



## **BIBITOR, LLC DATASET SUPPORTING MATERIAL**

**Store Profitability Analysis of June 30, 2019 Bibitor, LLC. Incorporating  
Tableau.**

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## KEY TABLEAU TERMS:

**Dimension:** Fields that are discrete categorical information (should not be aggregated).  
E.g. Store number/location.

**Measure:** Fields that contain quantitative information (can be aggregated)

**Pill:** Represents a variable that can be moved to create a field in the view

**Worksheet:** A sheet where you build views of your data by dragging fields onto shelves.

**Dashboard:** A combination of several views arranged on a single page. Use dashboards to compare and monitor a variety of data simultaneously.

**Storyline:** A sheet that contains a sequence of views or dashboards that work together to convey information.

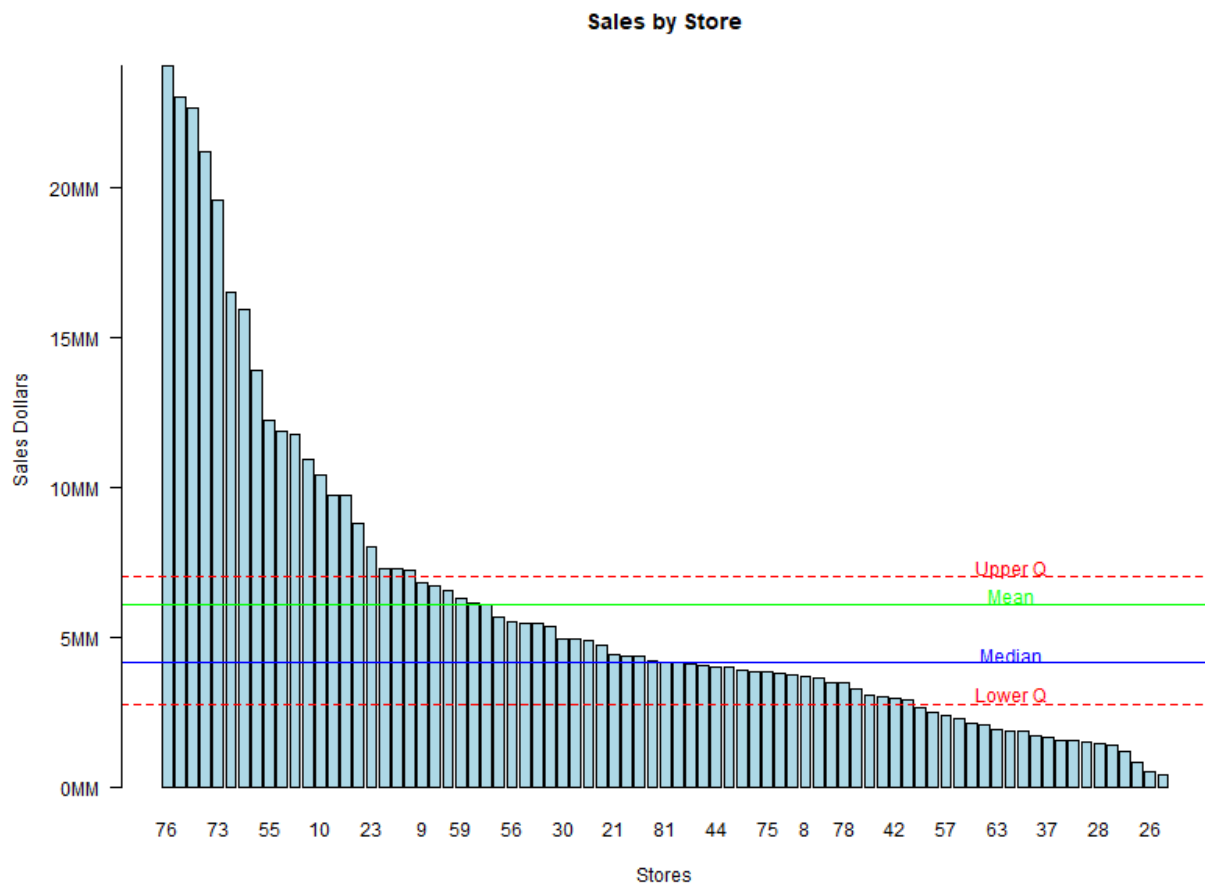
**Treemap:** A treemap displays data using nested rectangles whose area is proportional to the data it represents.

**Calculated Field:** Under the **Analysis Tab** in *Tableau*, the analyst can create new variables.

Additional terms can be found using the [Tableau glossary](#)

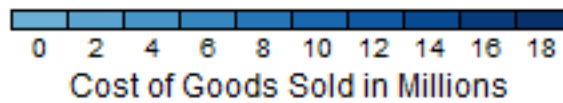
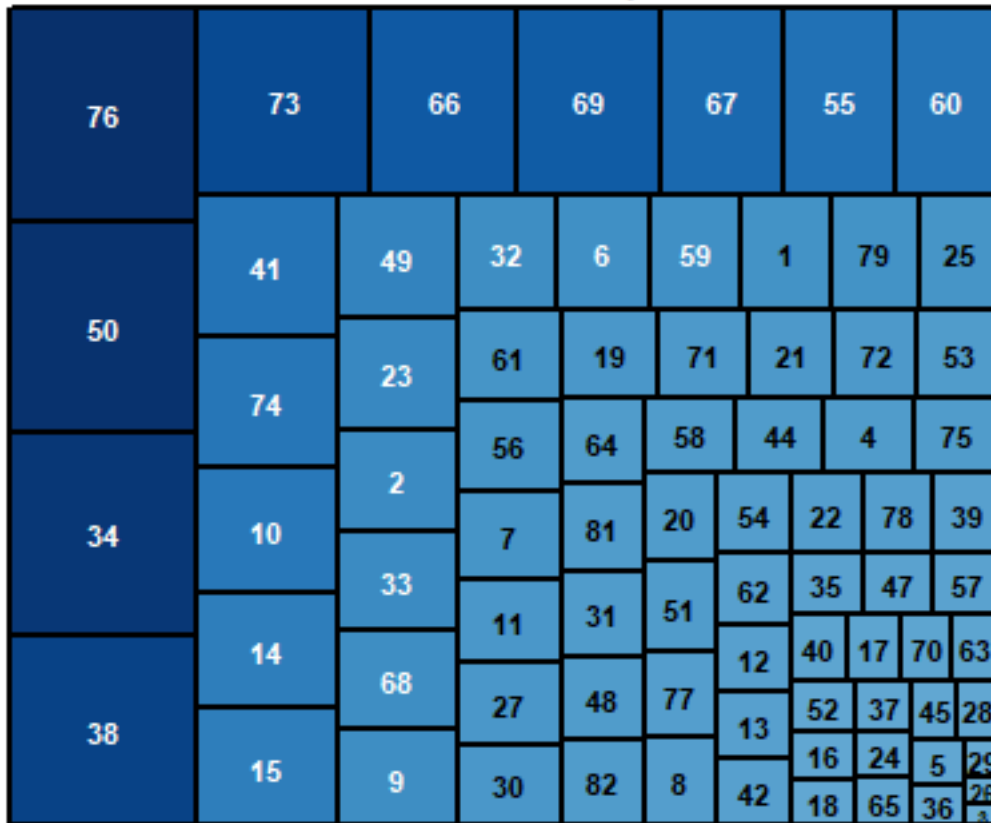
## Part I ( Difficulty: Beginner)

Bibitor, LLC asked you to complete due diligence on their wine and spirits business. Bibitor has 79 retail locations with approximately \$484 million in sales. Their CFO is at the forefront of data analytics and created a **Storyline** the company uses for making decisions about their stores. To facilitate the investigation, you have Bibitor's sales file with more than 13 million records and their purchase price file with the cost of each inventory item. Traditional spreadsheets cannot process all of the data, requiring the use of **Tableau** to complete your due diligence. Prior to using **Tableau**, the CFO provides you with two **Dashboards** from their Sales Profitability **Storyline** for the 12-months ended June 30, 2019. **The Company uses a different visualization software package. Your visualization will look different, but the data is the same**



Summary Data	Amount
Count	79
Sum	483,891,954
Average	6,125,215
Minimum	455,566
Maximum	24,111,751
Median	4,172,625

Cost of Goods Sold by Store



Summary Data	Amount
Count	79
Sum	347,412,594
Average	4,397,628
Minimum	326,143
Maximum	17,187,435
Median	3,024,716

## Required:

1. Using these two **Dashboards**, describe **Sales** and **Cost of Goods Sold (COGS)** in a short memo. In your memo, include a discussion about:
  - The total number of stores
  - Total **Sales** and **Cost of Goods Sold** for the company
  - The average and median **Sales** and **Cost of Goods Sold** per store
  - The 5 largest and smallest stores based on **Sales** and **Cost of Goods Sold**
  - Are the 5 largest/smallest stores based on **Sales** the same as the 5 largest/smallest based on **Cost of Goods Sold**? Would you expect them to be the same? What could cause differences?
2. Using **Tableau**, recreate the first **Dashboard** (Sales by Store).

Here are some hints:

- Verify your sales total (\$483,891,954) matches Bibitor's **Dashboard** , Sales by Store.
- Convert the variable **Store** into a **Dimension** and the variable **Sales Dollars** a **Measure** .
- To change Store to a **Dimension** , drag and drop the **Store** pill into the **Dimension** section on **Tableau**.
- Using the **Analytics** tab in **Tableau**, show the average line and median line on the graph.
- Sort the **Store** variable from smallest to largest.
- Under the **Worksheet** tab in **Tableau**, show the **Summary** .

## Part II ( Difficulty : Beginner/Intermediate)

The Bibitor, LLC CFO wants some additional analysis using **Tableau**. She is interested in differences between wine and spirits across the entire organization. She wants to know the differences in **Sales Dollars** and **Quantities** between the two categories, popular bottle sizes for wine and spirits, and the most popular vendor for wine and spirits. She is also interested in certain information at the **Store** level of detail.

### Required:

Assist the CFO in creating **Worksheets** and **Dashboards** to answer these questions:

- What is the total **Sales Dollars** and percentage breakdown of wine and spirits?

Hint: Use the **Classification** and Sales Dollars to separate the sales based on wine and spirits. Convert the data into a **Pie Chart (Show Me Tab)** and the **Analysis Tab** to convert data to percentages.

- What is the most popular **Size** for wine and for spirits based on **Sales Dollars** and **Quantity** (include the total **Sales Dollars** and **Quantity** in your answer)? Provide the CFO with some reasons why this is important for managing the business.
- Who is the most popular **Vendor** for wine and for spirits based on **Sales Dollars** and **Quantity** (include the total **Sales Dollars** and **Quantity** in your answer)? Provide the CFO with some reasons why this is important for managing the business.
- Which **Stores** have the highest and lowest weighted average sales price for wine and spirits? How does the weighted average sales price compare to a simple average of **Sales Prices** for SKUs (Brands) in each **Store**? What does a large difference between the simple average and the weighted average mean?

Hint: Create a **Calculated Field (Analysis Tab)** and label it **Average Sales Price**. To accomplish this, drag the **Sales Dollars** pill divided by **Quantity** pill. You should see the **Average Sales Price** pill. Drag the **Average Sales Price** pill into columns and convert the variable from “SUM” to “AVG” by using the **Dropdown Menu** on the **Pill** . Drag the Classification pill into the **Filter Card** to help you determine the **Average Sales Price** for wine versus spirits.

- What seasons/months are sales the highest and lowest? Provide the CFO with some reasons why this is important for managing the business.
- If you were the CEO or CFO, what other data/variables would you want to collect to improve your business and why?

**Part III ( Difficulty: Intermediate)** In order to create the **Treemap** for the **Cost of Goods Sold (COGS)**, you will have to link two data files. **Tableau** will do this automatically. Start by uploading the sales file (you can use the same workbook as the previous investigations; however, we always recommend you save your work as you go). Once the sales file is uploaded, upload the purchase price file. The files should be a center join based on **Brand**. Once the files are linked, verify your files uploaded and joined properly. The total **Sales Dollars** should be \$483,891,954. Verifying your **COGS** of \$347,412,594 will trickier as we need to create the variable (to be discussed below). To determine the **COGS**, you'll have to create the **COGS** variable by going to the **Analysis Tab** and clicking on a **Create a Calculated Field** . Drag **Purchase Price** and then multiply by **Sales Quantity**. You should see your new variable under the **Measures** .

- Once the files are merged, you'll have to calculate the following variables
  - **COGS** - \$347,412,594
  - **Gross Profit**:  $Gross\ Profit = Sales - COGS$
  - **Gross Profit %**:  $Gross\ Profit / Sales$
- Create a **Scatter Graph** comparing each store's **Sales** and **Gross Profit**.
  - Does the relationship appear to be linear?
  - What is the equation of the trend line? Hint: Use the **Analysis Tab** and drag it onto your **Worksheet** .
  - Why wouldn't all of the stores be exactly on the trend line since each store has access to the same inventory?
- Create a **Worksheet** to determine the percentage that each **Store** contributes to the overall **Gross Profit**. Use the **Classification** variable to filter based on spirits and wine. Convert your **Worksheet** into a **Stacked Bar Chart** . What percent does store 76 contribute to the overall gross profit? What percent does Store 76 contribute to **Gross Profit** based on wine only? Spirits only?
- Individually, which two stores have the highest **Gross Profit %**? Individually, which two stores have the lowest **Gross Profit %**?
- What kind of decisions could be made when examining a store's contribution to overall gross profit for the company? What kind of decision could be made when comparing individual store gross profit percentages?

#### **Part IV (Difficulty: Intermediate)**

Write a 1-page summary analyzing your finding regarding the profitability of the stores. Include recommendations to improve profitability and additional information management would want to collect to improve the company's profitability. You can include dashboards as appendices to support your argument.