Business Sale Data Analysis 2019

A BUSINESS ANALYSIS ON A LOCAL NIGERIAN BUSINESS IN THE UNITED STATES

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Introduction

An Electronics shop in Nigeria decided to expand their reach in the US. Here is their data for the year 2019 only.

Business Problem

My task here is to look at the business data and study it enough to help between their revenue and increase sales for the coming year in 2020.

Data source

https://www.kaggle.com/datasets/knightbearr/sales-product-data

Data wrangling/cleaning process

Because I used power query to merge the 12 different .xlsx files into one sheet, I had some blanks and inconsistent cell formats. I went ahead to remove empty roles in between my data set. During my cleaning process I did the following

- Removed 900 rows of blanks spaces and unrelated texts.
- Dropped 34 rows from my dataset as they were sales carried out in 2020 leaving only sales for 2019.
- Used a text split function to split the address column to extract only the city, state, and Zip code.
- Used a text split function to split the date column to extract only the month, day, and time.
- Formatted the 'price each' column to dollars for better understanding and visualizing.
- Created a column to calculate the total amount of product purchased per order id ('Quantity purchased' * 'Price each')
- Create a column to convert the amount from dollar to naira using an exchange rate of 746/$ (as of Jan. 15, 2023)
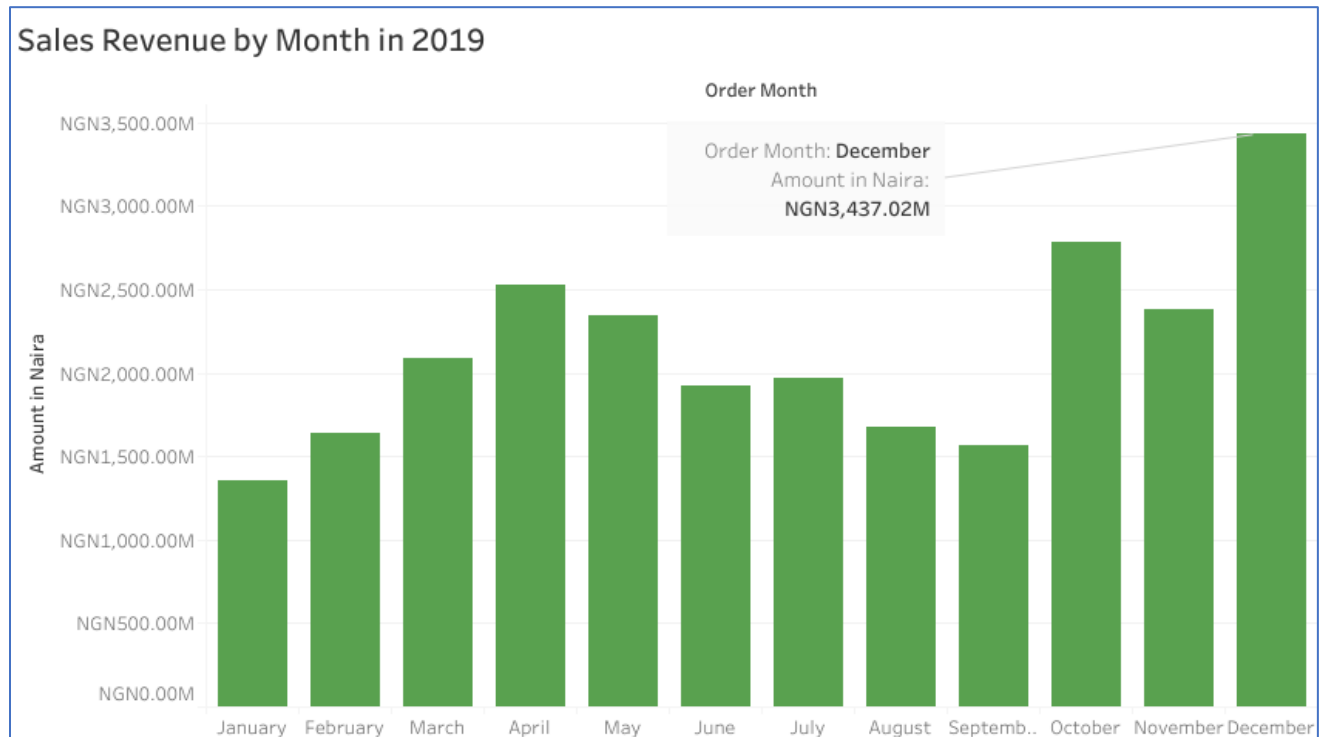- Using the Find and Replace function I converted my month column from number format to text.
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Exploratory questions

1. What was the month with the most revenue?
2. What city generated the most sales?
3. What product were purchased most often than others?
4. What can be done to improve the business?
5. What can the business channel more efforts to increase sales?
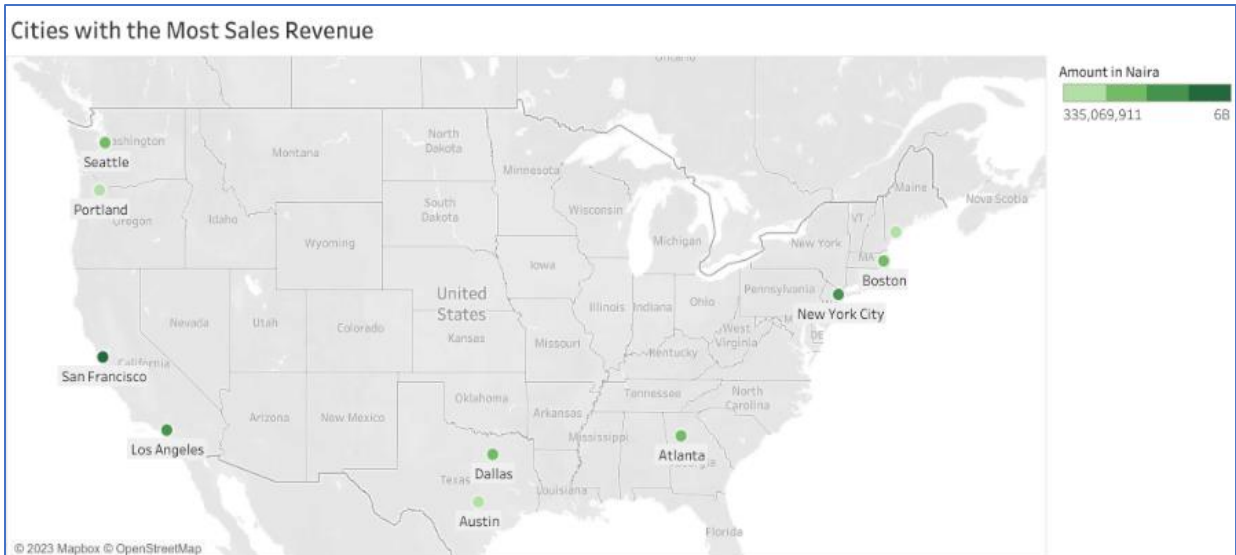
Analysis and Visualization

What was the month with the most revenue?

For us to carefully address the business problem statement we will need to first consider the business revenue in the year. Emeka's business generated a total revenue of NGN25.69B with Q4 being the most successful Quarter and December the most successful month in terms of revenue.
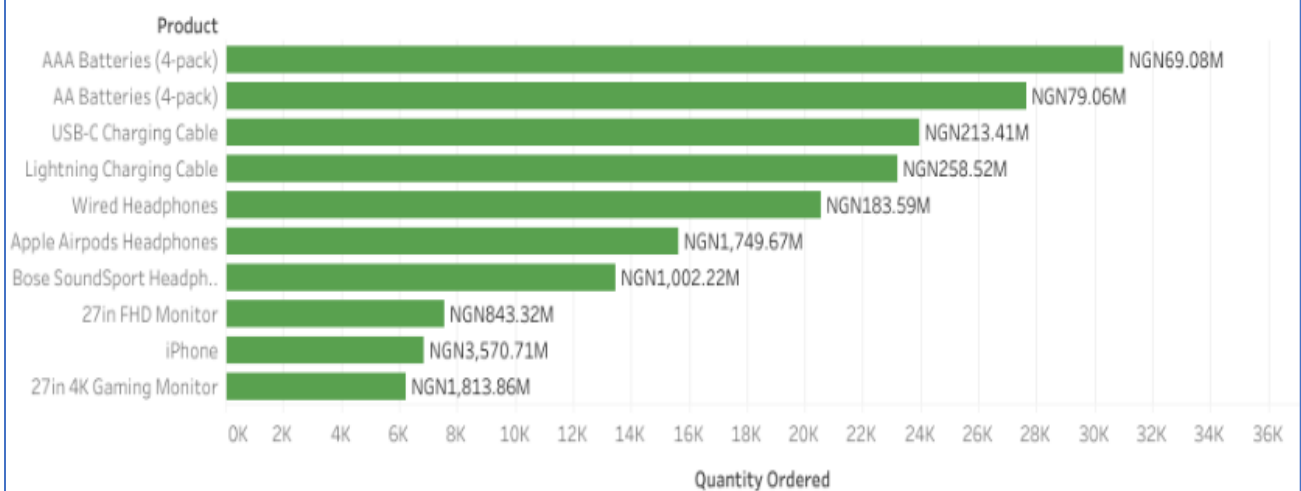

What city generated the most sales?

San Franciso seems to have welcomed Emeka's business so well as it the more money generated from the city. Other high-income cities includes Los Angeles, Seattle, Atlanta, and New York City.

Cities with the Most Sales Revenue

What product were purchased most often than others?

As against some business opinions that, the more sales you make of a product, the more money you generate. As factual as that may sound, our data disputes this belief. Here Emeka's business sold over 30,000 units of 'AAA Batteries (4 pack)' but generated revenue of NGN69.08m, but 'iPhone' sold less than 8,000 units with NGN3.57b in income made. This clearly tells us that Income generation is not correlated to the quantity of units sold. We can see from where the major chunk of Emeka's business generates revenue.

Top 10 Most Purchased Products and their revenue in 2019

Recommendation

What can be done to improve the business?

Before we can begin to make recommendations on how to improve the business, we will have to identify Emeka's business' weaknesses.

The graph above tells us of the days Emeka makes more sales. We will use this information to know exactly where to channel the business resources. On the average in 12 months, we can carefully establish that 28th to 30th are days with poor sales. Month end which usually seam to the time when people has enough cash to spend, but from a data stand point, it is not the best time to sale products.

Also, Q1 and Q3 have poor yield in terms of revenue generation and as such the business can perform the following:

- Intensify marketing between 10th and 18th of the month to increase sales and these are the periods with optimal unit sales and revenue generation.
- Cut down business running cost on month ends to save money and help strategize for the coming month.
- Market to more to areas like San Francisco, Los Angeles, Seattle, Atlanta, and New York City.