

Pizza Sales Analytics

Project Overview:

This project focuses on analysing pizza sales data using Power BI. The goal of this project is to create a dashboard that provides insights into pizza sales, customer behaviour, and trends.

Data Import:

The first step in this project involved importing three datasets using the Get Data - pizzas, pizza types, and orders - into Power BI.

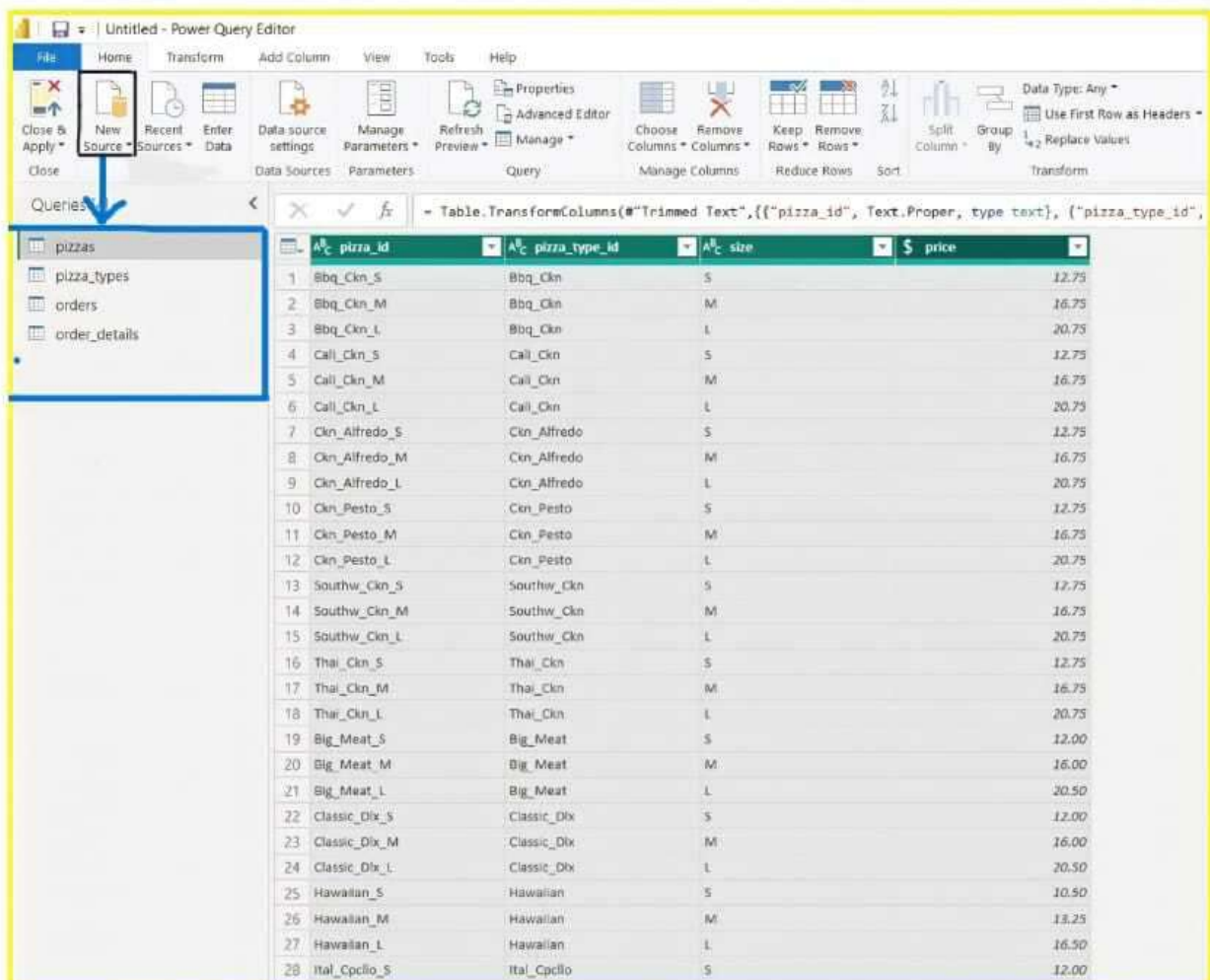


Table: TransformColumns(#"Trimmed Text",{"pizza_id", Text.Proper, type text}, {"pizza_type_id",

	A pizza_id	A pizza_type_id	A size	\$ price
1	Bbq_Ckn_S	Bbq_Ckn	S	12.75
2	Bbq_Ckn_M	Bbq_Ckn	M	16.75
3	Bbq_Ckn_L	Bbq_Ckn	L	20.75
4	Cali_Ckn_S	Cali_Ckn	S	12.75
5	Cali_Ckn_M	Cali_Ckn	M	16.75
6	Cali_Ckn_L	Cali_Ckn	L	20.75
7	Ckn_Alfredo_S	Ckn_Alfredo	S	12.75
8	Ckn_Alfredo_M	Ckn_Alfredo	M	16.75
9	Ckn_Alfredo_L	Ckn_Alfredo	L	20.75
10	Ckn_Pesto_S	Ckn_Pesto	S	12.75
11	Ckn_Pesto_M	Ckn_Pesto	M	16.75
12	Ckn_Pesto_L	Ckn_Pesto	L	20.75
13	Southw_Ckn_S	Southw_Ckn	S	12.75
14	Southw_Ckn_M	Southw_Ckn	M	16.75
15	Southw_Ckn_L	Southw_Ckn	L	20.75
16	Thai_Ckn_S	Thai_Ckn	S	12.75
17	Thai_Ckn_M	Thai_Ckn	M	16.75
18	Thai_Ckn_L	Thai_Ckn	L	20.75
19	Big_Meat_S	Big_Meat	S	12.00
20	Big_Meat_M	Big_Meat	M	16.00
21	Big_Meat_L	Big_Meat	L	20.50
22	Classic_Dlx_S	Classic_Dlx	S	12.00
23	Classic_Dlx_M	Classic_Dlx	M	16.00
24	Classic_Dlx_L	Classic_Dlx	L	20.50
25	Hawaiian_S	Hawaiian	S	10.50
26	Hawaiian_M	Hawaiian	M	13.25
27	Hawaiian_L	Hawaiian	L	16.50
28	Ital_Cpcilo_S	Ital_Cpcilo	S	12.00

Data Cleaning:

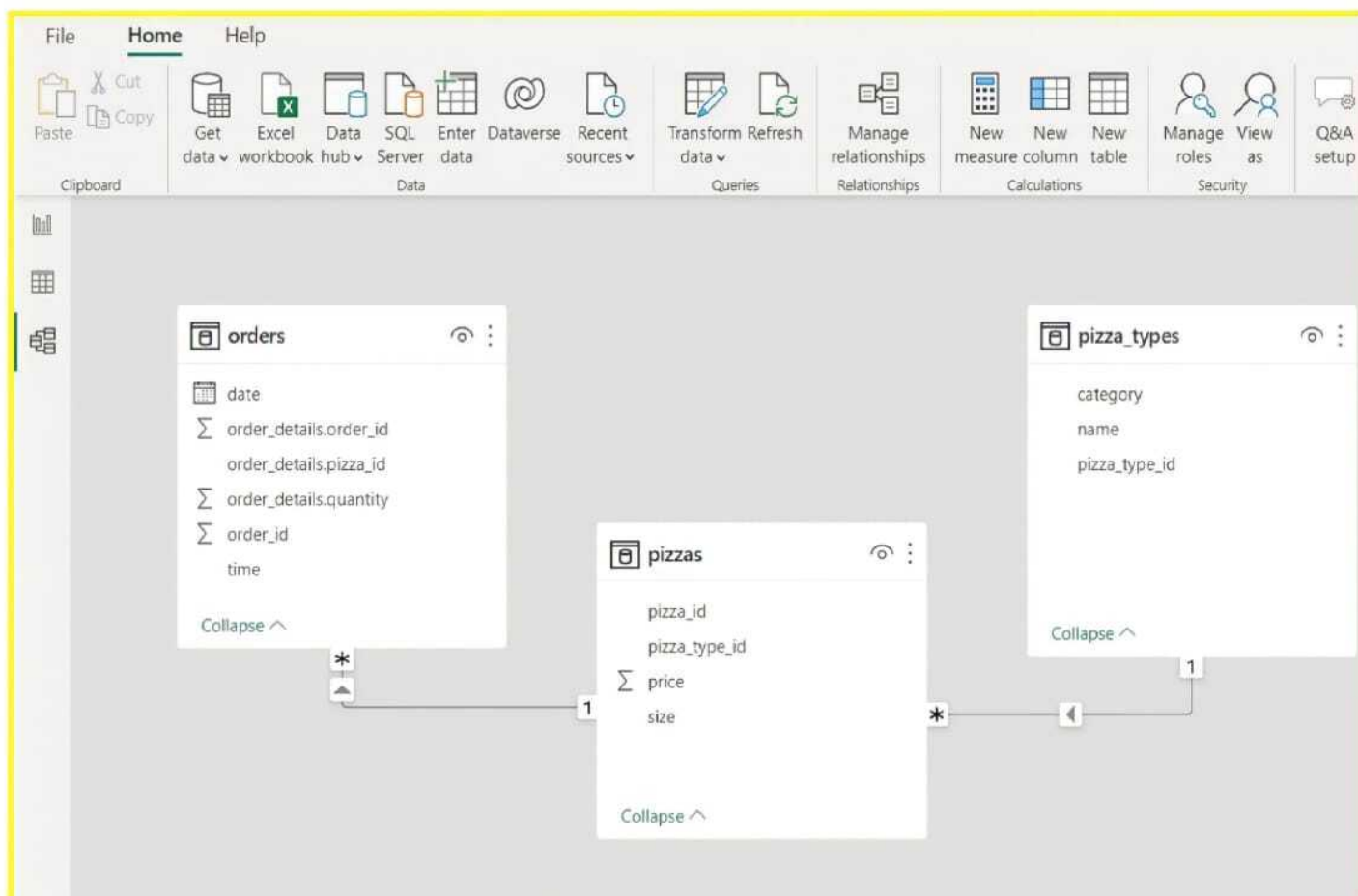
To ensure the accuracy of the analysis, the data was cleaned using Power Query. The cleaning process included promoting headers, removing duplicates, errors, and blank rows, as well as updating data types.

Power Query Editor interface showing a table with columns: pizza_id, pizza_type_id, size, and price. The table contains 28 rows of data. The 'APPLIED STEPS' pane on the right shows a list of transformations: Source, Promoted Headers, Removed Errors, Removed Duplicates, Removed Blank Rows, Changed Type, Trimmed Text, and Capitalized Each Word.

	pizza_id	pizza_type_id	size	price
1	Big_Chn_S	Big_Chn	S	12.75
2	Big_Chn_M	Big_Chn	M	16.75
3	Big_Chn_L	Big_Chn	L	20.75
4	Calz_Chn_S	Calz_Chn	S	12.75
5	Calz_Chn_M	Calz_Chn	M	16.75
6	Calz_Chn_L	Calz_Chn	L	20.75
7	Chn_Athlete_S	Chn_Athlete	S	12.75
8	Chn_Athlete_M	Chn_Athlete	M	16.75
9	Chn_Athlete_L	Chn_Athlete	L	20.75
10	Chn_Pesto_S	Chn_Pesto	S	12.75
11	Chn_Pesto_M	Chn_Pesto	M	16.75
12	Chn_Pesto_L	Chn_Pesto	L	20.75
13	Southw_Chn_S	Southw_Chn	S	12.75
14	Southw_Chn_M	Southw_Chn	M	16.75
15	Southw_Chn_L	Southw_Chn	L	20.75
16	Thai_Chn_S	Thai_Chn	S	12.75
17	Thai_Chn_M	Thai_Chn	M	16.75
18	Thai_Chn_L	Thai_Chn	L	20.75
19	Big_Meat_S	Big_Meat	S	12.00
20	Big_Meat_M	Big_Meat	M	16.00
21	Big_Meat_L	Big_Meat	L	20.00
22	Classic_Chn_S	Classic_Chn	S	12.00
23	Classic_Chn_M	Classic_Chn	M	16.00
24	Classic_Chn_L	Classic_Chn	L	20.00
25	Hawaiian_S	Hawaiian	S	10.50
26	Hawaiian_M	Hawaiian	M	13.25
27	Hawaiian_L	Hawaiian	L	16.50
28	Real_Cheese_S	Real_Cheese	S	12.00

Data Modeling:

To create a solid foundation for the analysis, the data was modeled using the fact dimensional model. The orders and pizza types tables were considered as dimensional tables, while the pizzas table was the fact table.



Measure Creation:

Several measures were created to calculate key metrics, including revenue, total revenue, % contribution, and average order value. Additionally, a calculated column was created for the day name to enhance time-based analysis.

```
Revenue = SUMX(orders,orders[quantity] *RELATED(pizzas[price]))
```

```
Total Revenue = CALCULATE([Revenue],ALLEXCEPT(pizza_types,pizza_types[pizza_type_id]))
```

```
%Contribution = [Revenue]/[Total Revenue]
```

```
Avg order value = [Revenue]/DISTINCTCOUNT(orders[order_id])
```

```
Day_Name = FORMAT(orders[date],"dddd")
```

Dashboard Creation:

To visualize and communicate insights, a dashboard was created using the report view in Power BI.

The dashboard included the following:

1. Text boxes
2. Images
3. Slicers
4. Bookmarks to clear slicer filters
5. Buttons
6. Cards to display KPIs
7. Multi-row card
8. Line chart
9. Bar chart



Insights Gained:

1. The Classic Deluxe pizza is the most frequently ordered pizza. As a result, it should be closely monitored to avoid going out of stock.
- 2.
3. July is the month when the most orders are received. The sales show a fluctuating trend over the months, and this data can be used to plan promotions and offers to drive sales during slower months.
4. Thai Chicken pizza is the highest-selling pizza, contributing 5.31% of total sales. This data suggests that Thai Chicken pizza is a popular choice among customers and can be used to plan promotions around this pizza to boost sales further.
5. The Brie Carre pizza and Green Garden pizza have the lowest contribution to overall sales at 1.42% and 1.71%, respectively. These pizzas should be reviewed to determine if they are worth keeping on the menu.
6. The Classic category is the top-performing category of pizzas, followed by Gourmet, Signature, and Vegetarian categories. This information can be used to guide menu planning and promotions to boost sales in underperforming categories.
7. Large-sized pizzas are the top-performing size, while XL and XXL pizzas have the lowest contribution to overall sales. This data suggests that customers prefer the large size, and the pizza business should consider focusing on this size.

Conclusion:

By leveraging the insights gained from this analysis, the project aims to assist in optimizing the menu, planning promotions and offers, and making informed decisions to drive sales growth.
