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RETAIL ANALYSIS

STORY 1:

BUSINESS INSIGHTS & ANALYSIS

Objective:

The objective of this case study is to analyze the overall sales performance, gross profit, category-wise contribution, state-wise revenue, buyer performance, and managerial efficiency to help business stakeholders take data-driven decisions for improving profitability and sales growth.

Key KPIs / Metrics Analyzed:

KPI 1: Total Sales

KPI 2: Gross Profit

KPI 3: Gross Profit Percentage (GP%)

Insights Observed:

- **Insight 1**

Total sales generated across all regions is \$57.65 million, with a gross profit of \$24.48 million and an overall GP% of 42.5%.

- **Insight 2**

Among all states, New South Wales (NSW) generates the highest sales, followed by Victoria (VIC) and Queensland (QLD). ACT and TAS contribute the least.

- **Insight 3**

Among product categories, Home, Mens, and Shoes are the top-performing categories in terms of sales, while Hosiery and Groceries contribute very low sales.

- **Insight 4**

Among buyers, Bruce Curtos is the top buyer with \$11M in sales, followed by Howard (\$9M) and Chester (\$8M).

- **Insight 5**

Among managers, John Gardner leads with \$5.3M in sales, followed by Jeremy G (\$4.9M) and Lillian Pruitt (\$4.8M).

- **Insight 6**

Sales trend shows strong growth during mid-2016 and early 2017, with fluctuations visible in early 2017.

Business Value / Decision Making:

- **Business Impact 1**

The company can focus more on high-performing states like NSW, VIC, and QLD to maximize revenue and run targeted promotions in low-performing regions like ACT and TAS.

- **Business Impact 2**

Since Home, Mens, and Shoes generate maximum revenue, inventory planning and marketing budgets should be prioritized for these categories to increase overall profitability.

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**STORY 2 :
TECHNICAL IMPLEMENTATION
USING POWER BI**

Power BI Desktop - Data Import & Setup:

- Loading the Retail Sales dataset
- Verifying column names
- Checking data types
- Removing blank rows

Power Query - Transformations Applied:

- Removed duplicate records
- Changed data types for Date, Sales, and Profit
- Split category and region columns
- Merged sales and profit tables
- Filtered null and zero sales rows
- Replaced error values
- Created custom columns such as Profit Margin

Power Pivot - Data Modeling:

- Total tables used: **6 tables**
- Fact Table: Sales
- Dimension Tables: Date, Category, State, Buyer, Manager
- Relationships Created: Sales connected to all dimension tables
- Cardinality Used: **One-to-Many**
- Calculated Columns Created: Profit %, Year, Quarter

Power View - Visualizations Used:

VISUAL TYPE	WHERE USED	WHY USED
Bar Chart	Sales by State, Manager, Buyer	Best for comparison
Line Chart	Sales by Date	Shows trend over time
Pie/Donut	Sales by Chain	Shows contribution
Card	Total Sales, Gross Profit, GP%	Displays KPIs
Tree Map	Sales by Category	Shows hierarchy
Map	Sales by State & Category	Geographic distribution

DAX Measures:

Measure 1:

Total Sales = SUM(Sales[Sales])

Measure 2:

Total Gross Profit = SUM(Sales[Gross Profit])

Measure 3:

GP % = DIVIDE([Total Gross Profit], [Total Sales]) * 100

Final Output:

1. **Total Pages Created:** 13

2. **Key Dashboards Included:**

- Sales Overview Dashboard
- Buyer & Manager Performance Dashboard

3. **Summary of Final Insights:**

The dashboard clearly shows state-wise performance, category contribution, buyer efficiency, and profit trends which help management make strategic business decisions related to pricing, inventory, and regional sales optimization.



