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A short-lived backlash: trade policy in the first half of the 19th
century

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Abstract

This paper shows that in the first half of the 19th century the wheat trade policy in Western European countries followed a big political cycle. This paper has tries to understand the causes of this cycle, taking into account the nature of political systems of those countries. Therefore, it focuses on the liberalization, which seems less easy to explain than a protectionist backlash. It puts forward six hypotheses - institutional change, modern economic growth, changes in relative price of wheat, insufficient world supply, fear of the mob and diffusion of free-trade ideology.

1) Introduction

The Repeal of British Corn Laws in 1846 is one of the most intensively researched issues in 19th century trade history. Its causes have always fascinated historians. Why did Robert Peel throw his weight behind the free-trade, splitting his own party and condemning it to stay away from power for many years? Why did a sufficiently large number of Tory MPs follow him? Very recently, Schonhardt-Bailey (2006) has argued that Peelites differed from the other Tories, as they represented not-so rural constituencies, and that Peel's conversion only acted a catalyst for a necessary realignment. Whatever was the cause of the Repeal, it marked a watershed in British history: to quote the title of a recent book, England had become a Free Trade nation (Trentmann 2007) and it was to remain such for almost a century. But the Repeal had consequences also on the other side of the Channel, as the liberalization in the United Kingdom allegedly unleashed a parallel trend on the Continent. The movement gained momentum after the 1860 treaty between France and the United Kingdom, not by chance negotiated by Cobden. The conventional wisdom attributes to the British example (and also to British diplomatic pressures) the following wave of liberalization (Bairoch 1976 and 1989). Findlay and O'Rourke, in their recent book *Power and Plenty* (2007), argue that "when Europe eventually moved towards freer trade in the late nineteenth century, this was largely as a result of Britain's example" p.372.

This conventional wisdom has been questioned as of late. Marsh (1999) has downplayed the role of UK as prime mover of the wave of trade treaties in the 1860s. Accominotti and Flandreau (2006) remind that the Cobden-Chevalier treaty had been preceded by others and, above all, with a standard gravity model, find no clear differential impact of treaties on trade flows. Sharp (2006) argues that the Repeal was the final act of a liberalizing trend which had started with the 1828 Corn Laws. Last but not least, in his book Nye (2007) makes two points: the Corn Laws were much less important than the Cobden-Chevalier treaty in the history of British trade policy, and that the treaty was the work by Chevalier as much as if not more than by Cobden [p.106]

This paper contributes to this budding revisionist movement by analyzing the trade policy for wheat in a number of European countries from the end of Napoleonic wars to the 1850s. Section 2 aims at establishing two key facts. First, the British liberalization of wheat trade was part of a wider movement which involved many countries at the same time, and in all likelihood contributed mightily to the substantial process of integration in the wheat market which featured Europe in the first half of the 19th century (Federico 2008). Second, protection to wheat growing was a relatively new development. They had been imposed after the Napoleonic wars, with a backlash which strongly reminds the reaction to the well-known "wheat invasion" of the 1880s (O'Rourke 1997). The rest of the paper aims at explaining both the protectionist reaction of the late 1810s and 1820s and the subsequent liberalization in a loose political economy framework. Clearly liberalization is more intriguing than the backlash. As Section 3 shows, the political system was either autocratic or dominated by small elites, in which landowners played a key role. It is not so surprising that they sought to protect their interest. If any, they were moderate in asking for protection was moderate. But why did the landed interest accept liberalization? The next six Sections discuss as many possible explanations, not mutually exclusive. Section 10 put forward a tentative conclusion

2) The facts: European wheat trade policy, 1815-1870

In the early modern period, many cities in Western Europe had set up regulations aiming at increasing supply of wheat to cities and preventing urban prices to fluctuate too widely, especially upwards. This policy clearly favored urban consumer against producers and grain traders. Trade policies had to be consistent with this aim. Imports were let free, while exports were regulated if not prohibited altogether. These pro-consumer policies had survived the formation of greater territorial states and also, by and large, the wave of reforms in the last decades of the 18th century. In Austrian Lombardy, exports were partially liberalized only in 1785 (Grab 1985), twenty years after the first proposal. In France, grain markets were liberalized twice, in 1763 and again in

1774 but freedom lasted only seven years and two respectively (Kaplan 1975-1976). The French Revolution and the start of the war marked a notable discontinuity. In metropolitan France, the restrictions to interregional trade were abolished and other regulations loosened, with relapses at every subsistence crisis (e.g. in 1793-1794, or in 1812), to be eventually dismantled in the late 1810s (Miller 1999). The French conquest brought forward a similar process throughout Western Europe. Furthermore, the international trade in wheat was much less hampered than other goods. The British governments allowed imports under license, while France encouraged these exports in order to drain bullion away from the United Kingdom (Galpin 1925, Olson 1963, Davis and Engerman 2006)

At the end of the war, European countries had to reconsider their trade policy. A return to 18th century regulations was impossible, but producers feared that peace brought the end of the bonanza. For the first time, imports were viewed as a threat, also in the United Kingdom, which in the meanwhile had become a net importer of wheat. Indeed, a committee of the House of Commons had recommended to protect domestic agriculture in 1813 (Barnes 1930). The Corn Laws, approved in 1815, stipulated free entry of foreign wheat if prices exceeded 80s/quarter but prohibition below that level. According to the Gazette price series (Mitchell and Deane 1976), the level had been reached nine times in the 23 years of war, but never before 1800. France imposed a duty in 1816. The reaction was delayed by the explosion of volcan Tamboro in Indonesia, which brought about one of the coldest years on record and sent wheat price to skyrocket (Post 1977). As soon as prices declined, the protectionist wave resumed. France imposed a sliding scale in 1819 and tightened it two years later (Ame 1876, Arnaune 1911, Rougier sd), Spain imposed duties in 1818, raised them three times in the next two years and prohibited altogether in 1820 (Regulations 1826, Montanes Primicia 2005) and so on

The first evidence of retreat of the protectionist tide was the approval of a new set of Corn Laws in 1828. The 1830s were still a mixed decade, with liberalizing measures (e.g. a change in the French sliding scale) compensated by increases in protection (e.g. Netherlands moved from a low fixed duty to a sliding scale in 1835). The massive liberalization started in the 1840s and gained momentum in the 1850s. Belgium suspended its sliding scale in 1839 and replaced it with a minimum duty (Suenens 1955), the United Kingdom repealed the Corn Laws, Piedmont abolished progressively duties from 1847 to 1854 (Di Gianfrancesco 1974) and so on. France suspended its sliding scale in 1853 and abolished definitively it in 1861 (Ame 1876 Arnaune 1911). Spain was the last country to free (not entirely) imports, as late as 1869 (Montanes Primicia 2006). In short, the protectionist period lasted for about twenty-thirty years.

How high was protection? In the case of wheat in the early 19th century, nominal and effective protection coincided, as wheat growing used no industrial inputs. Nominal protection can be computed as

$$NP(1)_{it} = D_{it} / P_{it} \quad 1)$$

Or

$$NP(2)_{it} = D_{it} / P_{Wt} \quad 2)$$

where D refers to the unit duty (or export tax), P to the wheat price in year t and the subscripts I and W to the importing countries and to the "world" price respectively¹. Sharp (2006) has raised doubts about the reliability of this measure of protection, at least for the United Kingdom. It argues that the nominal protection overlooks the strategic behavior of British traders who played the system in order to pay the least possible in duties (e.g. by storing wheat and releasing it to consumers when domestic prices were high and thus the duty low). One can put forward a similar argument for France, where the thresholds for the sliding scale differed also by district, and thus rational traders might decide also the point of entry into France. Thus, he suggest to use the ratio of total revenue to total import (in value)

$$AVE_{it} = \Sigma R_{it} / \Sigma P_{Tt} Q_{Tt} \quad 3)$$

where R refers to the amount of custom revenue and Q_T to the traded quantities (imports or exports). The two measures would coincide whenever duties were fixed throughout the year

Actual (realized) protection is important for many issues – most notably the analysis of market integration, but from the point of view of policy-making, the relevant parameter is the expected protection – i.e. the protection which agents expected to receive from the duty they were going to

¹ Unfortunately, c.i.f. price series are not available for any country

impose. Of course, this depends on expectations about prices and thus any estimate needs a model of expectations. It will be assumed that agents expected prices to remain constant at their "current" level – a model that can be called very naïve or super-rational. It will also be assumed that they neglected the consequences of their own decisions on "European" wheat prices (i.e., in the jargon of modern economics, that they reckoned to live in a small country). Assuming otherwise would attribute to 19th producers and politicians a level of economics sophistication that they were highly unlikely to have. The "current" level of prices is proxied by the average of the past three years². Thus, expected protection is defined as

$$ENP(1)_{it} = D_{it} / [(\sum P_{it-m}) / 3] \quad \text{where } m=1 \dots 3 \quad (4)$$

while the effect of a change in duty can be computed as

$$\Delta ENP(1) = (D_{it} - D_{it}^*) / [(\sum P_{it-m}) / 3] \quad (5)$$

where D_{it} is the new and D_{it}^* to the previous duty³.

So far, the sample includes six countries – Belgium (since its independence in 1830), France the Netherlands, the Kingdom of Sardinia (which, in spite of its name, included Piedmont and Liguria, in North-West Italy), the United Kingdom and Spain. These countries have been selected on the twin criteria of data availability and the position as potential importers of grain. Countries such as Germany (rectius the Zollverein) or Italy (i.e. all pre-unitary states, but Sardinia), which were to be major importers later in the 19th century, in the first half of the century were still net exporters or self-sufficient in normal years, even without duties. Also Austria-Hungary was basically self-sufficient, although the export of Hungarian grain to Austria remained subject to a differential duty (Komlos 1983).

Table 1 outlines the main changes in policy. It reports the initial (1814) and final (1870) level of nominal protection, plus all the intervening changes in expected protection, either in percentage points, or, if impossible to compute a meaningful percentage change, with letters (D: first imposition of a duty; P imposition of a prohibitive duty; L abolition of a prohibitive duty; A total abolition of duty S suspension of a duty) To make the table easier to read, the liberalizing measures are underlined, while the protectionist ones are in Italic. For instance, France first raised a duty in 1816 (D), introduced a sliding scale in 1819 (which halved protection, given the 1817-1819 prices, relative to the previous duty), changed the scale in 1821 (to a level which would have prohibited imports) and so on

Tab. 1

Changes in expected NP(1)

	Belgium	France	Netherlands	Sardinia	Spain	UK
Initial	2.1	0.00	2.1	0.00	0.00	1.1
1815						<i>P</i>
1816		<i>D</i>	<i>8.3</i>			
1817						
1818				<i>D</i>	<i>D</i>	
1819		<u>-49.9</u>		<i>60.0</i>	<i>400.3</i>	
1820					<i>P</i>	
1821		<i>P</i>				
1822			<i>15.4</i>	<i>50.0</i>		? ⁴
1823						
1824						
1825			<u>222.7</u>		<u>S</u>	
1826			<u>-53.5</u>			

² The choice of a three year average is a compromise. The "right" duration should refer to the period agents take into account to form their expectations. One possible model is having them to try to guess the "permanent" level of future prices, by averaging over a fairly long number of years. But it also possible that demand for protection increased by very low prices.

³ In the case of sliding scale, the duty is computed with the average price of the year

⁴ The 1822 Act cannot be assessed, as prices never reached the threshold to trigger it

1827						
1828					⊥	
1829						
1830	<i>P/L</i>		<u>-86.8</u>			
1831						
1832		<u>-1.3</u>				
1833	<i>D</i>					
1834						
1835	523.6		166.7			
1836						
1837						
1838						
1839						
1840						
1841						
1842						<u>-68.1</u>
1843						
1844						
1845	<u>-94.3(S)</u>		<i>A</i>			
1846	<u>S</u>	<u>S</u>				<u>-66.7</u>
1847	<u>S</u>			<u>-50.0 (S)</u>	<u>S</u>	
1848						
1849						<u>-75.0</u>
1850						
1851						<u>-37.5</u>
1852						<u>-20.0</u>
1853		<u>S</u>				<u>-75.0</u>
1854	<i>A</i>	<u>S</u>		<i>A</i>		
1855		<u>S</u>				
1856		<u>S</u>				<u>S</u>
1857		<u>S</u>				<u>S</u>
1858		<u>S</u>				
1859						
1860		<u>S</u>				
1861		<u>-91.9</u>				
1862						
1863						
1864						
1865						
1866						
1867						
1868						
1869						⊥
1870						
Final	0.00	2.2	0.00	0.00	3.1	2.3

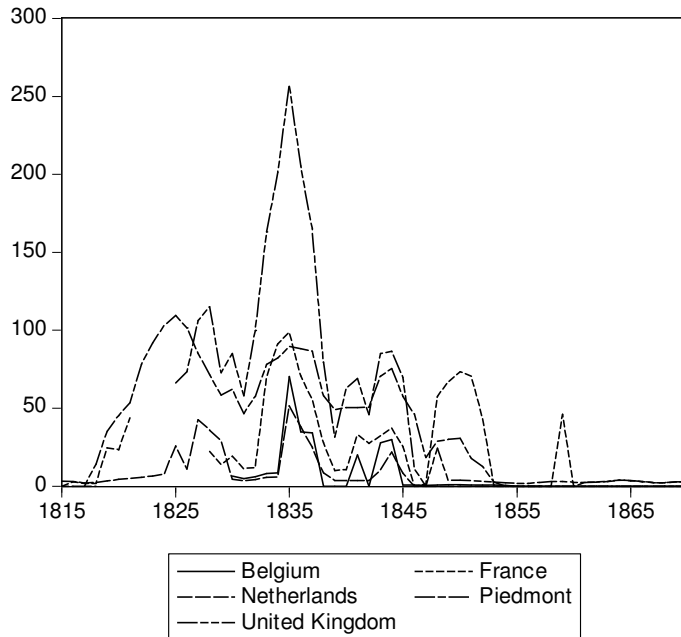
Source: Appendix

The first and last rows show that wheat trade was almost free at the beginning and at the end of the period. Consistently with the previous narrative, the positive signs concentrate in the ten

years after Waterloo, while the negative ones are scattered over a longer period. Some of the changes are quite large.

Graph 1 reports series of nominal protection, according to equation 2), omitting United Kingdom in 1815-1816 and 1819-1824, France in 1822-1827 and Spain over the whole period because they imposed prohibitive duties

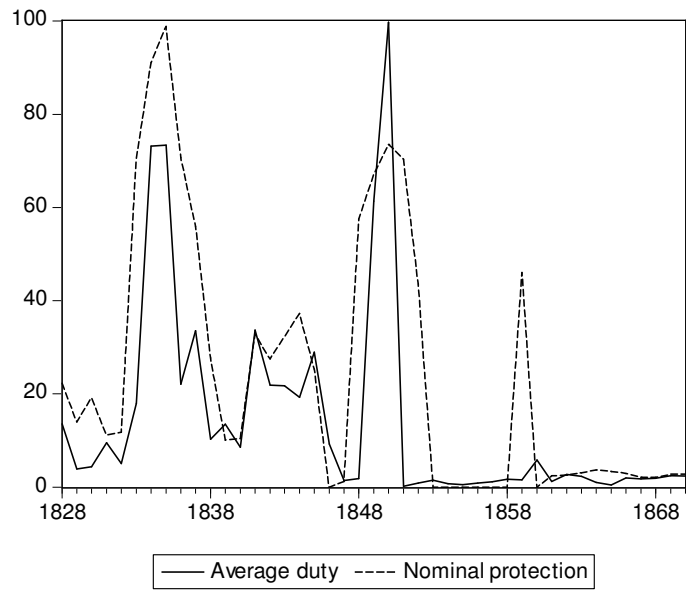
Graph 1
Nominal protection



The graph confirms that protection increased in the 1820s, remained high throughout the 1830s (peaking around 1835, when prices were low) and the first half of the 1840s and then declined sharply. The absolute level of protection was substantially higher than in the late 19th century backlash. In fact, the nominal protection (computed with Chicago prices) at its pre-WWI period peak, in the mid 1890s, was around 60% in France and Italy and around 45% in Germany (Federico-Persson 2007).

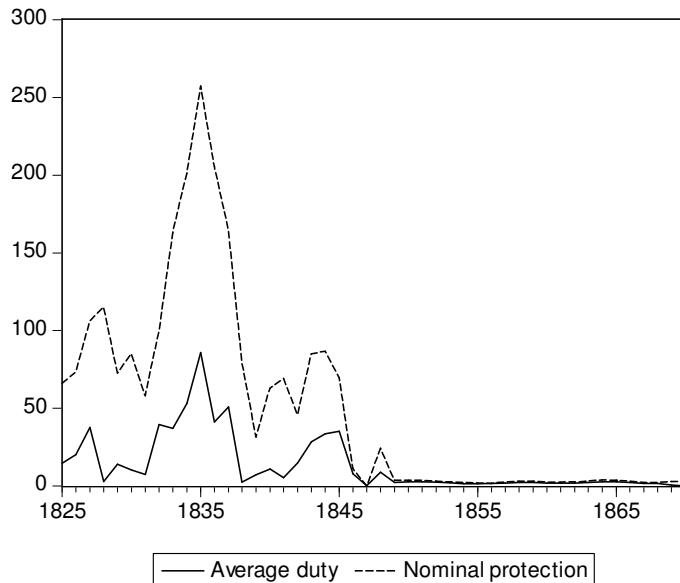
What about the distortions from measuring protection with NP(2) rather than with AVE? Unfortunately, a comparison with the average protection is possible for the United Kingdom and France only, and in both cases only since the mid 1820s

Graph 2
Comparison nominal and average protection
a) France



Source: Tableau decennale

b) United Kingdom



Source: Sharp 2006 tables 2 and 3

The graph confirms Sharp's suspicion: the nominal protection overstates protection. The bias was much bigger in the United Kingdom than in France (on average 2.7 times vs. only 70% higher). Yet, the coefficient of correlation between the two series is very high – 0.73 for France and 0.90 for United Kingdom (both significant at 1%). Thus, the bias is not so serious for purpose of political economy analysis – although the data are not accurate enough to be used for econometric analysis..

3) The facts: who set the trade policy?

After the Congress of Vienna, the old order seemed to have triumphed all over Continental Europe, but the early 19th century featured a slow process of democratization. The well-known POLITYIV data-base measures the level of democracy with its Polity2 index, ranging from -10 (pure autocracy) to 10 (perfect democracy)

Tab 2

Index of democratization...

	1800-02	1815-17	1843-45	1851-53	1868-70	1815-70
Belgium			-4	-1	6	0.4
France	-8	-4	-1	-6	-4	-3.3
Netherlands		-6	-7	-3	-3	-4.9
Sardinia		-10	-10	-7	-4	-8.2
Spain	-10	-9	-1	-4	-2	-4.6
United Kingdom	-2	-2	3	3	3	1.0

Source: Marshall-Jagger 2002

The trend towards democratization is clear, but it did not go very far: in the whole Continental Europe, only Switzerland qualified as perfect democracy⁵. The level of democracy matters for the issue at hand to the extent it affects the process of decision-making. In a nutshell, in an autocratic country, trade policy was decided by the king or his ministers, in a democratic one by the parliament. Of course, this is a very crude generalization. Also 19th century "autocrats" had to take into account the wishes of their people, especially after the experience of the French Revolution. On the other hand, the Parliaments were not necessarily involved in the details of trade policy. French tariffs were mainly set by bureaucrats while negotiating trade treaties, and the House had to approve or reject the deals (Verdier 1994). This rule, however, did not apply to wheat, the most important and representative product. The key factor for trade policy in parliamentary regimes is the extension of franchise, as measured by the share of voters on population aged 20 and over in Table 3

Tab. 3
Franchise in European countries

	Ca 1815	Ca 1840	Ca 1850	Ca 1870
Belgium		1.8	3.0	3.7
France	0.4	1.0	42.0	43.0
Netherlands	NE	NE	4.6	5.0
Sardinia	NE	NE	3.5	3.5
Spain	30	3	1	2.5
United Kingdom		6.8	7.0	15.0

Blank cell: no available data; NE no elections

Source: Spain Carreras and Tafunell 2005 cuadro 14.2 (shares on total population)⁶; others Flora (1983)

In spite of a small increase in franchise, voting rights were limited to a small minority in all countries but France after 1848. The key requirement was wealth. For instance, according to the 1820 French law the 24000 males (above 30 years) paying more than 300 Francs in direct taxes elected directly 258 members of parliament and the 95000 in the upper fourth of taxpayers in each department elected indirectly further 258 members (Caramani 2000 p. 293). The minimum requirement for being elected was a payment of 1000 francs/year. Unfortunately, there are no data on the distribution of voters by sector of activity and very few on the composition of the parliaments. According to Zeldin (1958 p.62) the French parliament under Napoleon III included 109 landowners [19%], 158 former civil servants (those in service were excluded by law) [26%], 137 entrepreneurs (75 industrialists, 22 financiers, 33 merchants etc.) [24%], 81 legal professions [13%], 42 other liberal professions [7%], 51 soldiers [8%] and 7 unknown. The Parliament had been elected with (near) universal male suffrage. It is likely that the proportion of landowners was higher under more restrictive regimes. Thus, even in "democratic" countries, the trade policy was decided in very limited groups, while the large mass of consumers had no say at all. The landed interest was very well represented, if not predominant. Thus, it does not take rocket science to explain the protectionist wave of the late 1810s-early 1820s. What is really interesting are the causes of the liberalization.

4) Hypothesis 1: institutional change

⁵ This mark is somewhat puzzling, as women were excluded from voting.

⁶ The franchise changed very frequently according to the vagaries of the political cycle. The share of voters was around 27-30% during the so-called Trienio Constitutional (1820-1822), while the series during the kingdom of Isabel II 0.13-0.15 1834, 0.53 1836 (February and July), 24.7 1836 (October elections), 2.1-2.2 1837, 2.8-3.1 1839, 3.4-3.8 1840, 4.3 1841 4.9 1843, 4.9-5.2 1844, 0.7-0.8% 1846, 1 1850, 1% 1851, 1-1.14 1853, 5.7% 1854, 0.9-1 1857, 0.9-1 1858, 1.1 1863, 1.1 1864 2.6-2.7% 1865, 2.4% 1867.

A priori one would expect that *ceteris paribus* an increasing power of parliaments and the extension of the franchise helped liberalization. Surely the great landowners loomed large among people kings were listening to, if any for the traditional links between the crown and the aristocracies. Furthermore, the extension of franchise increased the relative power of labour relative to capital and land. This latter was the scarce factor all over Western Europe, and thus the standard Heckscher-Ohlin framework would predict that democratization caused decrease in protection to wheat-growing (O'Rourke-Taylor 2007). However, the extension of franchise was too timid in 19th century Europe to have much effect. The United Kingdom 1832 reform bill had very little impact in the short term on composition of the House of Commons. Landlords accounted for about 80% of members of the parliament which repealed the Corn Laws (Schonhardt-Bailey 2006). Also the concession of universal male suffrage in France in 1848, the most dramatic increase in franchise among all the considered countries, did not affect much trade policy. In fact, according to the Constitution of 1852 Napoleon III had the exclusive power to introduce bills and the right to negotiate and sign commercial treaties key decisions in that field were increasingly taken by Napoleon Bonaparte, later Napoleon III (Plessis 1985). Only in Spain, the extension of suffrage in 1868 brought about a free-trade majority (Montanes Primicia 2005)

However, other types of institutional changes did affect trade policy. The most interesting case is the Netherlands (Wright 1958, Van Zanden-Riel 2004). After 1815 the kingdom was ruled by Willem I, from the house of Orange, with very large powers, included the right to set duties. The kingdom included also the so called Austrian Low countries (i.e. nowadays Belgium), whose interests differed quite sharply from those of the Netherlands. Landed interest was quite strong in the Southern areas of the Kingdom: in October 1824, Belgian landowners formally pleaded with the King for prohibition of imports (Regulations 1826 p. 378) and the next year they obtained a small increase in duties. In contrast, the protectionist movement in the Northern provinces was weak. The traditional merchant elites vehemently opposed any restriction to trade, while most farmers and landowners were not so interested in protection as they specialized in livestock rearing. Thus, Belgian independence in 1830 caused a dramatic realignment. Netherlands reduced duty to its 1822 level, while Belgium immediately prohibited imports, to be forced to back down by street riots (Suetens 1955 p.7).

Another interesting case is Switzerland (Humair 2004). It had missed the protectionist backlash because of its peculiar institutional structure. Until the Sonderbund war (1847), it was a very loose federation. Each canton was free to set its duties, but trade within the confederation was free. This made any attempt to protection futile as long as one canton let imports free. The only solution, for the cantons of the "agriculture de la plaine" (Berne and Vaud), which did want protection against French wheat, was to convince all others to raise duties. They tried vainly several times, most notably in 1822, but they failed. The new 1848 Constitution offered them another opportunity, as it shifted the power of setting tariffs to the Confederation. However, the outcome was not dissimilar. Members from the cantons of the "agriculture de montagne" (Grigioni and Ticino), exporting dairy products and livestock, "industrial" (Zurich and Berne) and "mercantile" ones (Basle, Geneve) joined forces and approved only a token level of protection..

5) Hypothesis 2: modern economic growth

Modern economic growth may account for the liberalization of wheat trade, for two reasons. First, it can increase the absolute number and the share of non-agricultural entrepreneurs who meet the minimum requirements for voting, and their proportion on the total. Unfortunately, it is impossible to test this hypothesis, because, as said, no source provides data on voters by sector of activity. What we have is the composition of GDP (Table 3)⁷. These data would proxy the underlying distribution of voters the better the more similar the distribution of income within each sector was – i.e. the closer was the non-labor share between agriculture and industry and the closer was the level of concentration of land (capital).

⁷ There are no data on the Kingdom of Sardinia, but as late as 1891 agriculture accounted for 32.2% and industry for 32.5% of the GDP (Felice 2005)

Table 3
Composition of GDP

	United Kingdom		Belgium		Netherlands		France		Spain	
	Agr	Man	Agr	Man	Agr.	Man	Agr	Man	Agr	Man
Ca 1815	26.1	32.0	30	29	25	30	43.4	33.3		
Ca 1830	23.4	34.4	20	37	22	32	40.5	37.8		
Ca 1850	20.4	34.3	21	38	26	26	32.4	44.0	36.5	14.6
Ca 1870	14.2	38.1	14	49	30	24	38.9	35.6	39.5	16.2

Source: United Kingdom (1821, 1831, 1851, 1871) Mitchell-Deane 1976 p.366; Belgium and Netherlands (1808-12, 1836, 1850, 1870) Van Zanden-Van Riel 2004 tab. 6.3; France (1815-1817, 1829-1831, 1849-1851 and 1869-71) Toutain 1997; Spain (1851-53, 1869-1871) Prados de la Escosura 2004 tab. A.2.6

In the key period of liberalization, the 1830s and 1840s, the share of agriculture, and thus, by hypothesis, the relative power of the landed interest, declined only in the United Kingdom and in France, and only by few percentage points. These changes were too small to account for the liberalization, unless the income distribution within each sector changed hugely

Second, modern economic growth may account for the liberalization also if it changed the personal interest of the same voters. Schonhardt-Bailey (2006) argues that British landowners had been shifting their investments towards industrial and financial assets in the 1830s and 1840s and that movement had been stronger in counties which elected MP which later sided with Peel in the Repeal vote (thus correctly representing their constituency). She backs this claim with a sample analysis of death duties in 1830 and 1850 for all counties. Without such an analysis, which is clearly beyond the scope of this paper, it is impossible to rule out a similar shift in interests also in other countries

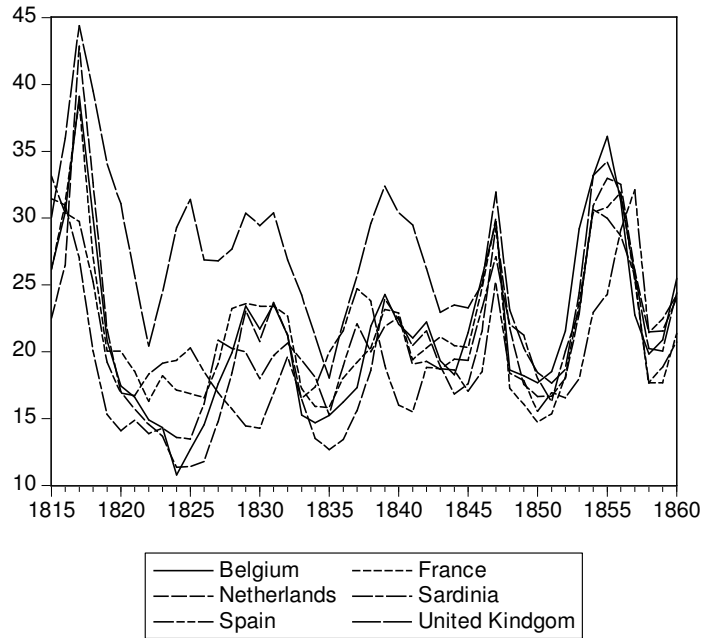
Anyway, both effects would explain liberalization, if indeed landed and industrial interests were totally alternative. This was by and large the case in England, but not in most countries of Continental Europe. There the most frequent solution (by far) was a collusive agreement. Time and again, industrialists supported the duty on wheat. The Barcelona textile manufactures supported the prohibition to imports as late as 1858, even when landowners from Andalucia were cautiously favorable to substituting it with a high duty (Montanes Primicia 2006). Similarly, French manufacturers opposed several proposal to abolish the sliding scale. This position was perfectly rational for import-competing producers, provided that the duty on their products exceeded the duty on wheat, suitably weighted for the share of wages in their production costs times the share of wheat on workers' budget⁸. French manufacturers suddenly discovered the damaging effect of wheat duties when the Cobden-Chevalier treaty stripped them from protection on their own products (Levasseur 1912).

6) Hypothesis 3: growing wheat prices.

Historians of Corn Law such as Barnes (1930) and Crosby (1977) assumed that the landlords' interest for trade policy depended on the price of wheat. When this latter was low or falling, they claimed protection, while they neglected the issue when the price was high or rising.

Graph 3
Nominal prices of wheat (shilling/q.le)

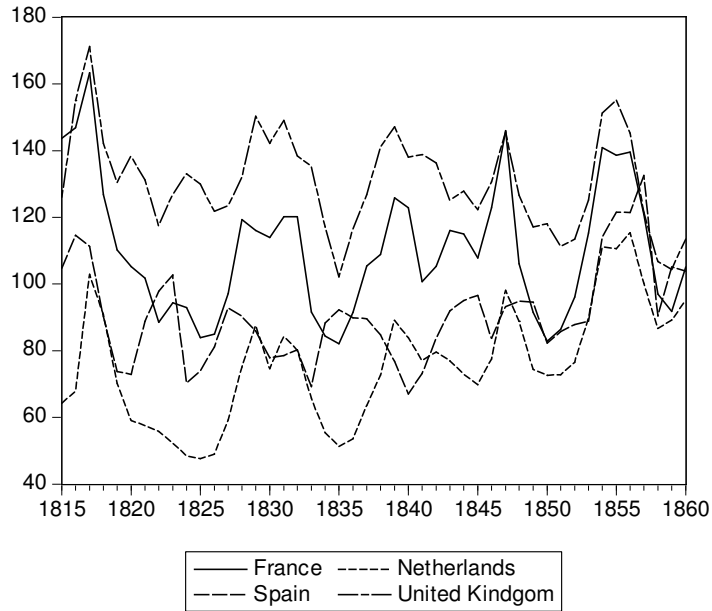
⁸ If wheat accounted for a share s of total consumption, an increase in duty by Δp (normalized at 1) would reduce the purchasing power of nominal wages by $(1-\Delta p \cdot \epsilon) \cdot \Delta p \cdot s$ where ϵ is the elasticity of demand. In the extreme case of fixed coefficients, the offsetting increase in wages would augment production costs by $[(1-\Delta p \cdot \epsilon) \cdot \Delta p \cdot s] \cdot w$, where w is the (fixed) share of wages. For instance, if $\Delta p=0.5$, $\epsilon =0.3$, $s=0.3$ and $w=0.5$, a 50% duty on wheat would increase production costs by 4%



Source: Federico 2008

A simple graph (Graph 3) supports their view. In the long run, prices remained pretty much constant, but there is a remarkable coincidence between periods of low and falling prices and protectionist movements. This is true not only for the impressive fall after 1817, but also of the dip of the mid 1830s, which featured a substantial increase in protection in Belgium and the Netherlands. In contrast, prices were high and growing in the mid 1840s (the “hungry forties”) and the 1850s, when protection was reduced. A savvy economic historian would object that people react to relative, not to absolute prices.

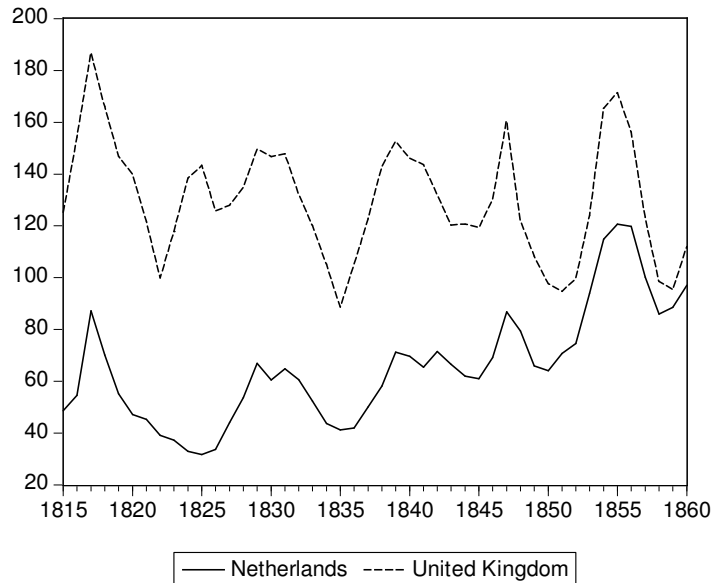
Graph 4
Real prices of wheat (1869=100)



Sources: wheat prices Federico (2008); price indexes: France GDP deflator from Toutain (1987), Spain Consumer price index from Reher-Ballestreros (Carreras Tafunell ed) Netherlands CPI from Van Zanden United Kingdom consumption from Clark (?)

The real prices of wheat fluctuated less than absolute ones, but the key movements are still evident (but for Spain, where deflation changes the whole profile of the series). This result is to some extent spurious, to the extent that wheat itself was a major component of the implicit deflator of GDP and or price indexes. Furthermore, the consumption pattern of great landowners surely differed from that of ordinary folks. Luckily, price indexes for the elite are available for the United Kingdom and the Netherlands (Graph 5).

Graph 5
Real prices of wheat for the élite (1869=100)



Sources: wheat prices Federico (2008); price indexes: Netherlands CPI from Van Zanden United Kingdom Lindert et al (2002) –series “top 5% not paying rent”

Differences are very small, although not entirely negligible: in the Netherlands, relative prices of wheat grew more for the rich than for the common people and in the United Kingdom they were a little bit more volatile.

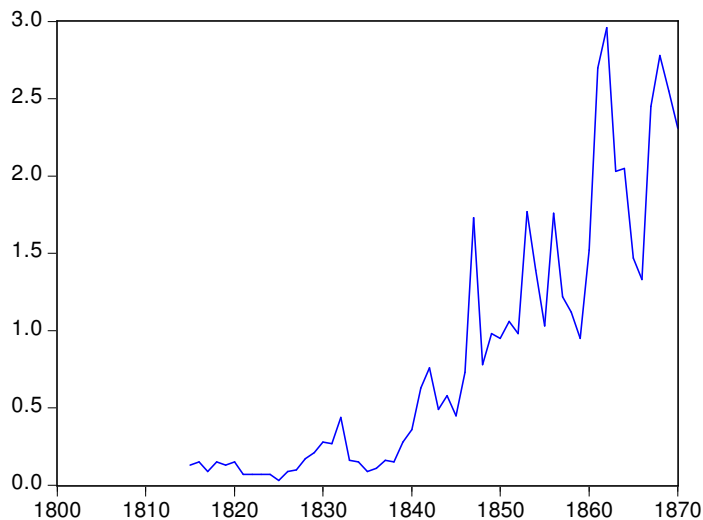
The broad coincidence between trends in prices and changes in trade policy would not by itself be sufficient evidence of a causal link even if landowners were all powerful. First, it assumes (as in Section 2) that landowners believed that current prices trend or level was to continue in the future. Second, it does not take into account the impact of price changes on the income of landlords. This latter would be the higher (and thus the landlords the more sensitive to price fluctuations) the higher the share on wheat on the gross output and the lower the elasticity of transformation among products. Even assuming a zero elasticity, a 10% duty would increase income by 3% if wheat accounted for a third of gross output (and for a similar share of expenditure). Thus gains (or losses) from expected price movements had to be substantial to spur rational landowners to action, especially if you factor in the disutility of political action

7) Hypothesis 4: insufficient world supply

Perhaps, expectations on prices were not so simple, and landowners took into account the future supply of wheat, on the basis of imports and on information about the agriculture in supply areas. Clearly, the amount of imports under protection was endogenous, but a 19th century landlord could infer the elasticity of “world” supply from trends in imports before the imposition of duties. A prime suspect is the arrival on the market of Russian wheat. According to Wheatcroft (1980 p.170), the total exports of cereals from Russia had been negligible until the mid 18th century and had started to rise in the the 1770s, up to some 135000 tons in the early 1810s. The

poor harvests of 1816-1817 boosted Russian exports in the 1816-1820 to 285000 tons⁹. Part of the Russian exports was the traditional Baltic trade, re-labelled Russian after the division of Poland. But the novelty was Southern Russia: Odessa had been opened to Western traders in 1803, and it had been declared a free port in 1817 (De Hagemeister 1836). It would be nice to know whether this increase was at the expense of traditional Baltic suppliers, but unfortunately the necessary data are missing¹⁰. Thus total trade is estimated from the import side, as sum of net imports into five countries, the United Kingdom, France, Belgium (since 1830), Netherlands (until 1850) and Piedmont (Italy after 1861).

Graph 6
Imports of wheat into Western Europe (millions of tons)



Sources Belgium Degreve (1982); France 1800-1826 Commercial regulations France (1842) and 1827-1870 Tableau decennale (ad annum); Netherlands Horlings (1995) Piedmont/Italy 1816-1860 Romeo (sd) 1863-1870 Movimento Commerciale United Kingdom Paliamentary Papers 1898¹¹.

The total imports of wheat increased in the long run from 0.1 million to 1820-1822 to 1.03 in 1846-1850 to 2.5 millions 1868-1870¹². Clearly import boomed after the liberalization, and this

⁹ To have a comparison, the Dutch imports from the Baltic in the 1760s totaled some 135000 tons (Ormord 2003)

¹⁰ The available series of export from Danzig may not be representative, as the Prussian government tried to shift exports to other ports (Cieslak-Bernat 1995). The only series are for Danish exports (Johansen 1985).

¹¹ The series Commercial regulations includes flour. Trade in wheat has been crudely estimated by assuming that flour accounted for the same share as in 1827-1830, separately for exports and imports

¹² The series is not homogeneous over time, as Netherlands stops in 1850 and The series for Belgium begins in 1830.. In theory included in Dutch imports, although separation likely to have increase total trade as flows from Belgium to Netherlands previously classified as domestic. Omitting Netherlands and Belgium for consistency's sake, does not change the outcome.

rise points to a potentially elastic supply. In a comparable situation, in the 1880s, this was the main issue in the debate about trade policy. Protectionist, while admitting that a duty could harm in the short run, argued that it was the only solution to save domestic agriculture, as the overseas continents could supply unlimited quantities of wheat at impossibly low prices. Free-traders downplayed this risk. So far, the debate of the 1820s has not been analyzed in depth, but at a first glance, this rhetoric argument seems less important. Imports from Russia were quoted as cause of grave concern in France (Levasseur 1912). On the other hand, William Jacob, in his quasi-official and thus highly influential reports (1826 and 1828) for the House of Commons before the approval of the 1828 Corn Laws, downplayed the productive potential of agriculture in Eastern Europe. He argued that agriculture was too backward to increase supply to match whatever rise in British demand, and that technical progress was hampered by feudal property rights, which could not be changed in a short time. He was proved wrong, as Southern Russia became the world major exporter of wheat on the Eve of World War One (Stern 1961). One wonders how much his position reflects a quasi-racist view of Russian and Eastern European peasants, as opposed to energetic American farmers of the 1880s rhetoric

8) Hypothesis 5: fear of the mob

The fear of bread riot had undoubtedly been the main motivation behind the pro-consumer policies of the Ancien Regime in France (Root 1994) and probably also in other Continental countries. The Revolution had allayed to some extent these fears, but not entirely. In 1812, Napoleon reacted to fall in harvest by re-regulating the Paris market (Miller 1999). And as late as 1830, the new Belgian government had to backtrack from its initial decision of prohibiting imports because of riots (Suetens 1955). This was an exception, and overall it seems difficult to argue that fear of the mob prompted liberalization in the 1830s and 1840s. However, its fingerprints can be traced in the willingness to prevent price rises, which underlined two distinctive features of the trade policy after the end of the French wars...

First, a lot of countries - the United Kingdom, France, the Netherlands- used sliding scales rather than fixed duties as in the 1880s backlash. The sliding scales aimed explicitly at stabilizing prices within a band or close to a target price (20 fr/hl in the case of France). This strategy may have reflected the permanence of a concept of "fair" price, but surely it aimed at avoid too large price spikes, which could cause social unrest.

Second, the governments were ready to suspend duties when prices rose too much. As Table 1 shows, this reaction was very common during the 1846-1847 crisis, although it did not suffice to avoid the outbreak of 1848 revolution (Berger-Spoerer 2001). Also other countries, not included in the table, such as the Papal States (Bonelli 1961 p. 61), reacted likewise. Later, France suspended the sliding scale from 1853 to 1858 allegedly because of poor crops. Clearly by itself a suspension of duty, by definition a temporary measure, did not permanent cause liberalization. France resumed protection in 1859, as the result of strong pressure from landowners. However, suspension proved that agriculture could survive without protection

9) Hypothesis 6: Cobden triumphans

Last but not least, liberalization can be attributed to the diffusion of free-trade ideology. As everyone knows, its antecedents can traced back to Adam Smith and, above all, to the French Physiocrats who had strongly argued that the free circulation of grain could stimulate agricultural production and increase the welfare of the whole population (Persson 1999). In the early 19th century the specific issue of protection to grain and role of land subject of theoretical debate between Ricardo and Malthus (Irwin 1996 pp.93-97 short account). The argument for free trade was popularized by Cobden Anti-Corn Law League. In spite of its organization, however it would not have succeeded, at least without a new election, had not Peel changed his mind. Actually,

Increase from 0.03 to 2.4 millions tons. Note that total import in the early 1820s fall short of likely exports. The gap is substantial, and it must be accounted for by imports into other countries, such as Portugal (Ferreira 1995).

before Schonhardt-Bailey (2006), Peel's conversion was believed to have been motivated mainly by the intellectual appeal of free trade (McCord 1958).

To what extent did British example or, more in general, did the free trade ideology inspire liberalization on the Continent? A precise answer to this question is impossible. Surely, there was nothing comparable, in scope and organization, to the League. French free traders were a minority and were out-organized by Protectionists, led by industrialists (Dunham). On the other hand, an ideology does not need a massive movement in public opinion to have far-reaching consequences on trade policy. Actually, it can act much more effectively in an autocratic regime, to the extent that free-traders had to convince only the ruler. This is in a nutshell the only explanation which Kaplan (1975-1976) puts forward to account for the 1764 liberalization in France: the Physiocrats were able to convince Louis XV, and it took seven years of disasters to have him to relent. The most important case in point is however Napoleon III. His action was undoubtedly instrumental to liberalization of French trade in the 1850s (Dunham 1930). It is however unclear to what extent he was inspired by free-trade theory or by foreign political considerations.

10) Conclusions

This paper starts by showing that in the first half of the 19th century, the wheat trade policy of a representative sample of Western European countries followed a big political cycle. Most countries raised duties, sometimes up to prohibitive levels, in the 1810s and early 1820s and reduced them slowly since the late 1820s. The increase in protection contributed to keep price dispersion high even after the end of the French wars, while the following liberalization accounted for a sizeable part of the integration of the market (Federico 2008). This paper has tried to understand the causes of this cycle, taking into account the nature of political systems of those countries. Therefore, it focuses on the liberalization, which seems less easy to explain than a protectionist backlash. It puts forward six hypotheses - institutional change, modern economic growth, changes in relative price of wheat, insufficient world supply, fear of the mob and diffusion of free-trade ideology. These explanations are clearly not mutually exclusive, although some are more plausible than others. The data are too scarce and imprecise for a full-fledged econometric analysis.

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