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15 de julio de 1993

HOW IMPORTANT WAS TARIFF PROTECTION IN SPANISH FARMING PRIOR TO 1936?

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Session: "La economía política del proteccionismo".

Please do not quote without permission. Comments most welcome.

¹ This paper is based on Chapter 8 of a book on Spanish agriculture which I am preparing. It is also part of a wider project on the level of agricultural protection in Spain over the period 1891-1991, and has benefited from a grant, DGICYT no. PB90-0268.

The importance of protection as a factor in explaining the slow development of the agricultural sector, if not the economy, has frequently been stressed in recent literature for the period 1891-1936. In this paper we look at three major areas of agricultural protection: the level of tariffs and their impact on living standards; the role of tariffs in determining the allocation of agricultural land between crops and livestock and, finally, the question of tariffs and the sectorial distribution of labour. We conclude that, although agricultural tariffs contributed to what economists today would consider a "misallocation" of resources, there were other factors which were of greater importance in explaining the low level of productivity in the sector.

1. WERE LEVELS OF PROTECTION IMPORTANT FOR SPANISH CONSUMERS?

... the higher the level of GNP per capita in 1913 or 1929, the lower the nominal protection of agriculture. It seems that the lower-income countries of Eastern and Southern Europe gave heavy protection to both agriculture and manufacturing.²

The Spanish economy saw some major changes in the half century or so prior to the Civil War. In particular, Prados de la Escosura has estimated that GDP per head exactly doubled between 1859/61 and 1933/35³. This increase in GDP was accompanied by structural changes, with a growth in

² Emphasis in the original. Lindert, 1989, p.12.

³ This is equivalent to an annual increase of 0.94 per cent. Carreras gives a more modest growth of 59 per cent, or an annual 0.65 per cent. Prados de la Escosura, 1993, Table D.2.

urbanization and a decline in agricultural employment. Yet there can be little doubt that Spain was still a poor country in 1936, both in absolute terms, and in comparison with other western European countries. Thus, real GDP per capita in 1929 in Spain was still only 68 per cent of that in Italy, 40 per cent in Great Britain, 46 per cent in France and 57 per cent in Germany⁴. In addition, Palafox has identified other indicators - per capita consumption of cotton and energy, numbers of letter or telegrams sent, and literacy were Spain once more performs noticeably worse than the continent's leading economies⁵.

Table 1 provides another indicator, this time for a wider selection of countries, and concentrating on one area which most interests us here, namely the relative cost of food in Spain. An hour's work in Spanish cities purchased significantly less than it did in other western Europe countries, with the exception of Italy. Of the other leading European nations, only in France did the low purchasing power of its citizens appear to have approached the level of that in Spain and Italy, although basic foods were considerably cheaper⁶.

⁴ Prados de la Escosura, 1992, p.36.

⁵ Palafox, 1991, p.25. For literacy see also Núñez, 1992, ch.2.

⁶ In comparison with Spain, French hourly building wages could purchase 31 per cent more for white bread or 54 per cent for potatoes. For an international study of living standards using this source, see Williamson, 1992.

TABLE 1.
RELATIVE PURCHASING POWER OF BUILDING WORKERS IN EUROPE, 1930.

quantity that wages from one hour's labour could buy in major cities, in kilos and litres.

	bread	potatoes	meat	milk	sugar
SPAIN (4)	1.79	3.93	0.27	1.79	0.73
Italy (7)	1.48	3.73	0.25	2.19	0.43
France (4)	2.34	6.04	0.29	2.53	1.07
Germany (6)	3.10	11.82	0.50	4.48	2.10
Britain (7)	3.40	8.68	0.71	2.85	2.71
Austria (3)	2.05	6.58	0.36	2.55	1.23
Ireland (3)	2.79	13.11	0.64	3.28	2.43
Low Countries (4)	2.93	13.67	0.53	4.56	1.74
Denmark (1)	2.41	12.50	1.14	6.06	4.00
Sweden (3)	2.37	15.83	0.89	8.64	4.52
Estonia (2)	1.94	6.60	0.36	2.20	0.94
Poland (4)	3.00	12.27	0.39	2.81	0.83
Czechoslovakia (3)	3.25	12.21	0.55	3.77	1.30

Building workers wages have been taken as an average between skilled (albañiles) and unskilled (peones) in the leading urban centres, the number of which are given after each country. Bread is from wheat flour, except in the case of Austria, Estonia, Germany and Poland, when rye bread has been used; meat refers to an average of beef, lamb, pork and veal, except when information is lacking, namely Denmark (lamb), Britain (veal), Ireland (pork and veal) and Sweden (pork).

Source: Dirección General de Trabajo, 1931, cuadros lxiii y lxiv, which in turn is based on International Labour Office publications. Information refers to January 1930.

What the Table cannot inform us of course is to what extent the low purchasing power of Spanish urban workers was a reflection of expensive food, and to what extent low wages.

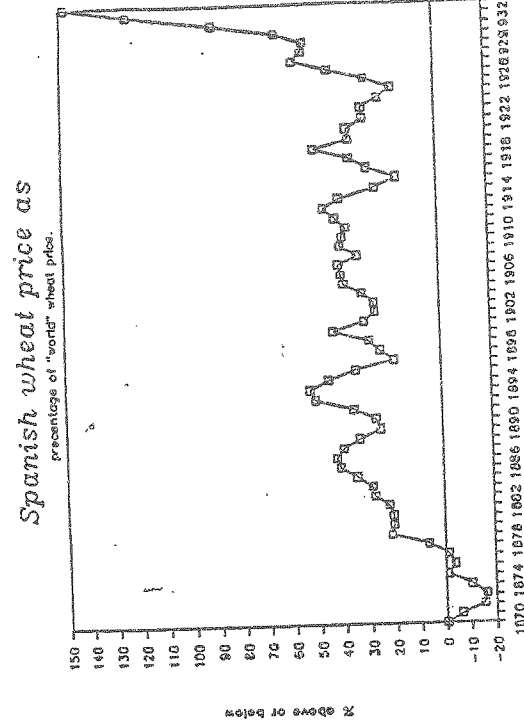
What is not debatable, however, is that the low relative wages led to poor diets. The low calorie intake, and shortage of animal protein in Mediterranean diets in general, and the Spanish in particular, is shown in Table 2.

The question of why diets in Spain were so poor in the 1930s cannot be simply a question of the level of economic development. The Irish for example, consumed 23 per cent more calories per individual, 95 per cent more meat, and 228 per cent more sugar, even though real per capita in the two countries was not very different. In the rest of this section we shall discuss the possibility of whether tariff protection was sufficiently high in Spain to explain the differences noted in Tables 1 and 2.

If from the late nineteenth century Spain was not alone in protecting its wheat growers, levels were considered exceptionally high, and helped produce some of Europe's highest bread prices. To compare the real level of protection between countries is notoriously difficult, given the variety of methods that protection might take, problems in converting currencies, and the significant dietary variations between countries. Comparing tariff levels alone is not

	annual per capita consumption, kilos.	meat	potatoes	other fruit	other (excl. butter)	total fat	total protein	total calories	total calories & from cereals & potatoes	total calories & from animal products	other and fats refer to fat content; meat to carcass weight
Austria	121.6	96.3	136.1	120.0	123.7	113.0	115.0	2520	2520	2520	Source: Yates, 1960.
Belgium	121.6	96.3	136.1	120.0	123.7	113.0	115.0	2520	2520	2520	
Denmark	121.6	96.3	136.1	120.0	123.7	113.0	115.0	2520	2520	2520	
France	121.6	96.3	136.1	120.0	123.7	113.0	115.0	2520	2520	2520	
Germany	121.6	96.3	136.1	120.0	123.7	113.0	115.0	2520	2520	2520	
Italy	121.6	96.3	136.1	120.0	123.7	113.0	115.0	2520	2520	2520	
Netherlands	121.6	96.3	136.1	120.0	123.7	113.0	115.0	2520	2520	2520	
Norway	121.6	96.3	136.1	120.0	123.7	113.0	115.0	2520	2520	2520	
Portugal	121.6	96.3	136.1	120.0	123.7	113.0	115.0	2520	2520	2520	
Spain	121.6	96.3	136.1	120.0	123.7	113.0	115.0	2520	2520	2520	
Switzerland	121.6	96.3	136.1	120.0	123.7	113.0	115.0	2520	2520	2520	

GRAPH 1



Figures given are three year averages.
Sources: Mitchell, 1962, GEHR, 1980, and Paris Egulaz, 1943. For exchange rates: Carreras (ed) 1989, pp.390-1.

enough⁷. The real level of protection that Spanish farmers enjoyed is perhaps best reflected in Table 3, which shows the country to have been virtually self-sufficient in wheat in comparison to other countries, which had theoretically higher levels of protection according to Liepmann⁸. Domestic self-sufficiency was achieved at a cost to the consumer, as domestic prices remained above international ones. Graph 1 compares the internal wheat price in Spain with the English price, which is taken as the "world price", and has been converted into pesetas at the current exchange rate⁹. Whereas between 1870-77 Spanish wheat prices were cheaper than "world" prices, this would not be the case for the rest of the period. Only during the First World War, when British prices rose on account of shipping difficulties, would the price difference fall much below 20 per cent.

⁷ For example, Spain supplemented its import tariffs from November 1921 by strict import quotas for wheat and maize and, therefore, in the words of Liepmann, "Spain's corn duties ... had only limited practical value for judging her corn-import policy, and the large decreases of her corn imports in post-war periods". Liepmann, 1938, p.101. For Spanish tariff policy see EPAPM 1928, pp.257-60 and Montojo Sureda, 1945, pp.15-47.

⁸ The I.I.A. does not allow a figure for 1909/13 to be calculated as the figures for production refer to post World War I boundaries, whilst imports to those before the War.

⁹ As much of wheat consumed in Britain was imported, there is not need to include freight in the calculation. Unlike GEHR (1980), who showed the costs (and profits) of shipping from England to Barcelona, our interest here is simply to illustrate the price "gap" between the two countries. A moving three year price average is used. For a wider comparison of international wheat prices between 1880 and 1905, see Palafox, 1991, cuadro 1.3.

TABLE 3.

INDICES OF WHEAT PROTECTION IN FIVE EUROPEAN IMPORTING NATIONS, 1925/9.

	(1)	(2)	(3)
Spain	96.9%	19.6%	19.2%
France	86.2%	23.0%	7.8%
Germany*	83.9%	29.0%	8.0%
Italy	74.0%	27.0%	5.6%
Gr. Britain	21.2%	--	9.2%

1. Level of self-sufficiency in wheat. * Includes both wheat and rye. The level of wheat self-sufficiency was 61.3% and rye 99.7%.

Source: I.I.A. various years.

2. Liepmann, (1938) figures for 1927.

3. Income from customs receipts as a % of total exports. Refers to period 1922-30. Tena, 1992, p.333.

Spain was obviously not alone in protecting its wheat farmers. Other countries, such as France or Germany, also protected their farmers but they also enjoyed relatively high agricultural productivity. In the case of France, Lindert has shown that the silver price of wheat grew from being 5 per cent higher than in England during the 1870s, to around 26 or 27 per cent by the 1890s and 1900s. In other words, not so very different from the Spanish experience¹⁰. Finally, Lindert also reminds us that the English Corn Laws kept the domestic price of wheat from around 1710 to 1846 significantly above that of other European countries. Indeed, the gap between Britain and other countries in this earlier period appears remarkably similar to that identified in our Graph 1,

¹⁰ Lindert, 1989, Table 3.

between Spain and the "world price"¹¹. It hardly needs mentioning that the period 1710-1846 is not normally considered one of agricultural failure in England. As Pedro Fraile has argued in another paper in this session, it seems unlikely that higher bread prices caused by tariff protection could make a really significant difference to household budgets in Spain in the period 1891-1936. However, even if cereal protection in Spain was not significantly above that of its neighbors, the low incomes of the country implied that its relative impact on aggregate demand would be greater than, in say Germany or France. Bread inevitably had a greater weight in the family budget of the lower income countries of the Mediterranean.

2. TARIFFS AND THE ALLOCATION OF RESOURCES WITHIN AGRICULTURE.

It follows that the best policy for European countries during the Great Depression was to carry out a shift from crop production to livestock. Countries which were able and far-sighted enough to do this stood a much better chance of overcoming the crisis that those which, in the face of the new trends, persevered with former habits¹².

The discussion in this section is centered in three main areas¹³. First, we examine the nature of tariffs for wheat farmers, and argue that they only formed part of a wider

¹¹ Ibid. Table 3.

¹² Tracy, 1989, p.19.

¹³ As we concern ourselves essentially with wheat, comments are obviously limited to the secano.

strategy for maintaining the domestic terms of trade of cereal farmers. Second, we consider who benefitted from tariffs within agriculture. Finally, we discuss to what extent it would have been possible to reallocate resources more efficiently within Spanish agriculture in the pre Civil War period.

As Sánchez Albornoz has shown, from 1820 government policy successfully reserved the internal and colonial markets for domestic cereal producers¹⁴. However, by the 1880s the impact of falling production costs in the new temperate countries and the decline in rail and sea freight, threatened to dislodge the Spanish Interior from its traditional markets of the periphery (Barcelona, Valencia etc.). If Spanish prices remained relatively stable, world prices fell significantly, and the tariff would now effectively provide farmers with a minimum price, ending the higher prices farmers had traditionally enjoyed after a harvest failure¹⁵. In Spain, as elsewhere, this had serious implications as greater stability in prices would produce greater instability in farm incomes, on account of harvest fluctuations. The First World War would see an extension in government intervention, with

¹⁴ Sánchez Albornoz, 1966. See also Nadal, 1985, pp.93-4.

¹⁵ The tariff of 4.54 ptas/100 kilos was increased in December 1891 to 8 ptas and again to 10.5 ptas. in February 1895. It then tended to fall, but with higher levels becoming operation if the domestic wheat price fell below certain levels. See EPAPM abril 1928, no.1529, pp.257-60.

attempts to fix maximum and minimum prices¹⁶. By the end of the War, Spain had become virtually self sufficient in wheat and the tariff was supplemented from November 1921 by strict import quotas. In only three years between 1922 and 1935 would imports rise above 5 per cent of the national harvest (1928, 1929 and 1932), being negligible in the rest. Instead of tariffs, imports were controlled by licenses, and internal prices through setting maximum and minimum limits¹⁷. Despite the dubious success in becoming self-sufficient in wheat, and stabilizing consumer prices, the clamour for still greater protection and reports of distress amongst thousands of wheat farmers during the 1920s, questions this as a suitable policy measure, a point examined elsewhere¹⁸.

The relative importance of agricultural tariff protection within the economy has been studied by Prados de la Escosura and Tena. High bread prices brought complaints from industrialists but, as the farming lobby believed, especially after the First World War, the protection that they received

¹⁶ The Real decree of August 1914 allowed, briefly, imported wheat to enter duty free if prices remained above 29 ptas./100 kilos. This was reintroduced between March and June, and November of 1915. Finally, the Real Orden of January 1916 established duty free imports until April 1921. Maximum and minimum prices for wheat were introduced in November 1915.

¹⁷ Montojo Sureda, 1945. See also Pinilla Navarro, 1992, pp.418-20.

¹⁸ See Simpson, in preparation, Chapter 10.

was often less than industry¹⁹. The result was, according to Torres, that relative prices moved against farmers, benefitting industry (as well as flour millers). In the absence of a comprehensive list of consumer and industrial prices, it is difficult to show whether Torres was indeed correct or not. Table 4 suggests that whereas wheat farmers were less successful than industry to increase prices during the War time inflation, the relatively high wheat prices of 1927/9 had allowed them to recover against most other producers, with the notable exceptions of cotton textiles and cement. It would seem that this was only temporary as by 1933/5 wheat was slipping back against most other commodities. However, if relative prices did move against the farmer between 1913-1935, the movement was slight and limited by government price intervention.

Peter Lindert has stressed that governments in recent decades frequently distort their economies through "an anti-trade pattern, namely that governments tend to tax exportable-good agriculture and protect import-competing agriculture"²⁰. In this respect Spain does not appear to have been very

¹⁹ Manuel de Torres noted that "...veremos que toda la producción española se ha desarrollado protegida por el arancel; más aún, la rama menos privilegiada es la agricultura. Quien compare la protección triguera con la de la industria textil o siderúrgica, se convencerá de aquella afirmación" Torres, 1934, p.231.

²⁰ Lindert, 1989, p.1.

TABLE 4.

MOVEMENTS IN COMMODITY PRICES IN SPAIN, 1913-1935.

	1913/5	1920/22	1927/9	1933/35
wheat	100	172	156	152
flour	100	168	155	153
woollen textiles	100	177	157+	
cotton textiles	100	250	225+	
cement	100	186	190	192
steel	100	385	143	196
iron	100	360	141	165
sulphuric acid	100	193	173	110
Asturias coal	100	419	154	175
petrol	100	155	74	98
superphosphates	100	276	122	145
sugar	100	241	171	177
coffee	100	151	195	217
tobacco				

+ Only 1927 and 1928. Source: Carreras, A. (1989) and Paris Egulaz, H. (1943).

different from most other countries²¹. Spanish producers of oranges, olive oil, olives, wine, grapes, raisins, soft fruits, nuts, early vegetables all suffered to some degree as they had to pay higher prices for wheat, meat, rice, sugar and industrial products because of import duties. Whilst it is true that most export crops were protected themselves from imports in the domestic market, it would seem unlikely that most would have faced any serious competition.

Finally we have to consider whether tariffs delayed the switch out of cereals and into other crops. This is especially important, as it has been argued that the high concentration of resources in cereals was a major cause of Spanish agriculture's low productivity. We shall consider this from two angles, first the question of lost export opportunities and, second, the delay in transferring resources to livestock farming. We shall argue that, rather than a misguided tariff policy, it was the low opportunity cost of cereal land in Spain in comparison to northern Europe that was the principal obstacle to change.

In the absence of irrigation, the major alternative crops to cereals on Spain's *secano* were vines and olives. Already by the first third of the twentieth century the domestic market was dependent on population growth for increased demand, with per capita consumption growing by just 8.3 per

²¹ For a broader discussion on the impact of tariff policy on the import of industrial goods on the agricultural in two very different economies, namely Canada and Argentina, see Solberg,

resistant varieties had allowed French domestic output to virtually recover²². Without the benefit of an abnormal short-fall in a major producing country, Spanish growers needed either to increase market share, or to extend the size of the market. They failed to do either, and the country's share of the world trade in wine slipped from approximately half in the 1880s to less than a quarter by 1925-9.

TABLE 5.
EXPORTS OF SPANISH BULK WINES.

	total	exports	exports	Spanish	index
	France	to	to other	by value	exports
exports		countries	France	price	
1861-65	88.7	9.9	78.8	11	100
1866-70	111.5	13.0	98.5	12	105
1871-75	160.6	30.8	129.8	19	153
1876-80	302.4	180.1	122.2	60	382
1881-85	682.7	547.9	134.8	80	1178
1886-90	825.6	698.0	127.6	85	1043
1891-95	536.4	444.5	191.9	70	510
1896-00	534.6	372.0	162.6	70	501
1901-05	208.4	143.3	65.1	69	210
1906-10	140.1	42.7	97.4	30	108
1911-15	269.9	141.8	128.1	53	359
1916-20	445.5	275.7	169.8	62	658
1921-25	278.6	166.2	112.4	60	314

exports in millions of liters. Wine price refers to San Pere de Ribes (Barcelona). Index of exports obtained by multiplying total exports by wine price; 1861-65 = 100.

Source: Estadística (s) de Comercio Exterior and Balcells 1960, pp.375-9.

A major problem facing Spanish producers was that the world market for cheap table wines outside France would remain

²² For Spanish viticulture in the late nineteenth century, see especially Carnero i Arbat, 1980.

cent in the case of olive oil, and falling by 1.4 per cent for wine, between 1897/01 and 1929/33²³. Both crops had important export markets, and it is in this area that we shall briefly look for lost opportunities because of the protected cereal market²⁴.

The vine was Spain's major export crop throughout the period²⁵. The intensive nature of viticulture made it well suited to the small family farms of the Mediterranean area, and the lack of capital often associated with peasant farming was alleviated in the pre-phylloxera period by the fact that off-farm inputs were minimal. Low entry costs and extensive areas of suitable land for its cultivation were offset only by the bulky nature of the product, and its perishability, as most wines in their natural state frequently became undrinkable within a few months of production. The railways helped lift the geographic restrictions on production, and the addition of alcohol to the wine, greatly increased the product's life.

Spanish exports grew rapidly from the early 1870s on account of the severely diminished harvests in France, caused by phylloxera (Table 5). Yet the boom was short lived. By the turn of the twentieth century, replanting with disease

²³ Simpson, 1989, cuadro 5.

²⁴ This section is based in Simpson, 1985 and 1992.

²⁵ At its peak in 1880-4, 45 per cent of all exports were products of the vine (Prados de la Escosura 1982, p.41).

limited. In part this was because producer countries restricted imports to protect domestic growers, and in part because non-producers frequently placed tariffs on wines to protect other domestically produced alcoholic drinks. Even if Spanish growers had managed to improve product quality and establish brand names, and a few producers did, it is unlikely that they would have widened the market significantly²⁶.

On the supply side, if producers appear to have responded quickly to an outward movement of the demand curve, they found it less easy to reduce output in periods of depressed demand, as taking vines out of production implied the destruction of costly assets. However, there appears to have been other factors which strictly limited long term profits in viticulture, as wine producers in the pre-phylloxera period experienced conditions not dissimilar to those faced by tropical agricultural producers at this time, namely low entry costs and elastic supplies of land and labour²⁷. Phylloxera, in part, would raise entry costs by demanding greater inputs of skilled labour and capital, but much of the world's overproduction of wine during the first third of the twentieth century stemmed from the extension of vines in regions such as central Spain and Algeria, where the crops

²⁶ In France, for example, the exports of quality wines declined from roughly 60 per cent of production of *vins de cru* in 1869-77, to 30 per cent in 1913, and 10 per cent in 1939. Warner 1960, p.85.

²⁷ For tropical producers, see Lewis 1978, especially Chapter 7.

opportunity costs were low, and phylloxera's presence minimal²⁰.

In conclusion, short term price rises had a tendency to encourage low cost producers to extend the area of cultivation in regions such as La Mancha in Spain, which tended to quickly reduce price levels. In general, world viticulture experienced considerable difficulties in the period 1900-1950, caused by the ease of planting vines in the large areas of the Mediterranean, areas where land was plentiful and wage labour was cheap²¹. Finally, as wines were exported strengthen in alcohol, product quality was low, and the value added tended to be minimum.

The olive was another crop of major importance both for the domestic and external market, with about a fifth of total output exported in the decade prior to the Civil War.

Between 1901-12 and 1926-35, the area under olives grew by a third, agricultural yields increased by 28 per cent, but industrial yields in the manufacture of olive oil saw

²⁰ Opportunity costs are difficult to measure, although for La Mancha (taken as Albacete, Ciudad Real, Cuenca and Toledo) wheat yields averaged only 0.6 tones per hectare in 1909/1914 (Torres 1944, pp.247-272), against a national average of 0.9 in all Spain, 0.7 in Algeria, 1.1 in Italy, 1.3 in France and 2.2 in the British Isles (calculated from Malenbaum 1953, pp.236-239). Lewis notes a figure of 700lb per acre (0.8 tones per hectare) for tropical countries in 1900 (1978, p.188). In some regions of Algeria and central Spain, phylloxera was still absent in the 1920s. Greater details can be found in Simpson, 1992, pp.118-128.

²¹ For growth in world output see Pujol Andreu, 1984.

low of 16.7 thousand tons of olive oil exported in the decade 1886-95, exports grew to 74.4 thousand in 1926-35. However, the six major markets for Spanish olive oil between 1865 and 1935, namely Italy, France, Cuba, Argentina, United States and Great Britain, illustrate once again the limitations of the export market for Spanish producers, as five of the six countries were either Mediterranean countries (and therefore producers themselves), or had large Mediterranean immigrant populations. Market size was therefore limited by taste and cultural experiences²². In addition, from the late nineteenth century producers would face increasing competition from other, cheaper vegetable oils²³.

Olive oil processing required a cash investment which could not be easily substituted by labour and which, by allowing economies of scale, gave the larger producer an advantage over the smaller one. This led to a greater concentration of production as small producers sold their fruit to the larger manufacturer²⁴. However, although the technical change in manufacturing increased product quality and opened up new markets, the greater part of the value added was obtained in the growing and harvesting of the crop. Government estimates in 1921 suggest that only 10 per cent of

²² The sixth country, Britain, was of declining importance from the late nineteenth century as cheaper vegetable oils were used for industrial purposes.

²³ Zambrana, 1987, ch.7.

²⁴ For the example of the company Carbonell in Córdoba, Zambrana, 1987, ch.4.

virtually no change. These movements in productivity are deceptive however, for whilst an important part of the increase in agricultural yields appears to have been achieved by simply having a greater proportion of the nation's trees in full production, and by farmers increasing annual variable costs (extra ploughings, hoeings, greater care in harvesting, etc.) to take advantage of favorable prices, the most significant change in this sector during the period was without doubt the modernization of the olive mills and presses.

TABLE 6

PRODUCTION, AREA AND YIELDS IN OLIVE OIL PRODUCTION, 1901-1935.

	PRODUCTION 000s		AREA 000s		AGRIC. YIELD kilos/ has.		INDUSTRIAL YIELD kilos/ has.	
	hls	index	has	index	hls	index	hls	index
1901-1912	2121	100	1448	100	787	100	18.77	100
1913-1925	3243	153	1679	116	1031	131	18.93	101
1926-1935	3920	185	1921	133	1006	128	19.36	103

Note: agric. yield refers to olives produced per hectare, and industrial yield to the quantity of oil obtained from the olives.

Source: Zambrana 1987, cuadro 6, p.74.

In the nineteenth century, most Spanish olive oil exported was of poor quality, and used for industrial purposes, namely lighting, as a raw material in the manufacture of soap, and as a lubricant for machinery. The growth of other cheaper vegetable substitutes implied that, to retain markets, producers had to improve product quality, switching from the industrial to edible oil market, which in turn required considerable investment in new plant. From a

the price of olive oil could be attributed to the manufacturing process²⁵. Therefore 90 per cent of the cost of olive oil was based on the use of extensive areas of relatively unfertile soil, and some of Europe's cheapest casual agricultural labour.

As with the vine, long term growth prospects of the olive were limited as supply could easily be increased, in the long term by extending the area of cultivation, and in the short term through adulterating the product. These facts, linked to the high levels of substitution in the non-Mediterranean countries implied that the olive, as with the vine, would have a growth potential which depended significantly on the limits of the domestic market. In other words, it is questionable to what extent a reduction in the area of cereals/legumes would have encouraged a movement of resources into these two other crops.

From the late nineteenth century, a major factor in productivity growth in northern European agriculture was the movement of resources away from the production of bread cereals, where demand tended to be stagnant and producers faced growing competition from the regions of recent settlement, and into meat and dairy products where value added was greater. Thus in Great Britain the area devoted to wheat fell by a half and the number of cattle increased by 30 per

²⁵ Dirección General de Agricultura y Montes, 1923.

cent between 1870 and 1910. In France, whilst the value of cereals stagnated, the output of meat and dairy produce increased by 48 per cent between 1865/74 and 1905/14. If in Germany there was no fall in the area of wheat and rye, the number of cattle rose by third between 1873 and 1913.³⁴ In Spain, the situation is harder to establish on account of the lack of reliable censuses at the turn of the twentieth century, and the problem of calculating suitable production coefficients. In general, however, livestock numbers do not appear so very different in 1929 as they were in 1917 or 1865.³⁵ By contrast, the area of wheat grew throughout most of the nineteenth century, and increased by 24 per cent and production by 34 per cent between 1905/9 and 1930/4.

There can be few doubts that this failure to switch resources out of bread grains and towards meat and dairy produce was a major cause of the low productivity in the agricultural sector in Spain. That said, it is much more

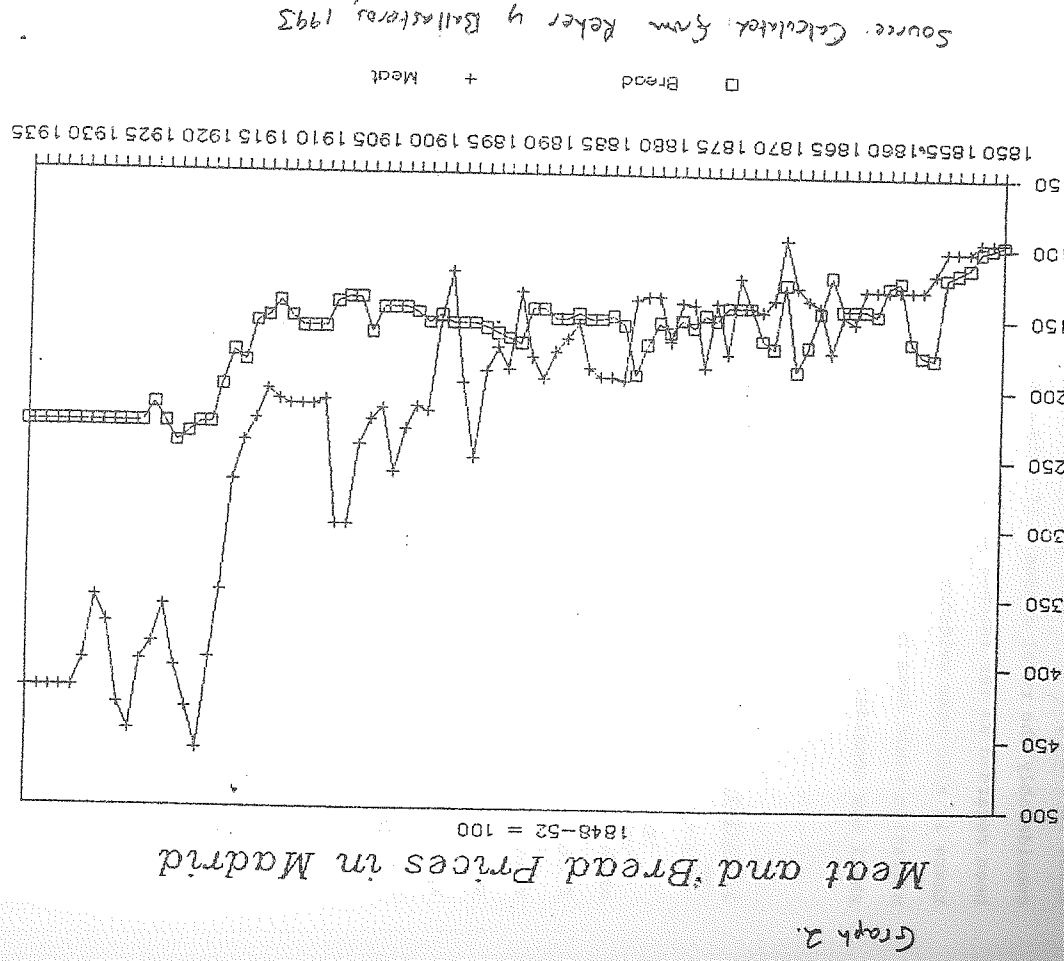
³⁴ Statistical Abstract for the United Kingdom, Toutain, 1961, Statistisches Jahrbuch für das Deutsche Reich, all cited in Tracy, 1989 pp. 51, 76 and 100-1.

³⁵ Taking the herd size (live weight) to have been 100 in 1865, it was 98 in 1750, 87 in 1917 and 105 in 1929. Garrabou and Sanz (1985) cuadro 20 and GEHR (1978) apéndice. One possible source of error is the month when the census was carried out, with 1865 (November) being exaggerated in comparison with 1929 and 1933 (March), and perhaps the former including the annual new borns, but the latter not (The date for the 1917 census is not known GEHR 1991, pp. 81-2). However, as the 1865 census includes the number of animals under six months (ie added to the national herd since March), and if this category is excluded, then the size of national herd in 1865 was not overcome until 1913 in the case of cattle, 1917 swine, 1921 goats, and sheep 1939. In terms of live weight per person, there still remains a significant fall.

difficult to establish to what extent the failure was the result of tariffs, and to what extent other factors should be blamed.

The question however, is not one of free trade or protection, as livestock producers also enjoyed strict controls on imports.³⁶ But it could be argued that if in 1929 Spain had imported, say a quarter of the country's wheat requirements, thereby pushing bread prices down towards world levels, a greater quantity of land might have been devoted to animal feed. The undeniable growth in per capita incomes, real wages and urbanization over the period 1865-1936 would, it might be expected, have led to an increase in demand for agricultural produce. The virtual stagnation in herd size as shown in the censuses of 1865, 1917 and 1933 suggests, however, that per capita supply fell. This has been corroborated, with the decline in per capita consumption of meat in Madrid during the first third of the century.³⁷ If demand for meat was indeed rising faster than supply, we would expect prices to have risen against that of bread. Graph 2 shows that this indeed was the case from mid 1880s, with growth being especially strong after the First World War. This also fits with what we know about wheat consumption. After growing from an annual 159.4 kilos/person in 1908/12 to 168.8 in 1918/22, wheat consumption then fell to 150.8 over the following decade. As early as 1926, Flores de Lemus had

³⁶ Gómez Mendoza and Simpson, 1986.



noted the growing importance of feed grains compared to bread, and suggested that this was the only feasible alternative to cereal farmers, given the impossibility of exporting wheat.³⁸ Finally, the government also reacted to the growing demand for meat, by allowing the annual import of 282.8 thousand tones of maize between 1920-33, the equivalent of 44 per cent of the domestic harvest.

In conclusion, theoretically lower bread prices achieved through a more liberal tariff policy might have released more land for feed grains which could have been diverted towards livestock produce. In reality, such a policy is likely to have had limited results. And for two reasons. First, whereas the arrival of cheap grain would allow a re-orientation of western European agriculture, the possibility in Mediterranean, and Spain in particular, were much less. On the secano, which covered about four fifths of Spain, natural conditions were inappropriate for intensive livestock farming as practiced in Europe prior to the Second World War. Natural pastures were notoriously poor, and artificial pastures virtually absent.³⁹ Until the development of intensive, stall feeding technologies, which could be adapted to Mediterranean type climates, Spain's meat consumption would remain low.

³⁷ Flores de Lemus, 1926. See also Jiménez Blanco, 1986 and GEHR, 1988, p. 61.

³⁸ See especially Tortella, 1992, and Calassi, 1986. In 1931 the area of artificial pastures in Spain was 374 thousand hectares, or 2.4 per cent of the total. GEHR 1983a.

A final alternative might have been to have allowed free trade in both grains and livestock produce, thereby hastening considerably the rural exodus. If this alternative would have been regarded as far fetched in the pre Civil War period, there is also some evidence to suggest that the expected out migration would have been smaller than is usually thought. We shall now consider this point.

3. TARIFFS: AN OBSTACLE TO OFF FARM MIGRATION?

The belief that tariff policy in Spain slowed the rural exodus has also been frequently discussed in the literature. Elsewhere I have suggested that there seems to have been a widening of the rural-urban wage gap between 1860 and 1896, which only starts closing again after 1914 ³⁹. These trends appear compatible with employment figures. Thus whereas between 1860 and 1910 approximately two thirds of the active male labour force was found in agriculture, the figures fell to just under half by 1930. Furthermore labour productivity in agriculture grew only slowly in the second half of the nineteenth century, stagnated between 1891/5 and 1909/13, and then increased by approximately 60% by 1929/33 ⁴⁰. In other words, the relatively high wage gap between 1896 and 1914 occurred at a time when agricultural productivity was stagnant, and the number of workers in the sector grew between

³⁹ Simpson, 1993b.

⁴⁰ Simpson, 1994.

Table 7.

CHANGES IN AREAS SOWN OF CEREALS-LEGUMES AND RURAL POPULATION. 1886-90 and 1930-5.

	% change in area sown	% change in farm population
Cantabrian Coast	+85.3	-26.9
Upper Ebro	+58.2	-16.7
La Mancha	+35.7	+15.9
Extremadura	+35.3	+ 2.4
Western Andalucía	+34.0	+ 4.0
Castilla-León	+24.8	-24.6
Baleares	+23.8	-20.3
Pais Valenciano	+15.2	- 8.2
Aragón	+ 8.5	-20.9
Cataluña	+ 7.9	- 8.5
Eastern Andalucía	+ 4.3	+15.5
Murcia	+ 0.9	-18.8
Galicia	-12.1	-11.0
SPAIN	+18.3	- 8.3

farm population refers to male labour only.

Regions: Cantabrian Coast (Asturias, Cantabria, Guipúzcoa and Vizcaya); Upper Ebro (Alava, Navarra and Rioja), La Mancha (Albacete, Ciudad Real, Cuenca and Toledo), Extremadura (Badajoz and Cáceres); Western Andalucía (Cádiz, Córdoba, Huelva and Sevilla); Castilla-León (Ávila, Burgos, Guadalupe, León, Madrid, Palencia, Salamanca, Segovia, Soria, Valladolid and Zamora); Pais Valenciano (Alicante, Castellón and Valencia), Aragón (Huesca, Teruel and Zaragoza), Cataluña (Barcelona, Girona, Lleida and Tarragona); Eastern Andalucía (Almería, Jaén, Granada and Málaga) and Galicia (Coruña, Lugo, Pontevedra and Orense).

Sources: GEHR 1983 and Censos de población.

1887 and 1910 by 16% ⁴¹. In industry and construction by contrast, output grew by 35% and employment by only 8% ⁴².

However, more direct information is available to consider the impact of tariffs and off-farm migration. According to GEHR, between 1886-90 and 1930-5 the area sown with cereals and legumes, crops which directly benefitted from protection, grew by 1.47 million hectares, or 18.3 per cent ⁴³. If tariffs encouraged an increase in output which, under conditions found in Spain implied an extension in the area cultivated, we would expect population to be retained in agriculture in those areas which saw a growth in the area cultivated. Table 7, however, suggests no obvious correlation. Of the 13 regions given, 7 had increases in the area sown greater than the national average and of these, 4 saw a greater decline in the farm population than the national average. Of the remaining 6 regions, 4 saw a greater population decline than the country as a whole. In particular, it is worth highlighting the case of Castilla-León which saw a growth of 25 per cent in the area sown, but a fall of the same amount in the size of the farm population.

There was, however, one large region where it does appear that the growth in the area cultivated was accompanied by a growth in population, namely La Mancha, Western Andalucía and

⁴¹ Nicolau, 1989.

⁴² Prados de la Escosura, 1993.

⁴³ GEHR, 1983b.

Badajoz. Between them, this area saw the area sown increase by a third (or the equivalent to just over half the national increase), whilst population grew by 11 per cent. If the impact of other crops (viticulture in La Mancha, olives in Andalucía) were also of importance in explaining these changes, it would appear that cereal tariffs perhaps helped retain labour. Yet if this is correct, this poses a paradox, as it would appear that in areas of small farms cereal tariffs encouraged both an extension in the area cultivated which was accompanied by a significant fall in farm population; by contrast, it would be in the areas of large estates and day labourers, in the south of the country, where the extension in cultivation would be accompanied by a growth in the labour force. Clearly, something other than just the price of wheat was determining the rate of out migration.

Conclusion.

The aim of this paper is to question the importance of tariff protection for cereals, especially wheat, in explaining the backward nature of Spanish agriculture. In the first instance we accept that Spain in 1936 was a poor country and, despite obvious changes in the economy, not least in the agricultural sector itself, diets were poor in comparison to other European nations. Second, if tariffs pushed cereal prices higher than those on the international market, the difference between Spain and France or Germany, was small. However, whereas farmers in these two other countries reacted to cheap imports both by protection and by switching resources

into other commodities, this was not in general the case in Spain. The area of cereal-legumes in Spain, far from declining actually grew in the half century prior to the Civil War. Furthermore, within this figure, the area sown with feed grains grew only slowly compared to other countries. The major problem, however, would seem to have been not the inefficiency of Spanish farmers, or the greater levels of cereal protection that they enjoyed, but rather the lower opportunity cost of land throughout much of the country.

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