Assignment 2 – Data Visualization (Power BI)

Submitted on 10/25/2019

OMIS- 670

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Data Set: The Dataset comprises of sales data for the company XYZ for the year 2012-2015.

XYZ is retail company selling three categories of product where each category includes two types of products. Following is the product mix of the company XYZ:

Product Type/Product Category	Product Type	
Electronics	DVD	Laptops
Cellular	ATT	Verizon
Cosmetics	Powder	Soap

The dataset typically includes sales date, sales amount, customer country, Product category, product type, pay type etc.

Using this dataset, we can analyze the sales trends of the company XYZ with the help of visualization which will further help us in planning business strategy/sales strategy for XYZ company.

Visualization tool: Power BI

Dataset source: Created by own

Dashboard Link: https://app.powerbi.com/groups/me/reports/241dd76a-c044-4775-9635-9d952fb41669?ctid=ea873390-8c1c-4231-a799-6b5a0235b2e6

Questions

1. **Using visualization find out the sales trend in each product category and type for XYZ company for the year 2012 to 2015.**

Please refer Sales trend of XYZ company for the year 2012-2015

Ans: Using Power BI I have created a line graph I have created sales trend for each product category. The graph helps us to compare total sales in each product category across the world for the year 2012-2015. Along with this I have created three bar graphs showing a comparative the contribution of each product type in its category over three year. The entire report is interactive through which each product sales can be analyzed.

This graph can answer following questions majorly:

a) Which product category has the highest/lowest sales in each year?
b) Which product contributes more/less sales for each category in each year?
c) Which product has increased sales over last three years?

Business Inference: Using these graphs XYZ can analyze and find out which product is helping to generate more sales and which product is not generating sales- through this company can decide to create more promotional/sales offers to boost sales for low performing product. They can even decide to discontinue any product in order to focus on those products which will generate more sales. Also, this visualization can be the first step to find out where the sales are lacking and what are the reasons behind that for the company.

2. **Using the sales dataset of the XYZ company create a visualization to show Sales distribution trend for the company XYZ for the year 2012-2015.**
Please refer Sales Distribution of XYZ company for the year 2012-2015.

Ans: In order to show sale distribution of the company I have used Pi- Charts to show Sales in different countries for last three years, another Pi-Chart showing Sales by Channel type(Direct, Post and Online), the third one is a stacked bar chart showing clear comparison of sales in each channel by country and the last one is a line chart showing how each channel type have performed in each year.

This graph can answer following questions majorly:
a) Which country contributes more/less to sale?
b) What percentage of total sale goes to direct sale channel in which India (this can be combination of any channel and any country)?
c) Which channel contributed more to the sale?
d) Which channel type have been increasing over the years?

Business Inference: Sales strategy is one of the key factors of success for any retail company. This visualization helps the company to identify the countries where its products are selling more, and through what channel. Through this company can see for e.g. that's its online sale is doing good in all three countries hence it should promote more online sales.

Another inference company can identify is that which channel type have increased/decreased its sales in last three years. If the company is planning to expand its business to different country, then this visualization can help to identify which channel type should the company focus more on.

3. **Find out payment trends for the company XYZ for the year 2012-2015?**

Please refer Sales trend of XYZ company for the year 2012-2015

Ans: Using power BI I have created three graphs in order find out the payment trends for the company XYZ for the year 2012-2015. The first chart is stacked bar chart showing payment patterns of customers paying in different countries. The second graph is a line graph showing How each pay type has been doing in terms of sales, clearly showing the comparison between each other. The third graph is a Donut chart showing pay type distribution by product category.

This graph can answer following questions majorly:
a) What are payment types which are used in each country and up to what percent of total sale in that country
b) Which pay type has been used frequently and has increased in three years?
c) How is each product generally paid (credit, Debit, Cheque etc.)?

Business Inference: If XYZ is developing its sales strategy then payment behavior of customers is one of the key factors to be considered for effective strategy. Payment behavior helps us to understand the latest trend in terms of payment in the market which customers are comfortable in. Ignoring this can

lead to loosing customers. For e.g. if customers these are buying products on loans and if any company is not providing that option to the customers then customer will choose a different company. This visualization will help the company to understand customers preferences for payments, and further can help to attract more customers by providing offers and discounts if paid through those methods.