

SUPERMARKET SALES ANALYSIS

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Overview

The growth of supermarkets in most populated cities and market competitions are increasing .

The dataset is one of the historical sales of supermarket company which was recorded in 3 different branches for 3 months (January to March.2019).

Problem statement:

The project aims to explore the supermarket company sales data to find out top performing branches and products, sales trend of various products and customer behavior.

In this analysis 18 business questions are answered.

Data acquisition

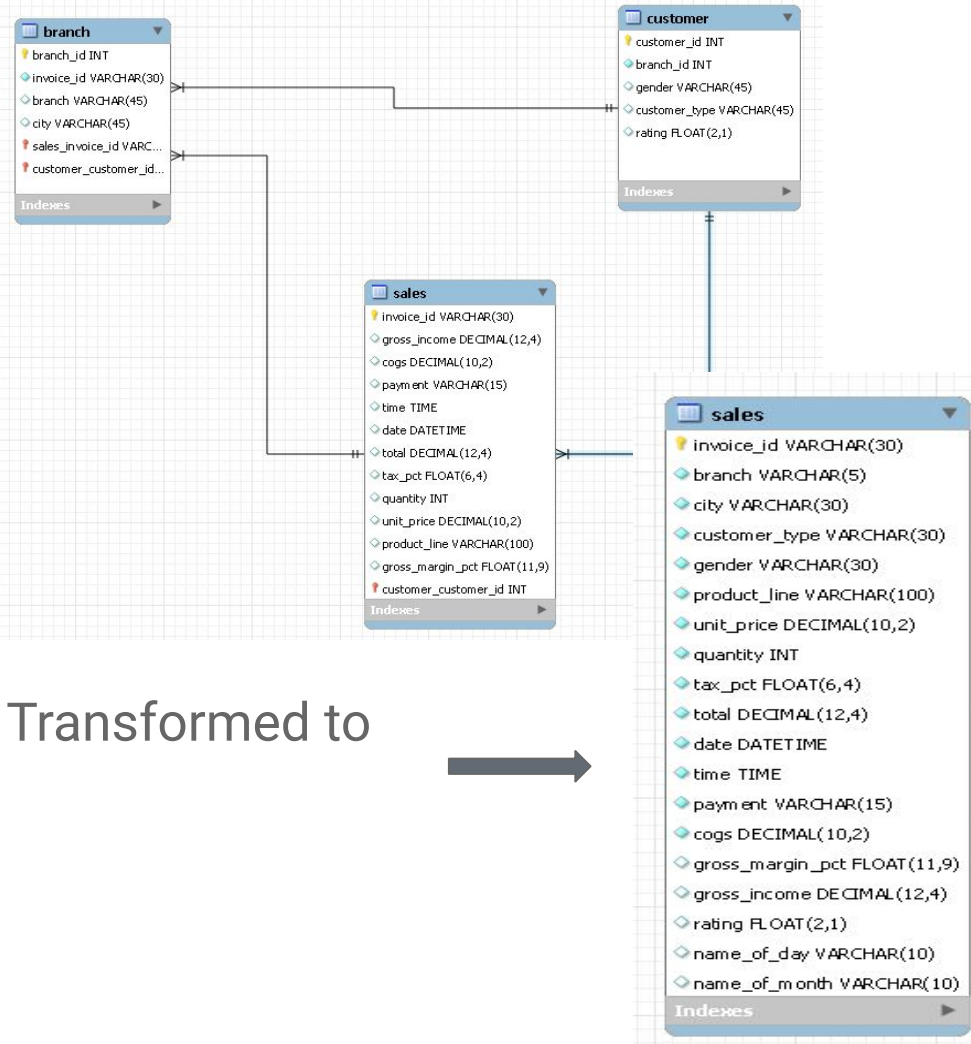
Dataset acquired from Kaggle online platform.

Challenges: There were no problems to get the data. But, acquiring data as a supplement from different sources was not possible. Because we couldn't find that could complement with the dataset.

Another obstacle: During the processes of importing the data to MySQL database, we had multiple bugs to fix.

Workflow: Load the data to jupyter notebook from kaggle → Clean the data → Move it to MySQL database → Analyze/extract insight → Back it to Jupyter notebook and visualize some of the insights.

Database Design and Transformation



SQL Insights and Analysis

Revenue by Month

month	total_revenue
February	95727.38
March	108867.15
January	116291.87

Revenue by Customer Type

customer_type	total_revenue
Normal	157261.29
Member	163625.10

Sales by Day

name_of_day	total_sales
Saturday	164
Tuesday	158
Wednesday	141
Thursday	138
Friday	138
Sunday	132
Monday	124

SQL Insights and Analysis

Revenue by Branch & city

branch	city	total_revenue
B	Mandalay	104534.61
A	Yangon	105861.01
C	Naypyitaw	110490.78

Revenue by Product_line

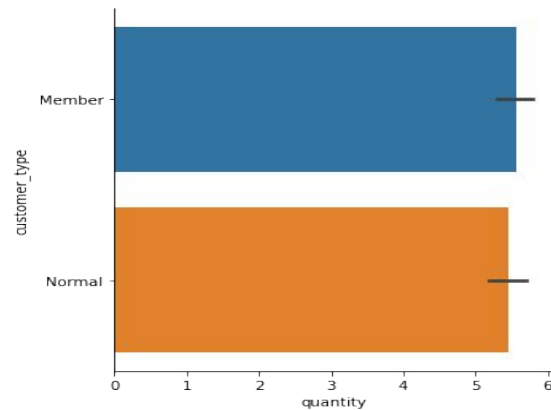
product_line	total_revenue
Food and beverages	56144.84
Fashion accessories	54305.90
Sports and travel	53936.13
Home and lifestyle	53861.91
Electronic accessories	53783.24
Health and beauty	48854.38

Product_line performance based on AVG sales (threshold 5.5)

product_line	sales_condition
Food and beverages	Bad
Health and beauty	Good
Sports and travel	Good
Fashion accessories	Bad
Home and lifestyle	Good
Electronic accessories	Good

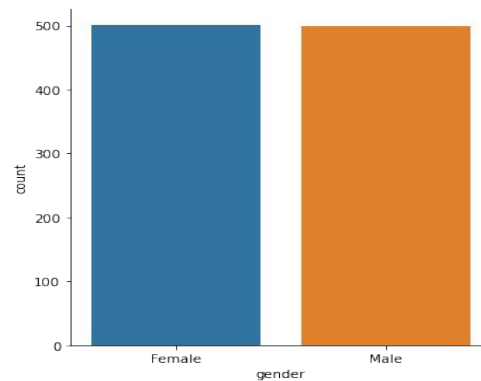
Key Insights

Sales by Customer Type



customer_type	count(*)
Normal	496
Member	499

Customer by Gender



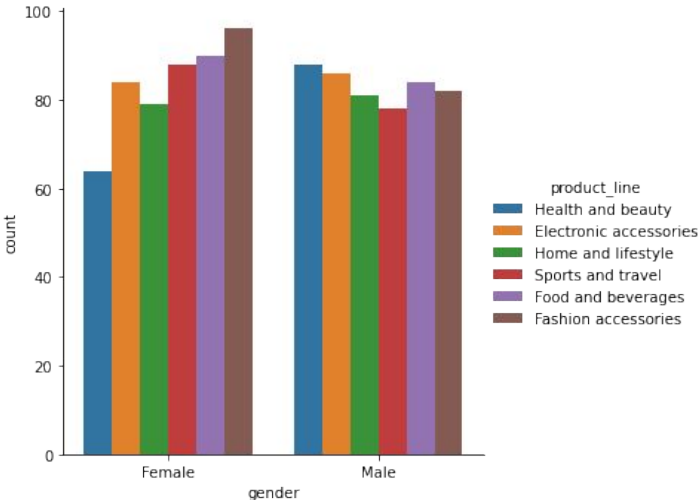
gender	Gender_count
Male	498
Female	497

Key Insights

Average Rating by Product Line

AVG_rating	product_line
7.1	Food and beverages
7	Health and beauty
7	Fashion accessories
6.9	Sports and travel
6.9	Electronic accessories
6.8	Home and lifestyle

Product_line by Gender



Conclusions and Business Implications

Conclusion

- Number of male and female customers were almost the same.
- Member customers has a slightly high impact on the overall sales and revenue.
- Saturday Tuesday and Wednesday were the top 3 purchasing days.
- Highest revenue was gained in January and branch 'C' was on top followed by branch 'A' and 'B'.
- The most sold product_line was in the category of 'Food and Beverages' despite bad sales condition and also it got the highest rating.

Further Analysis

Consider to collect more data in the aspect of below listed points to get more insight:

- Location based
- Means of payments
- Products variety

Questions

Thank You!

Reference

<https://www.kaggle.com/datasets/aungpyaeap/supermarket-sales/data>