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The European Wine Export Cycle

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- 1. Introduction**
- 2. European integration and the dynamics of wine exports: Some facts**
- 3. Synchronization of wine export cycles**
 - 3.1 Data and methods**
 - 3.2 Empirical results**
- 4. Conclusions**

Motivation

Europe is the **world's largest** wine-producing and **wine-exporting** region

Process of **European integration**

(European Union has becoming both deeper and wider)

Integrated **wine policy at the European level**

The European wine industry has witnessed an acceleration in its exports

Fluctuated in the short term, where periods of rapid growth have alternated with slow or negative growth

In this context, it is of particular relevance to know the **temporal dynamics of the fluctuations in wine exports** and to discover whether **there are cyclical co-movements within the European wine export cycle**

Contribution

- To analyse **whether (or not) exists a “European” wine export cycle**
- To examine **how it has evolved over the period 1957-2016**
 - Initial year corresponds to the inception of the European Economic Community (EEC)
 - Specific sub-periods
 - 1957-1967: 1st years of the EEC
 - 1968-1978: customs union in the EEC and the pre-European Monetary System (EMS) period
 - 1979-1986: great stability of the EMS and implementation of the Single European Market
 - 1987-1998: implementation of several proposals made in the Delors Report
 - 1999-2007: early years of the European Monetary Union until the financial crisis
 - 2008-2016: financial global crises and the subsequent sovereign debt crisis in Europe

Sample size

- **10 most important wine-producing countries in EU**

- 98% of EU28 production
- 96% of the volume of the EU's wine exports

Austria	AT
Bulgaria	BG
France	FR
Germany	DE
Greece	EL
Hungary	HU
Italy	IT
Portugal	PT
Romania	RO
Spain	ES

the European aggregate (10 countries)

European integration and the dynamics of wine exports: Some facts

- It is **not possible** to establish a **correspondence between the evolution of wine exports** in the different countries and the **main historical milestones of the integration**
- However, the process of **European economic integration** has corresponded to **an increase in wine exports as a share of the countries' wine production**
- By both volume and value, **Spain, Italy, and France lead the wine exports in the EU** (these three countries together account, on average, for 75.5% of the volume of wine exports and 77.9% of the value)
- **Spain** is the country that loses the most weight when we go from analyzing exports by volume to analyzing exports by value
- **France** improves its relative position for the value of exports

Wine exports as a share of countries' wine production (%), for sub-periods

	1957-1967	1968-1978	1979-1986	1987-1998	1999-2007	2008-2016
Austria	2.0	6.0	15.2	6.0	22.5	24.7
Bulgaria	25.8	49.2	60.3	55.5	63.1	36.1
France	5.3	8.7	14.4	22.6	28.2	31.9
Germany	3.9	8.7	30.2	26.8	28.2	43.6
Greece	12.9	20.4	12.6	15.7	10.2	9.6
Hungary	14.1	28.0	49.6	31.1	19.0	26.5
Italy	3.3	13.4	21.4	22.8	36.0	47.4
Portugal	19.3	21.8	15.5	30.0	36.6	47.5
Romania	5.8	11.0	8.9	6.5	6.3	3.7
Spain	8.5	14.2	15.7	23.6	30.1	54.2
EU10	6.4	13.1	18.7	22.8	30.1	41.5

- **wine exports by volume**

millions of liters

- **1957-2016**

- Sample source

Anderson and Pinilla (2017) database

- Country sample

- Austria, Bulgaria, France, Germany, Greece, Hungary, Italy, Portugal, Romania, and Spain
- aggregate of ten countries (**EU10**)

- **wine exports by value**

thousands of US dollars at 2015 constant prices

- **1960-2016**

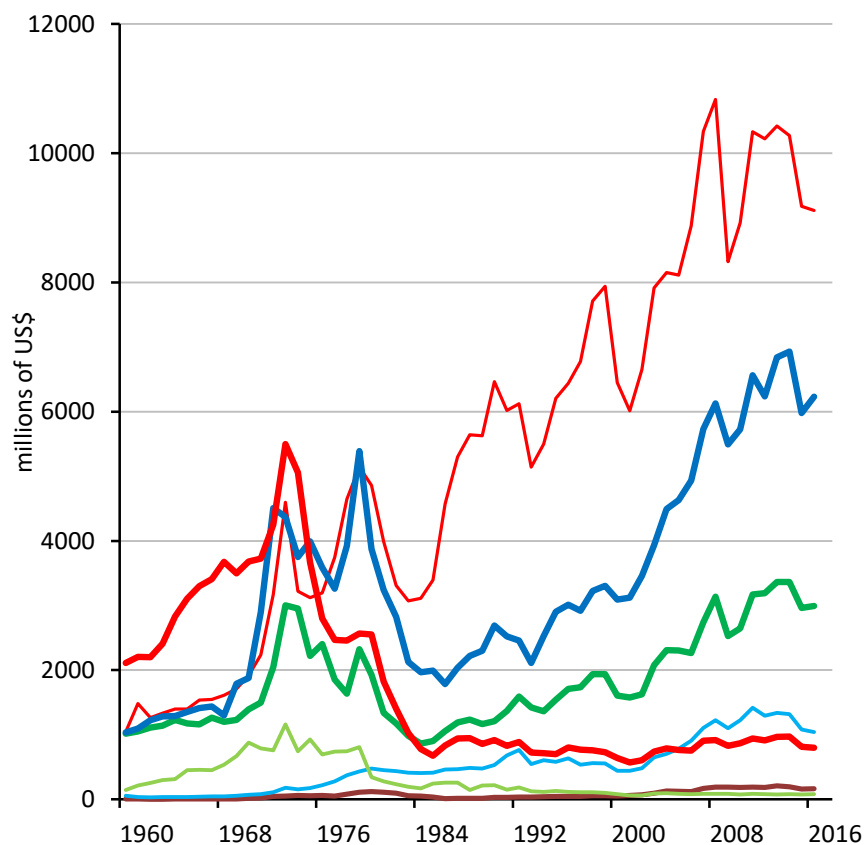
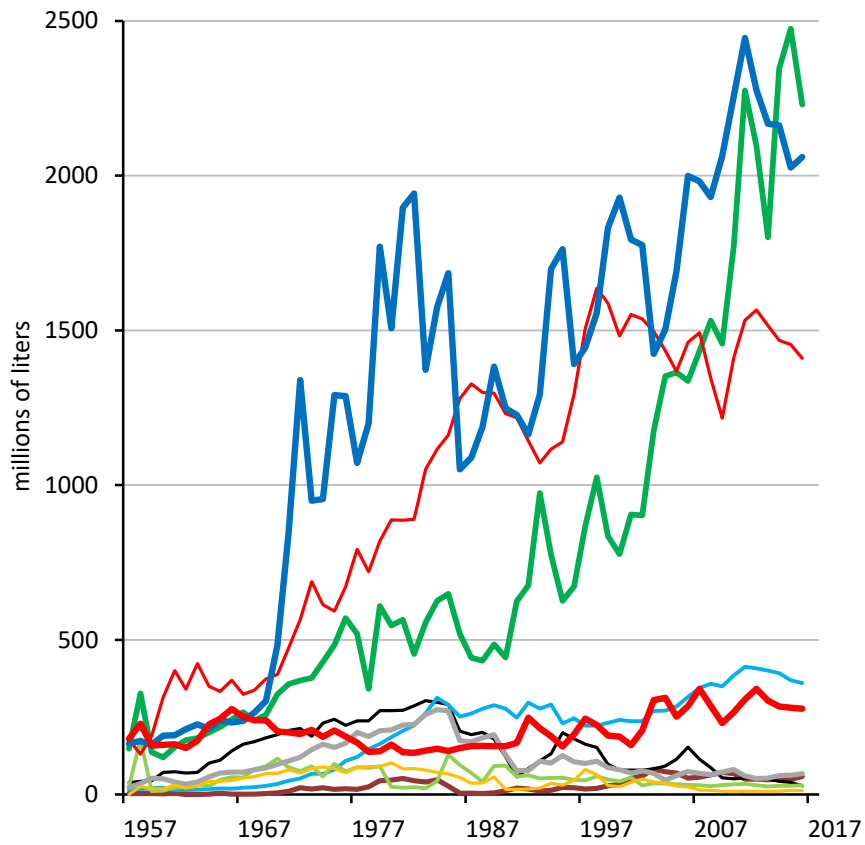
- Sample source

Anderson and Pinilla (2017) database

- Country sample

- Austria, France, Germany, Greece, Italy, Portugal, and Spain
- aggregate of seven countries (**EU7**)

Exports of wine by the main European producers, by volume and value

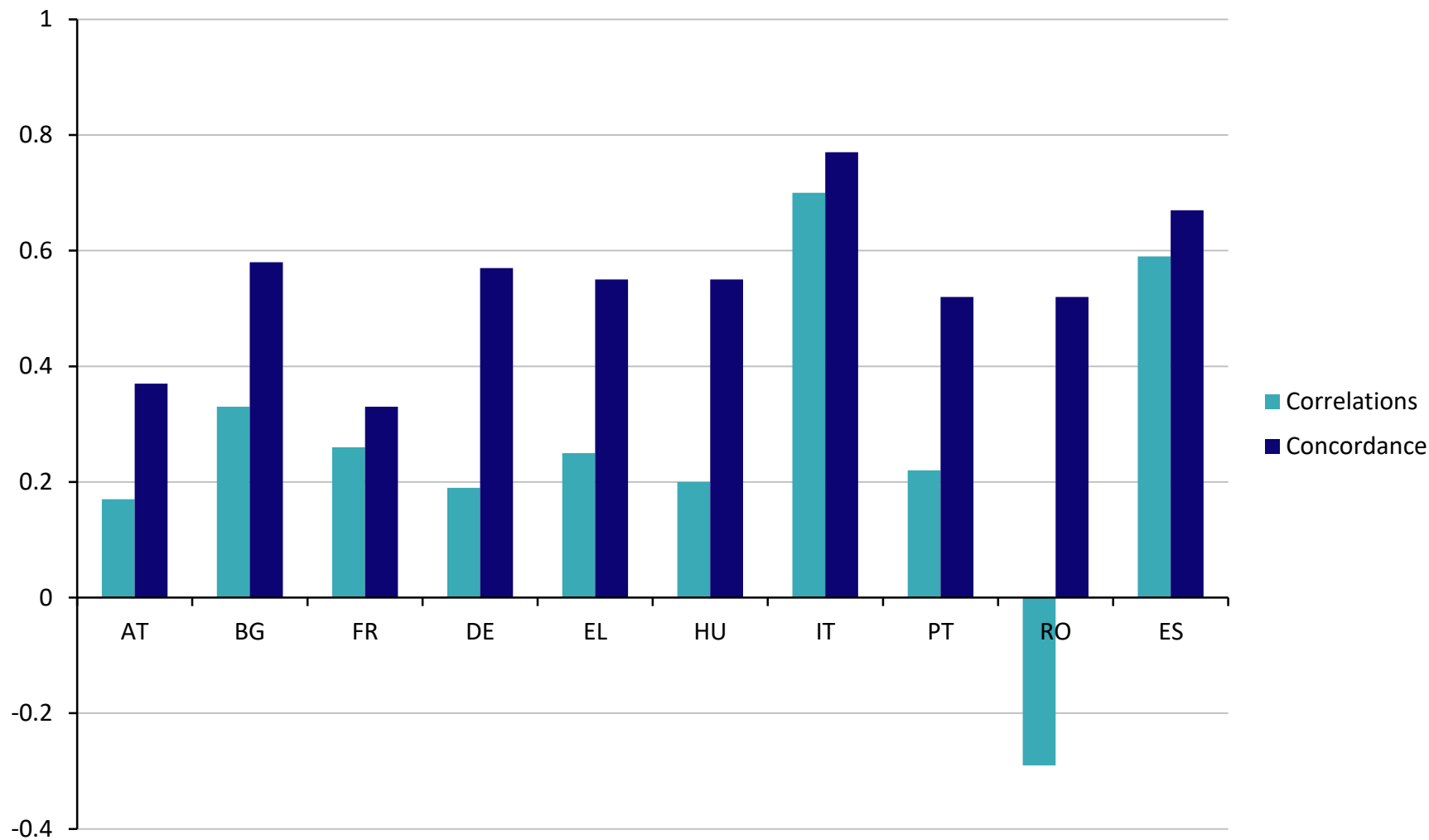


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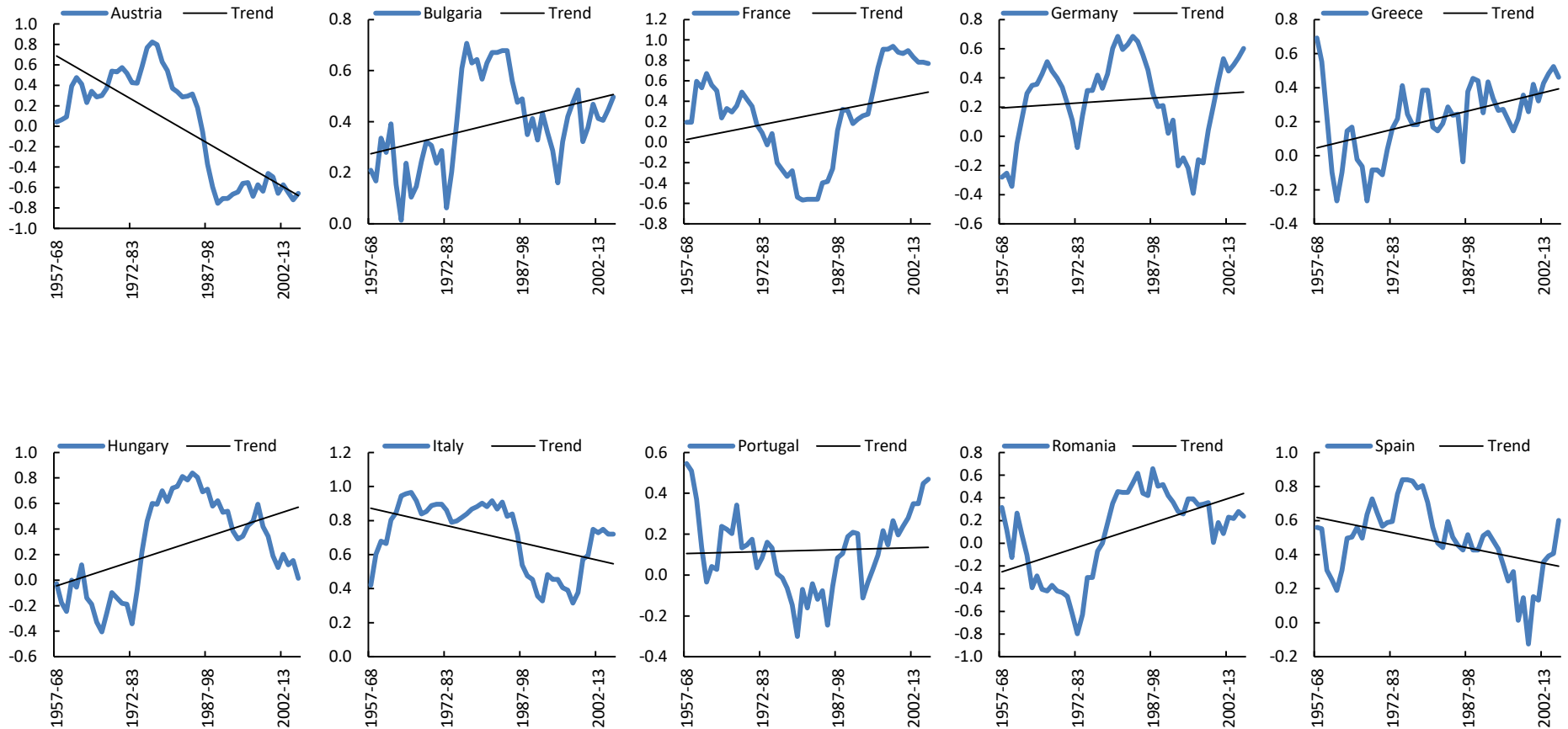
Methods

- Measures of business cycle
 - **Baxter-King Band Pass filter** and Hodrick-Prescott filter
- Measure of synchronisation
 - **Correlation coefficients** between the wine export cycle of each country and the European aggregate (with and without the specific country)
 - **Concordance indices**
 - Volatility - **Standard deviations** of the cycles
- The correlation/concordance analysis is employed
 - for the whole sample period
 - for a rolling period of 12 years

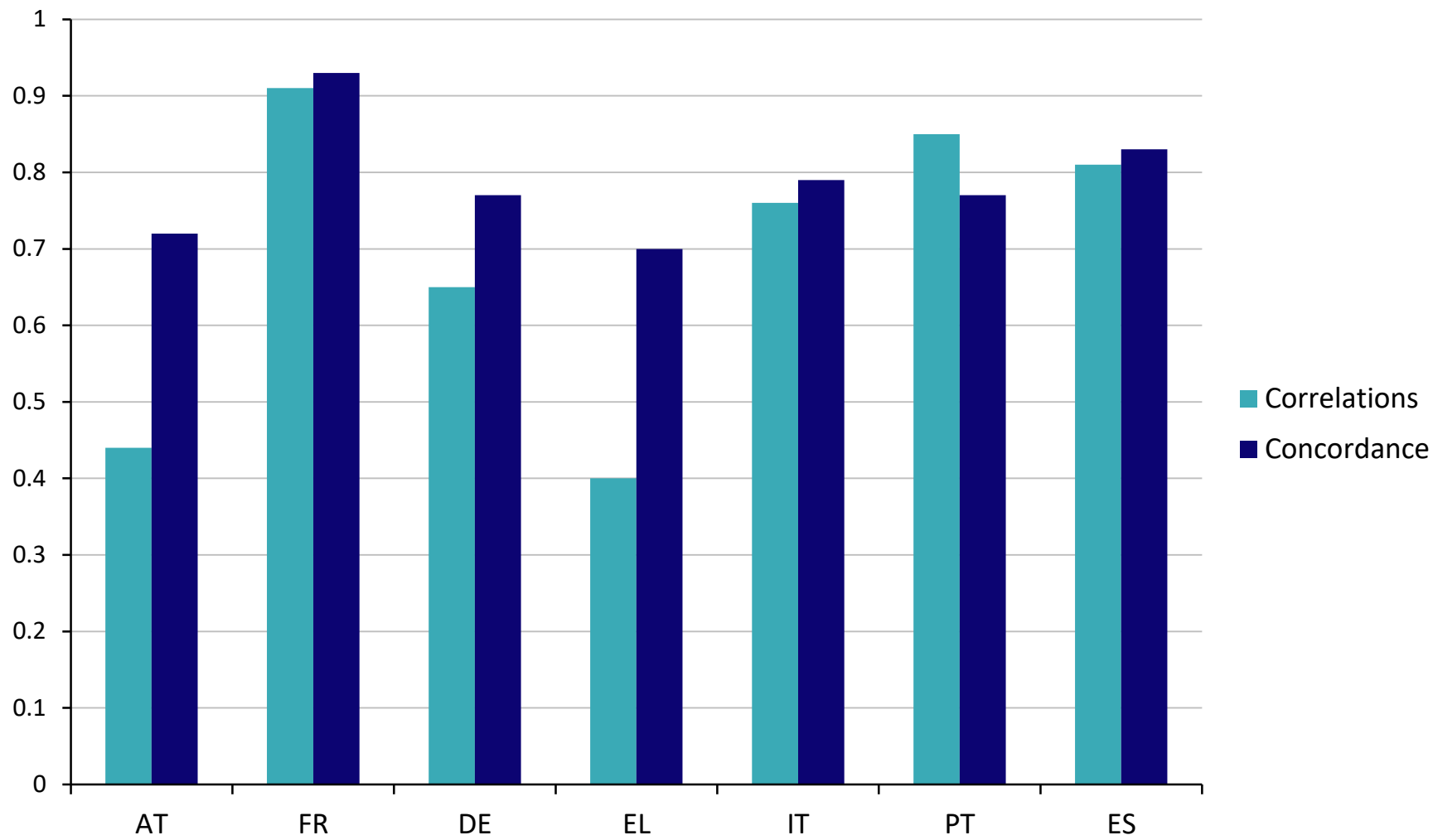
Measures of cyclical synchronization for wine exports, by volume, 1957-2016



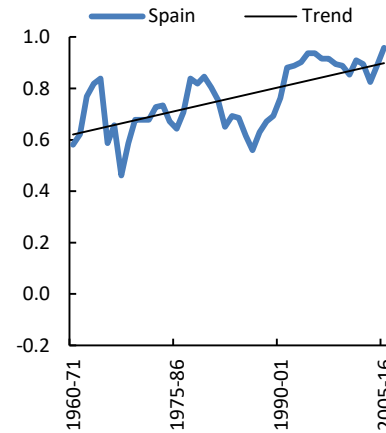
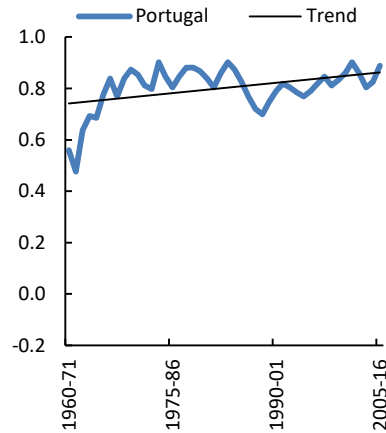
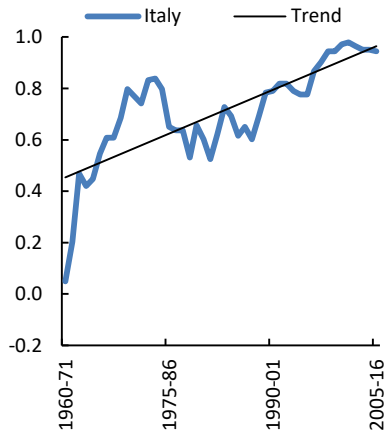
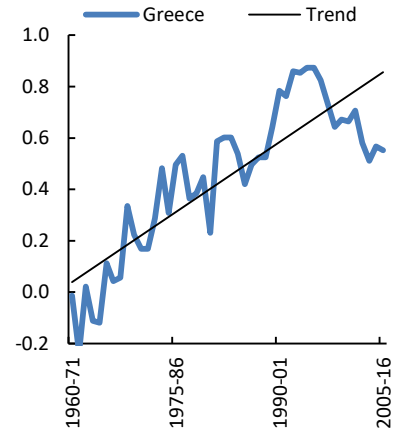
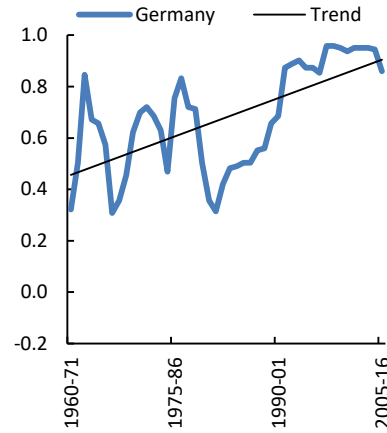
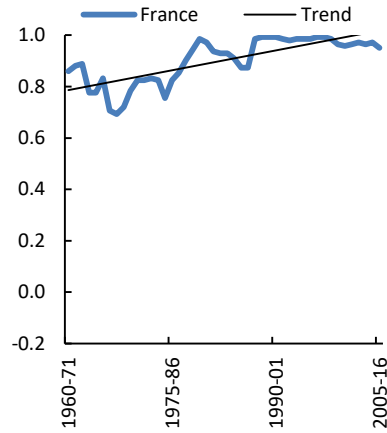
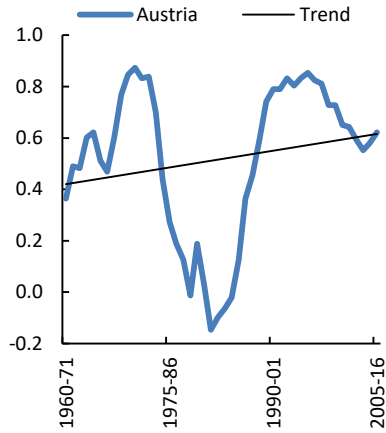
Rolling correlation coefficients for individual export cycles with the EU10, by volume



Measures of cyclical synchronization of wine exports, by value, 1960-2016



Rolling correlation coefficients of individual export cycles with the EU7, by value



Conclusion (I)

- The results, for **value**, point to the existence of a positive and statistically significant degree of synchronization between the national and the aggregate European wine export cycles, as the majority of the countries have a **high association with the European wine cycle**
 - Greece and Austria → lowest correlations/concordances with the European cycle, and they are those that display the greatest volatility
- In general, the rolling correlation and concordance show that the **synchronization with the EU cycles has increased**
- The results for the exports by **volume** suggest a great difference from the evidence for the exports by value. By volume, all the countries show a **lower cyclical association** with the European wine cycle, with Italy and Spain being the only countries with a strong correlation/concordance with the EU cycle. These correlation coefficients lose significance for Italy and become weak for Spain when we use the aggregated cycle without the respective countries

Conclusion (II)

- The results of this research, conducted with **a macroeconomic approach to business cycles**
 - useful for **understanding fluctuations in the wine trade in the past**
 - help in **forecasting the evolution of the international trade of European wine**



which is important to **support policy decisions**

- An analysis in greater detail of the synchronization of wine export cycles is an on-going line of research for the authors. Nevertheless, we are aware that forecasting the future evolution of the wine market is challenging and risky in a context dominated by discontinuities (Pomarici, 2016)

**THANK YOU
VERY MUCH!**



Suggestions
are welcome!

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