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France's international insertion strategy in globalization in long run perspective 1836-1938

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**France's international insertion strategy in globalization in long run perspective
1836-1938**

Abstract

Using a new long term database on French foreign trade at a high level of disaggregation the paper deepened France's international specializations, comparative advantages and exports concentration. At the beginning of the period, France appears to have espoused a Ricardian model of trade, exporting few textiles products in large quantities. The decreasing of the degree of specialization from 1860 to WWI calling into question dynamic Ricardian model expectations about an increasing of French exports concentration. The decline of exports concentration is correlated with chronic deficit of its balance of trade during Belle Epoque. We observe the same phenomena during the major part of interwar particularly after 1927.

Mots-clés : specialization, comparative advantage, exports concentration, first globalization.

L'insertion internationale de la France en perspective historique 1836-1938

Résumé

Cet article se fonde sur une base de données originale très désagrégée du commerce international pour analyser l'évolution des spécialisations, les avantages comparatifs et la concentration des exportations de la France sur la très longue période entre 1836 et 1938. En début de période la France épouse un modèle ricardien de commerce international, elle exporte peu de produits mais en grande quantité. Ses spécialisations se concentrent sur le secteur textile. A partir de la libéralisation commerciale des années 1860, la concentration des exportations diminue contribuant à une détérioration des performances si l'on en juge par l'apparition d'un déficit courant permanent et la baisse des parts de marché. La structure des spécialisations apparaît de plus en plus instable. La France apparaît alors incapable de renouveler ses spécialisations.

Keywords: specialisation, avantages comparatifs, concentration des exportations, première mondialisation.

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Introduction

We found out a lot of works concerning France's foreign trade quantitative dynamics between early nineteenth century and WWII. However they are still fragmented and the quantitative evidence is insufficient for interpretation particularly to highlight French specialization, comparative advantage and trade power.

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? What were the evolutions of the degree of specialization in link with sectoral diversification? According to Imbs and Wacziarg (2003) the relation between sectoral concentration and per capita income follow a U-shape, at first sectoral diversification increases but there exists a level of per capita income beyond which the sectoral distribution starts concentrating again. The model suggests an increasing of exports diversification during the first stage and a concentration in the second stage.

Did France able to renew and start up new modern specialization as describe for Great-Britain by Temin (1997) who invokes a Ricardian model based on differences in relative productivity? Did trade policy affects specialization nature and degree? Did specialization dynamic highlights French trade power decline during the first globalization and during the great depression in the 1930's?

To document these issues we propose a new long term database on French foreign trade at a high level of disaggregation to deepen France's international trade. We used different level of disaggregation to study product's flows, to consider the evolution of the composition of trade in term of both commodities imported and exported.

We analyse the evolution of specializations and comparative advantages in long run perspective. We use conventional methodologies to measure these phenomena (exports and imports concentration ratios, coverage ratios, Lafay index of specialization, econometric specification to test specializations' stability). By extension these new evidences permit to highlight French trade performance.

The article is structured as follows. First section presents a survey concerning French international trade between 1836 and 1938. Section 2 introduces the original database and some keys data. Section 3 provides an analysis of French's comparative advantages and specialization stability by using conventional methodologies. Last section discusses the main results and gives some explanations and research lines.

1. Survey

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. They are fragmented and not able to offer a complete and clear view of long-run tendencies. 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. He defends the thesis of a moderate protectionism, which tends to be consistent with structural evolution related to France's development. By using only exports or imports these studies didn't highlight specialization issue.

Some of more recent papers particularly focus on short-to-medium term or on a specific sector. Verley (1988) analyses the links between exports structures and economic growth during the 1860's applying a sectorial method. Broder (1993) uses a new approach in terms of effective protection to call into question the effects of the Méline's tariff on specialization. Broder (2006) focuses on 'Machines and Mechanicals' exports and imports between 1874 and 1913 and shows a French lack in term of innovation. Even when considering a longer period, works either focus on few chronological points (Bairoch, 1977; Levy-Leboyer and Bourguignon, 1990; Lefeuvre, 1993; Guillaumet, 2002). For example Bairoch (1993) studies sectoral structures of exports in 1886/90, 1911/13 and 1926/29.

Using annual data Verley (1997) studies the evolution of seven large exports between 1827 and 1880 in order to analyse their role in French industrialization. He focuses on textile industry strategy fully complementary with British exports in global system. Studying the impact of protectionism in top four industrial countries Dormois (2009) computes revealed comparative advantage for France in 1873, 1885, 1900 and 1913; high specializations in finished textiles and trinkets appear. During first globalization French textile specialization is clearly established by historiography.

The decline of French trade power during first globalization is also well-known in historiography (see Cameron, 1961 or Maizels, 1963). As an evidence of this decline, Bairoch (1993) shows that France is the world's second largest exporter until 1871 but falls to the 4th rank from 1875 (behind Germany and the United States). Indeed, the share of France in world exports increases from 9% in 1847 to 15,9% in 1865 but then quickly falls to 7,2% in 1913. Compared to other European countries, the French decline appears to be specific (Lewis, 1981; Federico and Wolf, 2011; Dedinguer, 2012; Huberman et al, 2014).

French trade suffered recurrent current account deficits from the end of the 1870s, an imbalance which worsened in the 1880s. Indicators of trade openness tell a similar story (Asselain and Blancheton, 2005): evidence shows the French index contracting at the beginning of the 1880s while other West European countries "open up" (see Lewis, 1981). This is the case for such laggards in industrialisation as Italy (see Federico and Wolf, 2011) and Spain (Tena-Junguito, 2007).

Once all these various assessments are put together, the diagnosis of a retracting export capacity of French foreign trade after 1870 becomes evident. The empirical basis for such conclusion, however, was always very slim, given the difficulty until recently to process large statistical datasets. Explanations are still confused to clearly identify and understand France troubles. Thus Lévy-Leboyer and Bourguignon highlight: "an error in estimating market trends. Contemporary observations show that manufacturers did not recognize in time that with the development of the urban market, durability and strength, which had justified the successful exportation of their products, ceased to be selling points" (1990: p.65).

Nevertheless, bringing these puzzle's pieces together does not give a complete view of French participation in the international trade, specializations and comparative advantages dynamics. Hence no general overview of French foreign trade for the period since it has been the object of systematic

records exists. The present study is the first to make use of a comprehensive annual database by product for France's foreign trade over the period 1836-1938.

2. Original database and global view of France's foreign trade 1836-1938

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 (corresponding to the SITC rev.3). Concerning the definition of trade we take into account "commerce spécial" and not "commerce général". Data from "commerce spécial" includes the value of goods really imported for national consumption and the value of national production exported ("commerce spécial" exclude goods in transit). These data not include traffic from tourism which can be significant for examples for garment, underwear, trinket, perfume. An other common dilemma of nineteenth century trade statistics concern the use of official price. After 1847 French *Tableau* purpose only 'valeurs annuelles' using conventional prices defined by a committee and not 'valeurs officielles' founded on traders statements.

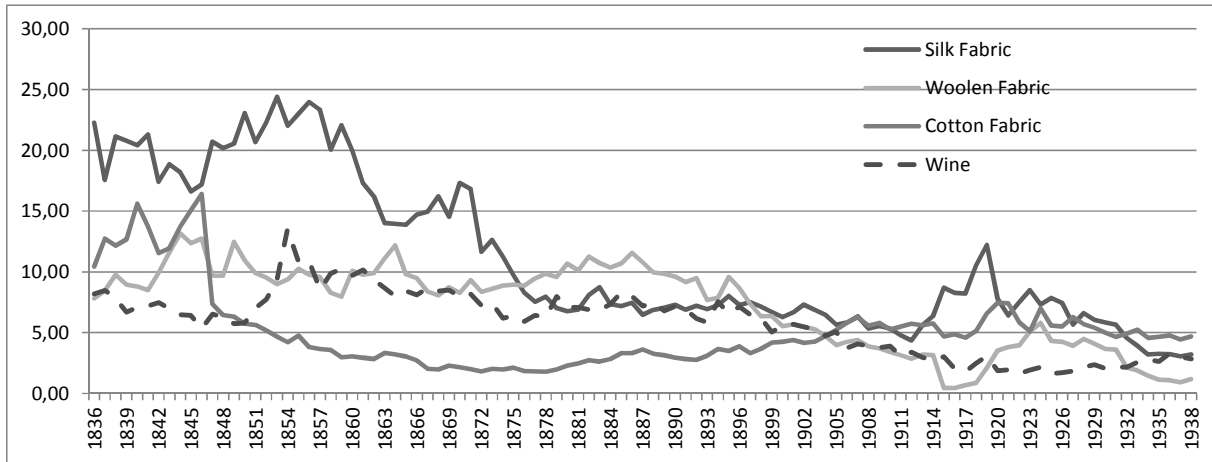
To present data we propose the evolution of the respective share of top 4 exports in the total of exports and the evolution of the respective share of top 4 imports in the total of imports value between 1836 and 1938.¹ Scrutinizing year-to-year changes in top exports over the 1836-1913 period, allows to trace trade specialization more closely, it is noticeable that the list of France's major foreign exchange earners did not differ markedly from one end of the period to the other. This consisted of a dozen of products including finished textiles (silk, woolen and cotton fabrics), wine, fancy goods and trinkets²). In 1913, France's main exporting industries were still those, which had made their fame under the Second Empire, only their share in total trade had been dwindling. During Belle Epoque France was not able to renew and start up modern large specializations as 'machines and mechanicals' in Germany (Dormois, 2009) or 'chemical products' in Switzerland (Charles, 2013).

The diagnostic of a decreasing of top 4 imports share is not so evident considering Figure 2. Major imports concern primary products as raw cotton, raw cotton, coal.... That is in keeping with the international labor division at that time. Theses first evidences invite us to consider more largely exports and imports concentration.

¹ For exports and imports we compute how many way one item is in the top 10 between 1836 and 1938 and purposes an average ranking.

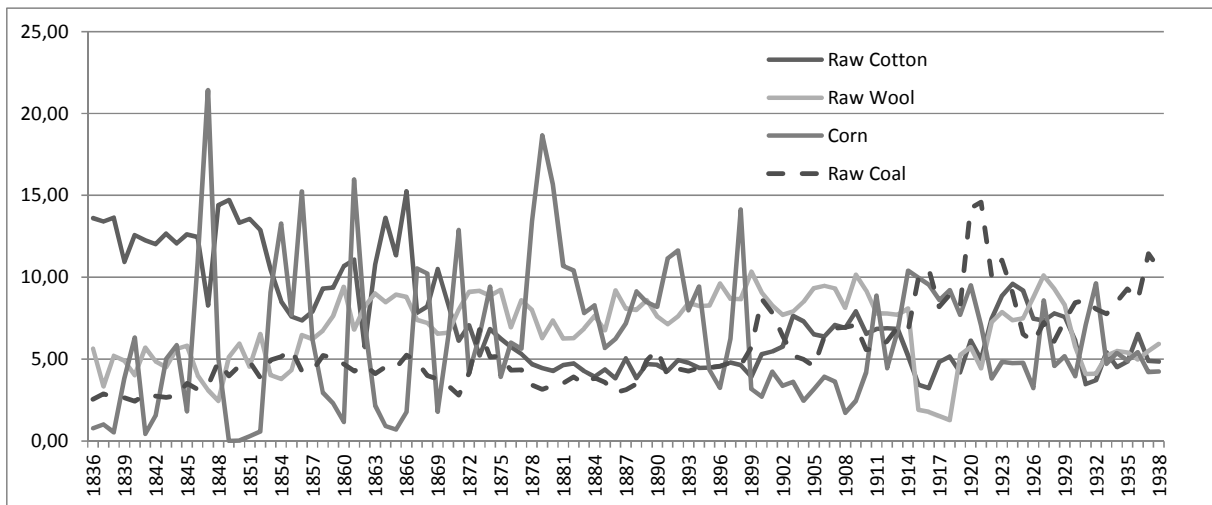
² This product category, specific to the French nomenclature combined a number of luxury or decorative articles using precious wood, inlaid with bone, ivory, mother-of-pearl including chessboards, tobacco jars jewellery cases, toys and the like; the Board of Trade used the formula "Small fancy wares and toys."

Figure 1. Evolution of the respective share of top 4 exports in the total of exports value between 1836 and 1938.



Source : Tableau général du commerce de la France avec ses colonies étrangères (1836-1896) ; Tableau général du commerce et de la navigation (1897-1938) ; own calculations.

Figure 2. Evolution of the respective share of top 4 imports in the total of imports value between 1836 and 1938.



Source : Tableau général du commerce de la France avec ses colonies étrangères (1836-1896) ; Tableau général du commerce et de la navigation (1897-1938) ; own calculations.

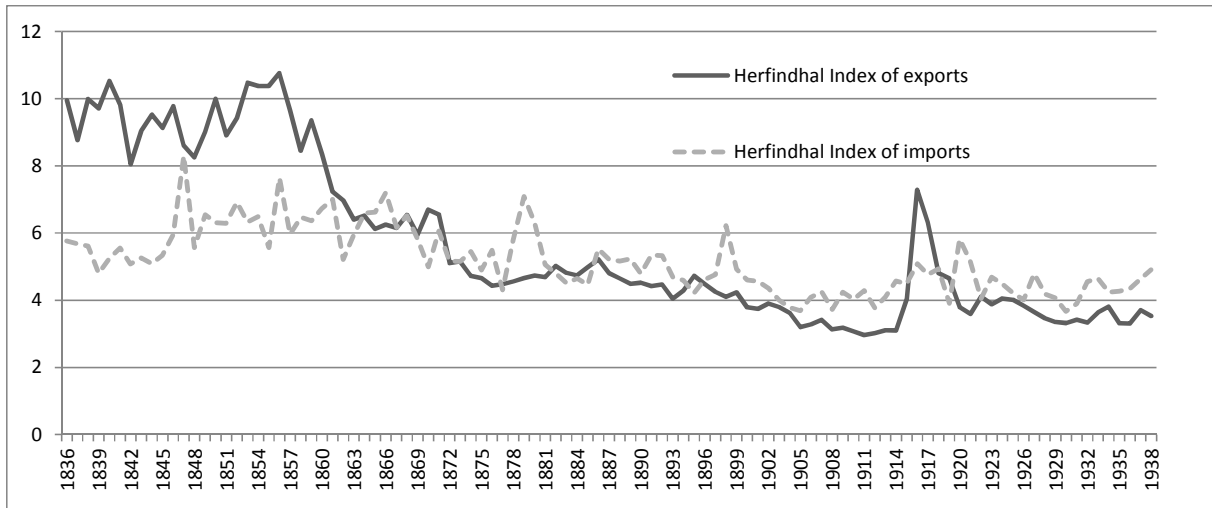
In order to highlight French international trade concentration we compute Herfindhal indexes for exports and imports (Figure 3). Herfindal index corresponds to the following formula:

$$H = \sum_i X_i^2, \text{ with } X_i \text{ is the share of product } i \text{ exports in the total exports. Maximal value is 100.}$$

Concerning exports between 1830's until 1850's concentration appears very high in line with a Ricardian positioning. The index fell rapidly between 1860's and WWI in opposition with Ricardian trade dynamic model which predicts theoretically a positive impact of trade liberalization on exports

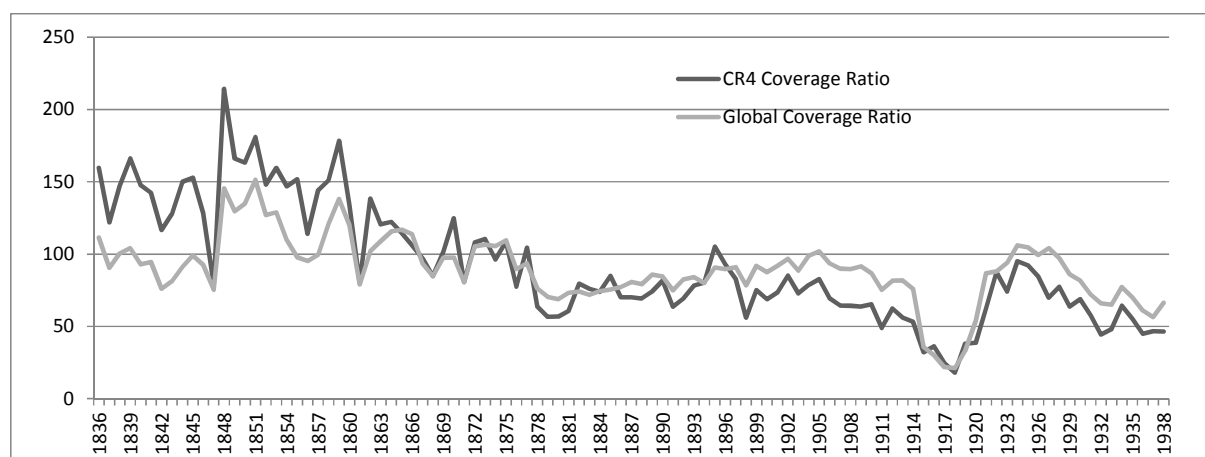
concentration if products are homogeneous. During interwar period go index stays stable at a low level. By opposition for imports in long term the index appears stable.

Figure 3. Evolution of the Herfindhal Indexes of exports and imports between 1836 and 1938



In order to deepen power dynamic and competitiveness we compute two foreign trade coverage ratio CR4 coverage ratio (value of top 4 exports / value of top 4 imports) and global coverage ratio (value of exports / value of imports). We observe a perfect correlation between the two curves, ACD correlation coefficient take value 0.82 between CR4 coverage ratio and global coverage ratio. When the more largest exports are higher than the more largest imports a current account surplus can be observed. Before the end of the 1870's CR4 coverage ratios are more higher than global coverage ratio. Figure 4 shows a turn point at the final of 1870's. The decline of French exports concentration seems correlated with chronic deficit of its balance of trade from the end of the 1870's until WWI. We observe the same phenomena during the major part of interwar particularly after 1927. Then a lack of large specializations seems explain deficit accentuation.

Figure 4. Foreign trade coverage ratios between 1836 and 1938



Source : Tableau général du commerce de la France avec ses colonies étrangères (1836-1896) ; Tableau général du commerce et de la navigation (1897-1938) ; own calculations.

3. France's comparative advantages and econometric framework to test specializations stability

In international economics there are many ways to measure comparative advantages and specialisations since the pioneer Index of Revealed Comparative Advantage by Balassa (1965). The choice of the right index depends on many elements. We propose to use the Lafay Index of international specialisation (1992). For an historical work it offers some advantages. It needs only national trade statistics; data on world exports with a suitable disaggregation are not available for our period. Lafay Index controls for distortions from an overall net deficit. In the first globalization context of increasing intra-industry trade a careful assessment of international comparative advantages requires to take into consideration exports and imports. The Lafay Index, by taking into account imports, allows to control for intra-industry trade and re-export flows. Lafay Index measures the contribution of different products to changes in total comparative advantage.

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 :

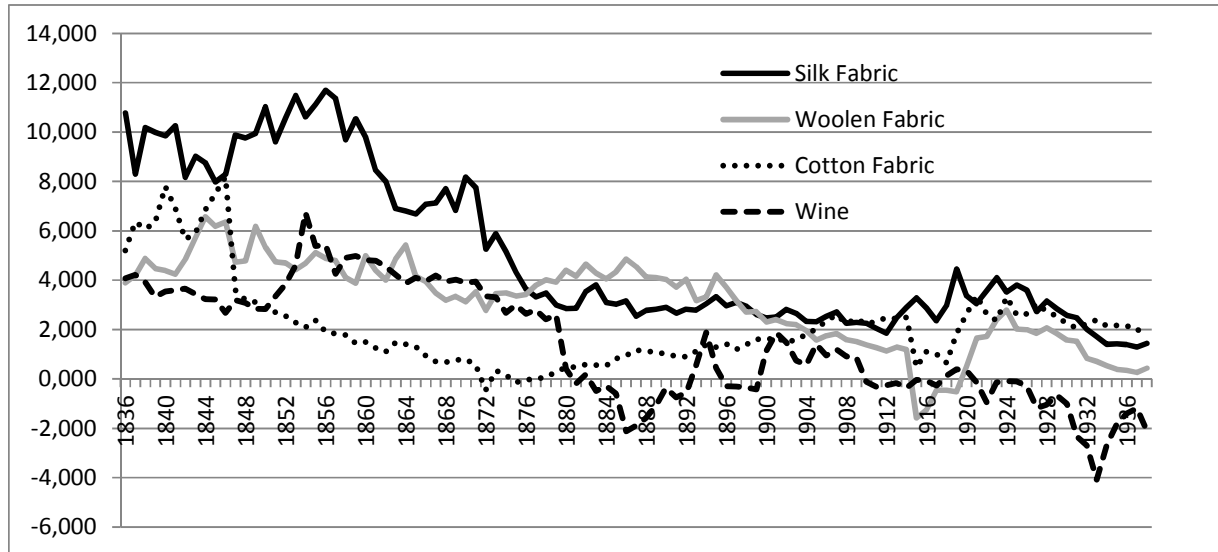
$$LFI_i = 100 \times \left[\left(\frac{x_i - m_i}{x_i + m_i} \right) - \frac{\sum_{i=1}^N (x_i - m_i)}{\sum_{i=1}^N (x_i + m_i)} \right] \times \frac{x_i + m_i}{\sum_{i=1}^N (x_i + m_i)}$$

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

Thus, a positive value indicate the existence of a comparative advantage in a given item (a specialization in the i th good). On the contrary, negative values points to de-specialization. All indexes sum up to zero, with a maximum range from 200 to -200 in the extreme case of complete specialization of the both exports and imports in one single good with balanced trade.

We compute LFI, year by year, for each product. We purpose to show results for top 4 exports.

Figure 5. Lafay Index of specialization for Top 4 exports between 1836 and 1938



Source : Tableau général du commerce de la France avec ses colonies étrangères (1836-1896) ; Tableau général du commerce et de la navigation (1897-1938) ; own calculations.

At the start of the period France was very highly specialized in finished textiles included in top 4 (silk, woolen and cotton fabrics). For silk fabric LFI index reach more than 10 in the 1850's it decreases from the start of the 1860's but France keeps clearly a silk specialization until WWII founded on quality reputation³. LFI index was high for cotton fabric (with a pick at 8 in 1846), it decreases quickly in the end of the 1840's, became negative in 1872 after cession of Alsace and Lorraine to Germany. It rises from 1880's to WWI and stays stable up value 2 during interwar. For woolen fabric LFI index had a better resistance between the 1860's and the 1890's, decreasing appears really in the 1890's and continues until the end of the period, then France loses this specialization.

To study the stability of French international specialization we use an approach inspired by the seminal contributions of Pavitt (1989) and Cantwell (1989), in line with recent papers about modern specializations (Alessandrini and Butuo, 2010; Chiappini, 2014). This approach exploits the following regression equation :

$$LFI_i^{end} = \alpha_i + \beta_i \cdot LFI_i^{start} + \epsilon_i \quad i = 1, \dots, N, \text{ in our study } N = 135.$$

The dependant variable is the distribution of LFI at the end of one period. The exogenous variable is the distribution of LFI of the same index at the beginning of the period, α and β are the standard linear regression parameters and ϵ is the residual term. In order to reduce the impact of LFI volatility we can take into account two or three years average. The interpretation of the regression is as follow:

³ This industry concentrated in Lyon area exports around 2/3 of the production until 1860, principally in USA until the end of the 1850's, after in Great Britain (see Verley, 1997).

- If $\beta_i = 1$ the specialization of the country is unchanged over time.
- If $\beta_i > 1$ country has become more (less) specialised in sectors for which it already has a comparative advantage (disadvantage).
- If $0 < \beta_i < 1$, on average the sign of the specialization is still the same, but the value of the index has increased in sectors for which the initial value of the index was low and has decreased in the sectors for which the initial value of the index was high.
- If $\beta_i < 0$ in this special case, the sign of the index has changed, the specialization ranking has reversed.
- If $\beta_i = 0$ there is no relationship between initial and final pattern of specialization.

Dalum et al (1998) point out that the interpretation of the β coefficient does not allow a conclusion on the evolution of the degree of country's specialization. Indeed Cantwell (1989) shows how it is possible to exploit the following relation deriving directly from the regression equation :

$$\frac{\theta_i^{2end}}{\theta_i^{2start}} = \frac{\beta_i^2}{Ri^2}$$

Where Ri^2 is the correlation coefficient from the regression and θ_i^{2end} and θ_i^{2start} are respectively, the variance of dependent and explanatory variable. The correlation coefficient is Ri a measure of the mobility of sectors along the distribution of the two indices. A high value for this coefficient implies that the relative products' position remains almost unchanged. Three different conclusions could be drawn by comparing the regression and the Ri :

- If $\beta_i = Ri$, the dispersion of the distribution remains the same
- If $\beta_i > Ri$, the degree of specialization has increased
- If $\beta_i < Ri$, the degree of specialization has decreased

Thus, this method allows a better understanding of a country's specialization dynamic.

To drive empirical analysis between 1836 and 1938 we proceed by iteration. First start point is 1836-1837 and we test generally three years by three years the specializations stability in order to detect break point. Detected break points are presented with a full line in figure follow. We renew the same operation taking previous break point as new start point for regression. Then β restarts to 1 for each break point. Retracing β estimations Figure 6 below and Tables 1, 2 and 3 show many original results.

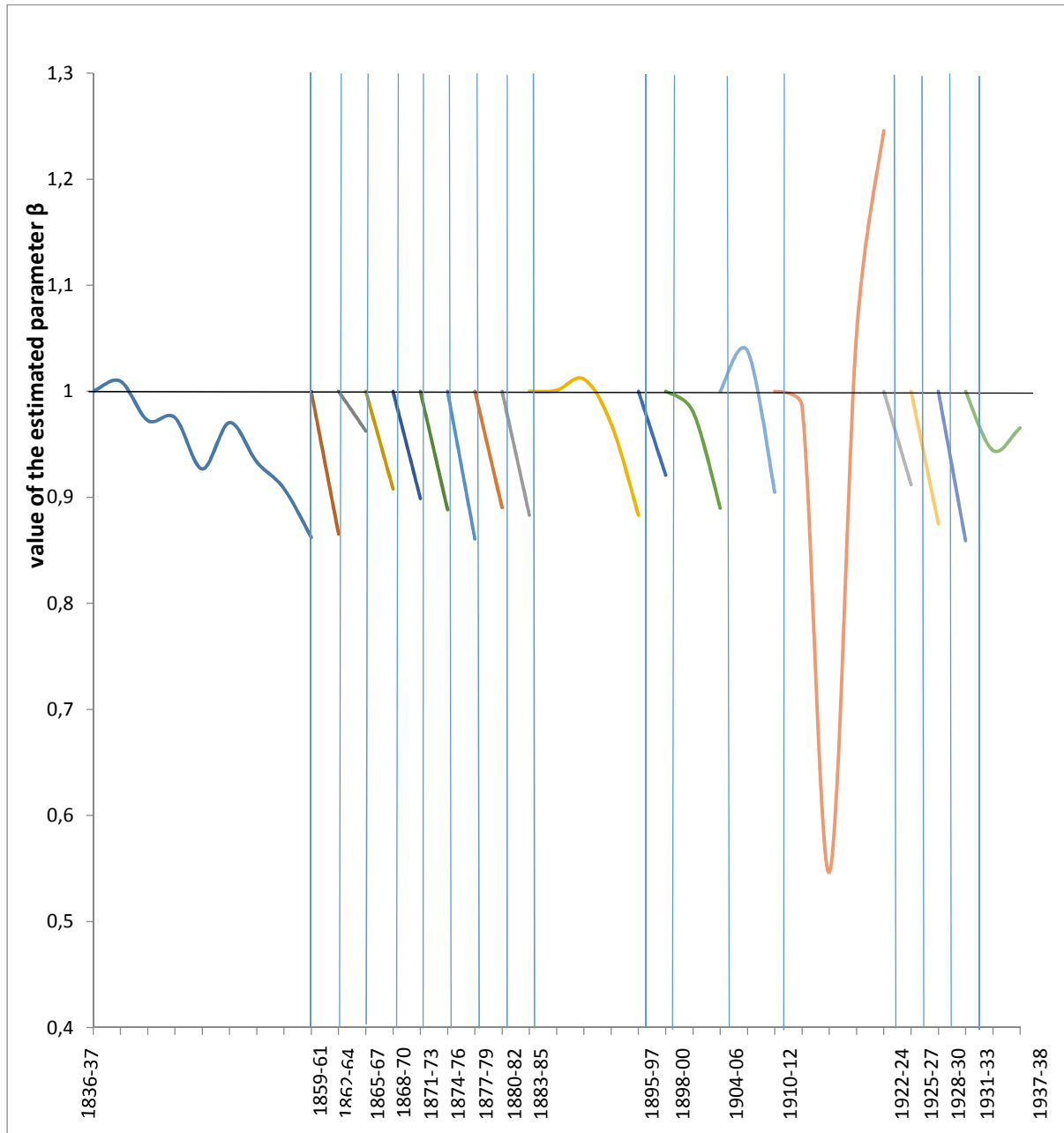
Table 1. Estimations for French specializations stability between 1836 and 1861

Start	End							
1836-37	1838-40	1841-43	1844-46	1847-49	1850-52	1853-55	1856-58	1859-61
β	1,0095	0,972	0,975	0,927	0,97	0,933	0,908	0,862
t^*	-0,775	1,788	0,985	2,945	0,957	1,679	2,485	4,272
β/R	1,019	0,988	1,107	0,97	1,033	1,039	1,002	0,938

Note : $t^* = (1-\beta)/\sigma_\beta$, we accept the hypothesis : $\beta = 1$ (at 1%) if $t^* < 2, 612$

Excepting for 1847-1849, between 1836-37 and 1856-58 French specializations appear completely stable (hypothesis $\beta=1$ can't be rejected). The bad harvesting in 1847 explains specialization instability in 47-49, for example corn imports increases from 99,8 in 1847 to 209 millions in 1848 and in consequences LF index decreases from -5.03 to -10.15. Between 1836-37 and 1859-61, β/R value is higher than 1 indicates an increasing of the degree of French specializations and confirms by extension the French exports high concentration during a quarter century.

Figure 6. β estimations between 1836-37 and 1936-38



Taking by start point 1859-61, β value is never significantly equal to 1 in the 1860's. Computing three years by three years β it appears different to 1 indicates a permanent instability of the structure of specializations between the start of the 1860's and 1883-85. β became significantly equal to 1 only when we consider 83-85 as a new start point. The degree of specialization decrease during the 1860's and the 1870's considering the rapid decreasing of β/R value (0,912 in 1883-85).

Table 2. Estimations for French specializations stability between 1859 and 1885

Start	End	Start	End	Start	End	Start	End
1859-61	1862-64	1862-64	1865-67	1865-67	1868-70	1868-70	1871-73
β	0,8655	β	0,9625	β	0,908	β	0,899
t^*	9,945	t^*	2,837	t^*	4,811	t^*	6,213
β/R	0,879	β/R	0,974	β/R	0,934	β/R	0,918
Start	End	Start	End	Start	End	Start	End
1871-73	1874-76	1874-76	1877-79	1877-79	1880-82	1880-82	1883-85
β	0,888	β	0,861	β	0,89	β	0,883
t^*	5,808	t^*	3,518	t^*	4,456	t^*	5,881
β/R	0,915	β/R	0,974	β/R	0,934	β/R	0,912

Note : $t^* = (1-\beta)/\sigma_\beta$, we accept the hypothesis : $\beta = 1$ (at 1%) if $t^* < 2,612$

In the 1860's 1870's trade liberalization introduces a permanent instability in specialization structure. The decreasing of the degree of specialization β/R indicates a more hard international competition face traditional French specialization and calling into question French Ricardian positioning. In a dynamic Ricardian model tariffs decreasing should result in an increasing of dominant suppliers and exports concentration (see Balassa, 1966 and Dornbusch et al, 1977).

Considering β estimations a period of specializations stability can be identify between 1883-85 and 1895-97. Taking a new start point in 95-97 we refuse β stability hypothesis between 95-97 and 98-00. After, two short periods of stability (each of 6 years) can be detected until 1910-12. Can trade policy able to explain this new stage? In France, the image is closer to that of the 1881 administration (law of May 7), which combined a flat rate with a level still relatively moderate and a more advantageous conventional regime, more or less flexible according to the result of negotiations. The tariff of 1881 left for the majority of products room to maneuver an equivalent of 24% of the negotiators fees. Almost immediately, conventions were signed with great partners (Belgium October 31, 1881, Italy November 3, 1881, Spain February 6, 1882, and Switzerland February 23, 1882...). The installation of the Méline tariff in France in 1892 reinforced protection, which benefited the agricultural sector and reinforced protectionism on the entire continent. In addition to the increase in customs duties, more detailed and complex tariff lists appeared. Tariff lists made up of minimum and maximum rates were introduced and accentuated uncertainty for the traders. In France, minimal taxes were reserved for the countries that had completed a bilateral treaty, which could only be modified by the decision of the Parliament. Until 1910, many tariff modifications intervened. France raised, for example, its customs protection in 1907 by adopting the "law of the lock". Under the terms of the latter, the government had the possibility of raising certain taxes on agricultural products mostly.

Table 3. Estimations for French specializations stability between 1883 and 1938

Start	End			
1883-85	1886-88	1889-91	1892-94	1895-97
β	1,009	1,011	0,969	0,883
t^*	-0,043	-0,439	0,955	3,943
β/R	1,029	1,055	1,037	0,946
1895-97	1898-1900			
β	0,921			
t^*	3,364			
β/R	0,96			
1898-1900	1901-03	1904-06		
β	0,981	0,89		
t^*	0,721	3,443		
β/R	1,027	0,963		
1904-06	1907-09	1910-1912		
β	1,038	0,905		
t^*	-2,236	3,1169		
β/R	1,056	0,968		
1910-12	1913-15	1916-18	1919-21	1922-24
β	0,986	0,546	1,0535	1,246
t^*	0,433	7,4825	-0,947	-4,111
β/R	1,051	0,885	1,238	1,423
1922-24	1925-27			
β	0,912			
t^*	3,262			
β/R	0,963			
1925-27	1928-30			
β	0,875			
t^*	7,859			
β/R	0,894			
1928-30	1831-33			
β	0,859			
t^*	3,824			
β/R	0,958			
1931-33	1934-36	1937-38		
β	0,944	0,965		
t^*	2,1176	0,906		
β/R	0,989	1,06		

Note : $t^* = (1-\beta)/\sigma_\beta$, we accept the hypothesis : $\beta = 1$ (at 1%) if $t^* < 2, 612$

This new trade regime more strategic and discriminatory, partly erected to preserve political and social stability in France, can explain this stabilization of specialization structure. Considering the decreasing of Lafay Index on major specializations France didn't restore high exports concentration between 1883-85 and WWI.

Comparing with specializations of 1910-12, of course specialization structure in 1913-15 and 16-18 are completely instable, in a war economy. Comparing with specializations of 1910-12 France keep in 1919-21 the same specializations structures as before WWI and appears more specialized, the degree of specialization increase ($\beta/R > 1$, 1,23 in 19-21). France's main exporting industries were still those, which had made their fame under the middle of the nineteenth century (silk fabric, cotton fabric). France was not able to renew modern large specializations in order to restore a more high exports concentration.

As Figure shows results for the 1920' are completely instable. Exchange rates instability can probably explain part of the phenomena on the period. Between 1931-33 and 1936-38 French specializations appear completely stable (hypothesis $\beta=1$ can't be rejected). As between 1883-85 and 1910-12 the rise in protectionism seems correlated with the stability of the structure of specialization.

Conclusion

Using an original database this paper confirms the conventional wisdom about France's position in international trade in the middle of the nineteenth century as an "advanced" country which exports manufactured products (73% of total exports in 1846) and imports primary products. This is fully in line with the international labor division of the period. Between the 1830's and the end of the 1850's exports concentration is very high. At the beginning of the period, France appears to have espoused a Ricardian model of trade, exporting few products in large quantities. France was largely specialized in finished textiles (silk, woolen and cotton fabrics...). In the 1840's and in the 1850's French specializations appear stable and a small increasing of the degree of specializations can be identified.

In a context of transportation cost decreasing (see Jacks et al, 2010, 2011), the 1860's-1870's trade liberalization introduces a permanent instability in specialization structure. The decreasing of the degree of specialization indicates a more hard international competition facing traditional French specialization and calling into question dynamic Ricardian model expectations about an increasing of French exports concentration. Exports concentration fell quickly, gradually and continuously until WWI. In long run perspective the decreasing of Herfindhal index appears in line with Imbs and Wacziarg (2003) analysis concerning the relation between sectoral concentration and per capita income which follow a U-shape.

Scrutinizing year-to-year changes in top exports over the period, allows to trace trade specialization more closely, it is noticeable that the list of France's major foreign exchange earners did not differ markedly from one end of the period to the other. In 1913, France's main exporting industries were still those, which had made their fame under the Second Empire, only their share in total trade had been dwindling.

Between the 1880's and 1910's a new trade regime, more strategic and discriminatory, partly erected to preserve political and social stability in France, can explain this stabilization of specialization structure (Becuwe and Blancheton, 2014). Considering the decreasing of Lafay Index on major specializations France didn't restore its Ricardian positioning between 1883-85 and WWI. France was not able to start up modern large specializations as for example 'machines and mechanicals'. In medium term this lack can contribute to explain part of GDP weakness in France. The empirical literature on international trade shows that growth rate of a country can be reduced by "wrong specialization" (Lucas, 1988; Young, 1991). In long term this lack generates a path dependency after WWI, France has an old fragile structure of specialization. Comparing with specializations of 1910-12, France keeps in 1919-21 the same specialization structure as before WWI (silk fabric stays top 1 exports). In the 1920's only and hard undervaluation of franc maintains a global coverage ratio near the equilibrium. The end of monetary doping and the great depression damage French foreign trade positions (chronic deficit...).

The decline of French exports concentration is correlated with chronic deficit of its balance of trade from the end of the 1870's until WWI. We observe the same phenomena during the major part of interwar particularly after 1927. Then a lack of large specializations seems to explain deficit accentuation. Considering the decreasing of manufactured share's in exports (only 46% in 1938) a long run degradation of France's insertion in international trade system should be underlined.

Regarding exports diversification and de-specialization one crucial question for an agenda research is : how an old industrial country as France adapts its insertion in international trade system and reacts against international competition particularly during first globalization ?

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