

## 1.1 Revenue by Store

### Insights

#### Output Analysis:

**Store 8** generated the highest revenue of **\$79,528.25**, accounting for **34.04%** of the total revenue, with **34.21%** of the overall transactions. **Store 3** followed closely with **\$77,213.23** in revenue, representing **33.05%** of the total revenue and **33.73%** of the transactions. **Store 5** generated the lowest revenue of **\$76,894.47**, contributing **32.91%** to the total revenue, with **32.06%** of the transactions.

#### The key patterns:

The distribution of revenue and transactions across the stores is fairly balanced, with no store performing drastically better or worse. However, **Store 5** consistently shows slightly lower figures in both total revenue and number of transactions, indicating an underperformance compared to the other two. Also, despite **Store 5** having fewer transactions, its percentage of total revenue is relatively high, which means that **the average transaction value in Store 5 is higher** compared to Store 8 and 3.

#### Potential Business problem:

**Store 5** seems to attract fewer customers or drive fewer transactions compared to Stores 8 and 3. This could be due to various factors such as lower foot traffic, ineffective promotions, or customer satisfaction issues.

## Recommendations

To improve overall sales, conduct customer satisfaction surveys or analyze feedback to identify potential issues, for example, service speed, product variety, ambiance. Also review Store 5's location, accessibility, and foot traffic to determine if external factors affect customer flow.

The high average transaction value in store 5 can be leveraged by implementing **cross-sell or upsell** strategies to maximize revenue from the existing customer base. Finally, maintain or enhance what is working well in Stores 8 and 3, by possibly expanding their product range or offering exclusive promotions to keep these stores competitive and further boost their performance.

## 1.2 Sales Volume by Product

### Insights

#### Output Analysis:

For the top 5 products, the most popular products include **Earl Grey Rg** (1,558 units), **Dark Chocolate Lg** (1,546 units), **Latte** (1,531 units) and **Ethiopia Rg** (1,506 units). These products show strong customer preference and contribute significantly to revenue generation.

While the for the bottom 5 products, such as **Guatemalan Sustainably Grown**, **Serenity Green Tea**, and **Earl Grey** have extremely low sales, with just **48** units sold. While **Dark Chocolate** (36 units) and **Spicy Eye Opener Chai** (42 units) are performing particularly poorly.

## The key patterns:

The **popular product categories** which include tea-based products (e.g., Earl Grey Rg, Morning Sunrise Chai) and coffee-based beverages (Latte, Dark Chocolate) seem to resonate well with the customer base.

While for the **Underperforming products**, certain niche products, like Primo Espresso Roast, Peppermint, and Guatemalan Sustainably Grown, are not attracting as many customers, potentially due to low demand or lack of visibility.

## Potential Business problem:

The lower sales volumes in the bottom 5 products may indicate either **overstocking** or **poor product-market fit**, leading to potential wastage. This can negatively impact inventory management as well as operational costs.

## Recommendations

Refocus marketing efforts on high-performing products to further increase their sales. Also, review inventory and pricing strategy for the underperforming products or alternatively, try **bundling underperforming products** with popular items to stimulate sales, or consider offering discounts to clear excess stock. Finally, Consider customer feedback and preferences.

## 1.3 Weekly Sales Trend

### Insights

#### Output Analysis:

**Wednesday** saw strong performance with **7,105 transactions** and **\$34,320.73** in total revenue, boasting the highest average weekly revenue per transaction of **\$4.83**. while the highest number of transactions occurred on **Monday** with **8,471 transactions** and a total weekly revenue of **\$39,614.34**. The lowest number of transactions happened on **Sunday** with **6,646 transactions** and **\$31,013.70** in total revenue, but the average transaction value remained consistent with other days at **\$4.67**.

## The key patterns:

**Monday** is the busiest day of the week for the coffee stores. While **Sunday** is the slowest day in terms of transactions and revenue, which might indicate lower foot traffic during weekends. Despite variation in the number of transactions, the **average revenue per transaction** remains stable across the week, ranging between **\$4.63 and \$4.83**, with **Wednesday** having the highest per-transaction revenue.

## Potential Business problem:

The fluctuations in transaction numbers suggest that customer behavior is not uniform across the week. The lower transactions on **Sunday** indicate an opportunity to boost sales during the weekends, while **Monday** present opportunities to handle higher demand more efficiently.

## Recommendations

To maximize Monday sales performance, consider **expanding resources** (more staff, extended hours) to handle the higher transaction volume efficiently. Also promote **special Monday offers** to capitalize on the high customer traffic. **Boost weekend traffic (Saturday and Sunday)** by introducing **weekend-specific promotions** to increase sales on slower days like Sunday. Also highlight limited-time or special weekend products to create urgency and draw customers in.

## 2.1 Best-Selling Product Category in Each Sales Outlet

### Insights

#### Output Analysis:

Across all three outlets, the **best-selling product category** is consistently **coffee**. **Outlet 8** sold the highest quantity of coffee, **10,236 units**, generating **\$30,862.70** in revenue. **Outlet 3** followed closely with **9,912 units** sold and a total revenue of **\$30,058.80**. While **Outlet 5**, sold **9,910 units** of coffee, generating **\$30,026.95**.

#### The key patterns:

The **Coffee category** dominates sales in all outlets, contributing significantly to overall revenue.

The difference in total quantity sold between the stores is relatively small, which indicates that **coffee demand is high and consistent** across all store locations. While **Outlet 8** performs slightly better in both quantity sold and revenue, suggesting it might have a larger customer base or higher demand for coffee products.

#### Potential Business problem:

Although coffee is clearly the best-selling category, the reliance on one category across all stores could pose a risk if customer preferences shift. In addition, other product categories are not contributing as much to overall sales, which could point to an **over-reliance on coffee** for revenue generation.

## Recommendations

**Diversify product offerings** by promoting other products to reduce over-dependence on a single product line (**coffee**). This could include improve visibility and marketing of underperforming categories. Also take advantage of coffee high sales performance by **expanding premium coffee options**.

## 2.3 Products with the Least and Most Wastage

### Insights

#### Output Analysis:

**Hazelnut Biscotti** shows the **least wastage** with an average waste percentage of **51.59%**, while the **Ginger Scone** has the **most wastage**, with **71.91%**.

## The key patterns:

Both products have high wastage rates, with **more than half of the stock** not being sold before the end of the business day or becoming unsellable. While **Hazelnut Biscotti** performs relatively better, even the lowest wastage percentage (51.59%) indicates inefficient stock management or low demand for these products. The **Ginger Scone's** wastage rate of 71.91% is very high, suggesting it is either overstocked or unpopular among customers.

## Potential Business problem:

High wastage levels lead to **inventory inefficiencies** and **lost revenue**, contributing to overall operational costs. The wastage rate for the Ginger Scone, in particular, is alarming and signals the need for urgent changes in either demand forecasting or product offering.

## Recommendations

Adjust the inventory levels for high-wastage products by considering reducing the amount of stock ordered or produced for this item, as current levels appear to far exceed customer demand. If the high wastage persists for items like the Ginger Scone, **consider discontinuing** these products, or replace them with items that align better with customer preferences. Also optimize stocking for low-waste products by implementing **better demand forecasting techniques** to optimize how much is ordered, produced, or displayed. Finally getting customer feedback on wasted products to understand **why certain products** like the aren't selling.

## 3.1 Sales Per Employee

### Insights

#### Output Analysis:

**Britanni Jorden** is the top performer with total sales of **\$27,516.04** from **5,930 transactions**, averaging **\$4.64 per transaction**. While **Joseph Byron** and **Peter Paloma** have the **highest sales per transaction**, with **\$5.00** and **\$5.21**, respectively.

#### The key patterns:

The sales per transaction across employees are relatively consistent, averaging between **\$4.50 and \$5.46**, indicating stable pricing or sales patterns across staff. Employees like **Britanni Jorden**, who handled the **most transactions** and generated the **highest sales**, are key contributors to overall store performance.

#### Potential Business problem:

There's a noticeable difference in **sales per employee**, particularly between the top performers and those with lower transaction volumes. This could indicate **uneven task distribution**, with some employees focused more on sales while others may be handling non-sales-related tasks.

## Recommendations

A task distribution review should be performed to evaluate how tasks are assigned. Employees like **Britanni Jorden** and **Kylie Candace** are highly effective in handling transactions. Consider **assigning more sales-oriented tasks** to those with lower performance to balance workloads and improve overall efficiency.

## 3.2 Potential Revenue Lost Due to Wastage by Store

### Insights

#### Output Analysis:

**Store 5** lost the **most potential revenue** due to wastage, with an estimated **\$5,429** in lost revenue from **1,590 units wasted**. **Store 3** lost **\$4,996.50** in potential revenue from **1,467 units wasted**, and **Store 8** lost **\$4,935.25** from **1,443 units wasted**.

#### The key patterns:

All three stores are experiencing high levels of wastage, leading to substantial **lost potential revenue**. The **wastage percentages** are significant, indicating inefficiencies in inventory management. Also, the difference in potential revenue lost across the stores is minimal, implying that wastage is a **common problem** affecting all outlets rather than being location-specific.

#### Potential Business problem:

**Wastage across all stores** is leading to a **significant lost revenue**, which can impact the overall profitability. The high wastage suggests that **stock levels are not aligned with actual demand**, and there may be inefficiencies in how products are ordered, stored, or managed.

## Recommendations

Using a better **inventory management system** that tracks sales patterns and alerts store managers when products are nearing their expiration dates or when stock is not moving.

Implement a First-In, First-Out (FIFO) system to ensure that products are sold in the **order they were stocked (FIFO)**, especially perishable items, to reduce waste and maximize revenue potential.

Introduce **demand forecasting** to better predict the quantity of products needed in each store. This can help reduce overstocking.

## 4.1 Average Transaction Value by Customer

### Insights

#### Output Analysis:

Across **2,246 customers**, the **average transaction value** is **\$4.68**, indicating that on average, customers spend **\$4.68** per transaction. Also, there is a variation in customer spending habits with the **minimum transaction value** of **\$2.87** and the **maximum** of **\$26.63**. Finally, the interquartile range (**Q1 to Q3**) is **\$4.20 to \$5.00**, indicating that 50% of the transactions fall within this price range. This highlights a narrow band of spending for the majority of customers, with only a few spending at the extremes.

#### The key patterns:

Most customers are making **small transactions**, with the majority spending around **\$4.20 to \$5.00**. while only a few outliers are making larger purchases, with the **maximum transaction value** reaching **\$26.63**.

#### Potential Business problem:

While the average transaction value is relatively stable, the coffee shops are heavily reliant on **low-value transactions**, which may limit revenue growth. Encouraging customers to increase their spend per visit is essential to boosting the overall revenue of the coffee stores.

### Recommendations

Implement better loyalty programs that rewards customers for spending above a certain threshold. This can motivate customers to increase their purchase amount to reach rewards.

Target high-spending customers with special promotions and offer them **exclusive value** on premium or seasonal items to encourage repeat purchases at the upper end of the price spectrum.

**Encourage upselling and cross-selling** by offering **bundled deals** that include multiple items for a slightly higher price, which can push the **average transaction value** closer to the **\$5.00 to \$6.00 range**.

## 4.2 Top 5 Popular Purchase Combinations by Customer

### Insights

#### Output Analysis:

The most frequent purchase combination is **Earl Grey Rg**, with a frequency of **881**, followed closely by **Dark chocolate Lg** (878), **Jamaican Coffee River Lg** (874), **Sustainably Grown Organic Lg** (868), and **Our Old Time Diner Blend Rg** (865).

#### The key patterns:

**Earl Grey Rg** leads the combinations, which could reflect a preference for more **classic or traditional beverages** like tea.

**Large-sized coffee blends** dominate the list, indicating that **customers prefer larger portions** for their coffee orders, potentially for on-the-go consumption or longer enjoyment.

### Potential Business problem:

The **lack of differentiation** in the frequency of the top purchase combinations shows that while the business has a few favorites, it may not be fully leveraging customer preferences to drive further sales growth.

### Recommendations

Promote popular combinations as bundles or **combo deals** that include the top-selling items or offering a discount on products when purchased with another product. This can drive higher sales for these popular combinations and increase the overall transaction value. Also encourage customers to try new combinations for example, when a customer purchases **Earl Grey Rg**, they could receive a **small discount on a new or less popular product** to increase exposure to other offerings.

## 4.3 Frequency of Daily Visits by Customers

### Insights

#### Output Analysis:

The **average frequency** of customer visits per day is **1.39**, indicating that most customers visit the coffee shop once a day, with a few visiting multiple times. The **minimum, median, Q1, Q3, and mode** values all being **1** suggest that the vast majority of customers only visit once per day. However, the **maximum value** of **7 visits** suggests that some customers are visiting multiple times a day, though this behavior is uncommon.

#### The key patterns:

**Single daily visits** are the norm, as shown by the **mode** and other quartiles all being **1**. And the **average frequency** being slightly above **1** could suggest opportunities for **increasing customer frequency** through targeted promotions or incentives.

### Potential Business problem:

The **limited frequency of visits** may be capping potential sales growth. If most customers only visit once a day, the coffee shop might be missing out on opportunities to increase visit frequency and thereby drive higher revenue.

### Recommendations

Incentivize repeat visits on the same day by introducing "Second Cup Discounts" or "Same Day Return Specials" that offer customers a discount or free item if they return for a second visit on the same day. This can encourage multiple daily visits and increase overall sales.

Introduce a **monthly subscription** service where customers can pay a flat fee for **unlimited coffee** or **daily discounts**. This can attract customers who may want to visit more frequently throughout the day without feeling the financial burden of multiple transactions.