

# SparkCART

*50,000 transactions — Sales performance & customer insights*

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# Key Findings

- Total revenue = \$ **\$25,111,677** across 50k orders.
- Top product category: Sports
- 40 + are the age group that spends the most of money on purchases
- France is the country that has the majority of customers

# Business Task

- Business task: “We want to understand our customers’ purchasing behavior to optimize marketing campaigns and product offerings”
  - What is the total revenue per product category?
  - Which age group spends the most?
  - Which countries generate the most sales?
  - What is the average purchase amount by payment method?
  - Are there seasonal trends or sales spikes by month/quarter?
  - What is the distribution of users by country and age group?

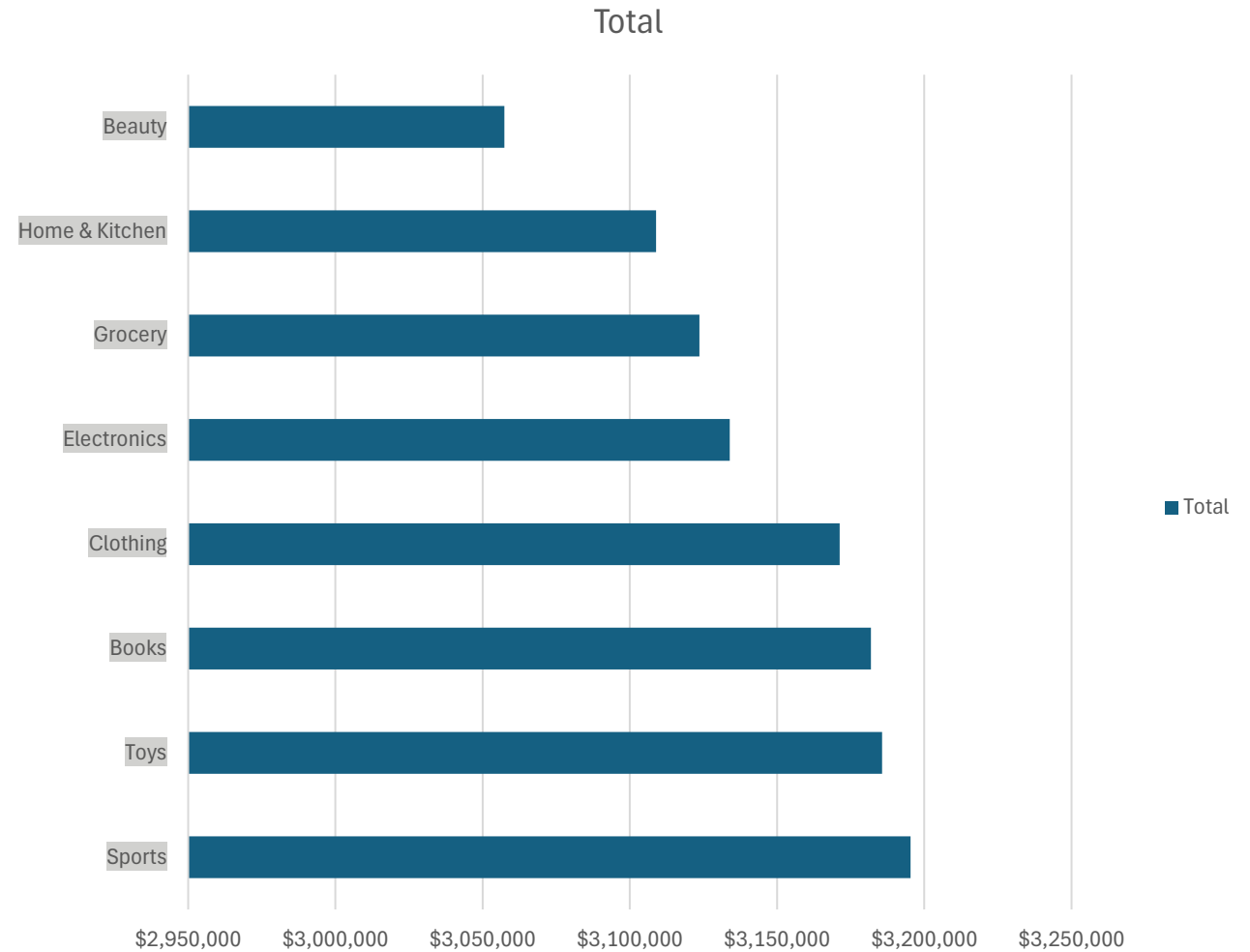
# Dataset overview & methodology

- Dataset: 50,000 transactions from Kaggle.
- Key columns: Transaction\_ID, User\_name, age, country, product\_category, purchase\_amount (US), payment\_method, date.
- Transformations: added Month, Age\_Group; removed duplicates; ensured date/currency types

Transaction_ID	User_Name	Age	Country	Product_Category	Purchase_Amount(US Dollar)	Payment_Method	Day	Transaction_Date	Month	Year	Age group
1	Ava Hall	63	Mexico	Clothing	\$780.69	Debit Card	Friday	4/14/2023	April	2023	40+
2	Sophia Hall	59	India	Beauty	\$738.56	PayPal	Sunday	7/30/2023	July	2023	40+
3	Elijah Thompson	26	France	Books	\$178.34	Credit Card	Sunday	9/17/2023	September	2023	25-40
4	Elijah White	43	Mexico	Sports	\$401.09	UPI	Wednesday	6/21/2023	June	2023	40+
5	Ava Harris	48	Germany	Beauty	\$594.83	Net Banking	Tuesday	10/29/2024	October	2024	40+

# Revenue by Product Category

- Top category: Sports – \$3,195,336, slightly ahead of Toys (\$3,185,652) and Books (\$3,181,897)
- .Other strong performers: Clothing, Electronics, Grocery, Home & Kitchen, Beauty (~\$3.05M – \$3.17M each).Insight:
- Revenue is relatively evenly distributed across categories, with Sports leading by a small margin.



# Which age group generates the most revenue?

- Insight:**

- Age 40+ generates **\$14,207,048 (~56%)** of total revenue.
- Age 25–40 generates **\$7,642,623 (~30%)**.
- <25 generates the smallest revenue (~13%).

- Recommendation:**

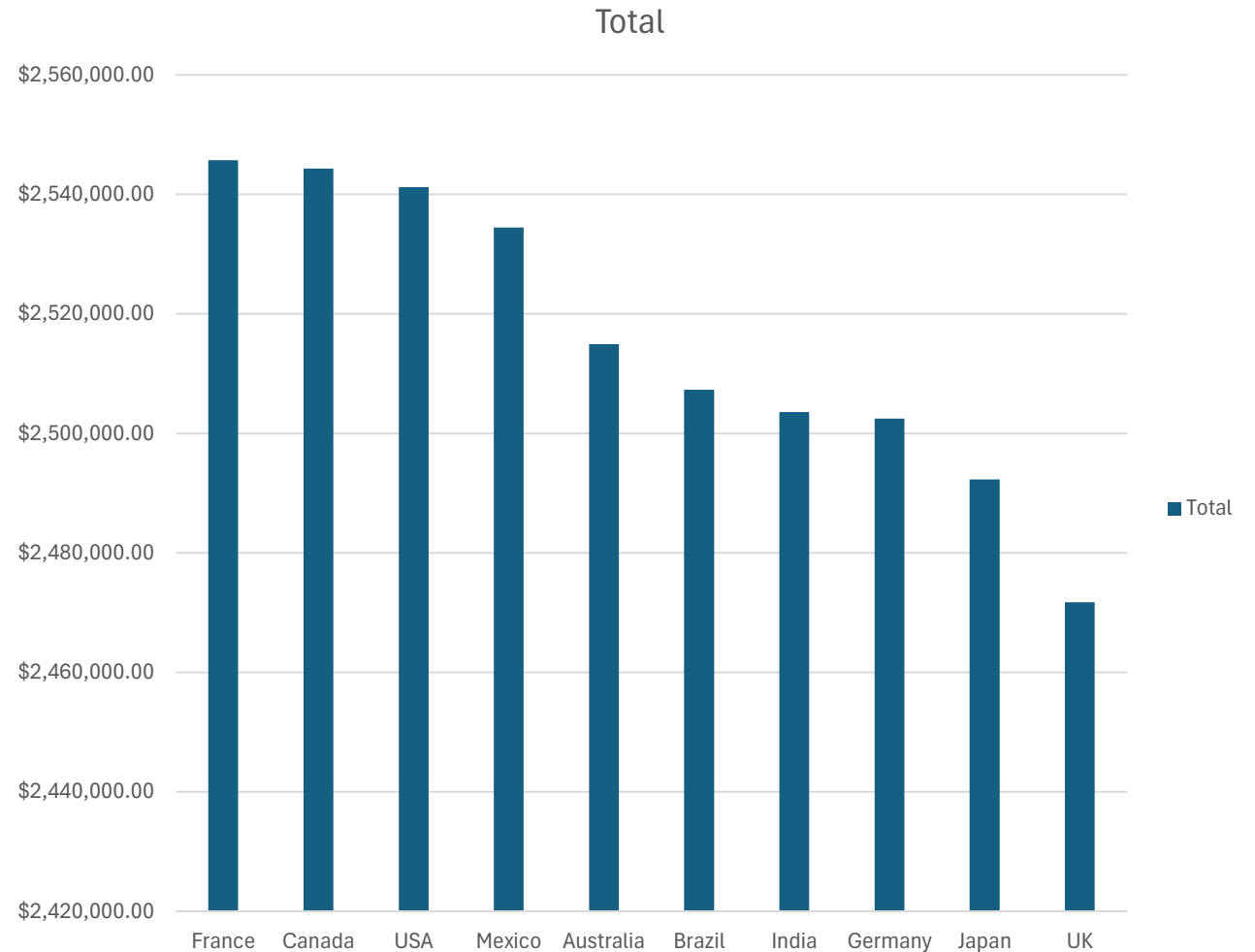
- Focus **loyalty programs, premium offers, and high-value promotions** on the **40+ age group**.
- Secondary campaigns can target the **25–40 group** with discounts or bundling offers.
- For the <25 segment, consider **awareness campaigns and entry-level products** to build long-term engagement.

# Revenue by Country

- Top three markets:** France (\$2,545,739), Canada (\$2,544,335), USA (\$2,541,220).

- Revenue is fairly evenly distributed** across all top 10 countries (~\$2.47M – \$2.55M each).

- Insight:** No single country dominates sales, indicating **global market consistency**.



# Which months see the highest and lowest revenue?

## •Insight:

- Peak months:** July (\$2,167,155), January (\$2,151,542).
- Lowest revenue:** February (\$1,960,408).
- Revenue gradually increases from February → July, then fluctuates moderately.

## •Recommendation:

- Plan **major marketing campaigns, discounts, and inventory stocking** in advance of **June–July peak season**.
- Use **February and slow months** for testing new products or running **low-cost engagement campaigns**.
- Consider **seasonal promotions** and targeted ads during high-revenue months.

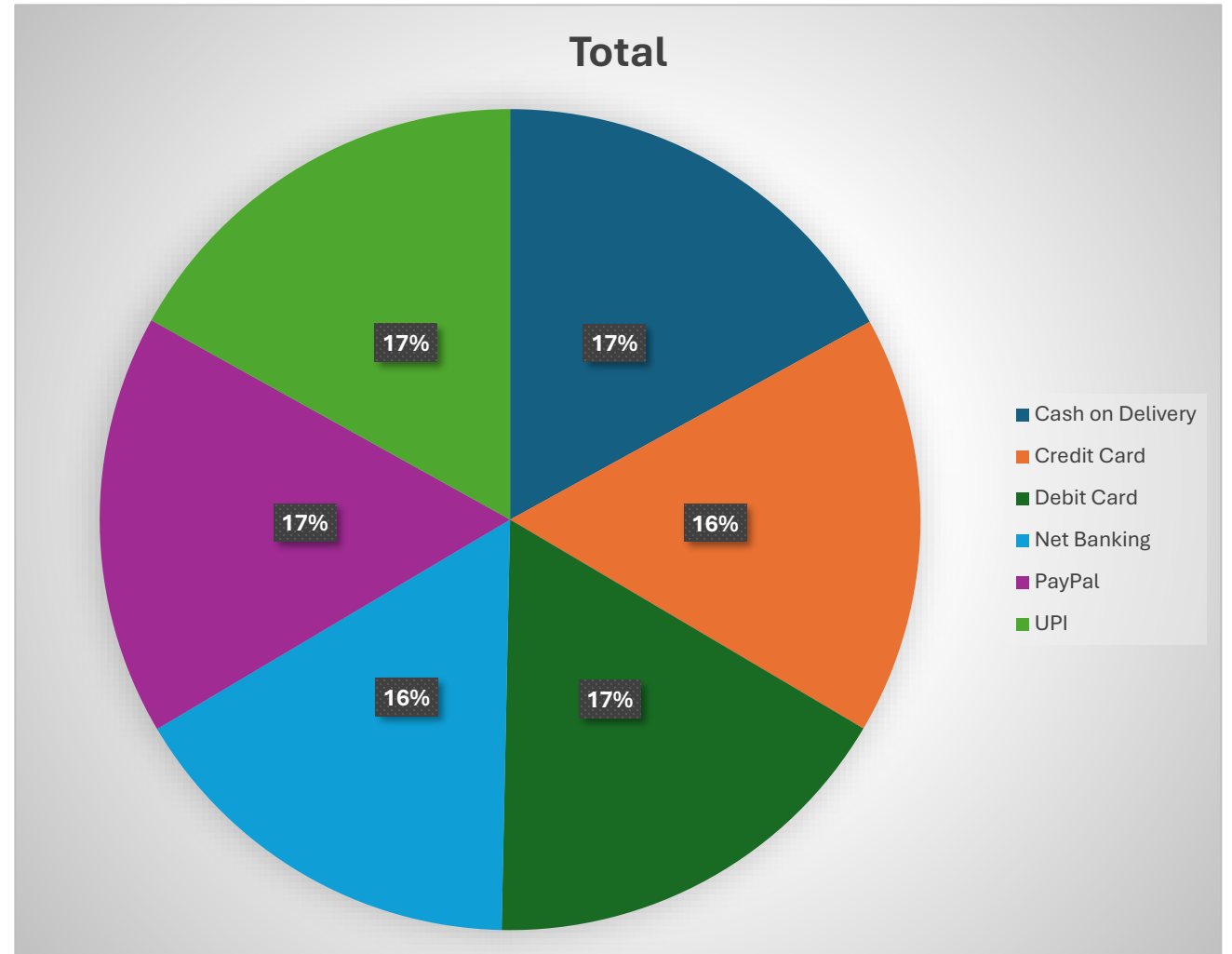


# Revenue by Payment Method

Top payment method: Cash on Delivery – \$4,276,269 (~17% of total revenue)

.Other strong contributors: UPI (\$4,259,356), Debit Card (\$4,234,776), PayPal (\$4,173,530), Credit Card (\$4,150,547), Net Banking (\$4,063,511).

Revenue is fairly evenly distributed across payment methods, with no single method dominating.



# Which payment methods are most used?

- **Insight:**

- Revenue is fairly evenly distributed among payment methods:
  - Top: Cash on Delivery (\$4,276,269), UPI (\$4,259,356), Debit Card (\$4,234,776).
  - Other methods: Credit Card, PayPal, Net Banking (~\$4,063k–\$4,173k).

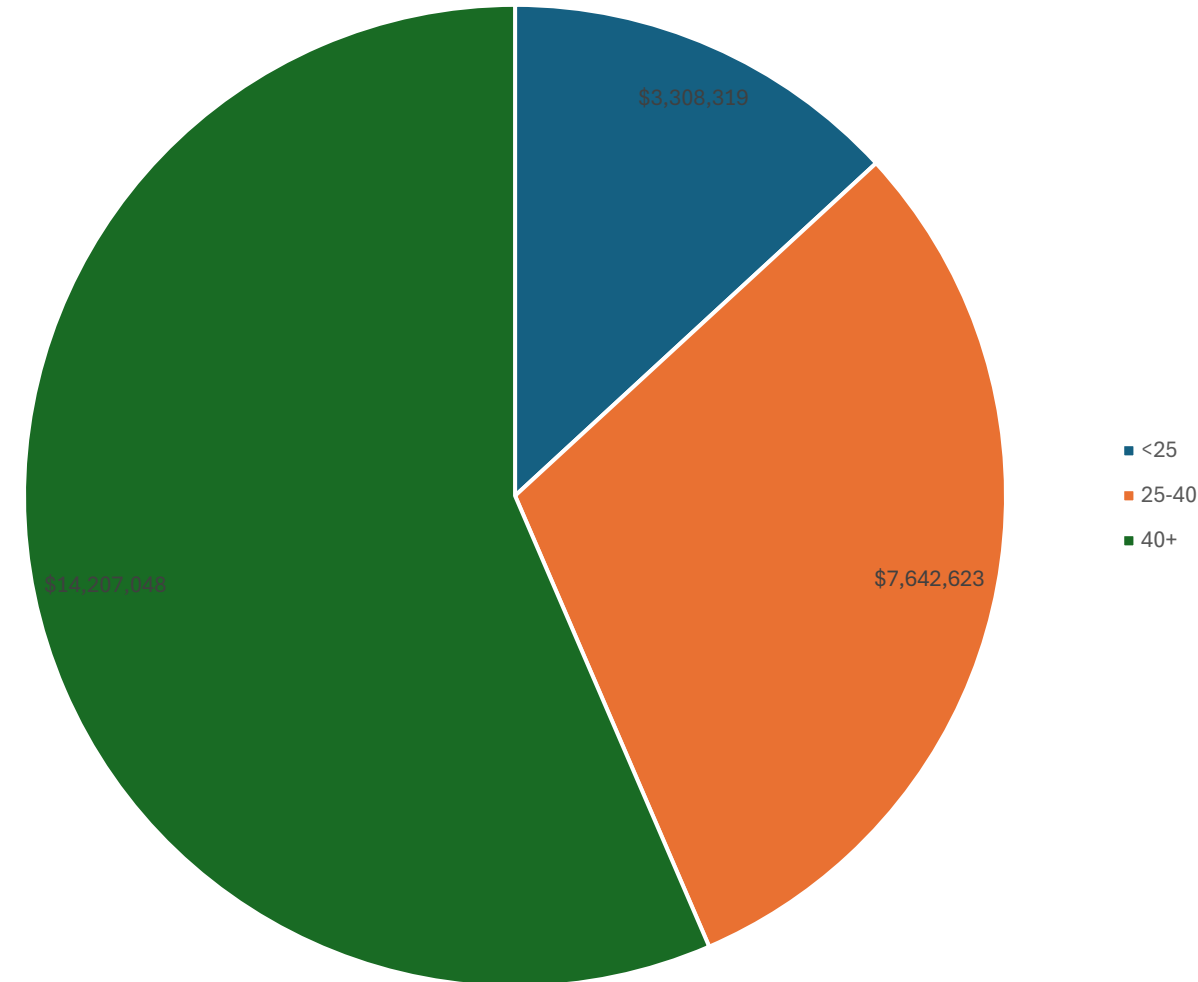
- **Recommendation:**

- Encourage **Cash on Delivery and UPI usage** through promotions, loyalty points, or free shipping.
- Ensure all payment methods are **easy to use and reliable**, as revenue is fairly evenly split.
- Test **targeted incentives** for underperforming payment methods to balance usage.

## Revenue by Age Group

- **Primary revenue segment:** Age **40+** contributes **\$14,207,048**, ~56% of total revenue.
- **Secondary segment:** Age **25–40** contributes **\$7,642,623**, ~30% of total revenue.
- **Youngest segment (<25):** Contributes **\$3,308,319**, ~13% of total revenue.

• **Insight:** Revenue distribution aligns with transaction counts—older customers both buy more and generate higher revenue.



# Which product categories generate the most revenue?

## •Insight:

- Top 3 categories: Sports (\$3,195,336), Toys (\$3,185,652), Books (\$3,181,897).
- Other categories (Clothing, Electronics, Grocery, Home & Kitchen, Beauty) are close (~\$3.05M–\$3.17M).
- Revenue is **relatively balanced across categories**.

## •Recommendation:

- Prioritize **inventory, promotions, and cross-selling campaigns** for **Sports, Toys, and Books**.
- Maintain **stock levels for all categories**, as customers buy across multiple categories.
- Bundle products (e.g., Sports + Clothing, Books + Toys) to **increase average order value**.

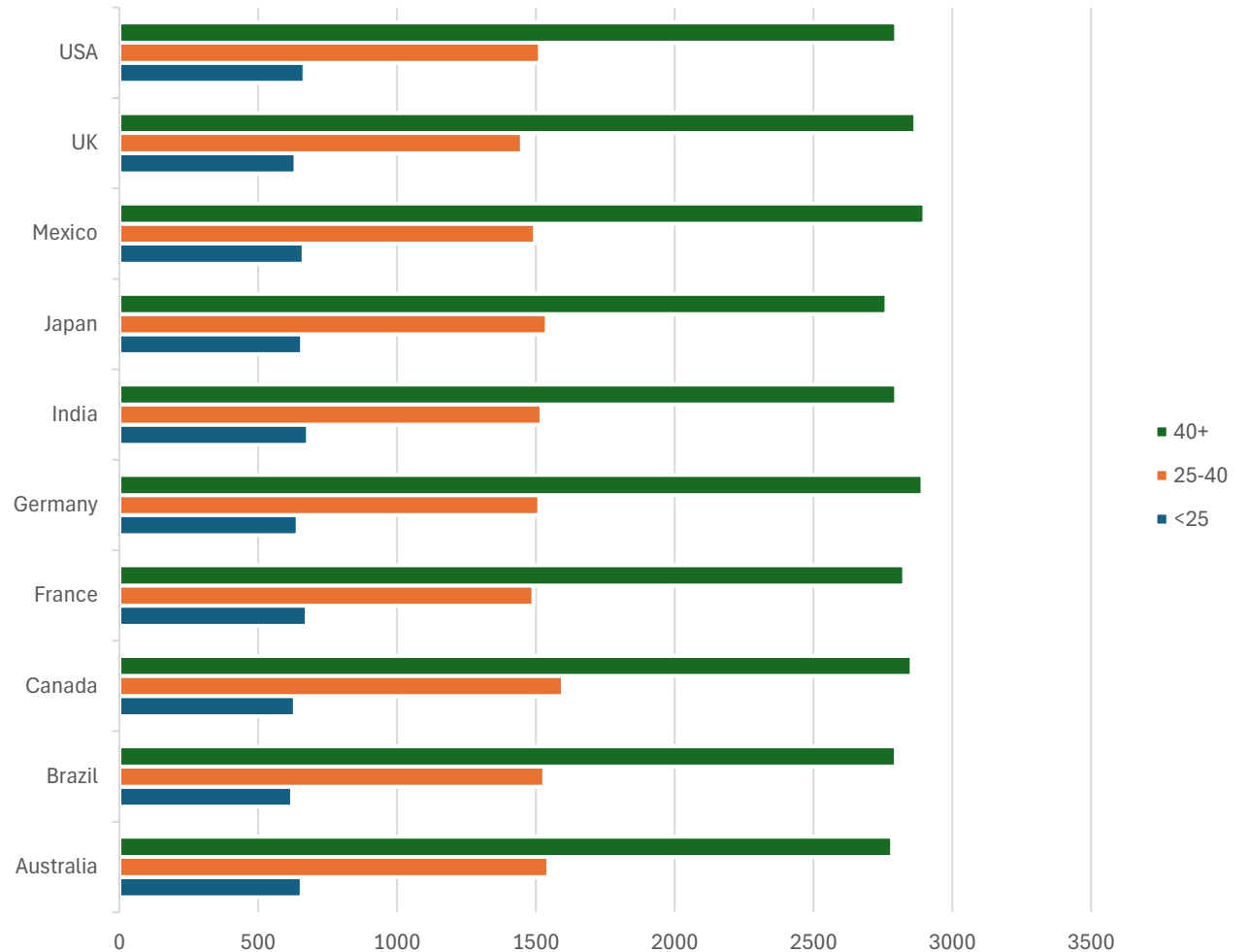
# Customer Segments & Top Customers

- Primary purchasing segment: Age 40+** contributes **56.5%** of total transactions (28,275 of 50,000).

- Secondary segment: Age 25–40** accounts for **30%** of transactions (15,196).

- Youngest segment (<25):** Smallest contributor at **13%** (6,529 transactions).

- Country consistency:** All countries follow a similar distribution, suggesting a **globally consistent customer profile**.



# Which countries are top revenue contributors?

- **Insight:**

- Top 3: France (\$2,545,739), Canada (\$2,544,335), USA (\$2,541,220).
- Revenue distribution is **very consistent** among top 10 countries (\$2.47M–\$2.55M).

- **Recommendation:**

- Use **global marketing campaigns** for these top 10 countries due to similar revenue patterns.
- Localize campaigns minimally (language, cultural references) for differentiation.
- Allocate slightly higher budgets to **France, Canada, and USA**, since they are marginally ahead.

# Overall Recommendations for Marketing & Product Optimization

## 1. Customer Segmentation:

1. Primary: Age 40+ → loyalty programs, premium offers.
2. Secondary: Age 25–40 → bundling, discounts.
3. <25 → awareness campaigns.

## 2. Seasonal Campaigns:

1. Focus major campaigns and inventory prep for **June–July and December–January** peaks.
2. Use slow months for **experiments and testing new products**.

## 3. Product Focus:

1. Highlight top-performing categories: **Sports, Toys, Books**.
2. Bundle related categories to increase revenue per order.

## 4. Payment Methods:

1. Promote **Cash on Delivery and UPI** with incentives.
2. Ensure smooth experience across all payment types.

## 5. Geography:

1. Consistent campaigns across top 10 countries; minor localization if needed.
2. Slightly increase focus on **France, Canada, USA**.

## 6. Data-Driven Next Steps:

1. Track **repeat customers** and **average order value** by age group.
2. Consider **RFM (Recency, Frequency, Monetary) analysis** to identify high-value customers.
3. Test **personalized email campaigns** based on category preference and age segment.