



Overview: Brown and Brothers Inventory & Revenue Dashboard

This report was created as a demonstration of my analytical skills and ability to extract insights using Power BI. The dataset, sourced from Kaggle in CSV format, was cleaned, enriched, and transformed in Excel to prepare it for use in Power BI.

The objective was to analyze purchasing trends, product preferences, and revenue behavior for a fictitious company, *Brown and Brothers*, in order to identify actionable business insights.

Data Preparation

- **Source:** Raw dataset from Kaggle.com
- **Tools used:** Excel (initial cleaning), Power Query (additional transformations)
- **Steps:**
 - Created a working copy of the raw data to preserve original values
 - Removed duplicates and irrelevant columns
 - Enriched data by adding new columns:
 - **Category:** Grouped products into logical categories
 - **Season:** Mapped items to seasonal trends
 - Handled missing values and combined data where necessary

Business Questions Addressed

- What payment method is most preferred by customers?
- Which products are most frequently purchased?
- What are the seasonal trends in customer purchases?
- Can we identify potential wholesale buyers based on bulk purchasing behavior?
- Which time periods have the highest revenue and purchase activity?

Power BI Measures & Visuals (Selected Examples)

- **Profit Over Time:** Monthly breakdown of net revenue
- **Top Products:** Most purchased and most consistently purchased items
- **Product Ratings:** Customer preferences by rating
- **Payment Breakdown:** Cash vs. credit usage over time
- **Customer Segmentation:** Identification of wholesale-like behavior based on volume and seasonality

Key Insights

- A customer segment exists that consistently purchases high volumes of out-of-season items — identified as potential **wholesale buyers**.
 - Sales are not heavily driven by brand loyalty but appear responsive to **seasonal promotions** and **bulk discounts**.
 - **Out-of-season inventory** presents a strong revenue opportunity when strategically marketed at the right time.
 - Power BI visuals helped reveal these patterns clearly and provide actionable marketing and operational strategies.
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Conclusion & Recommendations

Brown and Brothers could:

- Implement **targeted discounts** to nurture wholesale behavior
- Design **seasonal marketing campaigns** to clear excess inventory and increase revenue
- Incentivize preferred payment methods to reduce transaction costs or increase margins
- Use Power BI's insights to continuously monitor trends and customer segments

Sample DAX Measures Used

Below are a few sample DAX measures created for this report, demonstrating the logic and calculations behind the insights shown in the dashboard:

-- Total Revenue

Total Revenue = SUM('SalesData'[Revenue])

-- Average Rating

Average Rating = AVERAGE('SalesData'[Rating])

-- Most Popular Item (by quantity sold)

Most Popular Item =

CALCULATE(

```
MAX('SalesData'[Item]),  
FILTER(  
    'SalesData',  
    'SalesData'[Quantity] = MAX('SalesData'[Quantity])  
)  
)
```

-- Total Items Sold (for inventory analysis)

Total Items Sold = SUM('SalesData'[Quantity])

-- Revenue by Season

Revenue by Season =

```
CALCULATE(  
    SUM('SalesData'[Revenue]),  
    ALLEXCEPT('SalesData', 'SalesData'[Season])  
)
```

-- Repeat Customers (if customer IDs exist)

Repeat Customers =

```
CALCULATE(  
    DISTINCTCOUNT('SalesData'[CustomerID]),  
    FILTER(  
        'SalesData',  
        CALCULATE(COUNT('SalesData'[Date])) > 1  
    )  
)
```

★ **About the Analyst**

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Live Dashboard: [View Brown & Brothers Inventory & Revenue Dashboard](#)