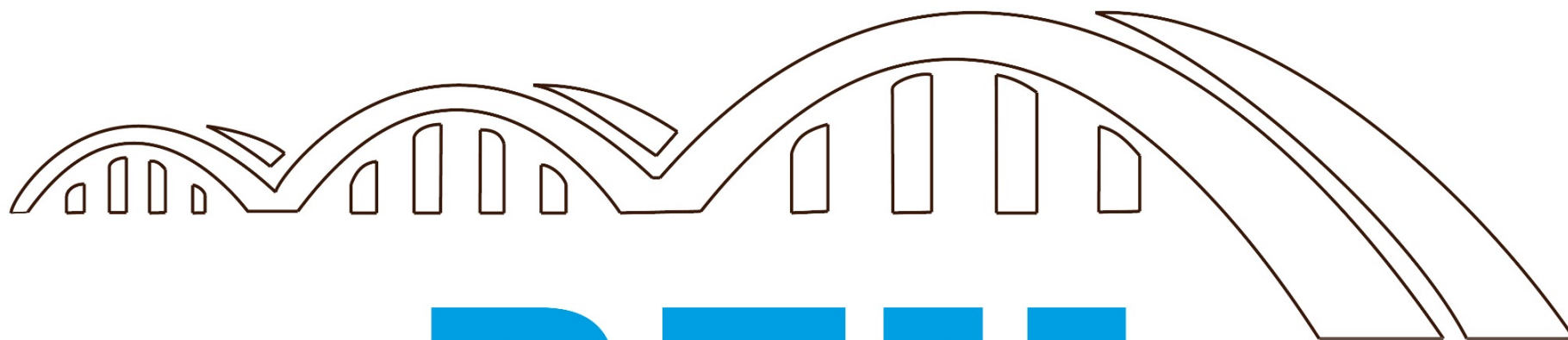


# The First Great liberalization

Stéphane Becuwe (University of Bordeaux)

Bertrand Blancheton (University of Bordeaux)

Chris Meissner (University of California, Davies)



**BEH**

Bordeaux Economic History

# AFSE, NICE, 2017

- Three goals today:
  - A first draft of a paper
  - Montesquieu Database
  - Discussion on problems concerning the data

# AFSE, Nice, 2017

- The Paper
- 1860 treaty reconsidered
- Historiography
- Among the economic and the historic literature we found out a lot of contributions about quantitative analysis of France's foreign trade between the 1830's and WWII.

# AFSE NICE 2017

- Tyszynski (1951) pioneer work analyses the structure of manufactured products' exports after 1899.
- Yates (1959) focus on primary products during the first part of twentieth century.
- Maizels (1963) applies shift-share analysis to manufactured goods exports between 1899 and 1913 in order to explain French foreign trade decline by a bad geographical diversification.
- Weiller (1971) proposes imports data according to the type of products (food, industrial raw material and artifacts) and to the products' origin using 14 countries and 23 temporal points between 1873 and 1913.
- Some papers particularly focus on short-to-medium term or on a specific sector Verley (1988), Broder (1993, 2006, 2013), Bairoch, 1977, 1993, Levy-Leboyer and Bourguignon, 1990. Lefeuvre, 1993; Guillaumet, 2002,.
- Bairoch (1993) studies sectoral structures of exports in 1886/90, 1911/13 and 1926/29.

# AFSE NICE 2017

- Studies are fragmented and not able:
  - To offer a complete and clear view of long-run tendencies
    - Specializations/comparative advantages
    - Intra-industry trade degree
  - To test a theoretical hypothesis.
    - Upgrading quality after a liberalization shock?
    - 1860 as an exogenous shock (to challenge Flandreau & Accominotti 2008, Tena et al 2012).

# AFSE NICE 2017

- How a country react face a liberalization exogenous shock ?
- Some recent papers analyses Chinese case after 2001
- We consider one of the first great liberalization shock : the commercial treaty between UK and France in 1860 and analyse French reaction.
- In the middle of XIXth century France was the second world's largest exporter and offers a significant example to study a national dynamic of adaptation face globalization.

# Issues

- How an old industrial country (early starter) adapts its insertion in international trade system and reacts against international competition during first globalization? In theory three ways are possible.
  - Ricardian theory
  - factor-endowments approach
  - New international trade theories



# Issues

- Considering Ricardian trade theory, in the middle of the nineteenth century France is predicted to specialize in producing a short specific range of manufactured products which complete British specializations. In a dynamic Ricardian model as Dornbusch et al (1977) transports costs or tariffs decreasing result in a shrinking range of goods produced domestically, thus fostering specialization. Was France really fully in line with ricardian view in nineteenth century?

# Issues

- In factor-endowments approach inter-industry trade, mainly between the labor scarce and resource abundant New World and the labor abundant and land scarce Old World, is associated with products homogeneity and weak exports diversification too.

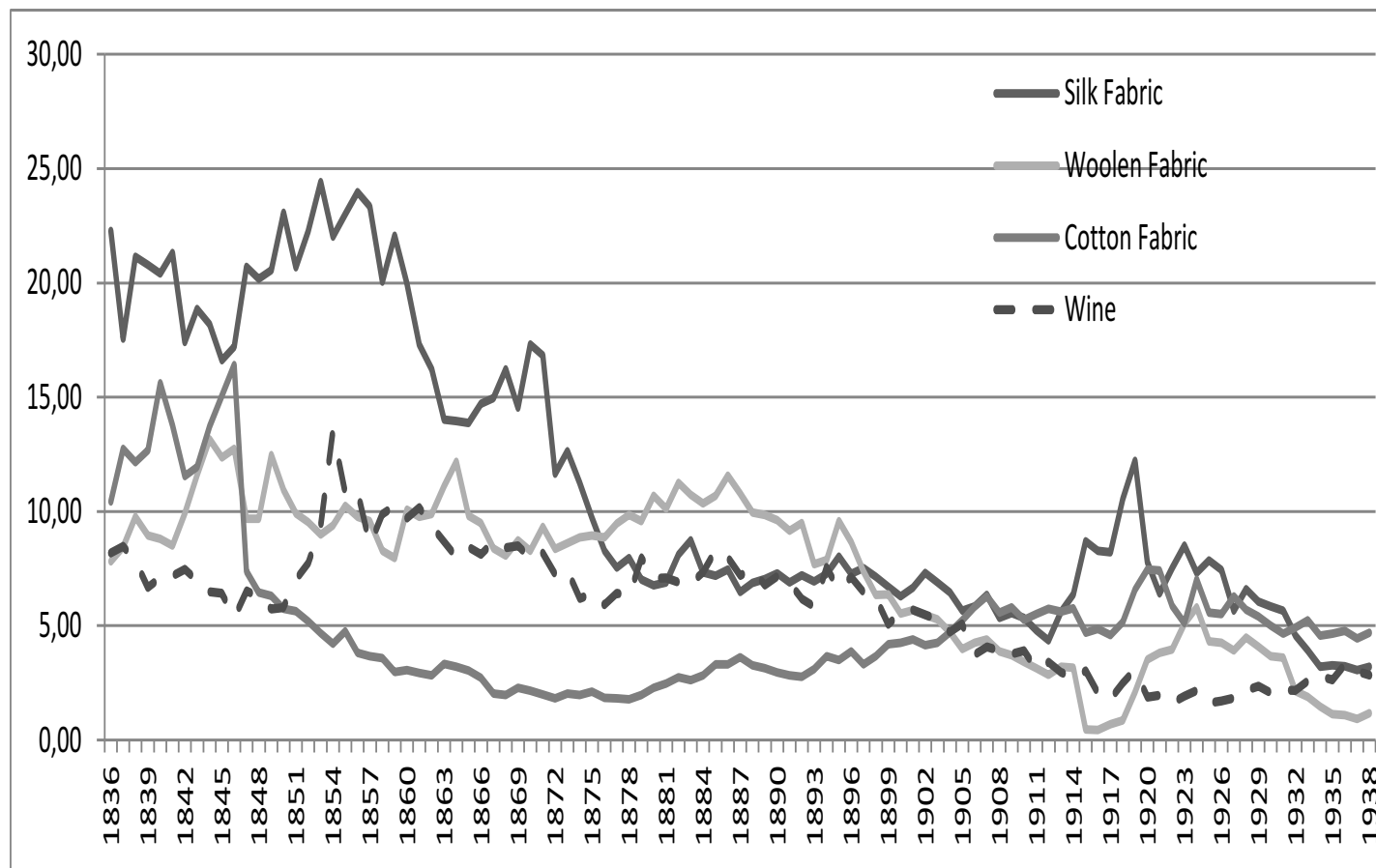
# Issues

- In new international trade theories exports diversification appears as a response. Incorporating increasing returns and love of variety Krugman model (1979) predicts that rich countries would have produced and exported a wide range of goods. Exports diversification and intra-industry trade increase. In Lancaster model (1980) IIT grows in response to demand diversification. In Falvey's (1981) approach, remains faithful to the classical hypothesis (perfect competition, absence of economies of scale...), quality is an increasing function of capital intensity. Capital abundant countries would have comparative advantage in higher-quality varieties while labour abundant countries have comparative advantage in lower quality varieties.

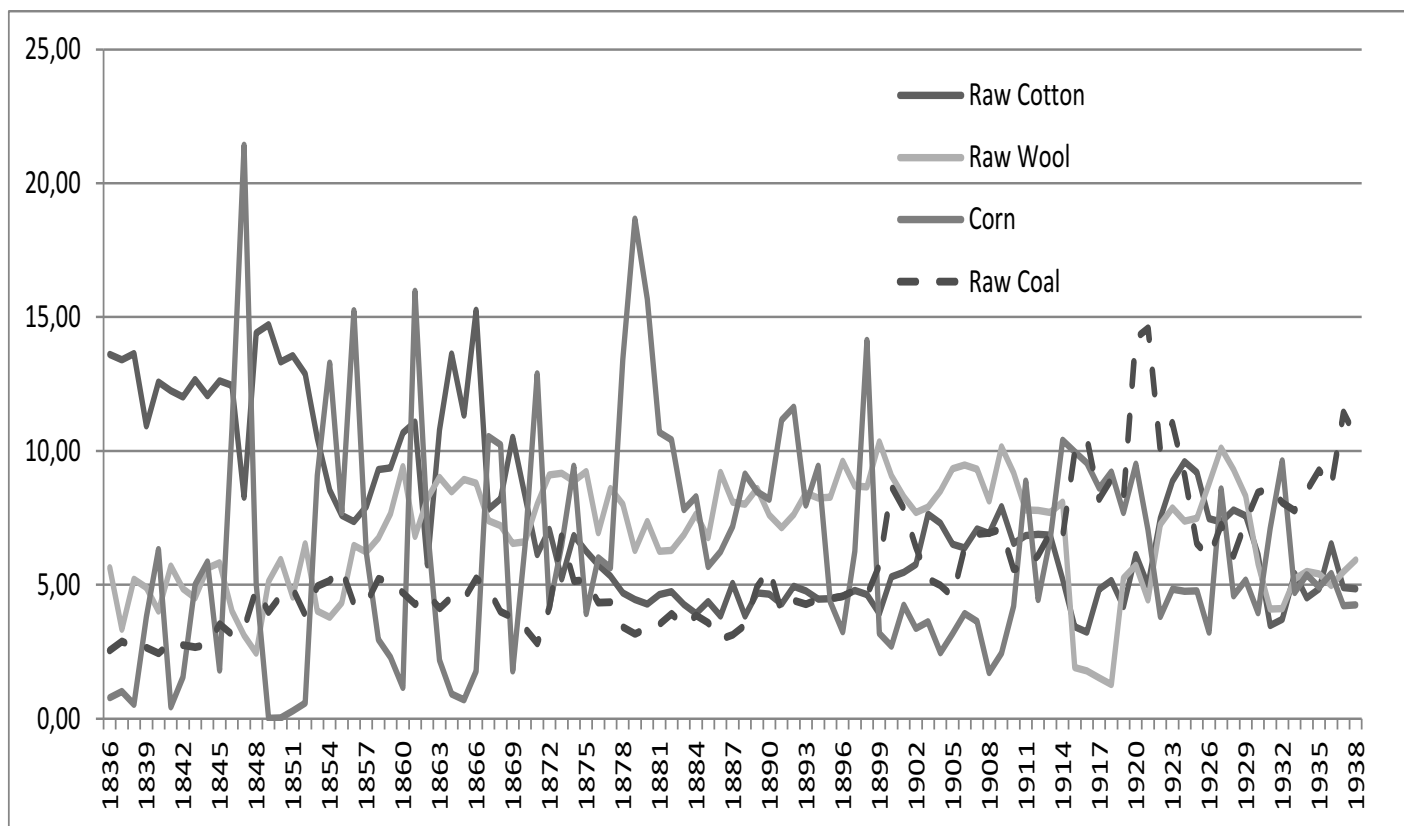
# Data

- To analyse the evolution of the composition of trade in term of both commodities imported and exported our strategy has consisted in building an original disaggregated database for France's foreign trade recorded annually between 1836 and 1938. Our main data source is the Tableau général du commerce de la France avec ses colonies étrangères (Tableau général du commerce et de la navigation after 1896).
- Focusing on product dimension we take into account 107 headings for the imports and about 135 for the exports.

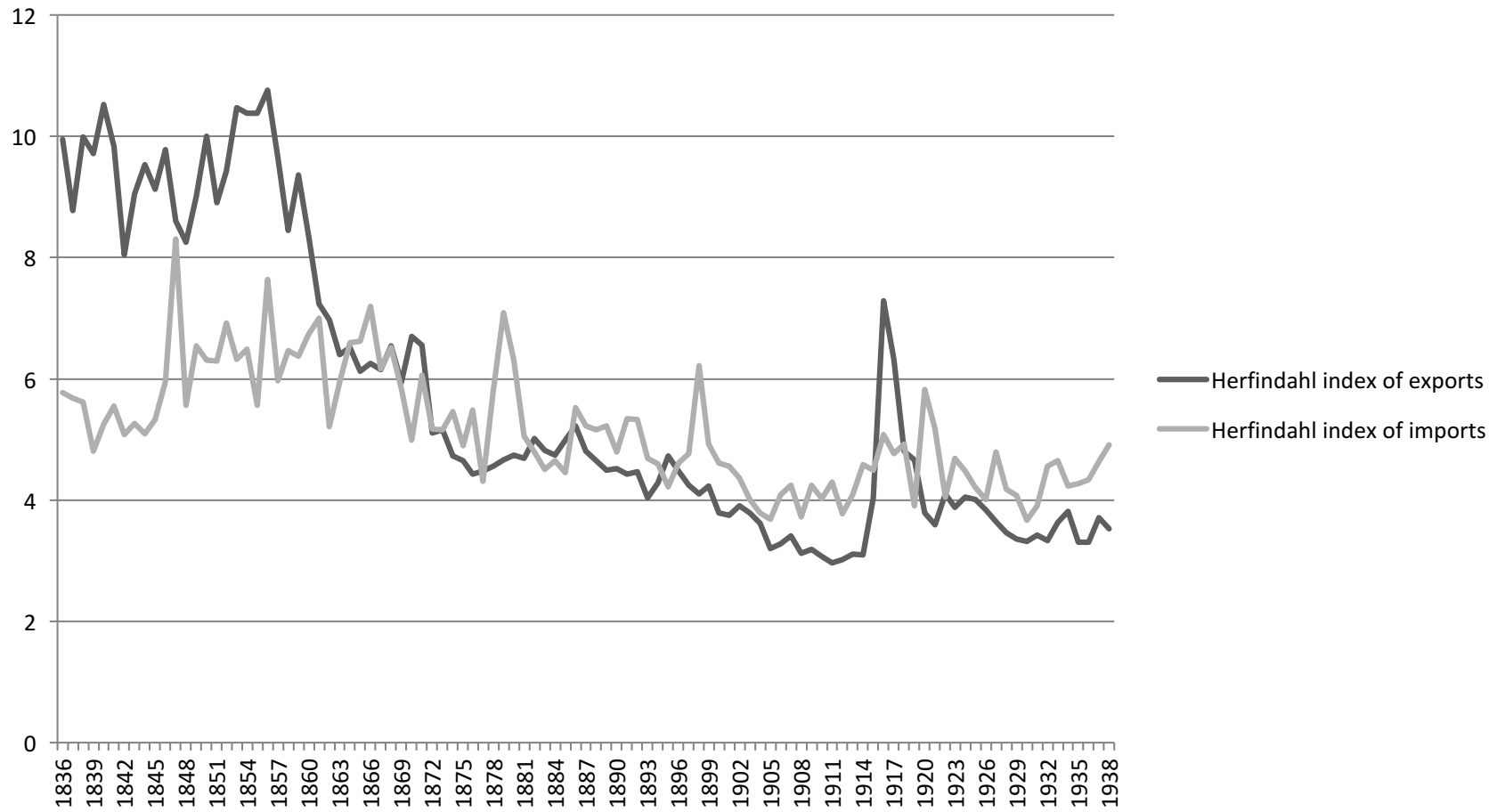
## Evolution of the respective share of top 4 exports in the total of exports value between 1836 and 1938.



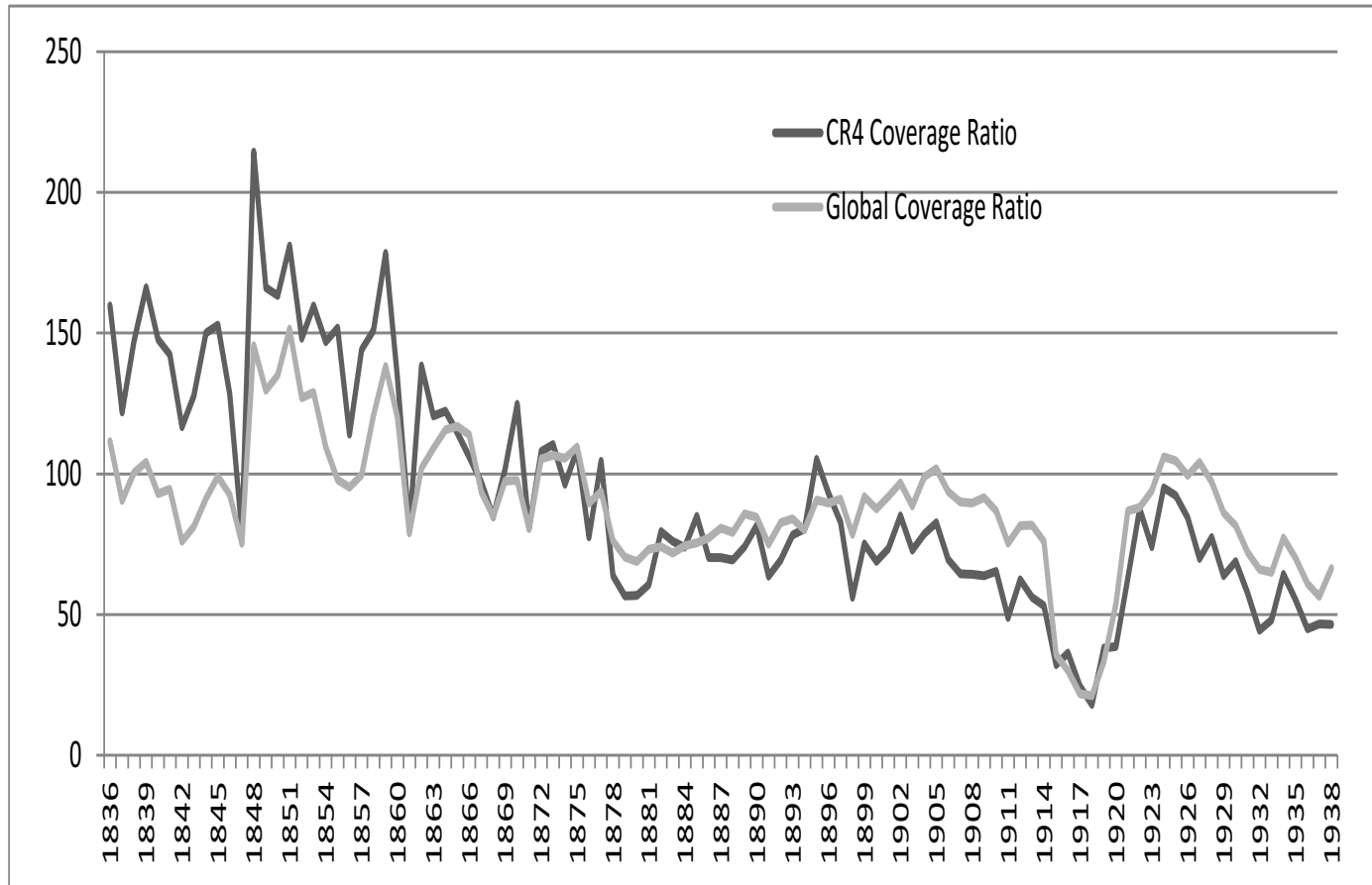
# Evolution of the respective share of top 4 imports in the total of imports value between 1836 and 1938.



# Evolution of the Herfindahl Indexes of exports and imports between 1836 and 1938



# Foreign trade coverage ratios between 1836 and 1938





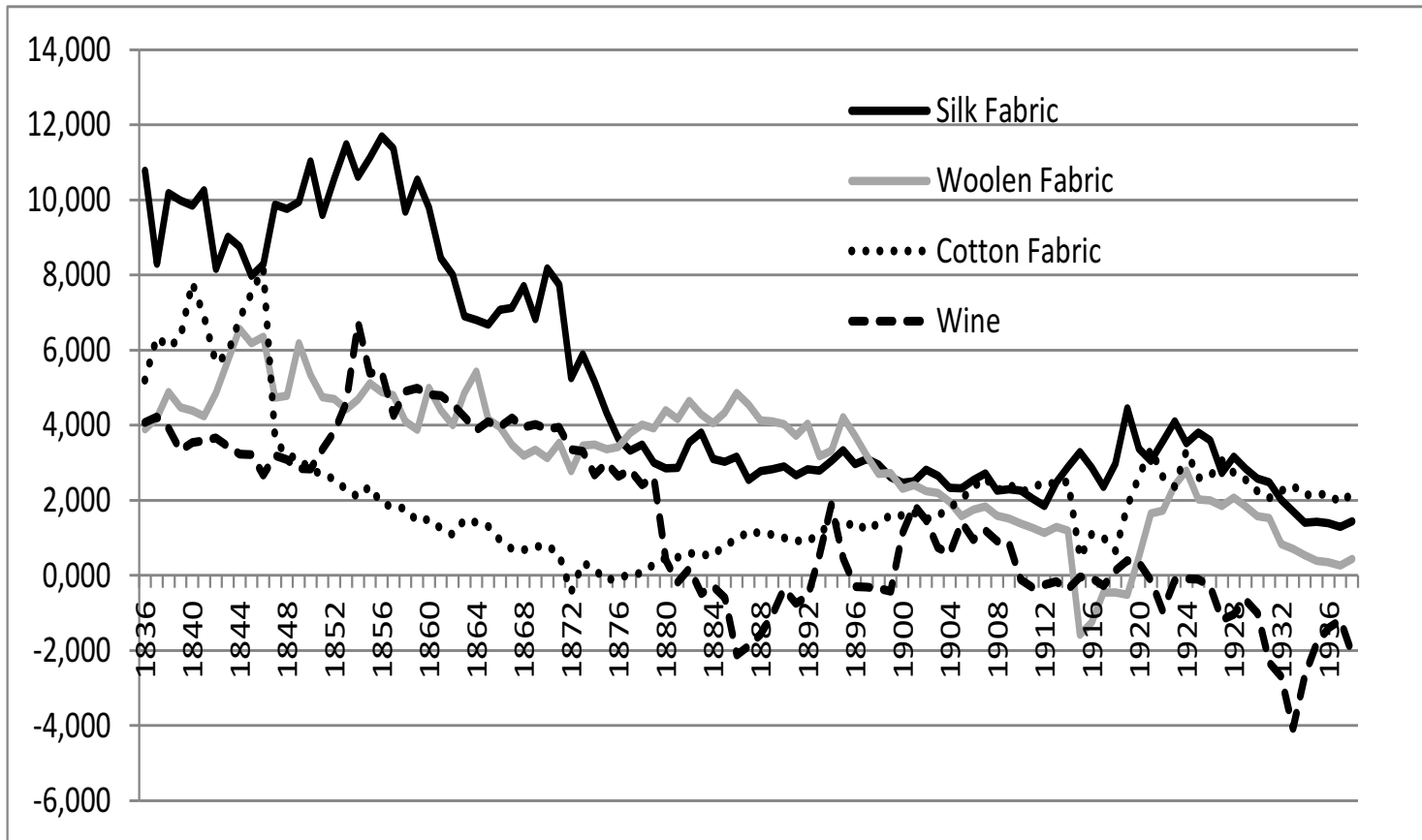
# Specializations and comparative advantages

- We compute the Lafay Index of international specialisation for items of the 3-digit SITC classification.
- For any given product  $i$  the Lafay Index (LFI) is defined as :

- $$LFI_i = 100 \times \left[ \left( \frac{x_i - m_i}{x_i + m_i} \right) - \frac{\sum_{i=1}^N (x_i - m_i)}{\sum_{i=1}^N (x_i + m_i)} \right] \times \frac{x_i + m_i}{\sum_{i=1}^N (x_i + m_i)}$$

- Where  $x_i$  and  $m_i$  are export and import of product  $i$  and  $N$  the number of products.

# Lafay Index of specialization for Top 4 exports between 1836 and 1938



# Intra-industry trade

- In order to give on other lighting on specialisations dynamics and competitiveness we purpose to measure intra-industry trade. Firstly at an aggregated level. We compute IIT at a global level by using Aquino and corrected Grubel and Lloyd index. The Aquino index (AI) is defined as :

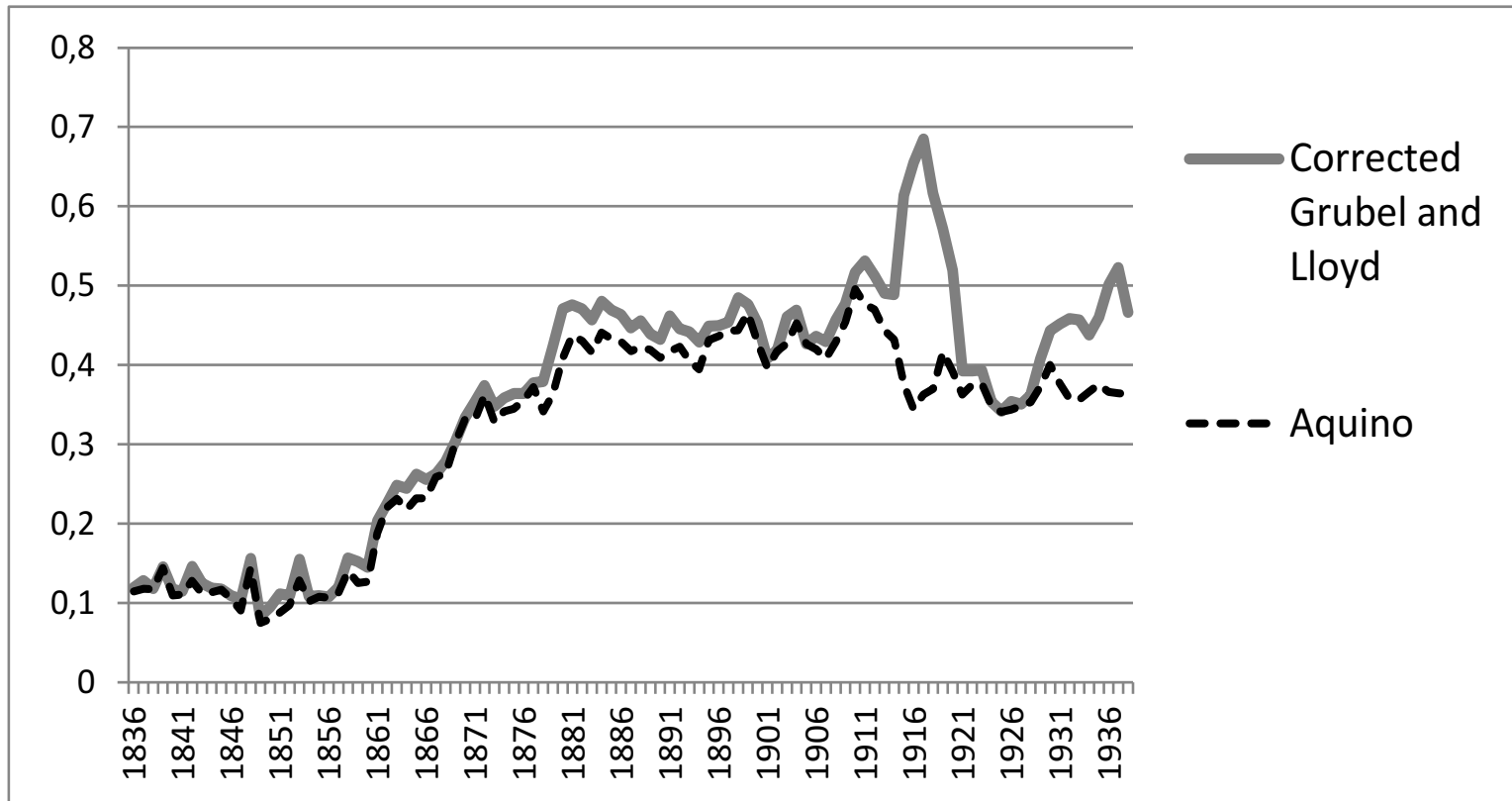
- $$AI = 1 - \frac{1}{2} \sum_i^N \left| \frac{xi}{\sum_i^N xi} - \frac{mi}{\sum_i^N mi} \right|$$

- Where xi and mi are export and import of product i and N the number of products.
- The corrected Grubel and Lloyd is defined as :

- $$CGLI = \frac{\sum_i^N (xi - mi) - \sum_i^N |xi - mi|}{\sum_i^N (xi - mi) - |\sum_i^N xi - \sum_i^N mi|}$$

- Where xi and mi are export and import of product i and N the number of products.
- This index controls for distortions from an overall net deficit.

# Intra-industry trade



# Intra-Industry determinants

- Trade policy and Linder hypothesis
- $GGapt$  is value of the difference between French GDP per capita and the GDP per capita of trade partners. GDP per capita of trade partners is weighted by exports share in French exports. Considering Maddison Project Database we include 12 partners represented 75.88% of French exports (UK, Belgium, Germany, US, Switzerland, Italy, Spain, Netherlands, Greece, Denmark, Sweden, Norway).
- $IIT_t = b_0 + b_1(year) + b_2(T_{t-1}) + b_3[GGapt - 1] + \eta_{i,t}$

# Intra-industry Trade

| Aquino index          | Year              | GGapt-1          | Tt-1                 | Cste               | R <sup>2</sup> | F     | Period    |
|-----------------------|-------------------|------------------|----------------------|--------------------|----------------|-------|-----------|
| Primary products      | 0.16*<br>(2.07)   | 0.003<br>(0.53)  | -5.06***<br>(-14.93) | 79.03***<br>(34.5) | 0.81           | 85.47 | 1849-1913 |
| Agricultural products | 0.28***<br>(2.86) | -0.01<br>(-1.44) | -0.46***<br>(-3.87)  | 26.13***<br>(7.48) | 0.69           | 44.54 | 1849-1913 |
| Transformed products  | 0.39***<br>(3.44) | 0.0015<br>(0.19) | -5.03***<br>(-5.93)  | 71.97***<br>(0.49) | 0.68           | 43.38 | 1849-1913 |

# Quality positioning

- In order to study France's positioning we will build different quality index founded on unit values
  - unit values as proxy for quality, (Manova & Zhang 2012, Johnson 2012)
  - We compute annually for 9 top exports (the lake of imports for trinkets ...).
    - Exports unit values dispersion (40 countries)
    - Exports unit values / imports unit values

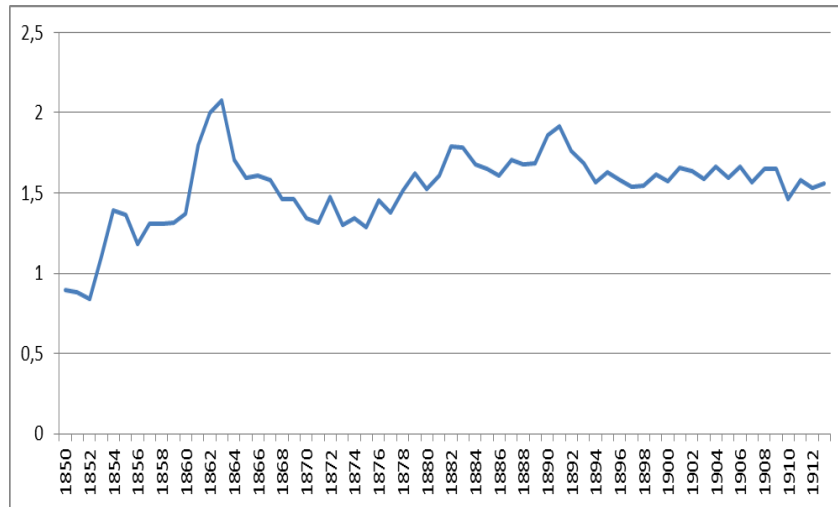
# Quality Positionning

- For 3 headings (Wooleen, Coton and Silk Fabrics) at a desagregated level (30 products by average) we compute exports units values, imports unit values and tariffs)

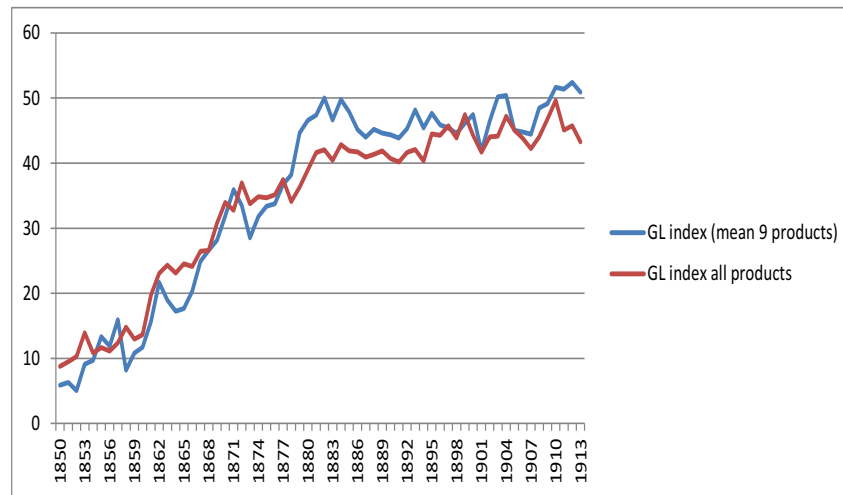


# Quality in response to trade liberalization

Quality index QI (mean of 9 products)

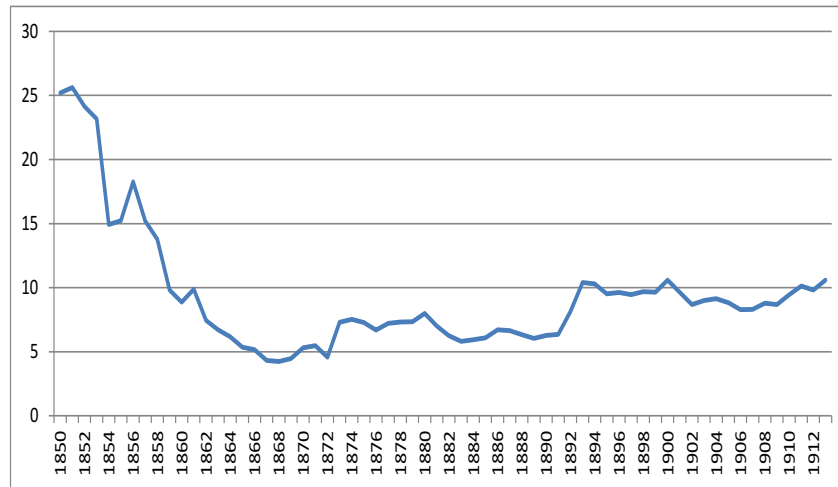


Grubel & Lloyd indexes GL



# Correlations

**Custom tariff CT (mean of 9 products)**



**correlations**

- $GL = -1,66.CT + 50,61,$   
 $R=0,53$
- $QI = 0,0086.GL + 1,227,$   
 $R=0,55$
- $QI = -0,0349.CT + 1,85,$   $R=-$   
 $0,70$
- $N = 64$

# AFSE-NICE 2017

- Focusing on data one problem appears
  - Bad valuation of French imports in special trade
- Why ? Different Valuation of imports for general trade and special trade
- It is more easy to state special trade, traders conceal transit

# AFSE-NICE-2017

1827, 'official values' in order to find a solution  
face undervaluation by traders

prices stay the same until 1847

pressure to change immediately

# Valuation

- “*commerce spécial* (special trade)” and “*commerce general* (general trade)”.
- Data from “special trade” includes the value of goods really imported for national consumption and the value of national production exported (“special trade” excludes goods in transit).
  - Definition of transit (less than three months in the country)???

# 1847 French reforms

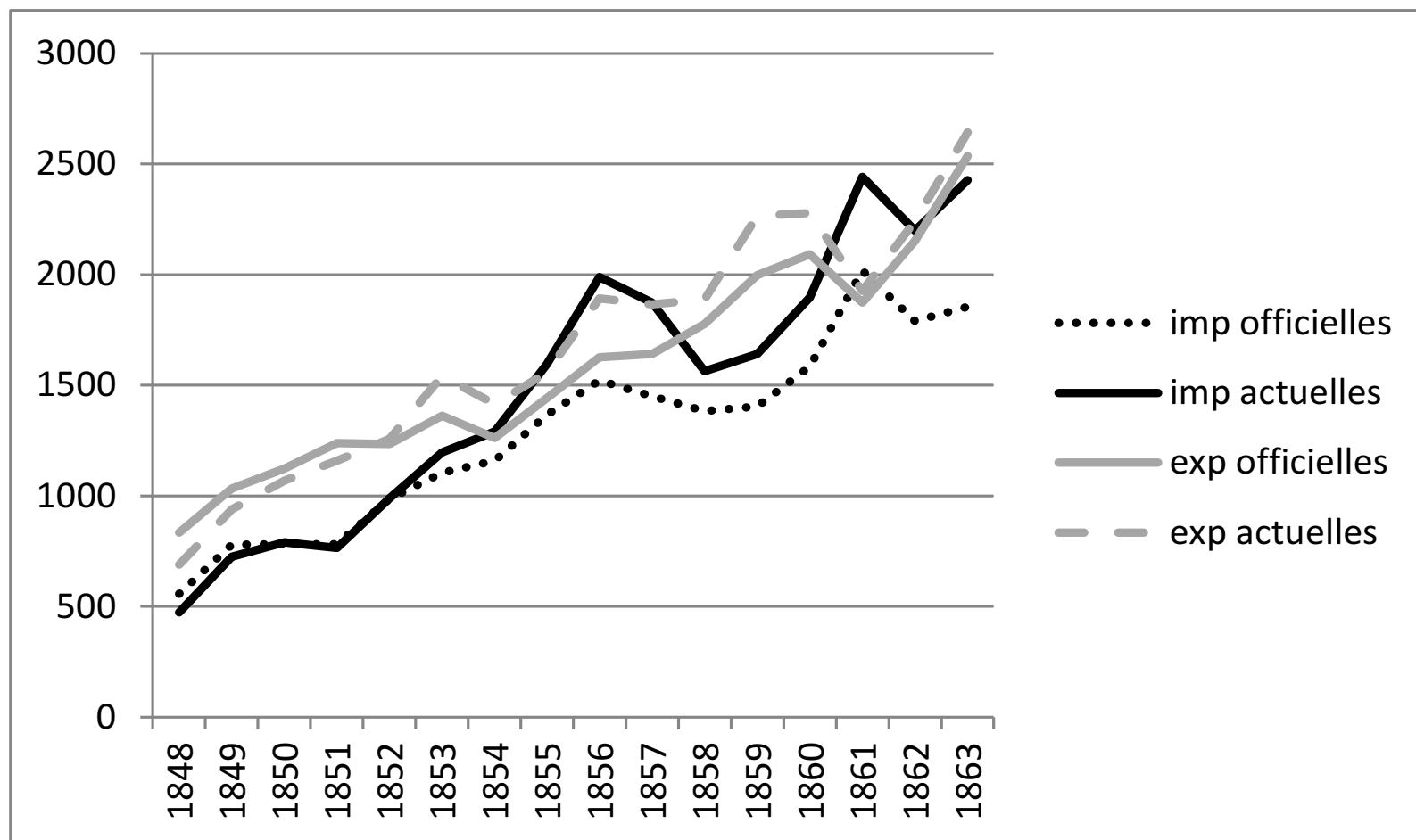
- 1847 only six countries publish annual data
  - Belgium (official values, one actualisation in process system between 1833 and 1847)
  - Russia ?
  - USA (Statements)
  - Austria (Statements)
  - Zollverein (only quantities)
  - UK (statistical Tables, actualised values - exporters statements, official values imports)

# Valuation

- After 1847 the French Table shows “actualised values” using standard prices defined each year by a Custom Value Commission and “official values” based on traders’ statements. During the first months of year the committee defines standard price used to value quantity on each heading of general tariff nomenclature.
- After 1863 official values disappear (in 1854 in Statistical Tables)

# Commerce spécial

comparison between valeurs officielles and actuelles





# Valuation

- Average values for each heading in general tariff (by the Commission)
  - 1313 in Méline tariff 1892,
  - 1469 in 1910 Tariff's.

# valuation

- We compare French and Belgian data.
  - Easy (exchange rate, same system....)

# Special Trade, in thousands francs

|       | France             |                      | Belgium           |                     |
|-------|--------------------|----------------------|-------------------|---------------------|
|       | Source             |                      | Source            |                     |
| years | Exports to Belgium | Imports from Belgium | Exports to France | Imports from France |
| 1906  | 803.625            | 377.012              | 548.062           | 604.631             |
| 1910  | 1003.65            | 467.749              | 669.156           | 747.401             |

# mirror

- We consider 29 products (1906 and 1910)
  - Homogeneous
  - Unit values are different for the same product
    - Difference on Quality?
    - Wrong transit

| PRODUITS<br>SIMILAIRES | Source Belgique                         |   |   | Source France                               | Rapport<br>VUE/VUM |
|------------------------|---|---|---|---|--------------------|
|                        | Quantités en tonnes importées de France | Valeurs des importations provenant de France (mille francs) | Valeur unitaire des produits importés (VUM) | Valeur unitaire des produits exportés (VUE) |                    |
| MIEL                   | 253                                     | 194   | 0,77  | 0,85  | 1,11               |
| FROMAGES               | 3338                                    | 2354  | 0,71  | 2,15  | 3,05               |
| ŒUFS                   | 79                                      | 106   | 1,34  | 1,76  | 1,31               |
| HARENGS                | 1389                                    | 278   | 0,20  | 0,2   | 1,00               |
| MALT                   | 9643                                    | 2571  | 0,27  | 0,255                                       | 0,96               |
| PDT                    | 10947                                   | 915   | 0,08  | 0,15  | 1,79               |
| CACAO                  | 1908                                    | 2673  | 1,40  | 1,645                                       | 1,17               |
| THE                    | 4                                       | 13  | 3,25  | 3,5   | 1,08               |
| CHARBONS DE BOIS       | 242                                     | 21  | 0,09  | 0,06  | 0,69               |
| BETTERAVES             | 21033                                   | 678   | 0,03  | 0,017                                       | 0,53               |
| BIERES                 | 82                                      | 30  | 0,37  | 0,4   | 1,09               |
| ARDOISES (TOITURES)    | 8055                                    | 701   | 0,09  | 0,07  | 0,80               |
| AMIDON                 | 1265                                    | 481   | 0,38  | 0,52  | 1,37               |
| BOUGIES                | 22                                      | 25  | 1,14  | 1,2   | 1,06               |
| COLLE DE POISSON       | 60                                      | 1789  | 29,82                                       | 25  | 0,84               |
| POUDRE A TIRER         | 1                                       | 1   | 1,00  | 1,5   | 1,50               |
| SON                    | 27905                                   | 3907  | 0,14  | 0,135                                       | 0,96               |
| CAOUTCHOUC             | 1310                                    | 20036   | 15,29                                       | 22  | 1,44               |
| CIMENT                 | 2101                                    | 52  | 0,02  | 0,033                                       | 1,33               |
| GLACE                  | 458                                     | 8   | 0,02  | 0,03  | 1,72               |
| BITUMES                | 17887                                   | 2326  | 0,13  | 0,06  | 0,46               |
| SEL                    | 92789                                   | 1984  | 0,02  | 0,02  | 0,94               |
| SULFATE AMMONIAQUE     | 193                                     | 55  | 0,28  | 0,29  | 1,02               |
| LIQUIDES ALCOOLIQUES   | 26                                      | 152   | 5,85  | 2,4   | 0,41               |
| INDIGO                 | 17                                      | 84  | 4,94  | 8   | 1,62               |
| VERNIS sans ALCOOL     | 215                                     | 388   | 1,80  | 1,8   | 1,00               |
| CHAUSSURES             | 108                                     | 689   | 6,38  | 12  | 1,88               |
| CORDAGES               | 358                                     | 394   | 1,10  | 1,2   | 1,09               |
| CHICOREE BRULEE        | 4635                                    | 1159  | 0,25  | 0,55  | 2,20               |

# Conclusion

- How to explain the difference in flow valuation?
  - The influence of Commission and quality issues
  - Overvaluation of special trade to reduce the costs.

