

## **Executive Summary( Business Intelligence Intern applicant at Bayer Healthcare LLC) by Christy George**

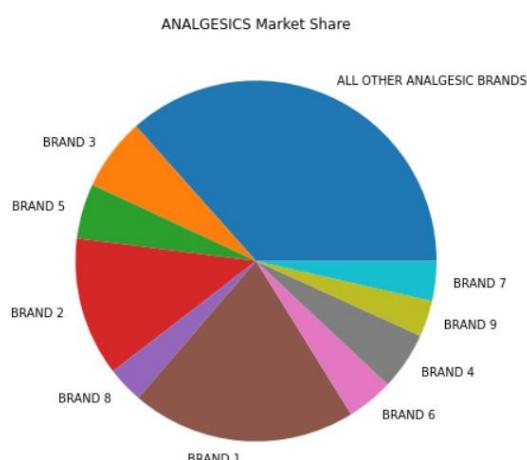
- **Purpose statement:** Analyze Bayer Healthcare LLC's market performance in total and "Manufacturer 1"'s performance in particular. The key insights from the data for the future projection of the revenue are dependent on the performance analysis.
- **Research methodologies:** We have the market type, category of the products (Analgesics and Upper Respiratory), different brand types, manufacturers, sales for the past year, and present (in Dollars). We can ask some questions related to the data, such as:
  - Which category dominates in the market? And their revenue figure.
  - Number of brands existing in the market
  - Sale value of each Brand (Current and last year)
  - Manufacturers existing in the market and their sale values
  - We can observe the best combinations of category, brand type, and manufacturers based on the performance.Firstly, the market type is the same for all the categories of products to eliminate it for the analysis. Grouping the category into two, i.e., "Analgesics" and "Upper Respiratory," would give us a better understanding of the performance of each type. To understand the sales change in dollars, the difference of the "Dollar sales" and "Dollars Sales Years Ago" is calculated.  
Also, we found descriptive statistics of the sales figures across the market for understanding the statistics and their distribution.  
Secondly, focus now can be towards only understanding "Manufacturer 1" 's performance in the market. There are some inevitable questions, such as which category of the products was in profit over the year, what brands they manufacture, what could be the difference between "Manufacturer 1" and other manufacturers, and what should be the strategy for "Manufacturer 1" for the future sales growth.

**Key findings and discussions:** After careful evaluation of the data, we found that:

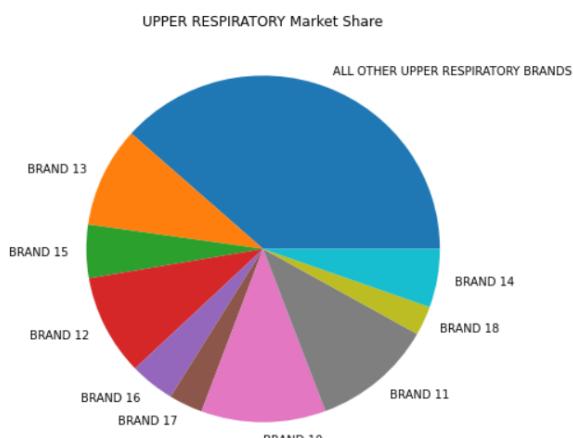
- "Upper Respiratory" category products are dominant in the market with total sales of \$ 5,45,64,21,000 and positive growth in Sales by \$24,99,15,900.

| Category          | Dollar Sales | Dollar Sales Year Ago |
|-------------------|--------------|-----------------------|
| ANALGESICS        | 4.015331e+09 | 3.980029e+09          |
| UPPER RESPIRATORY | 5.456421e+09 | 5.706337e+09          |

- A total of 18 brands are named, and the rest of the brands with their categories.



**Fig 1**

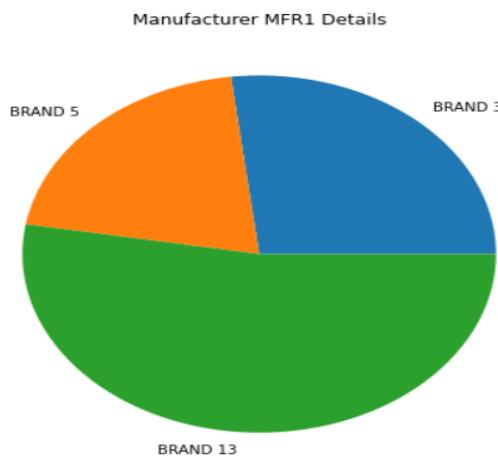


**Fig 2**

- We found that all brands under the "Upper Respiratory" category products dominate the sales figures with \$2,09,49,04,454 in the current year and \$2,27,98,39,144 in the previous year. "Brand 1", manufactured by

"Manufacturer 3" under the "Analgesics" category, has the highest revenue among other brands with current sales of \$80,79,89,916 and \$79,65,38,936 in the previous year. Similarly, "Brand 9", manufactured by "Manufacturer 6", under the "Analgesics" category, has the lowest figure of \$13,05,91,831. Among all the products, the highest revenue increase is seen in the "Upper Respiratory" category by all the manufacturers and brands, and the highest revenue decrease is seen in the "Upper Respiratory" category of "Brand 12" and manufactured by "Manufacturer 3".

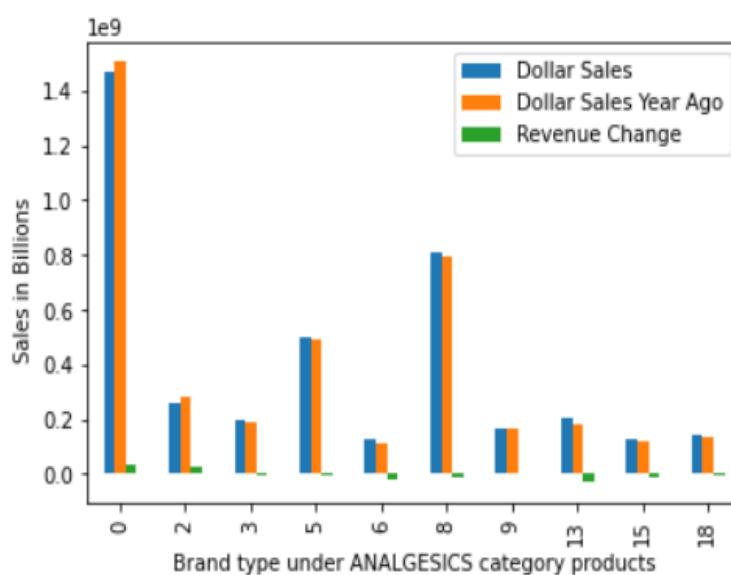
- There are a total of seven manufacturers who are labelled other than a group of manufacturers. The group of manufacturers has the highest sales in both categories.
- **Manufacturer 1:** Produces both types of products, i.e., "Analgesics" and "Upper Respiratory." It also manufactures three brands, namely "Brand 5", "Brand 3", and "Brand 13". The market share of "Manufacturer 1" is seen below:



- We observed that among all "Brand 13" under the "Upper Respiratory" category has the highest revenue with \$51,04,99,643 in the current year and \$48,11,75,624 in the previous year, and "Brand 5" under the "Analgesics" category produces the lowest sales of \$19,79,02,439 in the current year and \$19,18,12,842 during the last year. We can conclude that "Brand 3" has performed the best out of all the brands manufactured by "Manufacturer 1" with a 9.13% increase in revenue followed by "Brand 5" with -3.08% and "Brand 13" with a -5.75% change in sales compared to the previous year.

#### **Conclusion:**

- The **best performing products** in the entire market for the highest revenue are under the "Upper Respiratory" category by all the remaining manufacturers and combine all brands. "Manufacturer 6" producing "Brand 18" under "Upper Respiratory" category products has performed the best among individual manufacturers.
- Manufacturer 3, producing "Brand 12" under "Upper Respiratory" category products, has been the most unsatisfactory performance among all the manufacturers.
- **Manufacture 1:** Producing Brand 3 under the "Analgesics" category has the highest increase in revenue, but the highest sales in total are earned by brand 13. Similarly, Brand 13 has had the lowest revenue increase, and "brand 5" had created the most insufficient revenue.



**Fig 3**

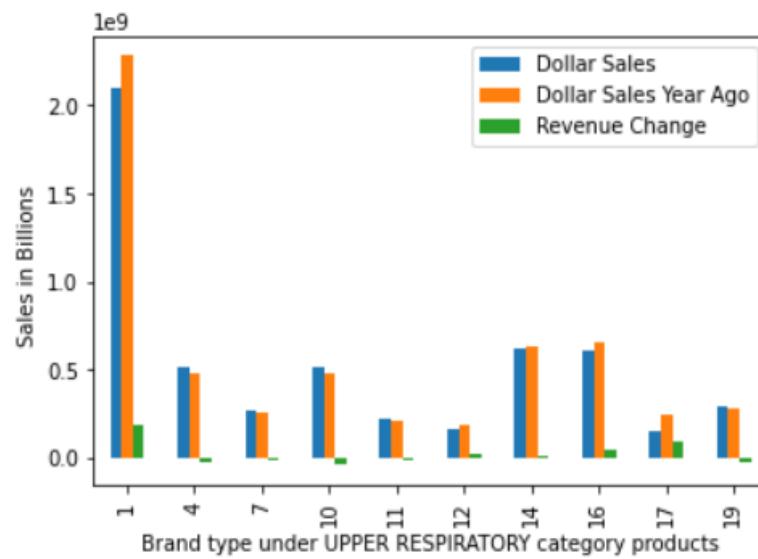


Fig4

#### **Recommendations:**

Since this data is not sufficient enough to predict the revenue on certain conditions, we can make inferences from the available data that:

- Under "Upper Respiratory" category products, we should be increasing the productions of "Brand 1", "Brand 12", "Brand 14", "Brand 16", and "Brand 17" since it gives positive revenue growth. "Brands 4", "Brand 7", "Brand 10", "Brand 11", and "Brand 19" have negative increases in sales. Furthermore, there should be further analysis of other features which are unavailable in the data.
- Manufacturer 1: Manufacturer 1 should increase the production of "Brand 3" products under the "Analgesics" category since it has the highest revenue growth. Further analysis is needed to understand other brands' low performance, although "Brand 13" under the "Upper Respiratory" category has produced the highest sales among all. If "Manufacturer 1" wants to introduce new products, it should follow nearly the same conditions as "Brand 3" under the "Analgesics" category.