
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name='display_overlay' value='yes' /><param name='display_count' value='yes' /><param
```

name='language' value='en-US' /><param name='filter' value='publish=' /></object></div>
<script type='text/javascript'>   .