Digital Marketing Analysis

Purpose of the Project

The purpose of this project is to use data from a t-shirt selling company to understand how well their product is being sold on 3 digital marketing channels by using data from February 2016 to April 2019.

Summary of Analysis

Customers from all 3 digital marketing channels are spending less, on average, but are interested in the t-shirt products. Since all 3 digital marketing channels generated less revenue than the previous year, it may be a global issue, such as the economy, that affected the average order value. However, since it is forecasted that the average order value is going to decrease more the following year, pricing adjustment plans or cost cutting measures may be necessary.

Also, the marketing campaign from Facebook experienced a breakeven point. As a study[1] has shown that the popularity of Facebook is declining, a more popular digital marketing platform that is targeted towards a younger audience, such as TikTok, Reddit, or Instagram, should be looked into.

Key Questions

1. What is the marketing trend in 2018?
2. How are the digital marketing channels performing?
3. What is the sales trend?
4. What is the age demographic of the 3 digital marketing channels?
5. What actions are necessary to improve the sales and advertising performance for the future?

Key Insights

1. There is a seasonal trend as the total number of t-shirt sales increase between the months of June to September. However, in 2018, the net revenue decreased by 10.2% compared to 2017. The marketing campaign from Facebook experienced a breakeven point in 2018 and is forecasted to have a negative profit margin the following year in 2019.

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[1] https://blog.gitnux.com/facebook-decline-statistics/#:~:text=In%202020%2C%20Facebook's%20usage%20among,internet%20users%20in%20the%20US.

2. The digital marketing channels have a consistent performance from 2017 to 2018. The CTR and conversion rate from the 3 channels shows that the advertisements are effective in bringing in potential customers and the t-shirts are capturing their interest.

   All 3 channels experienced a similar CTR from 2017 to 2018.
   a. Facebook Ads CTR: 2.6%
   b. Google Ads CTR: 4.8%
   c. Twitter Ads CTR: 3.3%

   Also, the conversion rate for Facebook and Twitter remained consistent from 2017 to 2018, while Google experienced an increase.
   a. Facebook Ads: 2.2%
   b. Google Ads: 4.8% (previously 3.6%)
   c. Twitter Ads: 3.2%

3. Customers are spending less money when purchasing the products. The average order value from 2017 to 2018 decreased. In 2017, 88.89% of customers spent, on average, more than $50. In 2018, only 33.33% of customers spent, on average, more than $50. All customers that spent more than $50 were from Google.

4. The 3 digital marketing channels are mainly used by young individuals. 51.5% of Facebook[2] users are between the ages of 18-34, 51.8% of Twitter[3] users are between the ages of 18.34, and Google[4] users are more likely to be younger, between the ages of 18 to 44.

5. The data shows that the decrease in net revenue was due to the customers spending less, on average, when purchasing the t-shirts, but the performance of the digital marketing channels show that customers are interested in buying the product. Since all 3 digital marketing channels generated less revenue than the previous year, it may be a global issue, such as the economy, that affected the average order value. However, since it is forecasted that the average order value is going to decrease more the following year, pricing adjustment plans or cost cutting measures may be necessary. Also, the marketing campaign from Facebook experienced a breakeven point. As a study[5] has shown that the popularity of Facebook is declining, a more popular digital marketing platform that is

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[2] https://www.oberlo.com/statistics/facebook-age-demographics#:~:text=The%20age%20demographic%20of%20Facebook%20users%20is%20similar%20to%20that,%2C%20however%2C%20looks%20slightly%20different.

[3] https://www.businessofapps.com/data/twitter-statistics/

[4] https://www.userzoom.com/ux-blog/what-are-the-differences-in-how-age-demographics-search/

[5] https://blog.gitnux.com/facebook-decline-statistics/#:~:text=In%202020%2C%20Facebook's%20usage%20among,internet%20users%20in%20the%20US.

targeted towards a younger audience, such as TikTok, Reddit, or Instagram, should be looked into.

About the Data

The data contains information from February 2016 to April 2019. It contains information that tracks the customer interactions (impressions, clicks, conversions) and the sale from these interactions (CPC, advertising cost, other cost, revenue) with the advertisements shown on these 3 digital marketing channels: Facebook, Google, and Twitter.

Tools Used:

1. Excel
    a. Pivot Tables
    b. Nested IF statements
    c. FORECAST function

Columns created for additional analysis.

- Average Order Bracket
    - Created using IF statements to group the column “Average Order Value”
- CTR
    - Divided the column “Clicks” by “Impressions”
- Conversion Rate
    - Divided the column “Conversions” by “Clicks”
- Total Cost
    - Added columns “Advertising Cost” and “Other Cost”
- ROI
    - Divided the column “Total Profit” by “Total Cost”
- Total Profit
    - Subtracted the column “Total Revenue” by “Total Cost”
- Forecast Average Order Value
    - FORECAST function on the “Average Order Value” column from February 2016 to April 2019
- Forecast Average Order Bracket
    - FORECAST function on the “Average Order Value Bracket” column from February 2016 to April 2019
- Forecast Impressions
    - FORECAST function on the “Impressions” column from February 2016 to April 2019
- Forecast Clicks
    - FORECAST function on the “Clicks” column from February 2016 to April 2019
- Forecast CTR
    - Divided the column “Forecast Clicks” by “Forecast Impressions”

- Forecast CPC
    - FORECAST function on the “CPC” column from February 2016 to April 2019
- Forecast Conversion
    - FORECAST function on the “Conversions” column from February 2016 to April 2019
- Forecast Conversion Rate
    - Divided the column “Forecast Conversion” by “Forecast Clicks”
- Forecast Revenue
    - Multiplied the columns “Forecast Conversions” and “Forecast Average Order Value”
- Forecast Advertising Cost
    - Multiplied the columns “Forecast Clicks” and “Forecast CPC”
- Forecast Other Cost
    - FORECAST function on the “Other Cost” column from February 2016 to April 2019
- Forecast Total Cost
    - Added the columns “Forecast Advertising Cost” and “Forecast Other Cost”
- Forecast Total Profit
    - Subtracted the columns “Forecast Revenue” by “Forecast Total Cost”
- Forecast ROI
    - Divided the columns “Forecast Total Profit” by “Forecast Total Cost”