

GOVERNMENT ARTS COLLEGE (AUTONOMOUS)

COIMBATORE

DEPARTMENT OF MATHEMATICS

NAANMUDHALVAN COURSE DATA ANALYTICS WITH TABLEAU

CLASS: III YEAR B.SC MATHEMATICS-SEMESTER:5

PROJECT REPORT

(PROJECT DOCUMENTATION)

NM TEAM NUMBER : 1

NM TEAM ID : NM2023TMID23679

**NM PROJECT TITLE : Unveiling Market Insights: Analysing Spending
Behaviour and Identifying Opportunities for Growth**

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SmartBridge Educational Services Pvt. Ltd.

Project Report

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

INTRODUCTION

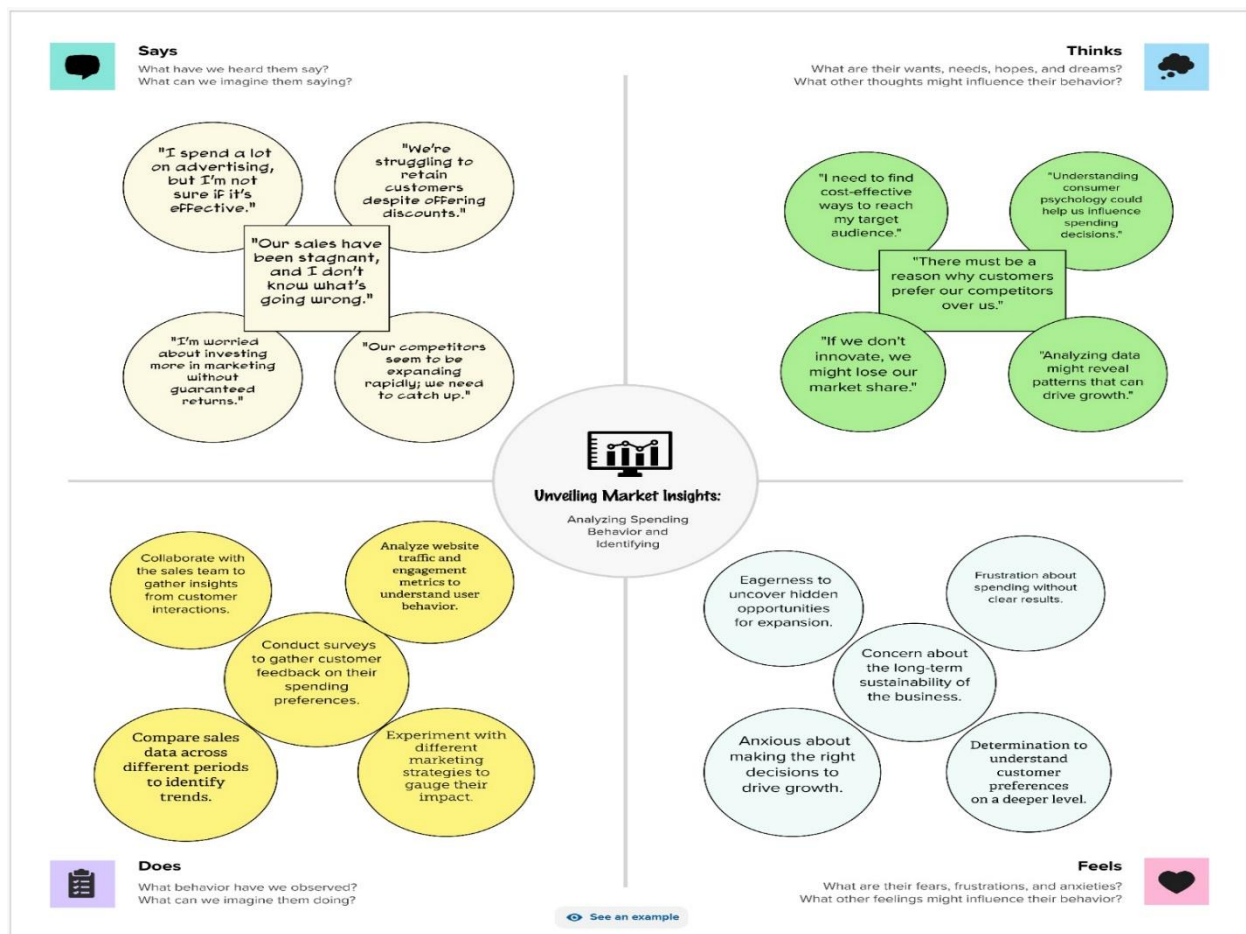
Wholesaling or distributing is the sale of goods to retailer to industrial, commercial, institutional or other professional businessman to other wholesalers (wholesale businesses) and related subordinated services. Wholesaling is buying goods in bulk quantity, usually directly from the manufacturer or 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. In today's data-driven business landscape, organizations rely on robust tools and platforms to extract meaningful insights from their data.

Tableau, a powerful data visualization and business intelligence tool, has emerged as a game-changer in this regard. It empowers businesses to unlock the hidden potential of their data, enabling them to make informed decisions, identify trends, and gain a competitive edge in their respective markets. Market insights are invaluable for businesses striving to stay ahead in today's competitive environment. They provide a deep understanding of customer preferences, market trends, and competitor behavior. Armed with these insights, organizations can tailor their strategies, optimize operations, and ultimately drive growth and profitability. Whether you're a business analyst, data scientist, or a manager seeking to make data-driven decisions, this journey will empower you to navigate the complex world of data and emerge with actionable insights that can transform your organization's fortunes. Let's embark on this exciting journey together to uncover the power of Tableau in unveiling market insights. Tableau excels in geospatial and time-series analysis, making it ideal for uncovering location-based trends and temporal patterns that are essential in market analysis. Through Tableau's data storytelling and reporting capabilities, organizations can communicate their market insights to

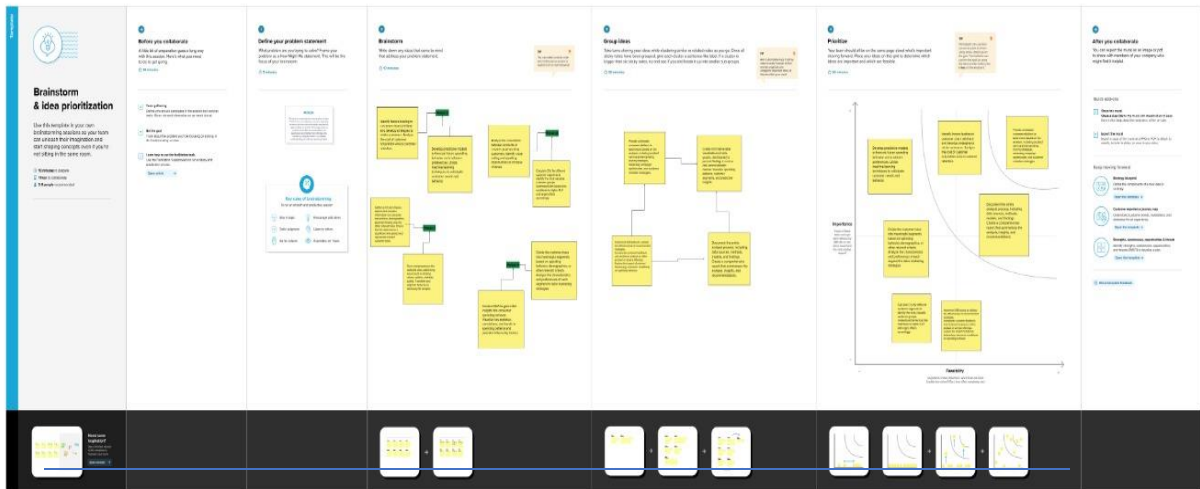
stakeholders, facilitating data-driven decision-making across all levels of the organization. Tableau offers options for sharing insights securely with team members and stakeholders, allowing for collaboration on data-driven strategies and actions.

EMPATHY MAP & BRAINSTORMING MAP

Empathy Map



Brainstorming



Dashboard

Wholesaler Customer Analysis



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

unveiling market insights



unveiling market insights

Milk Kpi	Grocery Kpi	Fresh Kpi	Region Wise Detergent Paper and Grocery	Channel Wise Detergent Paper and Grocery	Region Wise Milk	Channel wise Deliassan and Frozen
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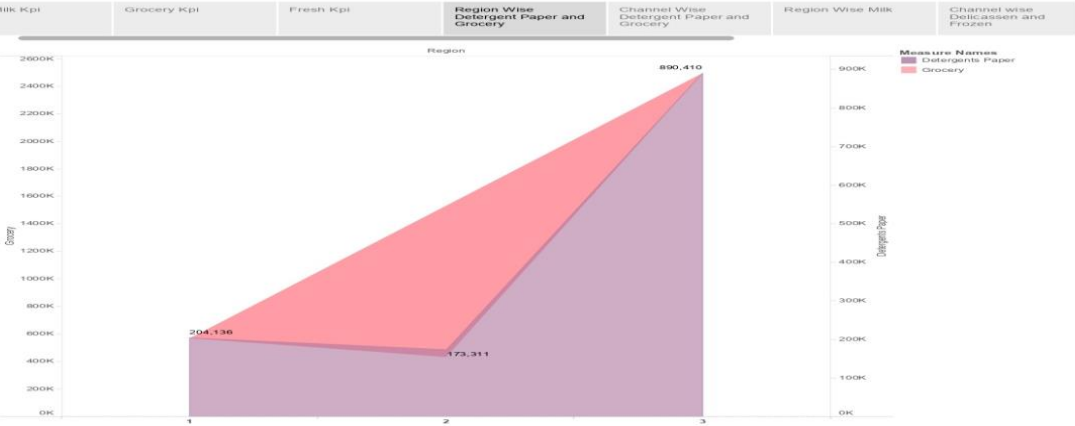


unveiling market insights

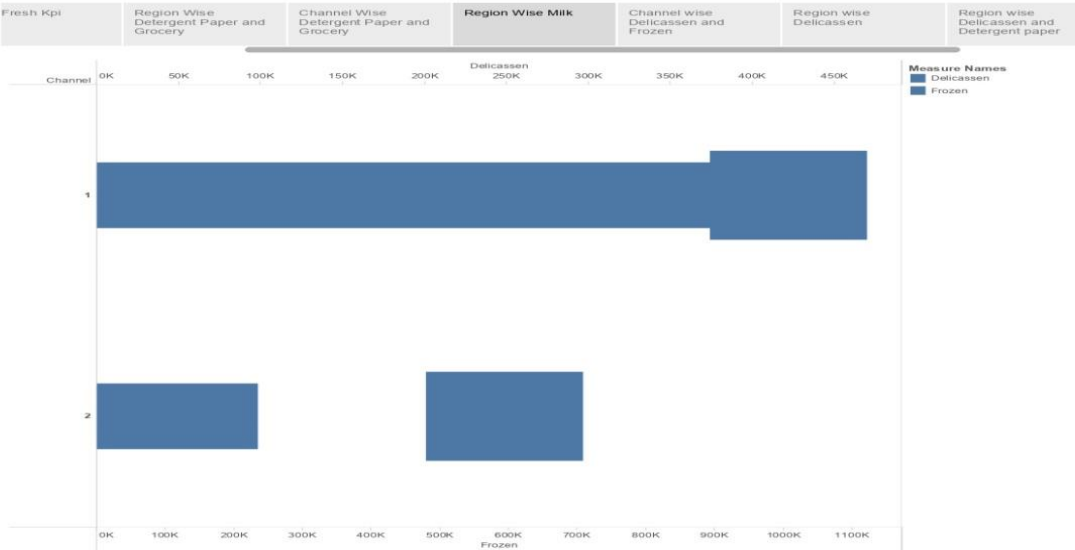
Milk Kpi	Grocery Kpi	Fresh Kpi	Region Wise Detergent Paper and Grocery	Channel Wise Detergent Paper and Grocery	Region Wise Milk	Channel wise Deliassan and Frozen
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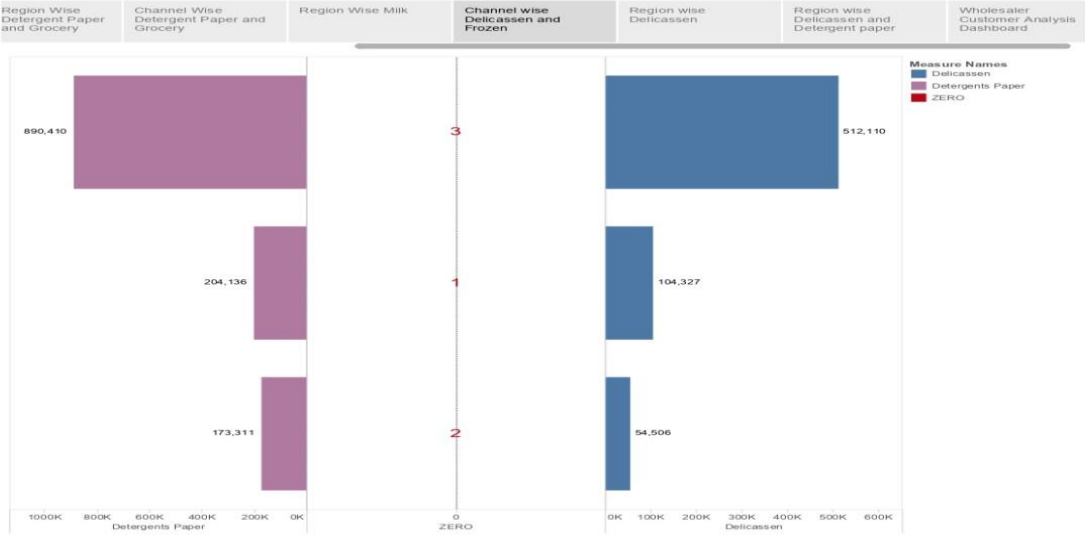
unveiling market insights



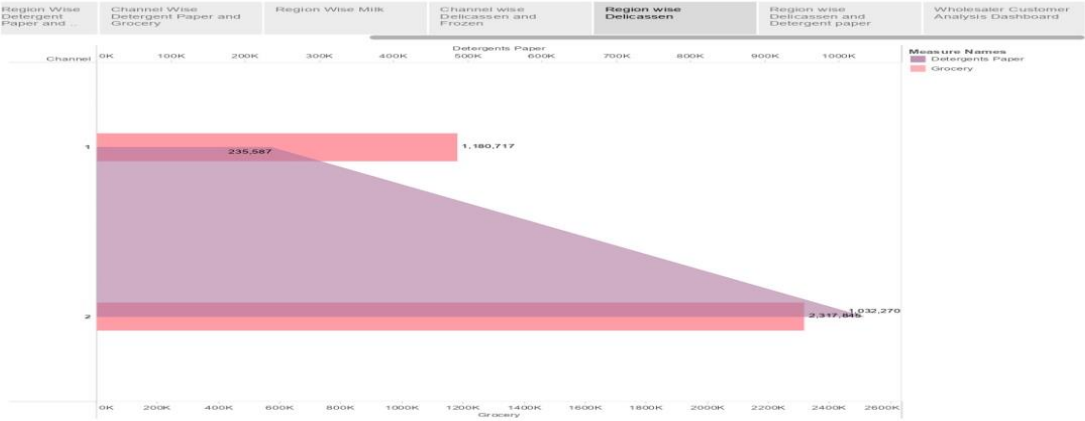
unveiling market insights



unveiling market insights



unveiling market insights



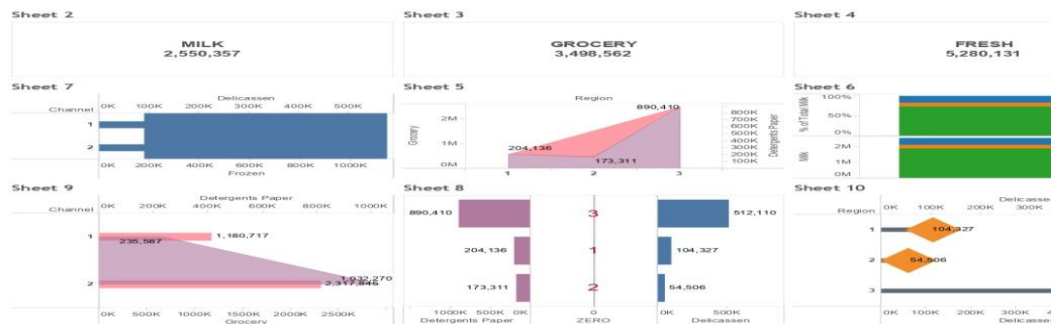
unveiling market insights



unveiling market insights

Region Wise Detergent Paper and ...	Channel Wise Detergent Paper and Grocery	Region Wise Milk	Channel wise Delicassen and Frozen	Region wise Delicassen	Region wise Delicassen and Detergent paper	Wholesaler Customer Analysis Dashboard
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Wholesaler Customer Analysis



Story for Unveiling Market Insights: Analysing Spending Behaviour and Identifying Opportunities for Growth

Advantages & Disadvantages

Advantages

- **Informed Decision-Making:** Market insights provide data and information about customer preferences, market trends, and competitors, helping businesses make well-informed decisions.
- **Competitive Advantage:** Access to market insights allows companies to stay ahead of competitors by identifying emerging trends and adapting their strategies accordingly.
- **Risk Mitigation:** Understanding market dynamics can help companies anticipate potential risks and challenges, allowing for proactive risk management.
- **Product Development:** Insights into customer needs and preferences can guide product development, leading to the creation of products that better meet customer demands.
- **Targeted Marketing:** Market insights enable businesses to tailor their marketing efforts to specific customer segments, increasing the efficiency and effectiveness of marketing campaigns.
- **Cost Savings:** By avoiding costly mistakes and focusing resources on areas with the highest potential for success, market insights can lead to cost savings.

Disadvantages

- **Cost:** Gathering and analyzing market insights can be expensive, especially for small businesses with limited resources.
- **Time-Consuming:** The process of collecting and analyzing market data can be time-consuming, potentially delaying decision-making.
- **Data Accuracy:** The quality and accuracy of market data can vary, leading to potentially flawed decisions if based on incorrect or incomplete information.

- **Overreliance on Data:** Relying solely on market insights can lead to a lack of creativity and innovation in strategy development, as businesses may become too risk-averse.
- **Competitive Pressure:** Once market insights are unveiled, competitors may also access the same information, reducing the competitive advantage.
- **Changing Market Conditions:** Markets can be unpredictable, and relying too heavily on historical data may not always be suitable for adapting to rapidly changing conditions.

Applications

➤ **Data Gathering and Preparation:**

- ✓ Begin by collecting relevant market data from various sources, such as sales records, customer surveys, online sources, and external market reports.
- ✓ Clean and preprocess the data as needed, including data cleaning, transformation, and integration from various sources.

➤ **Data Connection:**

- ✓ Import your prepared data into Tableau. Tableau supports various data sources, including spreadsheets, databases, cloud services, and more.
- ✓ Establish a connection to your data source within Tableau.

➤ **Data Visualization:**

- ✓ Create visualizations that help you understand market trends and patterns. Tableau offers a wide range of chart types, including bar charts, line charts, scatter plots, heatmaps, and more.
- ✓ Use filters, parameters, and calculated fields to create interactive dashboards that allow you to drill down into specific market segments or time periods.

➤ **Exploratory Data Analysis (EDA):**

- ✓ Use Tableau's drag-and-drop interface to perform EDA. Explore correlations, trends, outliers, and other insights within your data.
- ✓ Create dashboards with multiple visualizations to provide a comprehensive view of your market data.
- **Geospatial Analysis:**
 - ✓ If your market insights involve geographical data, Tableau can create interactive maps and geospatial visualizations to uncover location-based trends and opportunities.
- **Time-Series Analysis:**
 - ✓ Tableau excels at time-series analysis, allowing you to create visualizations that reveal trends and seasonality in your market data.
- **Sharing Insights:**
 - ✓ Publish your Tableau dashboards and reports to Tableau Server or Tableau Online for secure sharing and collaboration with team members or stakeholders.
 - ✓ You can also export visualizations and reports in various formats (PDF, image, etc.) for offline sharing.

CONCLUSION

In conclusion, using Tableau for unveiling market insights is a powerful and effective approach for businesses and organizations. Tableau's capabilities in data visualization, exploration, and analysis enable you to transform raw data into actionable insights that can drive strategic decisions and enhance your competitive advantage. Tableau's user-friendly interface and diverse visualization options make it easy to create compelling charts, graphs, and dashboards that reveal market trends and patterns. Tableau allows for interactive exploration of data, making it possible to drill down into specific market segments, time periods, or geographic areas for a more in-depth understanding of the market. Tableau can connect to various data sources, enabling you to consolidate data from multiple channels and systems for a holistic view of the market. Tableau excels in geospatial and time-series analysis, making it suitable for understanding location-based trends and time-dependent patterns in the market. Tableau offers options for securely sharing insights with team

members and stakeholders through Tableau Server or Tableau Online. This facilitates collaboration and decision-making based on real-time data. You can set up automated data refresh schedules, ensuring that your market insights remain up-to-date without manual intervention.

Future scope:

The future scope of using Tableau for unveiling market insights is promising and likely to continue evolving as technology advances and businesses increasingly rely on data-driven decision-making. Here are some key areas of future development and opportunities for using Tableau in this context:

- **Enhanced Data Connectivity:** Tableau is likely to expand its connectivity options to accommodate emerging data sources, including IoT devices, social media platforms, and real-time data streams. This will allow businesses to incorporate a wider range of data into their market insights.
- **Advanced Analytics Integration:** As businesses continue to embrace advanced analytics, Tableau is likely to strengthen its integration with machine learning and AI tools. This will enable more robust predictive modeling, anomaly detection, and automated insights generation.
- **AI-Driven Insights:** Tableau may incorporate artificial intelligence and natural language processing capabilities to automate the process of uncovering insights from data. This could involve the automatic identification of trends, anomalies, and key performance indicators.
- **Augmented and Virtual Reality:** The integration of augmented reality (AR) and virtual reality (VR) technologies into Tableau could provide immersive data visualization experiences. Users could explore market insights in three-dimensional virtual environments, enhancing their understanding of complex data.
- **Data Governance and Security:** With growing concerns about data privacy and security, Tableau is likely to continue enhancing its data governance and security features. This will help organizations comply with evolving data protection regulations and secure their market insights.
- **Natural Language Processing (NLP):** Tableau could integrate NLP capabilities to enable users to interact with data using natural language queries. This would make data analysis more accessible to non-technical stakeholders.

- **Cloud Integration:** The cloud computing trend is likely to continue, and Tableau will likely expand its cloud integration options to provide more flexibility and scalability to businesses. This could include deeper integrations with cloud data warehouses and platforms.

Thank You!!