The dispersion of customs tariffs in France between 1850 and 1913: discrimination in trade policy

Stéphane BECUWE

&

Bertrand BLANCHETON

GREThA, CNRS, UMR 5113
Université de Bordeaux

La dispersion des tarifs douaniers selon la provenance des produits (1850-1913) : discrimination de la politique commerciale

Résumé

Cette contribution met au jour, pour la première fois à notre connaissance, l'existence d'une dispersion des tarifs douaniers de la France selon la provenance des produits entre 1850 et 1913. Si une partie de cette dispersion résulte de biais liés à la constitution des nomenclatures du Tableau général du commerce de la France, elle révèle néanmoins l'existence de pratiques discriminatoires à l'encontre de certains pays pour certains produits. Le principe même de cette dispersion tarifaire (qui n'est pas spécifique à la France) introduit des doutes quant à la robustesse des travaux empiriques conduit sur le thème de la corrélation entre tarif douanier et croissance (tariff-growth paradox) et sur la manière dont a été traité le thème de la protection effective. Elle doit selon nous ouvrir la voie à des travaux qui réintroduisent la dimension pays dans l'étude de la politique commerciale fin XIXe.

Mots-clés : Politique commerciale, histoire de la mondialisation, tarifs douaniers

The dispersion of customs tariffs in France between 1850 and 1913: discrimination in trade policy

Abstract

This contribution purpose an original and exhaustive measure of customs tariffs dispersion depending on the origin of imported products in France between 1850 and 1913. While a part of this dispersion is the result of a systematic structural effect linked to the compiling of nomenclatures for France's general trade chart, it nevertheless reveals the existence of direct discriminatory practices applied to certain countries for certain products. The principle of this dispersion of tariffs (which was not specific to France) introduces uncertainty over the strengths of empirical work dealing with the correlation between customs tariffs and growth (the tariff-growth paradox), and over the way in which the theme of effective trade protection has been treated. In our opinion, it should pave the way to work that reintroduces the country dimension into the study of late 19th century commercial policy.

Keywords: Trade policy, History of globalisation, Customs tariffs

JEL: N7

Introduction[1]

At the outset, the objective of our research was to apply an approach angled on effective protection for France (tariffs strategy consequences in term of national added value) at a totally disaggregated level in order to try and advance recent work (Tena-Junguito (2006) and Dormois (2006) (2007)) which focuses on tightly aggregated nomenclatures, a select number of sectors and involving only a few chronological markers.

Initial analysis of sources available at the French National Customs Museum (data relative to imports and duty received country by country) revealed substantial heterogeneity of "tariff practices". For one and the same heading (even extremely disaggregated and, on the face of it, homogeneous), tariff rates could differ considerably according to the country of origin. We have elected to take a deeper look at this research path, which to date has remained uncharted. Indeed, up until now, historiography has addressed French trade policy focused only on products, either from a quantitative angle around the theme of per-sector or effective protection (Desaigues (1985), Nye (1991), Irwin (1993), Broder (1993), Tena-Junguito (2006) and Dormois (2006) (2007)), or by considering the role of pressure groups (Barral (1974), Smith (1980), Démier (1990), Plessis (1993), Cadier-Rey (1997), Garrigues (2002), Todd (2008)…).

We have tapped into data from France's general trade chart (an annual publication Tableau général du commerce de la France) and, for nine countries, have studied the customs duty applied to all the products included in the official nomenclature every five years between 1850 and 1910. We have made a statistical analysis of these duties.

This article establishes the existence and measure a substantial dispersion in French tariffs, which evolves significantly throughout the period. While a part of this dispersion is the result of a systematic structural effect linked to the compiling of nomenclatures for France's general trade chart, it nevertheless reveals the existence of direct discriminatory practices applied to certain countries for certain products. This original result has three major consequences. It introduces an additional argument against the use of average customs duty to measure the trade openness of a given country ; as a consequence, the strengths of empirical work which activates this ratio on the theme of tariff-growth paradox would appear to be significantly challenged. From the article, it emerges that an average customs duty for a product or product family makes only little sense when

country dispersion is high. The article then shows the necessity to efficiently conduct an analysis in terms of effective protection and to cross-reference the product and country factors.   Tariffs dispersion evolution between 1850 and 1913 is particularly interesting, it casts light different "trade policy regimes".

Our approach is rolled out in three stages. In an initial section, we present the data, propose a measurement of tariff dispersion and its dynamics, and show the appeal of analysing disaggregated data. In a second section, we analyse the possible sources of this dispersion and the historical evolution of tariff dispersion. In the third section, we bring out the fundamental consequences for the fertile theme of tariff growth paradox.

The dispersion of tariff practices in France (1850-1910)

Methodology and data

To highlight the heterogeneity of tariff rates according to the origins of products, our approach has been as follows. We have considered nine countries: Great Britain, Germany, Italy, Spain, Belgium, Switzerland, Argentina, Russia and the United States, which on average accounted for 60.77% of French imports (standard deviation of 5.29) and 43.64% of customs receipts (standard deviation of 7.51). The sample appears representative in terms of both intensity of flows and diversity (although mention should be made of the virtual absence of exotic foodstuffs). We have analysed customs duties per product in the most disaggregated way possible, based on France's General Trade Chart. The nomenclature for this primary source is indeed highly disaggregated: the number of products is in excess of 100 at the end of the period for Great Britain, Belgium, Germany or Italy and several dozen for the other countries. We have worked on 5-year data starting in 1850 and ending 1910, taking into account the year 1893 (to better appreciate the potential influence of the Méline tariff of January 1892). This means that 14 dates will systematically lie at the base of our calculations.

For each of these countries, importations and customs duties per product have made it possible to calculate mean customs duty rates per product and per country. From these figures we have been able to calculate the mean figure and the dispersion figure, providing that the product comes from at least three countries from the nine under consideration. Next, the selected products have been split into three categories: staples (or primary products, e.g. wool, plain timber, unrefined coal…), agricultural products (such as cereals and wine…) and processed products (machinery and engineering, hide and leather goods, silk fabrics…). This distinction aims to produce the bases for analysis in terms of real protection. For each of the three categories, the average rate of customs duty and the mean standard deviation coefficient for average rates of customs duty per product have been calculated[2]. This latter indicator is considered as an indicator of dispersion for custom duty rates per country and per product category.

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[2] We give an exemple for 1905 in annexe.

A high dispersion of tariff protections according to the country of origin and product category.

Figure 1 presents the shifts in custom duty rates per class of product for the nine countries. The evolution of total average customs duty (ACD all products) is also given.

Figure 1: Shift in the average customs duty per product category
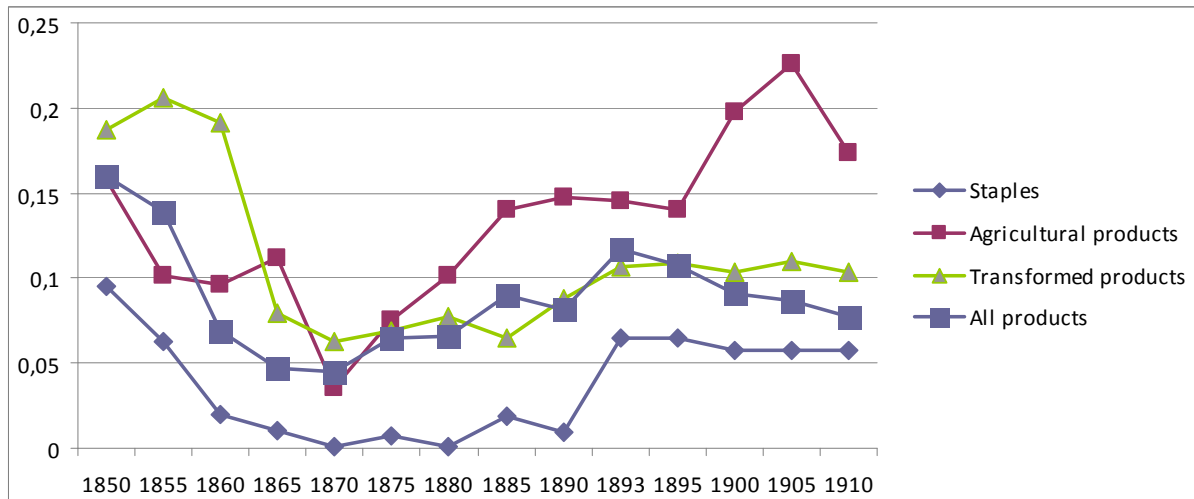
Source: General Chart of Trade for France, Musée National des Douanes, Bordeaux. Own calculations.

As evidenced by the calculation of the coefficients of correlation between these four curves, shifts are similar except, however, for that of the average customs duty for agricultural products and that for processed products. But the question is: do these differences in the evolution of nominal protection barriers between the agricultural and manufacturing sectors reflect for as much the existence of a commercial policy?

Table 1: ACD correlation coefficients

ACD correlation	Staples	Agriculture	Transformed	Overall
Staples	1.000	0.618	0.593	0.851
Agriculture		1.000	0.105	0.382
Transformed			1.000	0.671
Overall				1.000

The following figure visualises the evolution in dispersion coefficients for customs duty rates for the three product categories.

Figure 2: Evolution in dispersion indicators
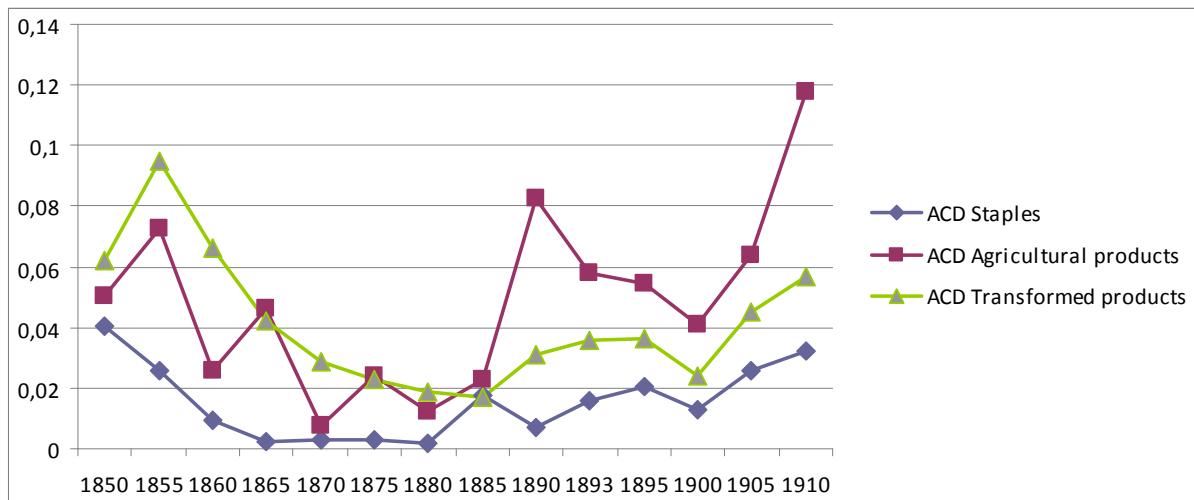
Source: General Chart of Trade for France, Musée National des Douanes, Bordeaux. Own calculations.

The average rate of dispersion over the period is 0.0156 for staples, 0.0466 for agricultural products and 0.0416 for processed products. The values of this dispersion indicator are very high. If we consider the ratio standard deviation / average of tariff average for each product category (equal respectively 0.077, 0.1322 and 0.1131), coefficients of variation calculation give 0.4126 for staples, 0.3673 for agricultural products and 0.3737 for processed products. They attest to the fact that for one and the same product, the applied rate of customs duty is highly variable depending on the country of origin. This is one of the article's mains findings.

For the staples associated with much more homogeneous nomenclatures (categories such as lead, wood, plain timber, zinc…), the coefficient of variation is more than agricultural products and more than processed products, which form often heterogeneous categories (rubber and gutta-percha structures, apparel and sewn lingerie pieces…).

Dispersion shows marked shifts that we will need to try and explain further on. It falls from the start of the period until the 1870's, then rise until the end of the period.

An examination of the two figures reveals a similar evolution between the average customs duty and the dispersal indicator for each category of products. This fact is proven by calculating the correlating coefficients between these two variables, respectively equal to 0.886 for the basic commodities, 0.569 for the agricultural products and 0.888 for the processed products. The quality of the correlations obtained between the average customs duty and the dispersal indicator suggests that dispersion increases when the level of protection rises and that conversely it decreases when protection decreases. This relationship is especially true for the basic commodities and the processed products. This correlation suggests that the dispersal country could be a complementary instrument of trade policy.

Dispersion in tariffs per country: illustrations with products

The reality of this dispersion appears more clearly when looking at these examples. The graphs below retrace the shift in customs duty for the "machinery and engineering" category, the "wines" category and for "plain timber" category. Significantly differentiated practices prevail, depending on the country exporting the product. American machinery seems to be taxed twice the amount of other countries between 1865 and 1875, and the rate of customs duty imposed on American imports

and machinery and engineering products is at its highest at the end of the period between 1892 and 1910. In 1890, Italian wines were taxed at a five times higher rate than Swiss wines and duty was significantly higher than for Spanish wines. Russian woods were taxed three times higher than Swiss woods between 1893 and 1910. The study of disaggregated flows and the analysis of the level of duty applied to such and such a country are unquestionably of great value.

Here again, we cannot systematically establish a link between variation in levels of protection per country and the shift in the flow of imports. Each configuration can be analysed individually. For Broder (1993)[3], "the absence of any statistically detectable close link between the shift in customs duty and the evolution of imports is not comparable to neutrality of tariffs." If the purpose of such tariffs is to protect ageing and ineffective industry - in this case faced with peaks in demand - the result will be an increase in imports. There will be simultaneously a rise in tariffs and a rise in imports. To illustrate this point, Broder considers the example of agricultural machinery further to the tariff introduced in France in 1892. Between 1889 and 1903, a period when the pressure of customs barriers was raised three-fold, the value of imports was multiplied 8-fold. Three-quarter of imports of agricultural machinery came from the United States, the rest was imported from Germany and Great Britain. The agricultural crisis in France ruled out any possibility of high growth for this industrial sector nationwide. Under these conditions, the recovery after the Méline tariff could only work in favour of imports. "The rise in duties had the sole aim of aligning imported prices on excessively high home market prices. Customs duties could not create the conditions for competitive agriculture and would have run counter to the interests that the tariff set out to protect."[4]

Figure 3: Customs tariffs applied to the machinery and engineering sector between 1850 and 1910, according to country of origin.
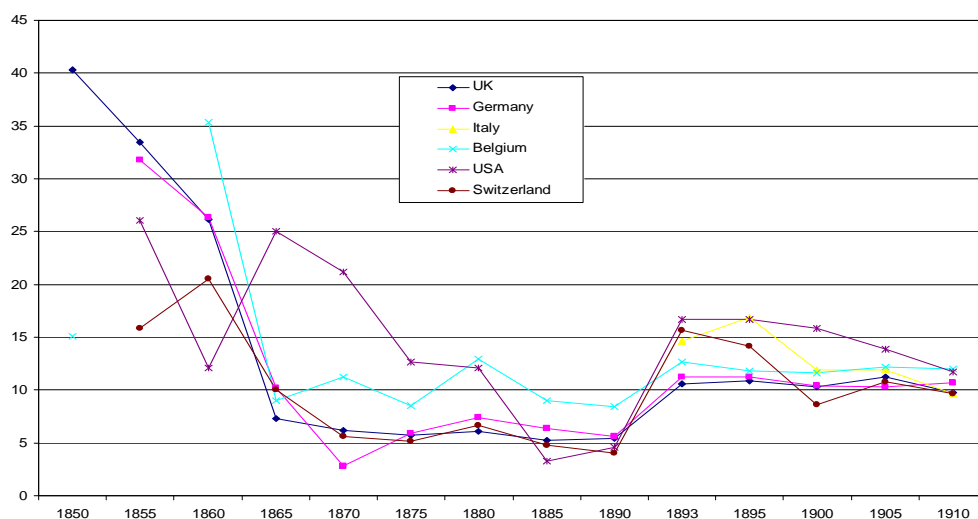
Source: General Chart of Trade for France, Musée National des Douanes, Bordeaux. Own calculations.

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[3] Broder, « Le tarif de 1892 et les industries nouvelles : une première approche », p. 61.
[4] Ibid., p.62.

Figure 4: Customs tariffs applied to the wine sector between 1850 and 1910, according to country of origin
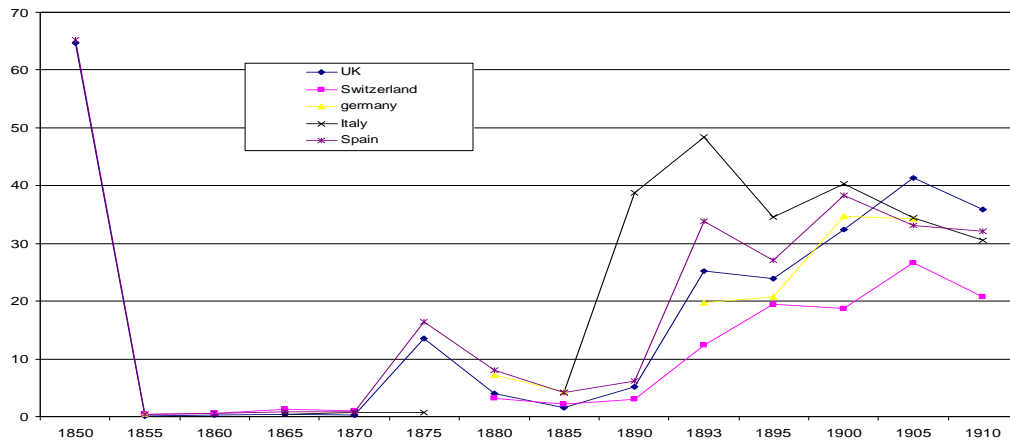
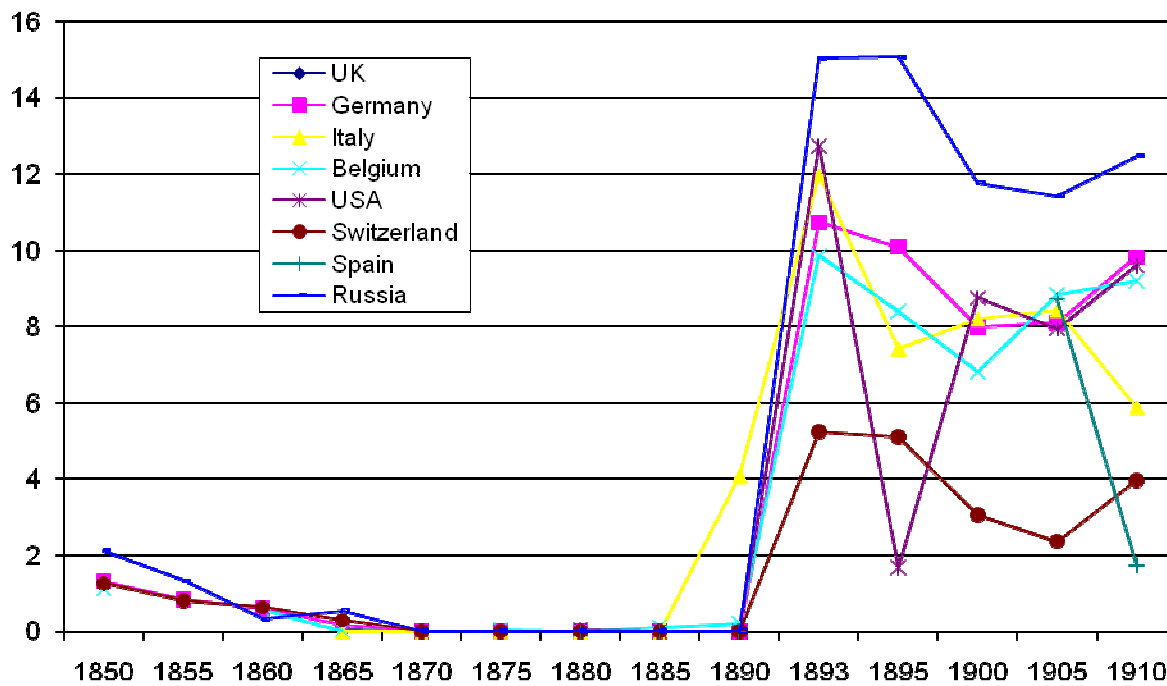Source: General Chart of Trade for France, Musée National des Douanes, Bordeaux. Own calculations.

Figure 5: Shift in the average customs duty for plain timber, per country

Source: General Chart of Trade for France, Musée National des Douanes, Bordeaux. Own calculations.

Explanations for dispersion of tariffs: between statistical systematic error and discriminatory practices

How might we explain dispersion of tariffs at that moment in time? How then can we appreciate the full dynamics of the situation and what is this meaning in term of trade policy?

The dispersion of tariffs revealed and discussed in this article was the structural outcome of two major factors, whose relative influence we are unable to separate and evaluate: a systematic structural effect relative to the compilation of nomenclatures and discriminatory practices geared to partner countries. Separation is even more delicate than the characterization of the products within nomenclatures is a tool of indirect discrimination. The proliferation of titles and the absence of harmonization of nomenclatures is de facto a way to penalize a specific partner and thus circumvent the clause of most favoured nation.

The number of customs nomenclatures

We should indeed firstly question the influence of customs nomenclatures given in France's general chart of trade. This primary source proposes a relatively fine break-down of flows of imports. For the beginning of the 20th century, the nomenclature included up to 100 and more entries for France's main trading partners. Despite this significant disaggregation, certain headings still pooled a high number of products whose levels of taxation could be different. This was the case, for example, of entries for "machinery and engineering", "chemicals", "metal tools and structures", "pottery, glass and crystal", "paper, carton, books and engravings" and even "livestock". At the end of the period, the general tariff for France comprised as many as 654 entries – the figure for 1892. A seemingly specific and homogeneous heading included variants, tariff differentiation according to quality, quality or even aged for the "livestock" category…This factor is therefore a structural item of explanation for the dispersion of tariff levels with even relatively disaggregated entries.

As noted in figure 2, the dispersal levels of the three product categories do not manifest dissimilar evolutions. This being said, they are not identical, and the calculation of the correlating coefficients of the dispersal index proves this.

Table 2: Dispersion indicator correlation coefficients

	staples	agric.	processed
staples	1.000	0.592	0.563
agric.		1.000	0.470
processed			1.000

While the level of dispersion is almost identical for the three product categories, the same is not true of their evolution. These differences demonstrate the existence of an effective protection. During a global tariff reduction, certain sectors are less protected more than others, as was the case for the industry beginning in 1860 ; and conversely, an increased tariff pressure, like the one that began in 1881, protected agriculture relatively more than other sectors. In these conditions, the evolution of the tariff dispersion in various sectors cannot be perfectly correlated.

Accordingly, other structural explanations of dispersal must be taken into serious consideration. An important part of dispersion is the result of discriminatory practices and tariff consequences of bilateral commercial treaties. This deviates from the general stated tariff or from the system of double tariff scales beginning after 1892, which continue to be connected to a system combining a flat rate and a conventional tariff.

Direct discriminatory practices

During the 19th century, commercial treaties were instruments of commercial policy, and they established preferential bilateral conditions at the expense of un-favored countries, which were imposed a general tariff (they were, for this reason, beholden to the tenants of free trade). At the beginning of the period studied (1850), in France a flat rate prevailed dating back to 1791, which did not cease to be modified by laws and decrees, and carried the traces of certain archaisms: very high tariffs sometimes which penalized the competitiveness of French products (raw materials could be strongly taxed) and prohibitions (on cotton wire, prepared skins…). This system, inherited during the last few decades, is associated with a strong dispersal of tariffs.

Senatus Consulte of 1852 gave the sovereign the right to sign and to execute commercial treaties without ratification by the Parliament. During the 1850's the imperial commercial policy consisted of decreasing certain rights during the 1850's before the signing of the Treaty of January 23, 1860 with Great Britain and defining a new flat rate, which eliminated in particular, prohibitions. Among the nine countries that we are studying, six signed treaties with France (Great Britain 1860, Belgium May 1, 1861, Zollverein March 29, 1862, Italy January 17, 1863, Switzerland June 30, 1864, Spain June 18, 1865) including the most favored nation clause and three did not sign any (Argentina, the United States and Russia).

The diffusion of the most favored nation's clause (for time limited), via the Cobden-Chevalier's network of treaties, explains not only the reduction of the customs tariffs, but also the decrease of tariff dispersal (ref. Figure 2). By nature, this clause implies, for the same product, a convergence of tariff levels for the countries that are in agreement. Thanks to these agreements, the customs duties were reduced in half and because they remained in place for ten years, they brought more certainty and stability to commercial relations. Insofar as these treaties were reciprocal and largely overlapping, they constituted a type of commercial, preferential, and "multilateral" trade agreement. Lampe (2009) establishes, like Accominotti and Flandreau (2005), that if the trade treaties signed within the Cobden-Chevalier network framework did not cause a total increase in international business between 1860 and 1875, they did nevertheless, make a distinction between products and instigate a strong need for intra-European trade.

However, the tendency to be in favor of a more open commercial system disappeared rather quickly. The Great Depression, which began in 1873 accentuated the need for interior protection and slowed down the search for external outlets. The unification of Germany and Italy also modified the trade relations system in Europe, because each one of these two countries wanted to consolidate its new national unit by increasing its tariff revenue. On their side, the United States refused to belong to the European network of nondiscriminatory treaties preferring to negotiate preferential bilateral agreements. In the 1870's, the unilateral Ricardian vision of free trade was thus called into question in Europe, in favor of increasing the world competition and slowing down activity. Consequently, within the realm of foreign trade relations this highly negotiated and strategic approach prevailed. The European commercial treaties network started to dislocate when it came to the question of renewing the initial treaties signed in the 1860's. In 1871, the incipient Republic in France looked for a way to increase its financial resources through tariff policy by specifically raising the taxes on sugar and coffee. In March 1872, the treaties ended when England and Belgium were denounced, then restored via the conventions of July 1873, which thereafter expired in 1877: these events translated into a climate of risen commercial tensions. In Spain and Italy, nominal protection increased from the mid 1870's. In Spain, the tariffs of July 1877 established a double column of rights, those for the products coming from a country with which Spain did not have trade agreements (taxed according to the provisions of the arencel Figuerola), and those for the products coming from a country benefiting from the clause of the most favored nation. For Italy, Federico (2006) suggests a variation in terms of

manpower from 1877 when in July a new treaty was defined with France. In April 1878, Italy adopted a new flat rate.

The agricultural lobbyist groups, in front of the overseas cereal surge, solicited a greater protection against the more competitive foreign products and encouraged other sectors, like the iron, steel, and textile industry, to do so as well. The reorientation towards a more protectionist commercial policy in Europe was confirmed by the increase of customs duties in Germany in 1879.

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 (see Augier and Marvaud (1911)). Almost immediately, conventions were signed with Belgium October 31, 1881, Italy November 3, 1881, Spain February 6, 1882, and Switzerland February 23, 1882. At the same time France granted the clause of the most favored nation to Great Britain, Russia, and Germany (article 11 of the 1871 Treaty of Frankfurt).

In continental Europe, the commercial policy became even more aggressive starting from the 1890's. The installation of the Méline tariff in France 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. Consequently, the stability of the customs duties could not be guaranteed through the treaty, which was not the case for the tariffs applied within the framework of the former commercial treaties. The fact that the tariff lists were increasingly detailed, was certainly due partly to the increase in product differentiation and thus with the widening line of foreign goods, in particular of the manufactured goods, but often this preoccupation with detail was used with protectionists fines to reduce the competition with foreign products. 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. The Parliament only intervened afterwards. In 1910, the difference between the minimum tariff rates and the maximum tariff rates increased. Figure 2 confirms the impact of these measurements in terms of increase in tariff dispersal, particularly proven in the agricultural product category.

The protectionist forces won many countries, which allowed governments the possibility to legitimately assert their own commercial restrictions onto others. Also, this period was marked by a series of isolated commercial wars, which accentuated the tension within the commercial system. The period from 1880 to 1890 was marked by episodes of strong commercial tensions related to treaty renegotiations. Between 1886 and 1892, France was in conflict with Italy, the higher reprisal tariffs were applied rather than the flat rates. Federico (2006) emphasizes the disastrous character of this war with Italy. Between 1893 and 1895, an equally violent conflict put France in opposition with Switzerland, both countries incapable of agreeing on a convention. France subjected the Swiss products to its flat rate between 1893 and 1895. Switzerland then subjected the French products to a tariff higher than the flat rate (retention tariff), in particular in the wine sector and the clock industry (see Humair (2004)). Another conflict exploded between France and Spain following the new flat rates (of December 27, 1891 for Spain and the Méline tariff for France). Germany conflicted with Russia (1893), Spain (1894-1896) and Canada (1894-1910) and Austria with several Balkan states (like Romania).

These various events led to the signature of bilateral commercial treaties, which called into question the clause of the most favored nation. This meant, not only an increase in tariff pressure, but more specifically, a more important tariff dispersal than we noted at the beginning of 1880 (ref. figure 2).

In short, for France, tariff dispersal represented an increase in protection and/or international trade tensions (commercial wars), which led to the signature of bilateral commercial treaties that mitigated the application of the most favored nation clause.

Tariff dispersion is not a French characteristic in particular. In addition to Spain the double grid system also prevailed in Switzerland from 1880-90 (see Humair (2004) for quantitative elements). The Germany of the Bismarck period developed a strategy that consisted in signing few commercial treaties and only granting reductions on products of which the partner is practically exclusive, so that the concessions would not benefit the countries Germany already granted the clause to. The rights were thus specialized gradually, which resulted in a limited role for the most favored nation clause[5].

The historiographic consequences of tariff dispersion

The existence of significant tariff dispersion prompts us to take a new, in-depth look at the arguments surrounding the effects of commercial policy on growth in that day and age.

Tariff dispersion and the weakening of the significance of tariffs as a measurement of commercial openness

This dispersion adds extra weight to the criticism made of the use of average customs duty as a means to measure commercial openness. Over the period from 1870 to 1913, many empirical studies use average customs duties as a form of measurement for the commercial openness of national economies (see O'Rourke 2000, Clemens & Williamson 2001, Irwin 2002, Vamvakidis 2002, Dejong-Ripoll 2006, Tena Junguito (2009) Schularick & Solomou (2011)…). These works explore the correlation between average customs duties and the growth of per capita income (very many of them establish a "tariff growth paradox").

In these same works, criticism of the average customs duty focused exclusively on two points: the effects of structures linked to the calculation of an arithmetic average, and the question of the importance and signification of the taxation of exotic products. Part of literature note the existence of other approach to measure trade policy (Anderson & Neary (2007)) but empirical studies continue to use tariff average as exogenous variable.

Average customs duties are very often weighted by imports, as recalled by O'Rourke (2006). The author uses the following very classical formula:

$$t = \sum_i \frac{M_i}{M} \cdot t_i$$

where t is the average customs duty, M_i/M the relative share of product i in total importations, and t_i is the customs duty applied to product i.

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[5] Thus, the product labels appear in the French customs nomenclature like « Czechoslovakian crystals» or « Paris items ».

On this basis, a high tariff for a product (identical irrespective of trading partner) tends to lower its share in total imports and even, if exorbitant, to totally eliminate that share. In doing so, it is no longer accounted for in the average figure. These effects of structure linked to the arithmetic average thus lead to an overestimation of the openness of countries, which levy very high taxes on certain products (thereby slowing down flows of imports). And an under-estimation of the openness of countries which elect to apply rather lower tariffs on an even basis.

The second problem lies with the signification of taxation on exotic products. Nye (1991) stresses that in theory, these duties have a distortional effect on the domestic market and should be considered as protective. For Irwin, they are motivated solely by fiscal considerations and are not protective as long as there is no replacement product. Later work from O'Rourke (2006) and Tena-Junguito (2006) showed that the key issue in the controversy lay with the status of imports of alcohol by Great Britain (especially rum and wine). If these products were not considered to be exotic products, owing to the fact that British beer could be considered as a replacement product, then the view put forward by Nye would seem to be accurate.

The significance of tariff dispersion and the heterogeneity of practices according to the country of origin appear to us to form a third major line of criticism levelled at average customs duty, which constitutes a sort of symmetrical of a product structure effect, applied this time to the exporting country. The value of t_i is not unique, on the contrary it is highly variable depending on the countries of origin. Consequently, the validity of the construction of this indicator, used by the majority of authors, appears to be challenged.

At a more disaggregated level, when, as with staple products, dispersion is high per unit, it means that the standard deviation for custom duty rates is, for one and the same product, higher than the mean figure for applied duties. In other words, the ACD rate per product is not significant and can hardly be considered as a protection indicator for the goods under consideration. It is essential to take account of the products' country of origin, since evidently the dispersion of nominal rates of protection is very significant in geographic terms.

This same conclusion also applies to agricultural products and, to a lesser extent, to processed products. The values of dispersion indicators make it impossible to consider the rate of ACD per product as being significant.

A huge number of recent studies relative to a per-sector approach to protection have been conducted, claiming that duties applied to such and such a major sector (industry and agriculture for Lehman & O'Rourke (2008)) and such and such a product were the same, whatever the country of origin (for Portugal (Lains 2006), for Germany (Dedinger 2006), (2008), for Spain (Tena-Junguito 2006a), for Italy (Federico 2006), for France Nye (1991), Broder (1993), Tena-Junguito (2006b), Dormois (2006) (2007)…). We feel it is very difficult to draw conclusions when using highly aggregated nomenclatures, as each heading thus defined includes a large number of products that are taxed with different levels of tariff according to country of origin.

This, in the case of France, Dormois (2007), who analyses effective protection using 13 sectors at three key dates - 1873, 1892 and 1913 – and concludes with the absence of commercial strategy and the weakness of the foundations of commercial policy. Naturally, a part of customs duties were motivated solely by a commitment to protecting the government's budgetary income, but if we take a detailed look at French tariff-setting, it appears both complex and at time rather relevant.

The existence of a proactive trade policy in France

Several parts of our disaggregated data lead us to believe that the French authorities were conducting a real commercial policy strategy. When you analyse the simultaneous evolution of duties applied to staples and to processed products, there is a clear relevance of choice. We will take a single example, that of wool and woollen fabrics, which at the time played a key role in international trade.

The following table sums up the shifts in average customs duties on imports of wool and woollen fabrics over the period of 1850 to 1910.

Table 3: Shift in average customs duties: wool and woollen fabrics (in %)

	1850	1855	1860	1865	1870	1875	1880	1885	1890	1893	1895	1900	1905	1910
ACD wool	22.46	23.76	1.23	0.12	0.165	0.195	0.16	0.12	0.07	0.06	0.065	0.075	0.047	0.19
ACD woollen fabrics	24.17	15.98	28.77	9.32	9.98	9.65	9.78	10.03	11.51	13.93	18.14	16.47	14.97	13.97
ACD basic wool 100 in 1850	100	105.78	5.49	0.525	0.735	0.87	0.71	0.53	0.31	0.27	0.29	0.33	0.21	0.855
ACD basic woollen fabrics 100 in 1850	100	66.09	119	38.58	41.29	39.93	40.46	41.5	47.62	57.63	75.04	68.14	61.94	57.8

<u>Source</u>: Musée National des Douanes, Bordeaux. Own calculations.

We observe that the customs protection barrier imposed on imports of wool fell sharply from 1860 onwards. The same phenomenon occurred from 1865 onwards for woollen fabrics. The point is that the size of this fall in customs duty was not the same for the two products. Thus, nominal protection in 1850 was 190 times higher than what it was in 1865 for wool. For woollen fabrics, this same ratio was 2.59. We can therefore of course employ the term free trade, but the degree of this free trade should be qualified according to the type of product under consideration, and importantly to the category to which it belonged.

This same fact occurred again when the protection barriers went back up in the 1890s. Nominal protection for staples continued to fall while those for processed products rose.

These reverse changes suggest the intuition not of trade practices but of a genuine trade policy based on the implementation of effective protection. The example of wool and woollen fabrics is testimony to this hypothesis. The lowering of customs duty for the main import (wool), considerably more substantial than for the end product, gives backing to the existence of cascading protectionism, the goal of which was to raise protection for products further down the production process line. The same observation also applies to silk and silk fabrics, for plain timber and wooden furniture, for flax and flax fabrics.

These observations give rise to a number of queries and of calls for deeper study. In the first place, if this really was a genuine and deliberate commercial policy, who were, if not the decision-makers, then at least the people behind the initiative and its introduction? Here, the question of level of expertise is plain to see. We know that effective protection raises the added value of the sector

producing woollen fabrics and consequently the remuneration of related production factors. Given that this fact may, so it would appear, be generalised to all processed or manufactured products, we should ponder the reasons that led to an improvement in the situation of industrial sectors (lobbying or positive external effects, perhaps?). In the second place, the lowering of nominal protection for staples and agricultural products followed similar trends during the decade of 1860-1870. What were the effects of these reductions on the competitiveness of France's industrial or manufactured products? In principle, the fall in the cost of imports (for staples) and lower pressure on wage-rises (owing to the fall in prices of imported agricultural products) should have worked in favour of the competitiveness of French processed products on foreign markets.

Conclusion

This contribution has cast light on the existence of a dispersion in France's customs tariffs, depending on the origin of products, between 1850 and 1913. A part of this dispersion is the result of a systematic error linked to the compiling of nomenclatures for France's general trade chart. But another part reveals the existence of discriminatory practices applied to certain countries for certain products. The very principle of this dispersion of tariffs (which was not specific to France) introduces doubts over the strengths of empirical work conducted on the theme of correlation between customs tariffs and growth (the tariff-growth paradox) and over the way in which the theme of effective protection has been treated. In our opinion, the existence of this dispersion shows the need to cross-reference the product and country dimensions when implementing an approach in terms of effective protection. The country dimension has been completely obscured by empirical studies on this subject, at a time when the then geopolitical context made tariffs more of a political weapon than ever before.

We feel that this contribution should pave the way to work that reintroduces the country dimension into the study of late 19th century commercial policy. A per-country analysis is likely to shed light on the arguments over commercial policy between 1870 and 1913, in a context of mounting international tensions. Between 1850 and 1913, were some countries more highly taxed than others? If so, what were the reasons?

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Annexe : The calculus of dispersion for the year 1905

Staples		Italy	Gr. Britain	Argentina	Germany	Un. States	Belgium	Russia	Switzerl.	Spain	mean	Stand. Dev.
zinc		0,0000			0,0004		0,0008		0,0000	0,0000	0,0003	0,0004
raw skins and furs		0,0004	0,0045	0,0005	0,0010	0,0008	0,0003	0,0010	0,0000	0,0000	0,0009	0,0014
wool and wool waste		0,0003	0,0014	0,0003	0,0012		0,0005	0,0000	0,0000	0,0002	0,0005	0,0005
rubber and gutta percha		0,0076	0,0037		0,0037	0,0000	0,0037		0,0000	0,0000	0,0027	0,0028
feather ornaments				0,0000	0,0000	0,0000	0,0000			0,0000	0,0000	
silk and silk waste		0,0010			0,0136		0,0000			0,0000	0,0037	0,0066
cotton wool		0,0010	0,0013		0,0006	0,0000	0,0000		0,0047	0,0000	0,0011	0,0017
petroleum oils, heavy oils			0,6900		0,7077	0,6675	0,0910	0,7000			0,5712	0,2689
coal			0,0708			0,0727	0,0705				0,0713	0,0012
carbonized coal			0,0616				0,0616					
volatile oils or gasoline		0,0144	0,0161	0,0213		0,0297	0,0203	0,0150	0,0000	0,0147	0,0164	0,0084
lead			0,1058		0,1004		0,0972			0,0595	0,0907	0,0211
stones and land		0,0746	0,0804		0,0374		0,0038			0,0536	0,0500	0,0310
gold and platinium					0,0005			0,0000	0,0000		0,0002	0,0003
pulp					0,0846	0,1117	0,0867	0,0760	0,0837		0,0885	0,0136
copper		0,0040	0,0008		0,0072	0,0003	0,0054		0,0063	0,0000	0,0034	0,0030
raw coal and char					0,0652							
plain timber		0,0843			0,0810	0,0794	0,0884	0,1143	0,0236	0,0871	0,0797	0,0274
mean											0,0613	0,0259

Agricultural products		Italy	Gr. Britain	Argentina	Germany	United States.	Belgium	Russia	Switzerl.	Spain	mean	Stand. Dev.
cereals		0,1858	0,3061	0,1960	0,1855	0,1737	0,2115	0,2446			0,2147	0,0465
cattle		0,0571								0,0625		
salted meat		0,2092	0,2591		0,1352	0,1026	0,2123	0,0909	0,2352		0,1778	0,0672
coffee			1,4030			1,3079	1,3457				1,3522	0,0479
horses			0,1290				0,1071	0,1000			0,1120	0,0151
pulses and flours		0,0667	0,1231		0,0832	0,0859	0,0912	0,0917		0,0919	0,0905	0,0169
wines		0,3447	0,4128		0,3423				0,2669	0,3314	0,3396	0,0518
dead game		0,0840	0,0959						0,0774	0,0769	0,0835	0,0088
live game		0,0958										
cheese		0,0872			0,0973		0,0786		0,0670		0,0825	0,0129
dessert fruits		0,1345	0,2870			0,1106	0,1609			0,2571	0,1900	0,0777
seeds and oleag. fruits		0,0000		0,0000	0,0017			0,0009		0,0000	0,0005	0,0007
beer			0,2578		0,2571							
cocoa			0,1351				0,4167		0,5307		0,3608	0,2036
leaf tabacco					0,0495	0,0030	0,3030	0,0000			0,0889	0,1445
manufactures tobacco			0,3430		1,0200	0,0254	0,8288				0,5543	0,4534
fat other than fish			0,0246		0,0000	0,0525	0,0062				0,0208	0,0236
medicinal species		0,0027			0,0149	0,0014	0,0300	0,0063		0,0007	0,0093	0,0114
tea			0,8028				1,0000	0,8095			0,8708	0,1120
seeds for sowing			0,0321			0,0319	0,0747				0,0462	0,0247
pure fixed oils							0,0280			0,0947		
eggs of poultry and game		0,0549			0,0502		0,0517	0,0494	0,0550		0,0522	0,0026
butter		0,0690	0,0723				0,0770				0,0728	0,0040
syrups and sweets			0,2340						0,1937			
horns, hooves, bones		0,0000	0,0134	0,0008	0,0250		0,0103			0,0000	0,0082	0,0100
mean											0,2364	0,0668

Processed products	Italy	Great Brit.	Germany	United Sta.	Belgium	Russia	Switzerl.	Spain	mean	stand. Dev.
cotton fabrics	0,0987	0,1692	0,1255	0,3276	0,0669		0,0975	0,1042	0,14137	0,08792
Prepared skin			0,0447		0,04572			0,02579	0,03874	0,01122
paper and its applications	0,0325	0,1182	0,0895	0,05345	0,0446		0,0872	0,05844	0,06913	0,03015
wool fabrics	0,1458	0,1525	0,1452		0,1715		0,1336		0,14972	0,01394
body	0,056		0,1367	0,117	0,1333		0,1172		0,11204	0,03260
pottery, glass and crystal	0,13	0,0862	0,0753		0,0622		0,1078	0,1743	0,10597	0,04122
tools and fabricated metal	0,141	0,1512	0,1446	0,2009	0,1738	0,1333	0,1654	0,0813	0,14894	0,03484
chemicals	0,00658	0,047	0,05161	0,02186	0,0471	0	0,0956	0,036	0,03822	0,03015
machines and engineering	0,1192	0,1126	0,1033	0,1387	0,1217		0,108	0,1237	0,11817	0,01170
cats, iron and steel	0,04348	0,2686	0,2391		0,269		0,3409		0,23222	0,11198
rubber products	0,04225	0,0542	0,07691	0,09077	0,09357		0,09649		0,07570	0,02263
hide and leather goods		0,0365	0,03418	0,1424	0,06405				0,06928	0,05060
clothing and lingerie pieces	0,1212	0,1468		0,1795	0,1366		0,2288	0,1455	0,15973	0,03886
silk fabrics	0,09495	0,061	0,10675	0	0,8		0,0446		0,18455	0,30390
linen fabrics		0,1729	0,1286		0,1893		0,084		0,14370	0,04734
jewelry and gold jewelry	0,01136	0,014		0,0337	0,0041	0	0,001419	0,0036	0,00974	0,01175
precision instruments	0	0,0031	0	0,0087			0		0,00236	0,00379
tabletterie		0,152	0,152		0,16				0,15467	0,00462
trinkets			0,08225	0,09172		0,06897			0,08098	0,01143
needles		0,1439	0,1436		0,186				0,15783	0,02439
colors	0,0505	0,219	0,1278	0,181	0,1065				0,13696	0,06549
straw hats	0,055						0,1027			
straw mats and braid	0,003135		0,00823		0,0096		0,00662		0,00690	0,00279
threads	0,0928		0,1061		0,0789	0,0814	0,08689		0,08922	0,01085
dyes derived from coal tar			0,2148							
brush	0,1098						0,0785	0,1489	0,11240	0,03527
furniture	0,1073	0,1105	0,135	0,0926	0,1029	0,1081	0,1416	0,0546	0,10658	0,02663
arms		0,1836	0,1234		0,3608		0,1111	0,2836	0,21250	0,10736
mean									0,10991	0,04513

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