

Analyzing Coffee Shop Sales

Years 2019-2022

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Project Overview

This project analyzes coffee sales data from **2019 to 2022**, focusing on identifying key insights across different dimensions. The analysis includes evaluating the **highest-selling coffee type overall** and **the year 2019, sales performance by country**, and identifying the **top 5 customers** to better understand customer behavior and sales trends.

Key Performance Indicators (KPIs)

- **Total Sales:** Evaluate total sales for all four years combined, as well as for the year **2019** individually.
- **Top-Selling Coffee:** Identify the highest-selling coffee type **overall**
- **Sales by Country:** Analyze sales distribution across different countries to identify the country with the highest sales performance.
- **Top 5 Customers:** Determine the top five customers with the highest total sales over the four years to assess customer loyalty and retention opportunities.

Data Download

Spreadsheet of my analysis work available here [📄 coffe Sales 2019-2022](#)

Original data gathered from [Original Data](#)

Tools & Technologies

- Google Sheets
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Figure 1 - Initial Spreadsheet

Order ID	Order Date	Customer ID	Product ID	Quantity	Customer Name	Email	Country	Coffee Type	Roast Type	Size	Unit Price	Sales			
QEV-37451-860	9/5/2019	17670-51384-MA	R-M-1	2											
QEV-37451-860	9/5/2019	17670-51384-MA	E-M-0.5	5											
FAA-43335-268	6/17/2021	21125-22134-PX	A-L-1	1											
KAC-83089-793	7/15/2021	23806-46781-OU	E-M-1	2											
KAC-83089-793	7/15/2021	23806-46781-OU	R-L-2.5	2											
CVP-18956-553	8/4/2021	86561-91660-RB	L-D-1	3											
IPP-31994-879	1/21/2022	65223-29612-CB	E-D-0.5	3											
SNZ-65340-705	5/20/2022	21134-81676-FR	L-L-0.2	1											
EZT-46571-659	1/2/2019	03396-68805-ZC	R-M-0.5	3											
NWQ-70061-912	9/5/2019	61021-27840-ZN	R-M-0.5	1											
BKK-47233-845	3/8/2021	76239-90137-UQ	A-D-1	4											
VQR-01002-970	10/28/2020	49315-21985-BB	E-L-2.5	5											
SZW-48378-399	7/2/2022	34136-36674-OM	R-M-1	5											
ITA-87418-783	5/22/2020	39396-12890-PE	R-D-2.5	2											
GNZ-46006-527	4/5/2022	95875-73336-RG	L-D-0.2	3											
FYQ-78248-319	6/7/2022	25473-43727-BY	R-M-2.5	5											
VAU-44387-624	3/20/2019	99643-51048-IQ	A-M-0.2	6											
RDW-33155-159	10/19/2019	62173-15287-CU	A-L-1	6											
TDZ-59011-211	6/13/2019	57611-05522-ST	R-D-2.5	4											
IDU-25793-399	12/4/2020	76664-37050-DT	A-M-0.2	5											
25793-399	12/4/2020	76664-37050-DT	E-D-0.2	4											
-20013-488	12/4/2020	03090-88267-BQ	A-D-0.2	6											
UQU-65630-479	1/22/2021	37651-47492-NC	R-M-2.5	4											
FEO-11834-332	2/11/2022	95399-57205-HI	A-D-0.2	4											
TKY-71558-096	9/15/2021	24010-66714-HW	A-M-1	1											

Data Cleaning Process

1. Consolidating Data

- The original data was split across different sheets. Using **Customer ID** and **Product ID** as search keys, I utilized the **VLOOKUP** function to merge all relevant data into a single sheet for better visibility and analysis.
- The **Sales** column was calculated by multiplying **Unit Price** by **Quantity**.

2. Data Formatting

- Converted the data into a table using the “**Convert to table**” feature in Google Sheets to improve readability and organization.
- Added units of measure:
 - Size** was displayed with "kg."
 - Unit Price** and **Sales** were formatted as currency (e.g., "\$").

3. Adding Descriptive Fields

- Abbreviated fields:** Coffee Type and Roast Type were originally displayed as abbreviations. New columns were added to show the full names for better clarity.
- Added **Year** and **Month** columns to the dataset to facilitate time-based analysis.

4. Checking for Duplicates

- Ran **Remove Duplicates** using Google Sheets' **Data > Data Cleanup > Remove Duplicates** feature.
- No duplicates were found.

Figure 2 - Updated Spreadsheet

H2

=VLOOKUP(E2,customers!A:B,2,False)

	G	H	I	J	K	L	M	N	O	P	Q	R	
1	Quantity	Customer Name	Email	Country	Coffee Type	Roast Type	#	Size	Unit Price	Sales	Coffee Type Name	Roast Type Name	Loyalty Card
2	3	Guthrey Petracci	gpetracci8@livejournal.com	United States	Rob	M		0.5 kg	\$5.97	\$17.91	Robusta	Medium	No
3	4	Gladi Ducker	gduckerdx@patch.com	United Kingdom	Rob	M		0.2 kg	\$2.99	\$11.94	Robusta	Medium	No
4	4	Gladi Ducker	gduckerdx@patch.com	United Kingdom	Exc	M		0.2 kg	\$4.13	\$16.50	Excelsa	Medium	No
5	4	Gladi Ducker	gduckerdx@patch.com	United Kingdom	Lib	D		1.0 kg	\$12.95	\$51.80	Liberica	Dark	No
6	3	Gladi Ducker	gduckerdx@patch.com	United Kingdom	Lib	L		0.2 kg	\$4.76	\$14.27	Liberica	Light	No
7	3	Suzanna Bollam	sbollam1f@list-manage.com	United States	Rob	L		0.5 kg	\$7.17	\$21.51	Robusta	Light	No
8	6	Spencer Wastell		United States	Exc	L		0.5 kg	\$8.91	\$53.46	Excelsa	Light	No
9	4	Krissie Hammett	khammettgm@dmoz.org	United States	Rob	M		0.2 kg	\$2.99	\$11.94	Robusta	Medium	Yes
10	2	Wilton Cottier	wcottierj3@cafepress.com	United States	Exc	M		0.5 kg	\$8.25	\$16.50	Excelsa	Medium	No
11	4	Dolores Duffie	dduffiepr@time.com	United States	Exc	D		2.5 kg	\$27.95	\$111.78	Excelsa	Dark	No
12	6	Starr Arpin	sarpinep@moonfruit.com	United States	Rob	M		1.0 kg	\$9.95	\$59.70	Robusta	Medium	No
13	1	Andie Rudram	arudramka@prnewswire.com	United States	Lib	L		2.5 kg	\$36.46	\$36.46	Liberica	Light	No
14	3	Marvin Malloy	mmalloyi6@seattletimes.com	United States	Ara	D		2.5 kg	\$22.89	\$68.66	Arabica	Dark	No
15	5	Angie Rizzetti	arizzetti55@naver.com	United States	Exc	D		0.5 kg	\$7.29	\$36.45	Excelsa	Dark	Yes
16	2	Morgen Seson	msesonck@census.gov	United States	Lib	D		0.5 kg	\$7.77	\$15.54	Liberica	Dark	No
17	6	Stanislaus Valsler		Ireland	Ara	M		0.5 kg	\$6.75	\$40.50	Arabica	Medium	No
18	2	Lyell Murch		United States	Exc	L		0.5 kg	\$8.91	\$17.82	Excelsa	Light	Yes

Analysis & Visualizations

Total Sales - 2019-2022

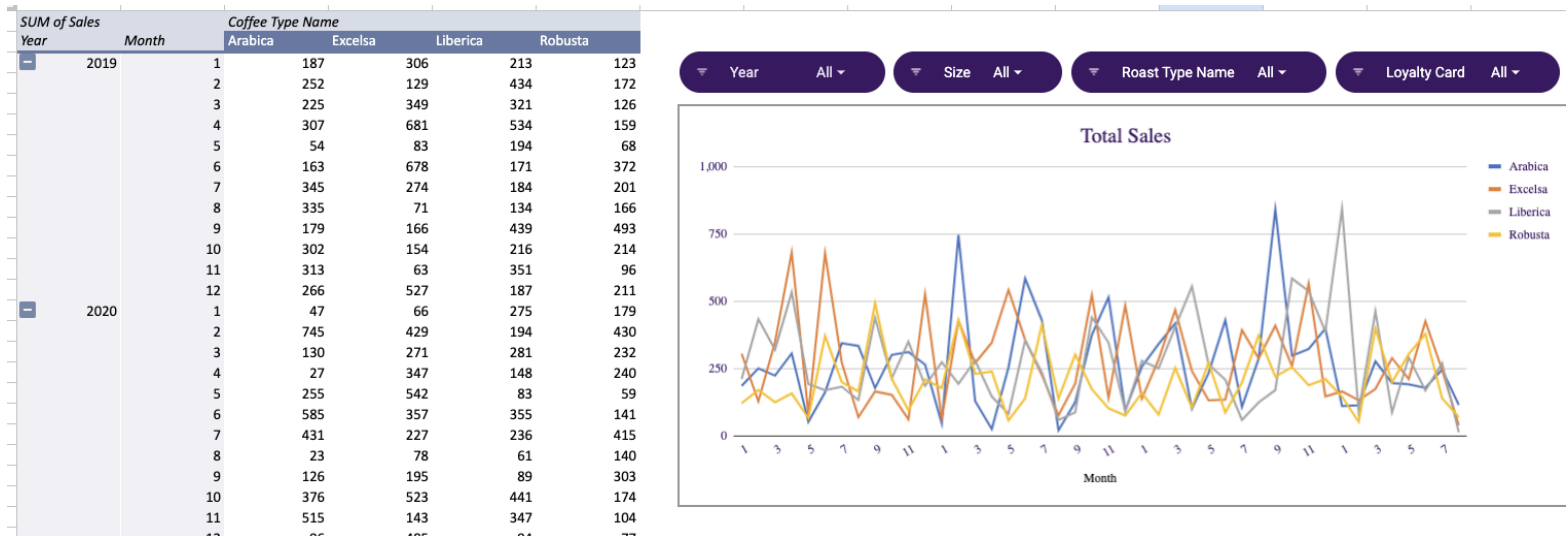
The line chart illustrating coffee type performance over the four years reveals the following trends:

- **Arabica** experienced high sales spikes in **2020 and 2021**, with more average performance in **2019 and 2022**.
- **Excelsa** demonstrated relatively stable performance across all four years, with its **highest sales spikes occurring in 2019**.
- **Liberica** started with **low sales in 2019**, but by early **2022**, it **reached an all-time high**, marking a significant increase from previous years.
- **Robusta** maintained **consistent, low sales throughout all four years**, without any notable spikes or dips.

We will explore these trends in greater detail in the following sections.

Note: For further analysis, the line charts below have slicers added to filter out specific sales. Slicers include specific years, Size, Roast Type, and Loyalty Card. Slicers can bring out interesting finds.

Figure 3 - Total Sales Pivot Table and Chart



Total Sales - 2019

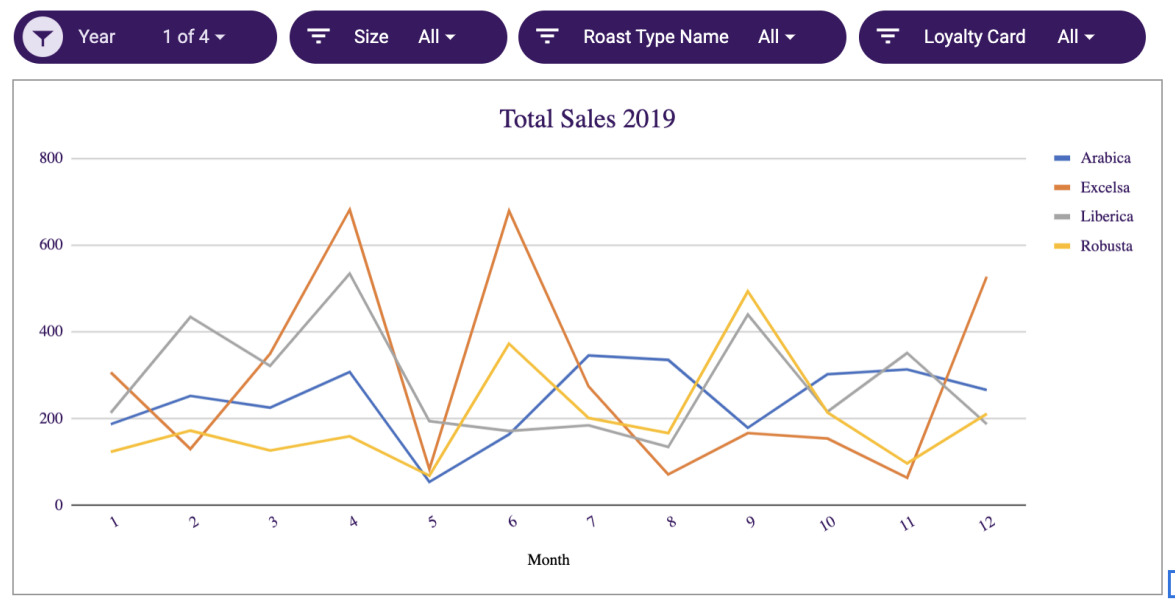
This chart shows the total monthly sales for four coffee types—**Excelsa, Arabica, Liberica, and Robusta**—across all months of 2019.

Excelsa was the top-selling coffee overall, with notable sales spikes in **April, June, and December**. However, it also experienced a significant dip from **July through November**, falling below the other coffee types during that period.

The other coffee types—**Arabica, Liberica, and Robusta**—displayed relatively similar fluctuations, with sales peaking and dipping throughout the year.

All coffee types experienced a **sharp sales drop in May**, which is an unusual pattern and may warrant further investigation to identify potential seasonal or external factors affecting sales during that month.

Figure 4 - Total Sales (2019)

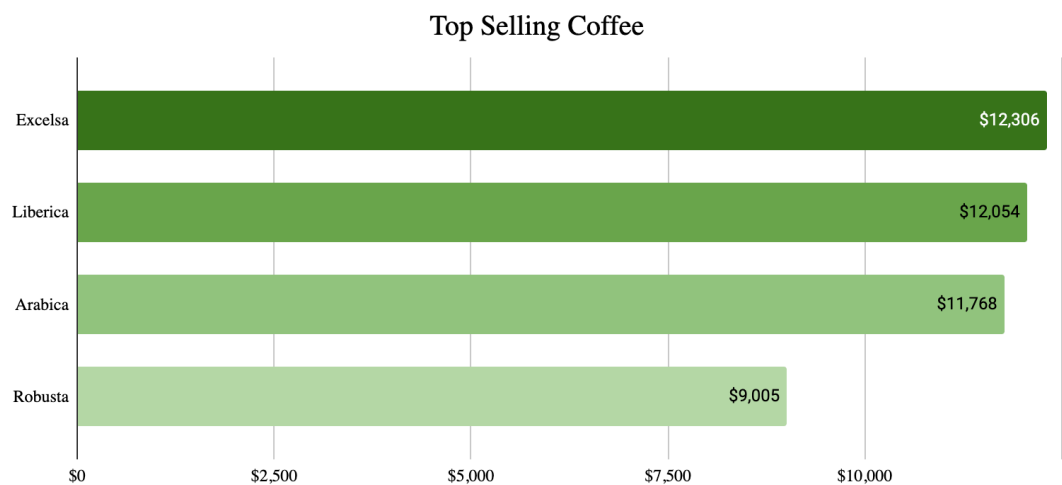


Top-Selling Coffee Type

Excelsa ranks as the top-selling coffee from 2019 to 2022, followed closely by **Liberica** and **Arabica**. The lowest-selling coffee is **Robusta**, trailing behind the top-selling Excelsa by approximately **\$3,000**.

The sales differences between most coffee types are relatively minor, with **Robusta** being the only standout **low performer**, about **\$3,000 less** than the top performer Excelsa. Capturing additional insights into sales trends could help identify underperforming coffee varieties and guide decisions on whether to phase them out or introduce new options for comparison.

Figure 5 - Top Selling Coffee



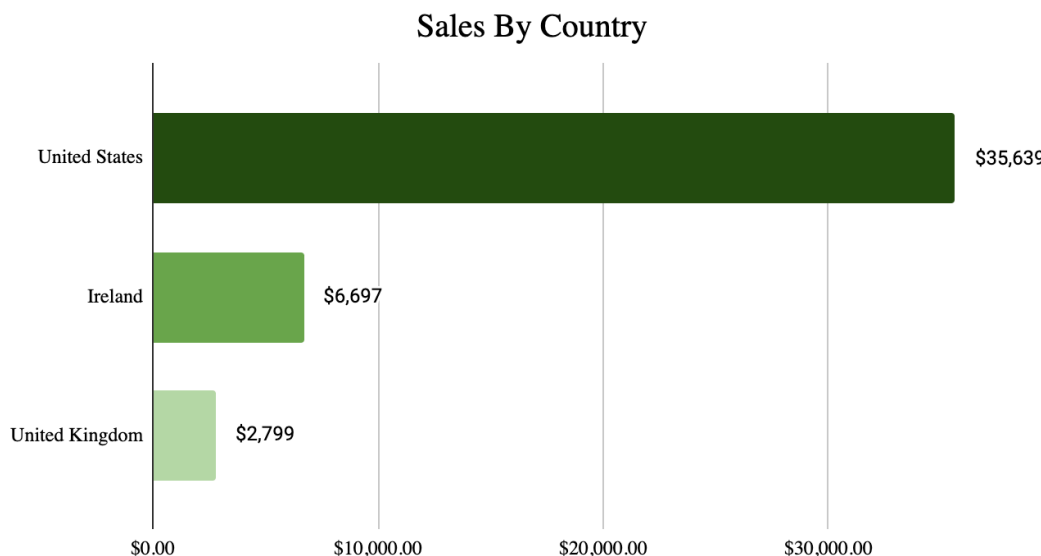
Sales by Country

Looking at sales from 2019-2022, The **United States** leads with a dominant **79% of total sales** across all countries. **Ireland** follows in second place with **15%**, while the **United Kingdom** accounts for the remaining **6%** of sales.

Recommendation:

Currently, there is no information on the number of shops per country, which prevents us from determining which country generates the most sales per shop. Gathering this data could provide deeper insights into regional sales performance and help identify opportunities for growth.

Figure 6 - Sales by Country



Top 5 Customers Analysis

The bar chart displays the top five customers with the highest purchase amounts across the years 2019–2022. Identifying these high-value customers allows us to acknowledge their loyalty and focus on enhancing customer satisfaction.

The highest-spending customer is **Allis Wilmore**, with a total purchase amount of **\$317**. Recognizing these customers can strengthen relationships and encourage continued support.

Recommendation:

To express appreciation and further build loyalty, we recommend implementing a **customer reward system** for the Top 5 customers. This could include perks such as discounts, free products, or exclusive offers. Such initiatives may not only increase satisfaction but also drive additional sales.

Figure 7 - Top 5 Customers

