

Gold in Bottle: *Olive Oil Dynamics*



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WHY OLIVE OIL MARKET ?

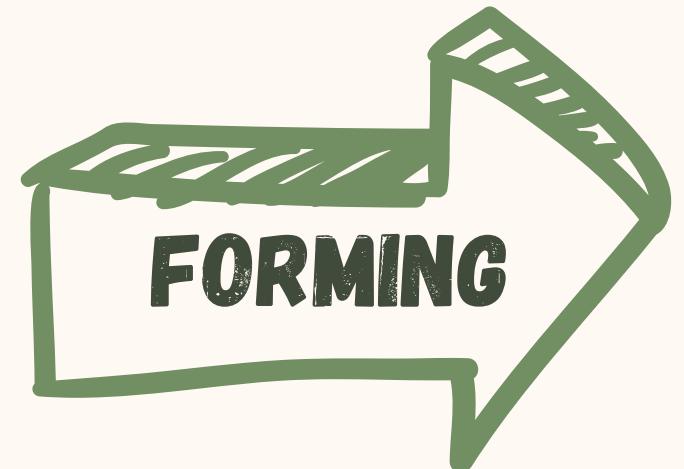
SINCE WE ARE IN PORTUGAL, OLIVE OIL HAS A PLACE ON OUR TABLE AND IN OUR HEARTS. SO WHY DO WE CARE?

- HIGH PRICES
- LOW PRODUCTION
- HIGH DEPENDENCE ON ONLY ONE PRODUCER





TEAMWORK & PROJECT MANAGEMENT



TEAMS GATHER, BRAINSTORM, AND FOSTER POSITIVE RELATIONSHIPS AS THEY TACKLE A PROBLEM TOGETHER.

ROLES ARE ASSIGNED, BUT TENSIONS RISE AS CONFLICTS AND RESISTANCE EMERGE, RISKING TEAM COHESION AND PROGRESS.



TEAM MEMBERS UNIFY, BUILDING TRUST AND COHESION, COLLABORATING DESPITE DIFFERENCES.



WITH A SHARED FOCUS AND FLEXIBLE ROLES, THE TEAM EXCELS, PRIORITIZING GROUP GOALS OVER INDIVIDUAL NEEDS AND ADEPTLY SOLVING CHALLENGES.



"A TEAM WORKING TOGETHER LIKE GEARS, SEAMLESSLY INTERCONNECTED TO DRIVE FORWARD."

THE DATA PROCESS



DATA RETRIEVAL

- Utilization of the requests library to fetch data from API endpoints.

DATA CLEANING

- Renaming columns to improve clarity and consistency `df.rename()`
- Dropping unnecessary columns using `df.drop()`
- Filtering out specific rows based on conditions using boolean indexing and `DataFrame.drop()`.

DATA TRANSFORMATION

- Performing groupby operations to aggregate data (`df2.groupby().agg()`).
- Plotting data using matplotlib (pyplot) for visual analysis (`df3['production'].plot()`).
- Conversion of JSON responses to pandas DataFrame using `pd.DataFrame.from_dict()`.

DATA ANALYSIS:

- Calculating total production per country over the specified period
(`df2_production = df2.groupby("country").agg({"production": "sum"})`).

STATISTICAL ANALYSIS:

- Analyzing statistical summaries like value counts
(`df2["country"].value_counts()`) to understand data distribution.

EDA CHALLENGE

Data Cleaning and Preprocessing:

Accurately cleaning and preprocessing data to avoid biases.

Data Aggregation and Grouping:

Performing group operations accurately to avoid errors.

Data Transformation:

Handling JSON-to-DataFrame conversion and transformations accurately.

Analytical Questions and Insights:

Addressing specific analytical questions effectively.

Code Maintenance and Documentation:

Ensuring code is well-documented and maintainable.

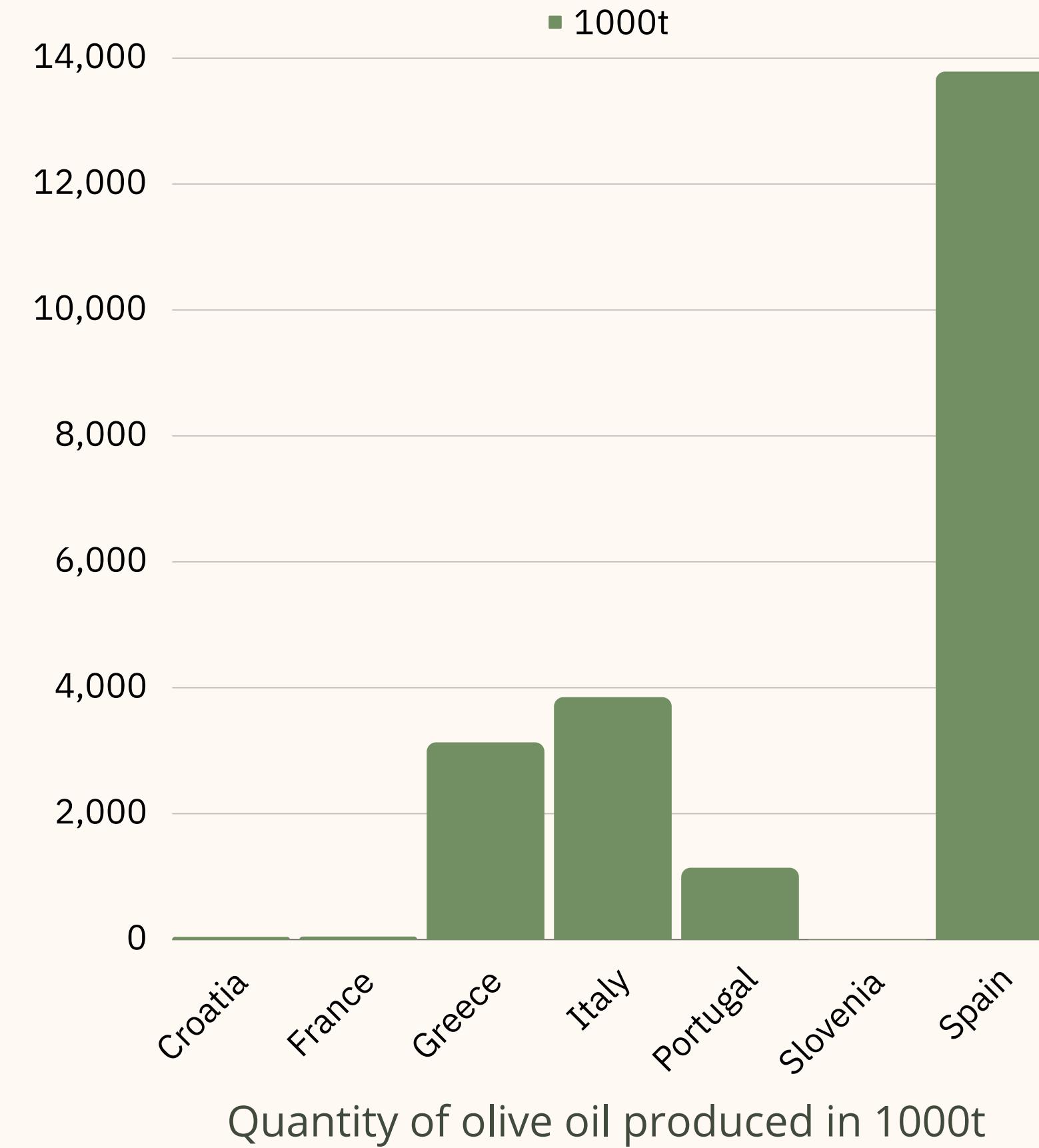
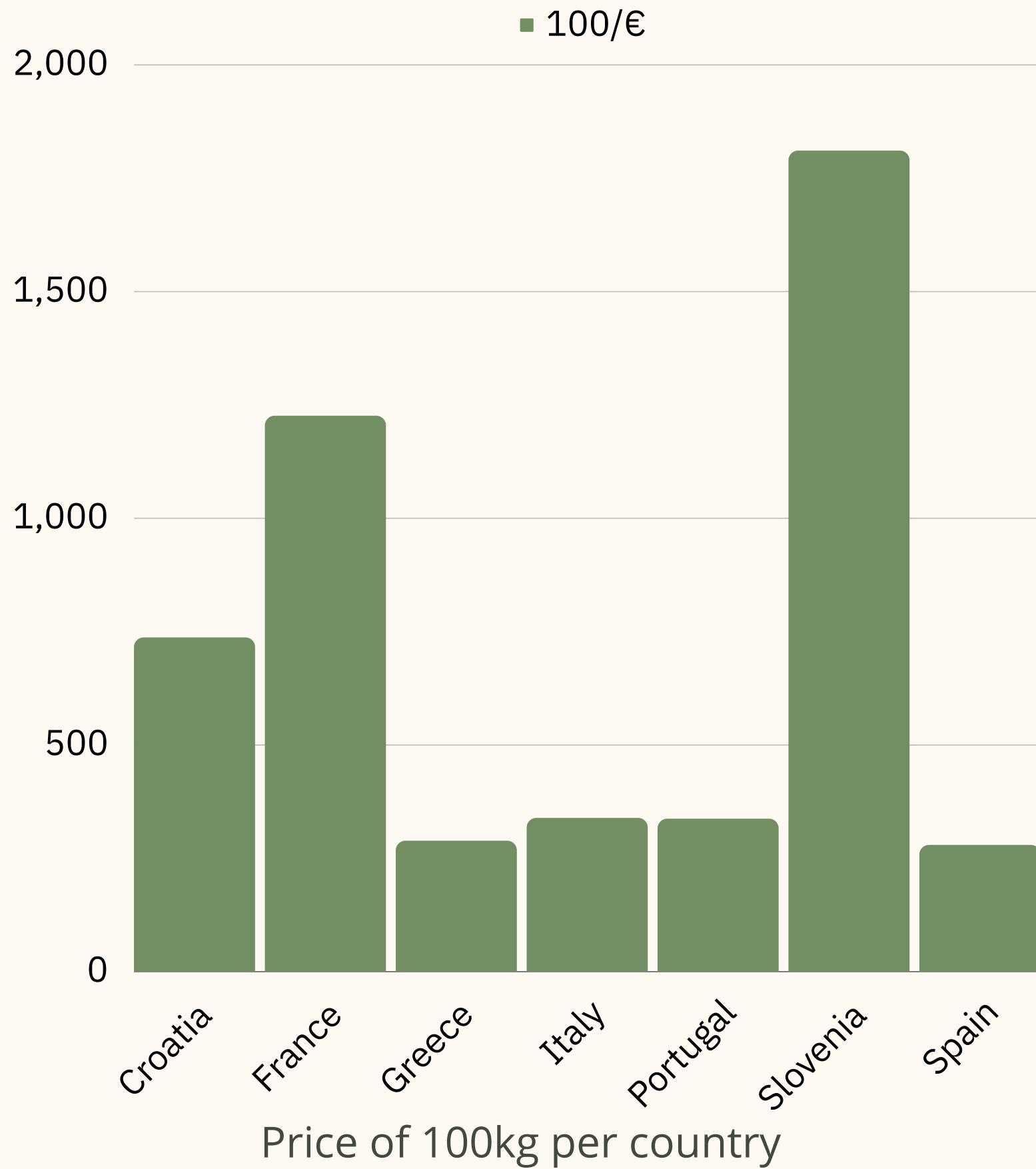
Data Quality and Completeness:

Ensuring accuracy and completeness of external API data.

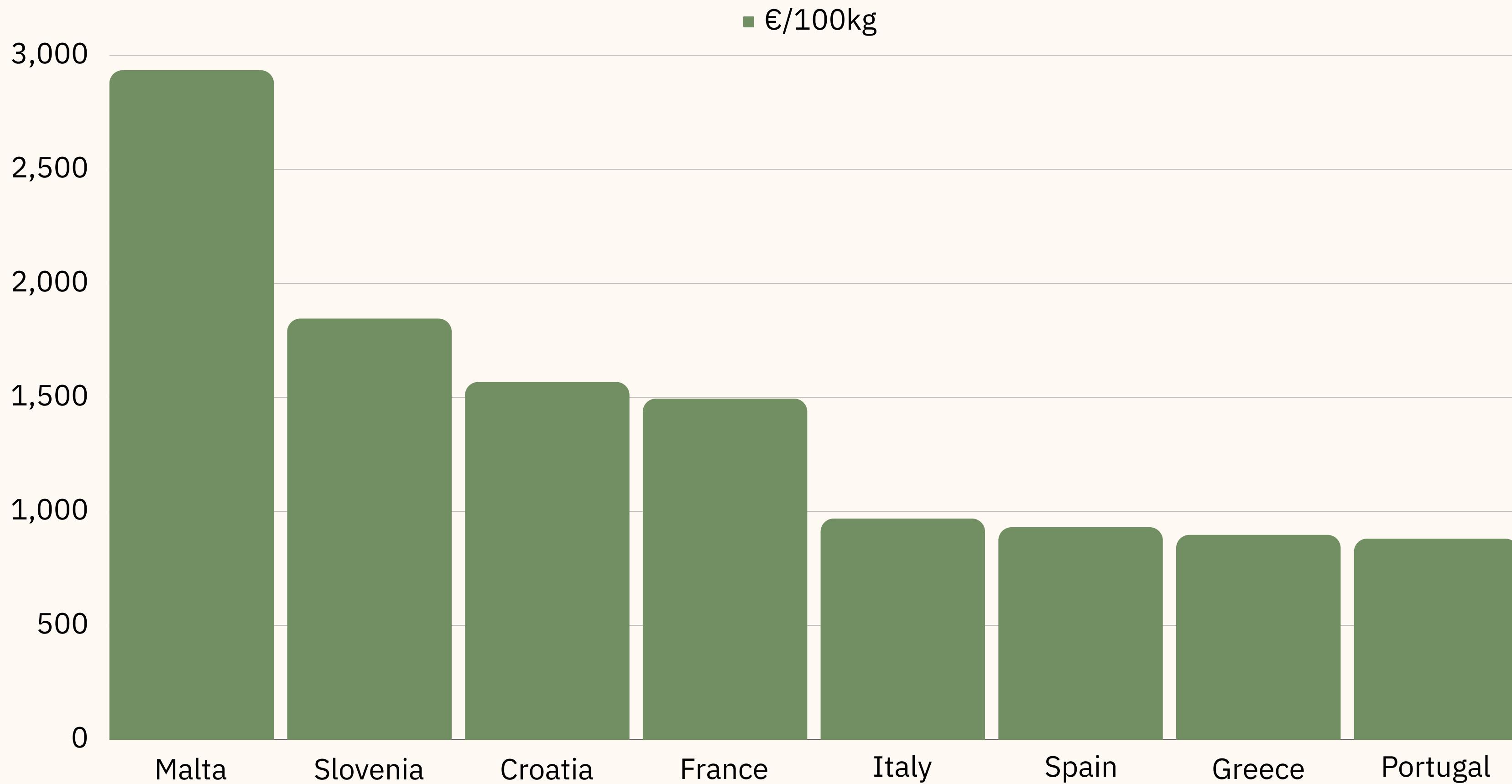
Data Visualization:

Creating clear and informative visualizations.

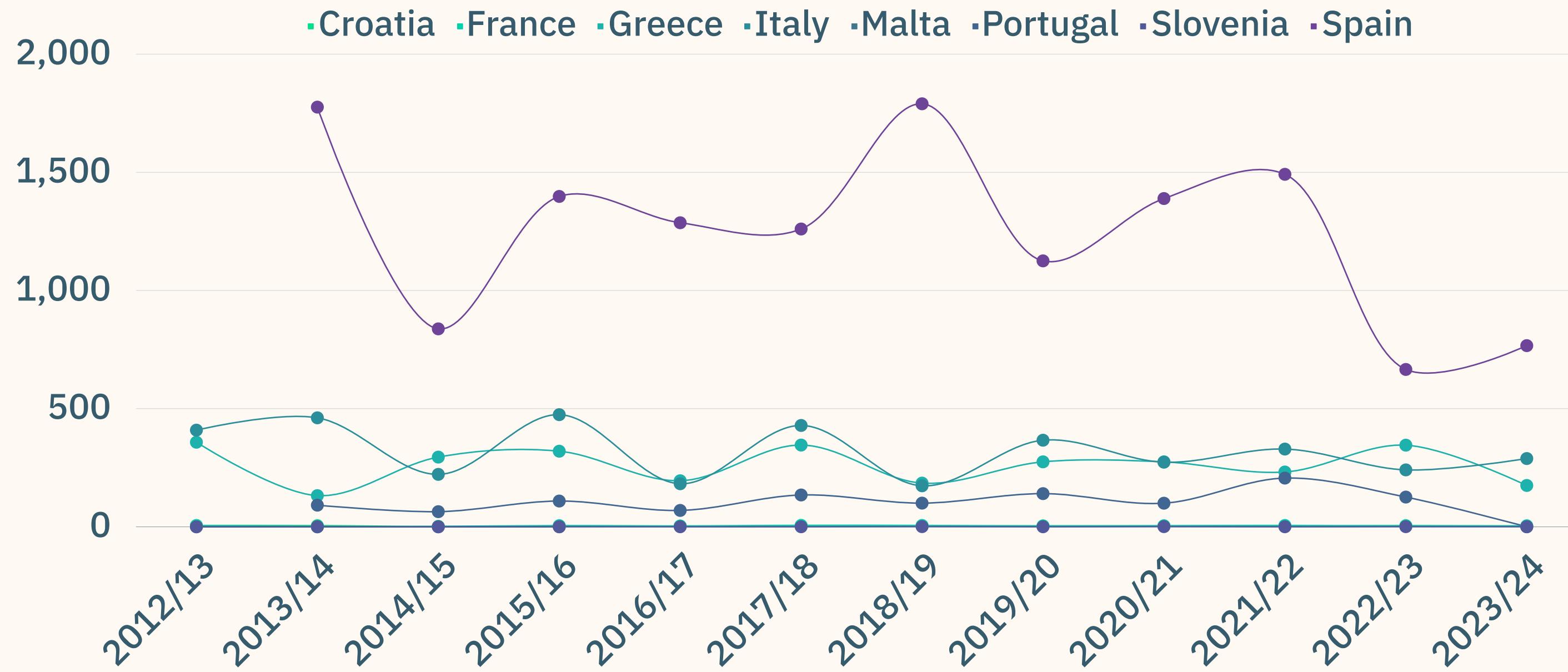
WHAT ARE THE TOTAL OLIVE OIL MID PRICE AND PRODUCTION OVER THE PAST 10 YEARS



WHICH MARKETS HAVE THE HIGHEST AND LOWEST OLIVE OIL PRICES



OVER TIME PRODUCTION & FLOATING PRICE



There are many factors that affect the price of olive oil in general.

For the current scenario, it lies in the Law of Supply & Demand.

When the amount of product available is low, prices are high;
when the product availability is high, prices are typically lower.

GENERAL FACTORS THAT INFLUENCE THE PRICE AND PRODUCTION:

- **Topographic conditions:**

Rainfall quantity, growing region

- **Growing conditions:**

Irrigation regime, damage caused by pests

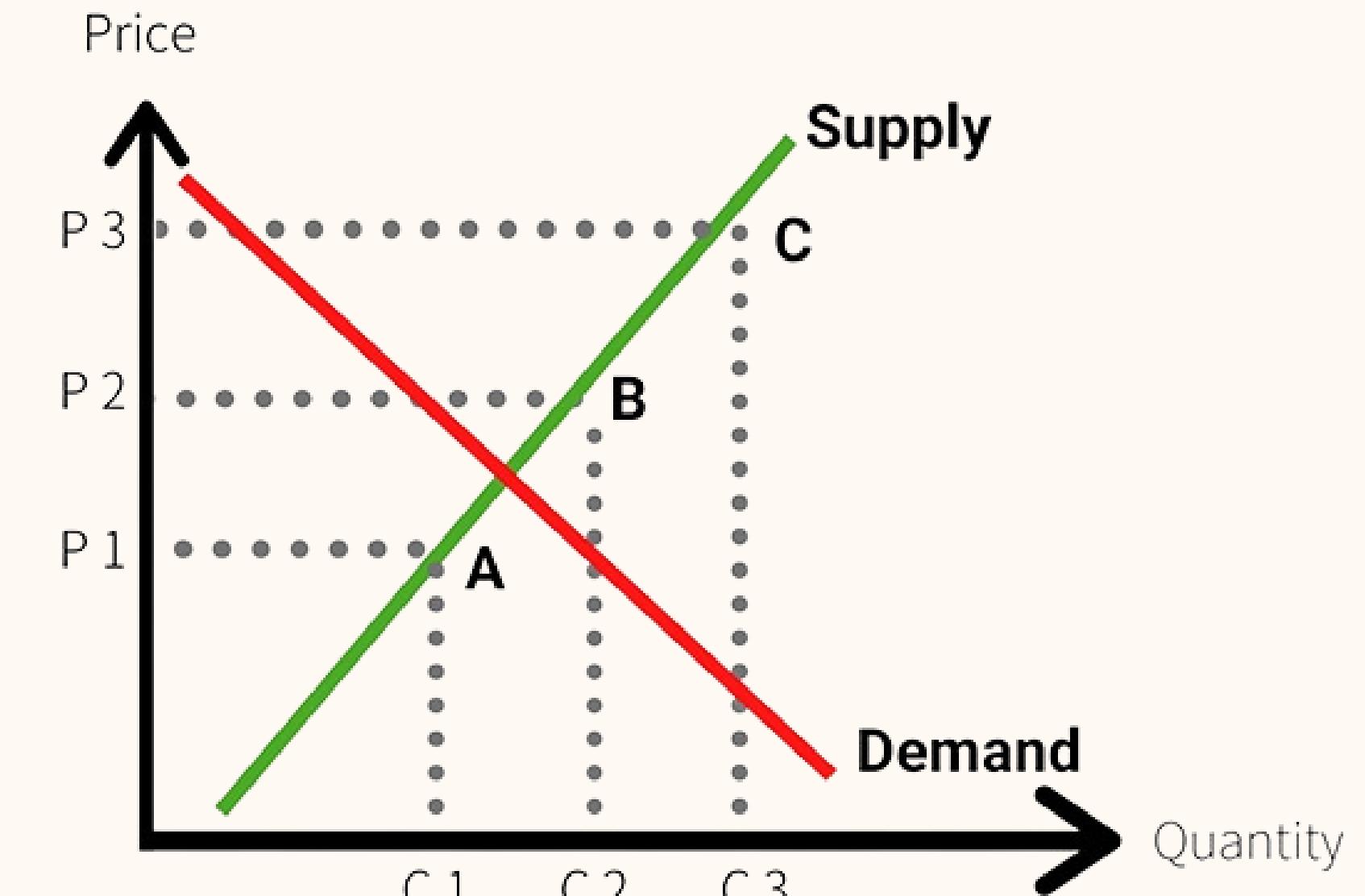
- **Maturity of the olive**

- **The time from harvest to oil production**

- **The production process:**

From extraction to bottle

- **Storage of the oil after production**



THE LAW OF SUPPLY & DEMAND

TEAM CHALLENGES



DATA AVAILABILITY: ACCESSING RELIABLE AND COMPREHENSIVE DATA ON OLIVE OIL PRODUCTION, CONSUMPTION, AND PRICING POSES A SIGNIFICANT HURDLE, PARTICULARLY IN REGIONS WITH LESS TRANSPARENT MARKETS OR FRAGMENTED DATA SOURCES.



GLOBAL ECONOMIC FACTORS: ECONOMIC CONDITIONS, CURRENCY FLUCTUATIONS, AND TRADE AGREEMENTS EXERT PROFOUND INFLUENCE ON OLIVE OIL MARKETS, REQUIRING CAREFUL CONSIDERATION TO ACCURATELY ASSESS THEIR IMPACT ON PRICING AND PRODUCTION TRENDS.



MARKET VOLATILITY: OUR ANALYSIS MUST CONTEND WITH THE INHERENT VOLATILITY OF OLIVE OIL PRICES, DRIVEN BY FACTORS SUCH AS WEATHER PATTERNS, GEOPOLITICAL EVENTS, AND SHIFTS IN CONSUMER DEMAND.

OUR ANALYSIS UNDERSCORES SEVERAL KEY INSIGHTS CRUCIAL FOR THE OLIVE OIL INDUSTRY:



- UNDERSTANDING **MARKET DYNAMICS** IS PARAMOUNT. FACTORS SUCH AS MARKET VOLATILITY AND SUPPLY CHAIN INTRICACIES SIGNIFICANTLY INFLUENCE PRICING AND PRODUCTION TRENDS.
- **DATA-DRIVEN DECISION-MAKING** IS ESSENTIAL.
- ADDRESSING **ENVIRONMENTAL CHALLENGES** IS IMPERATIVE.

MOREOVER, STAYING INFORMED ABOUT REGULATORY LANDSCAPES IS CRITICAL. PROACTIVE APPROACHES TO NAVIGATING REGULATORY CHANGES ENABLE US TO ADAPT STRATEGIES EFFECTIVELY AND CAPITALIZE ON EMERGING OPPORTUNITIES.



**THANKS FOR
WATCHING**