

# Chocolate Sales Analysis — SQL

## 1. Introduction

Sales analysis is a crucial aspect of business intelligence, helping organizations understand market demand, product popularity, and regional sales performance. By analyzing sales data, companies can optimize their inventory, improve marketing strategies, and allocate resources more efficiently.

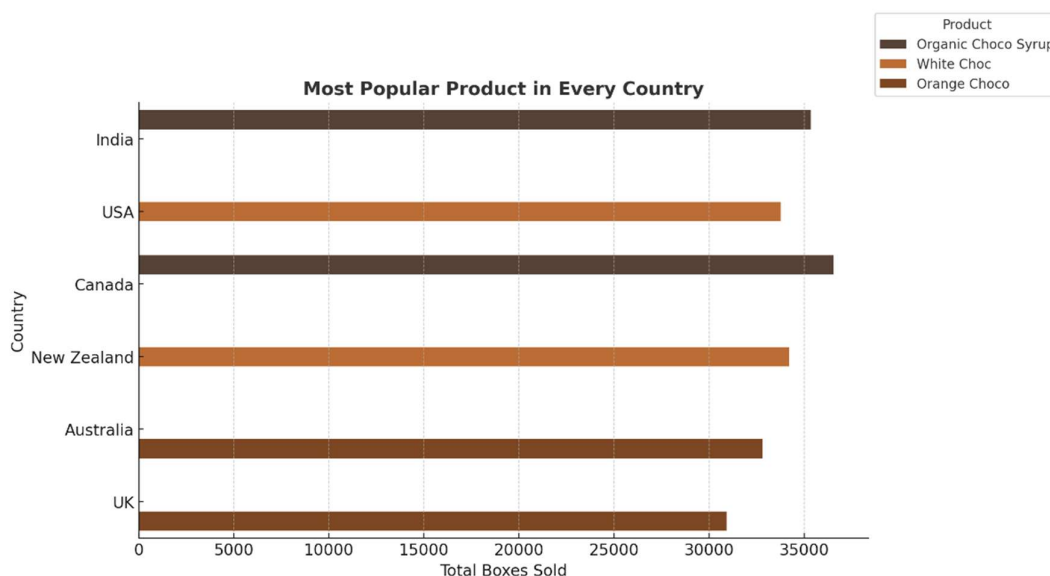
This report presents a detailed analysis of sales data across multiple countries, focusing on product popularity, peak sales periods, salesforce distribution, and sales performance across different regions. The dataset includes information on total sales by country, monthly sales trends, salesperson activity, and high-value transaction days.

## 2. Objectives of the Report

- ✓ Determine the most popular product in each country by analyzing total sales volume.
- ✓ Identify the month with the highest sales in every country to understand seasonal trends.
- ✓ Examine regional distribution of salespersons to evaluate market penetration and resource allocation.
- ✓ Highlight the top countries in terms of salesperson count to understand workforce concentration.
- ✓ Analyze the top-performing countries based on high-value sales days to assess sales consistency and revenue generation.
- ✓ Identify salespersons who were inactive in the first seven days of January 2022, which could indicate operational or logistical challenges.

This report includes SQL-based data extraction, statistical insights, and structured tables to facilitate data-driven decision-making. The findings aim to support business strategies, enhance sales efficiency, and optimize resource allocation across different markets.

## 3. Most Popular Product in Every Country



The bar graph displays the most popular chocolate product sold in each country, with the y-axis representing the countries and the x-axis representing the total boxes sold.

- Organic Choco Syrup is the best-selling product in India (35,356) and Canada (36,551), indicating strong demand for organic chocolate-based products in these regions.
- White Chocolate is the top seller in USA (33,771) and New Zealand (34,216), showing a preference for white chocolate in these countries.
- Orange Choco leads in Australia (32,816) and UK (30,920), suggesting a preference for citrus-infused chocolate flavors in these markets.
- The product preference varies significantly by country, hinting at regional taste differences or possibly the impact of local marketing strategies.

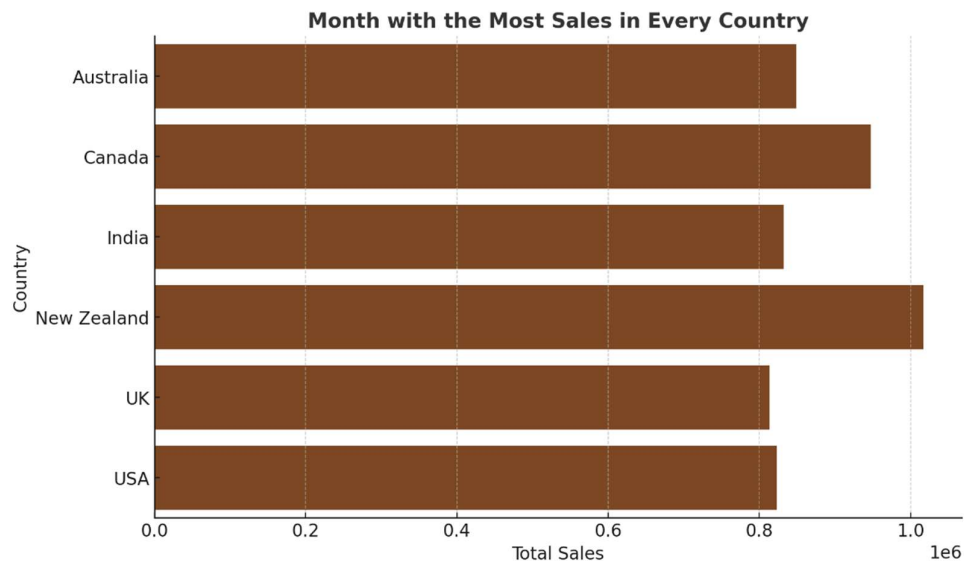
#### SQL Query:

```
with productsales as (  
  select  
    sales.geoid,  
    geo.geo as country,  
    products.product,  
    sum(sales.bboxes) as totalboxessold,  
    row_number() over (partition by sales.geoid order by sum(sales.bboxes) desc) as  
number_  
  from sales  
  inner join products on sales.pid = products.pid  
  inner join geo on sales.geoid = geo.geoid  
  group by sales.geoid, geo.geo, products.product  
)  
select geoid, country, product, totalboxessold  
from productsales  
where number_ = 1;
```

#### Table:

	geoid text	country text	product text	totalboxessold bigint
1	G1	India	Organic Choco Syrup	35356
2	G2	USA	White Choc	33771
3	G3	Canada	Organic Choco Syrup	36551
4	G4	New Zealand	White Choc	34216
5	G5	Australia	Orange Choco	32816
6	G6	UK	Orange Choco	30920

#### 4. Month with the Most Sales in Every Country



This bar graph shows the month with the highest total sales in each country, with the y-axis representing the countries and the x-axis representing the total sales.

- January 2022 was the peak sales month for all six countries.
- The highest sales occurred in New Zealand (1,016,764), followed by Canada (947,352), while UK had the lowest peak sales (813,414).
- This suggests a seasonal trend where sales peak in January, possibly due to post-holiday purchases, New Year promotions, or bulk buying.

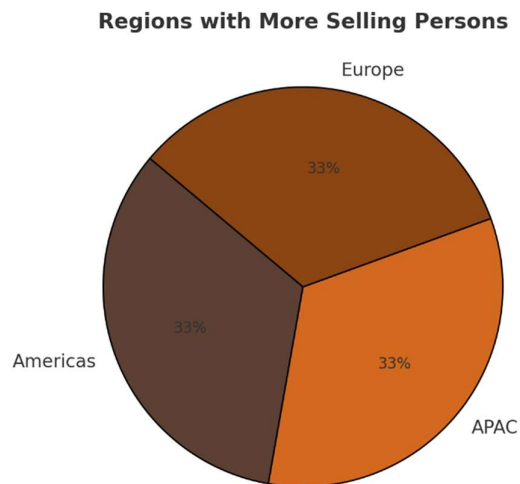
#### SQL Query:

```
with monthliesales as (  
  select  
    geo.geo as country,  
    to_char(sales.saledate, 'fmmonth yyyy') as salemoonth,  
    sum(sales.amount) as totalsales,  
    row_number() over (partition by geo.geo order by sum(sales.amount) desc) as  
number_  
  from sales  
  inner join geo on sales.geoid = geo.geoid  
  group by geo.geo, salemoonth  
)  
select country, salemoonth, totalsales  
from monthliesales  
where number_ = 1;
```

Table:

	country text	salemonth text	totalsales bigint
1	Australia	january 2022	848330
2	Canada	january 2022	947352
3	India	january 2022	831971
4	New Zealand	january 2022	1016764
5	UK	january 2022	813414
6	USA	january 2022	823088

## 5. Regions with More Selling Persons



The pie chart shows the percentage of selling persons in each region,

- Americas, APAC, and Europe all have 25 salespersons each, suggesting an equal distribution of sales forces across these three key regions.
- No one region dominates in terms of salesperson count, indicating a balanced approach to sales coverage.

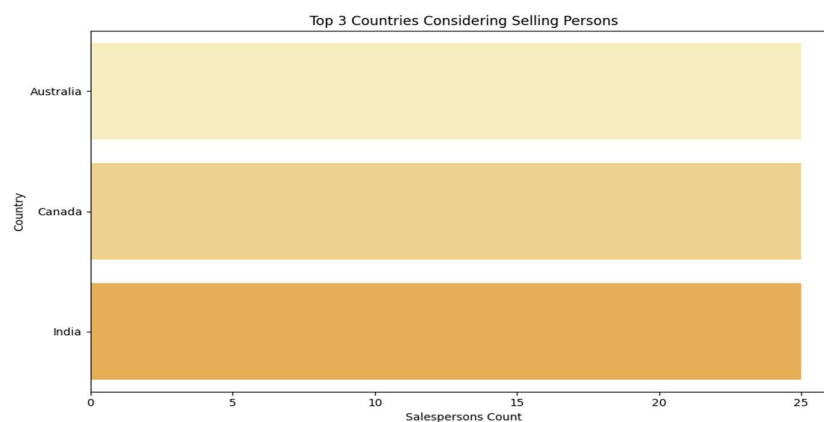
**SQL Query:**

```
select
  geo.region,
  count(distinct people.spid) as total_sales_persons
from people
inner join sales on people.spid = sales.spid
inner join geo on sales.geoid = geo.geoid
group by geo.region
order by total_sales_persons desc;
```

Table:

	region text	total_sales_persons bigint
1	Americas	25
2	APAC	25
3	Europe	25

## 6. Top 3 Countries by Number of Salespersons



The bar graph shows the top three countries with the most selling persons, with the y-axis representing the countries and the x-axis representing the number of selling persons.

- Australia, Canada, and India each have 25 salespersons, implying these are the most significant markets requiring strong sales representation.
- Other countries have fewer salespersons, which could mean lower demand or a different sales strategy (e.g., online-focused sales).

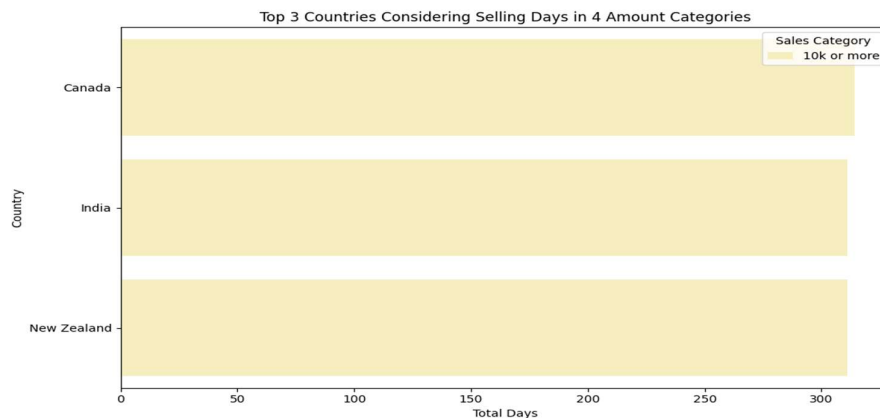
SQL Query:

```
select
  geo.geo as country,
  count(distinct sales.spid) as salespersons_count
from sales
inner join geo on sales.geoid = geo.geoid
group by geo.geo
order by salespersons_count desc
limit 3;
```

Table:

	country text	salespersons_count bigint
1	Australia	25
2	Canada	25
3	India	25

## 7. Top 3 Countries by Selling Days in High-Value Sales Categories



This chart shows the total selling days in the top three countries for each sales category, with the y-axis representing the countries, the x-axis representing the sales categories, and the bars representing the total selling days.

- Canada leads with 314 high-sales days ( $\geq 10K$  amount per day), followed by India (311) and New Zealand (311).
- These three countries are the most active in terms of high-value transactions, indicating strong demand and consistent sales performance in these markets.

### SQL Query:

```
with sales_categories as (  
  select  
    geo.geo as country,  
    count(distinct sales.saledate) as total_days,  
    case  
      when sum(sales.amount) >= 10000 then '10k or more'  
      when sum(sales.amount) < 10000 and sum(sales.amount) >= 5000 then 'under 10k'  
      when sum(sales.amount) < 5000 and sum(sales.amount) >= 1000 then 'under 5k'  
      else 'under 1k'  
    end as sales_category  
  from sales  
  join geo on sales.geoid = geo.geoid  
  group by geo.geo  
)  
select country, sales_category, total_days  
from sales_categories
```

```
order by sales_category, total_days desc
limit 3;
```

**Table:**

	country text	sales_category text	total_days bigint
1	Canada	10k or more	314
2	India	10k or more	311
3	New Zealand	10k or more	311

## 8. Salespersons with No Shipments in the First 7 Days of January 2022

- 8 salespersons did not make any shipments in the first week of January.
- This could be due to various reasons, such as vacations, delays in inventory, or underperformance.
- It may be worth investigating whether this was a one-time issue or a recurring trend.

**SQL Query:**

```
select people.salesperson, people.spid
from people
where not exists (
  select people.salesperson
  from sales
  where people.spid = sales.spid
  and sales.saledate between '2022-01-01' and '2022-01-07'
);
```

**Table:**

	salesperson text	spid [PK] character varying (6)
1	Janene Hairsine	SP26
2	Ebonee Roxburgh	SP28
3	Dyna Doucette	SP33
4	Gray Seamon	SP31
5	Niall Selesnick	SP27
6	Orton Livick	SP30
7	Zach Polon	SP29
8	Benny Karolovsky	SP32

## 9. Conclusion

This report provides a comprehensive analysis of chocolate sales trends across multiple countries, offering key insights into product popularity, seasonal sales patterns, salesperson distribution, and high-value transaction days.

### Key Takeaways:

- Organic Choco Syrup and White Choc are the best-selling products, with strong demand in India, Canada, the USA, and New Zealand.
- January 2022 recorded the highest sales across all analyzed countries, indicating seasonal demand spikes, possibly due to post-holiday shopping trends.
- Salesforce distribution is balanced across major regions, with Australia, Canada, and India having the highest number of active salespersons.
- Canada, India, and New Zealand lead in high-value sales days, reinforcing their significance as key revenue-generating markets.
- A group of salespersons remained inactive in early January 2022, highlighting potential operational or logistical inefficiencies.

Understanding these sales trends is essential for business strategy, market expansion, and resource optimization. By leveraging data-driven insights, companies can refine their sales approaches, enhance product marketing, and ensure efficient allocation of sales personnel to maximize revenue and market penetration.