

Analysis of Coffee Shop

Tool: MS SQL, Microsoft Excel, Power Query, [ER Diagram](#)

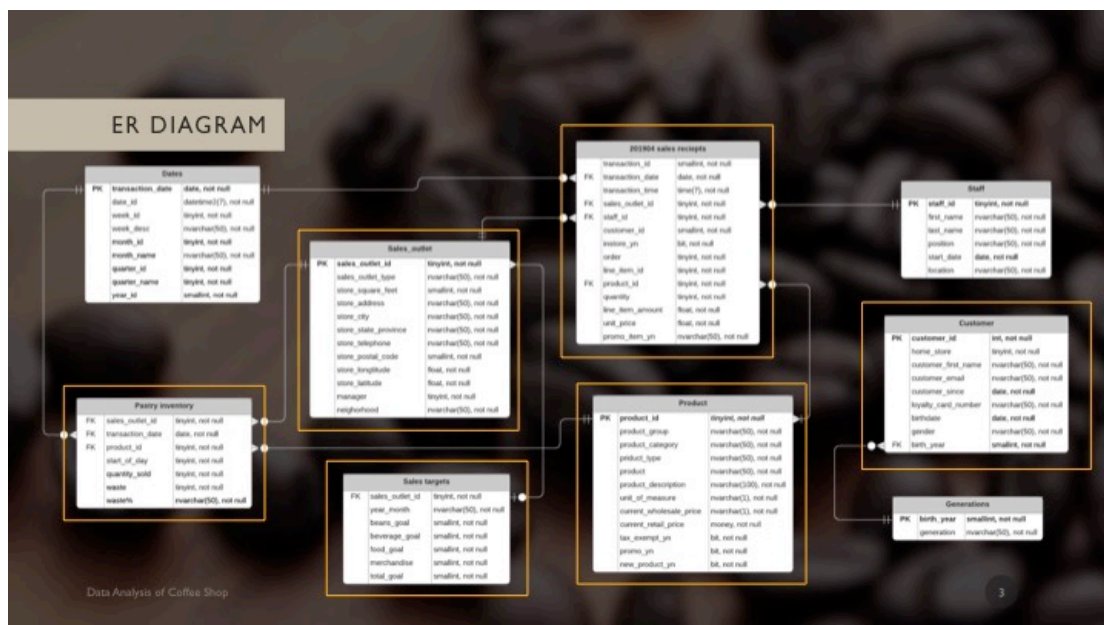
Source: [Kaggle](#)

Duration: 2 weeks

Data Description

This sample data module contains representation retail data from a fictional coffee shop chain. The source data is contained the business of 3 locations in New York on April 2019. Amber and Sandeep are the co-founders of the coffee chain.

ER Diagram

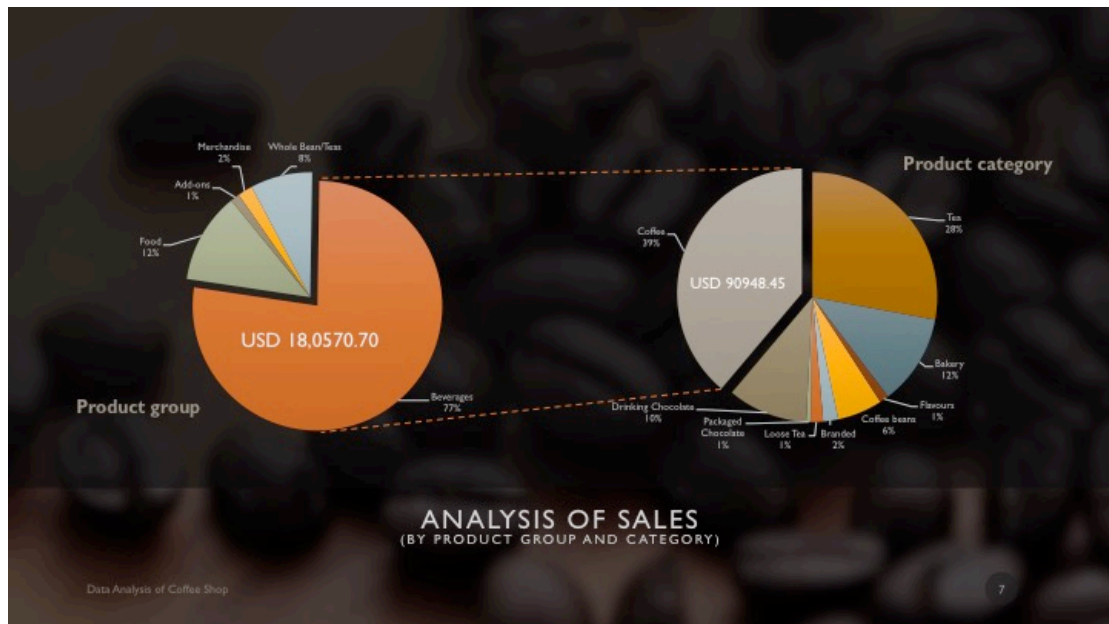


Data Preparation

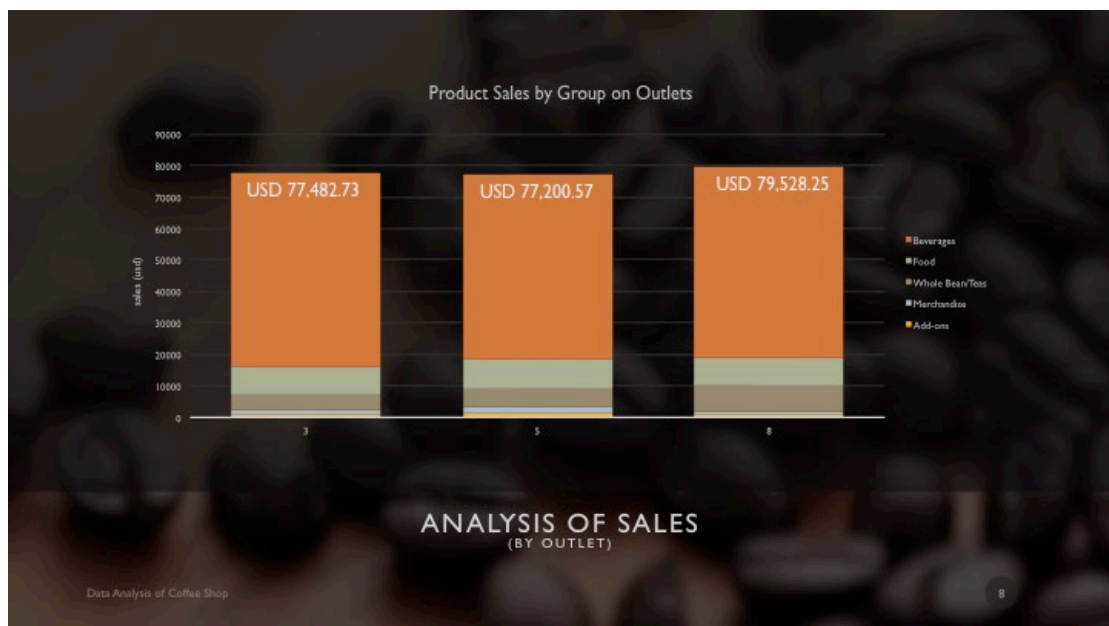
The dataset is quite clean. I just removed some empty columns, update the quantity_sold data in the inventory table, set primary and foreign key.

Analysis

- Sales



In Amber and Sandeep coffee shop, coffee (39%, USD90,948.45) is the best-selling beverages.



There are 3 outlets in the city and the outlet 8 is the slightly highest sales across the others.



By looking at the timeseries, the business seems better in the middle of the month and the average of the sales is around 8k.



The highest sale across the weekday is on Monday.



And the best-selling hours is between 8am – 10am.

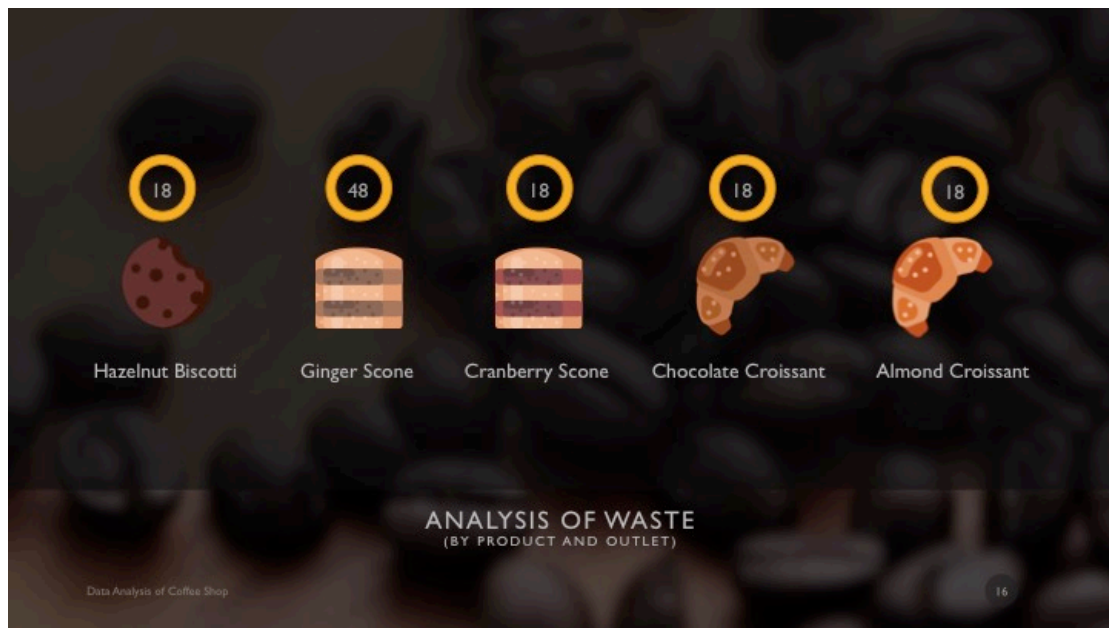
The analysis by timeseries is useful, so that Amber and Sandeep can promo their new product during the best-selling hour. On the other hand, giving promotional price after the peak hours to stimulate the sales.

- Customer



Understand the behavior of the target audience is also important. From the previous weekday sales bar chart, we can presume that most of the customer are professionals in the city, tend to buy a coffee on the first working day (Monday). And most of the sales come from new customer. We can focus on outlet 8, because outlet 8 is so far the highest sales.

- Waste



Besides beverage, food/bakery is the second-best seller. In Amber and Sandeef coffee shop, they bake Hazelnut Biscotti, Ginger Scone, Cranberry Scone, Chocolate Croissant and Almond Croissant freshly every day in every outlet. However, they are not sold out every day.



From the horizontal bar chart, we see they bake the Ginger Scone more than 2x of others and waste about 70%.



By plotting the maximum of daily quantity sold, we can either reduce the quantity bake of Ginger Scone daily or giving a promotion price to stimulate the sale.

- Promo



In Amber and Sandeeds coffee shop, they were actually having a promotion for Chocolate Croissant, Ginger Scone and Ouro Brasileiro Shot during the second half of the month.



By comparing the week with promotion and without the promotion, the Ginger Scone with the promotional price which bundle with ouro brasileiro did improve the sales.

Conclusion

Amber and Sandeed were aware of the waste of the Ginger Scone and started their action to reduce the waste in the same time also increase the sales. There is new product in the data, however the sale is not good. They may consider promoting or bundle with best-selling product during the peak period, for example, on Monday between 8am – 10am. Considering some activity or special promotion during the off-peak hours, for example, a value price for 30 minutes randomly. It is also important to understand customer preferences in a timely manner. Therefore, encourage them to be the member will help better analyze their buying habit in order to increase the sales.