

The Growth of Agricultural Protection in Europe in the 19th and 20th Centuries

Johan F. M. Swinnen

1. INTRODUCTION

THE collapse of the Doha trade negotiations in the summer of 2008, again, put the spotlight on two important realities of international trade policy. The first is that, despite the strong decline of agriculture in terms of employment and output in rich countries, agriculture remains disproportionately important to rich countries in their trade negotiations – even to the extent that they are willing to let the WTO negotiations collapse over disputes on agricultural policy. The second reality is that despite hundreds of years of economists’ arguing the optimality of free trade, political factors are more important than these economic arguments in both rich and poor countries. The political economy of agricultural policy is crucial to understanding the positions of the developing and developed countries in their trade negotiations, as well as their apparent inability to reform unilaterally or to reform as part of a broader trade negotiation outcome.

Europe is a fascinating case for the study of growth in agricultural protection because it has gone from one extreme to another in the course of one century. European countries currently spend tens of billions of euros annually – the EU alone more than 50 billion – on subsidising their farmers and protecting farmers against imports from other countries through import tariffs. While countries such

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as Norway and Switzerland also heavily protect farmers, the most important form of protection in European agricultural markets is undoubtedly the Common Agricultural Policy (CAP) of the European Union (EU). In the 1960s the EU introduced a highly protectionist and distortive CAP. This is in remarkable contrast with Europe's agricultural policies a century earlier. In the 1860s, Europe was characterised by free trade in agricultural and food products. The abolishment of the Corn Laws in 1848 signalled the end of import protection in England, and the English–French trade agreement of 1860 was the start of a series of trade agreements across Europe, effectively removing most trade constraints in agricultural markets.

The first objective of this chapter is to quantify the changes in protection that have occurred and to propose a series of hypotheses to explain these changes. The second objective of the chapter is to offer a series of hypotheses to explain the measured changes.

The analysis in this chapter is related to a series of other studies which have analysed agricultural protection in Europe and elsewhere and its causes. Important studies on other parts of the world include Anderson and Hayami (1986), Gardner (1987), Krueger et al. (1992) and Anderson (2009). Other European studies have either focused on the EU period when protection was already high (e.g. Grant, 1997; Olper, 1998; Moyer and Josling, 2002; Pokrivcak et al., 2006; Josling, 2009), on a shorter time period or a specific policy change (e.g. Schonhardt-Bailey, 1998; Swinnen, 2008), on broader trade issues (Williamson, 2006; Rogowski, 1989; Findlay and O'Rourke, 2007), or on a single country (e.g. Swinnen et al., 2001).¹ The current chapter is most closely related to two excellent historical studies, i.e. Michael Tracy's (1989) mostly qualitative analysis of the growth of government in European agriculture and Peter Lindert's (1991) study on the history of agricultural policy for an even broader set of countries (including developing countries).

The present chapter is, however, the first attempt to quantify the changes in agricultural protection by calculating annual indices of agricultural protection over the century when the dramatic policy changes took place (i.e. from the 1870s to the 1960s) for several European countries, including France, the UK, Germany, Belgium, the Netherlands and Finland. The period covered starts from when data were initially available until the countries joined the Common Agricultural Policy

¹ The vast majority of statistical studies on the political economy of agricultural protection are cross-section studies or those using panel data with relatively short time periods. While they yield important insights, the estimated relationship, mask strong occasional fluctuations in protection levels. These fluctuations in support to agriculture are clearly visible in the few historical studies using time-series data and econometric analyses, such as Gardner (1987) and Swinnen et al. (2001); however, these studies focus on a single country, making it difficult to generalise. The main exception is the early study by Anderson and Hayami (1986) and the recent global study by Anderson (2009).

of the European Union – which is at the end of the 1960s for the initial members of the EU.

In the second part of the chapter I will relate the variations in protection indicators to changes in policies and protection to changes in political institutions and organisations, economic development, and specific events, such as the two world wars. I propose a set of hypotheses on the causes of the changes in protection and relate those to insights from the literature on the political economy of agricultural protection.²

2. MEASURING AGRICULTURAL PROTECTION

There are several indicators (methodologies) that can be used to measure sectoral protection.³ To generate a comparable set of numbers over extended periods and a range of countries, the preferred methodology needs to be relatively simple and somewhat flexible (Anderson et al., 2008). For this reason, I follow Anderson et al.'s (2008) approach in measuring agricultural protection by calculating the nominal rate of assistance (NRA). The NRA is defined as the percentage share by which government policies have raised (or lowered) gross returns to producers above what these returns would have been without the government's intervention (see Appendix for details). In this study the most important element of the NRA is based on comparisons between domestic and international prices. This part of the NRA compares the prices of commodities in the domestic economy (at the port) with the international prices of commodities at the border (that is, c.i.f. in the port for importable goods; f.o.b. in the port for exportable ones).⁴ These price comparisons provide indicators of the incentives for production, consumption and trade, and of the income transfers associated with government interventions. For a more complete measure of protection I also added domestic subsidies to producers to these price distortions. The NRA thus captures the total protection to agricultural producers.

The data are collected for six countries (Belgium, France, Finland, Germany, the Netherlands and the UK) and several commodities. The quantity and quality of the data varies importantly among countries. In the tables I have only presented indicators and data for which I was relatively confident that they represented reality. The missing variables in the tables and figures thus reflect either that no

² See de Gorter and Swinnen (2002) and Swinnen (2009) for surveys of this literature.

³ Other measures include the OECD's PSE (Producer Support Estimate).

⁴ Within the framework of this study it was impossible to collect consistent data on quality adjustment, transport, storage and handling costs in moving commodities from the farm to the wholesale level; so we try to be careful in interpreting the calculated indicators in order to allow for bias in the numbers due to these omissions.

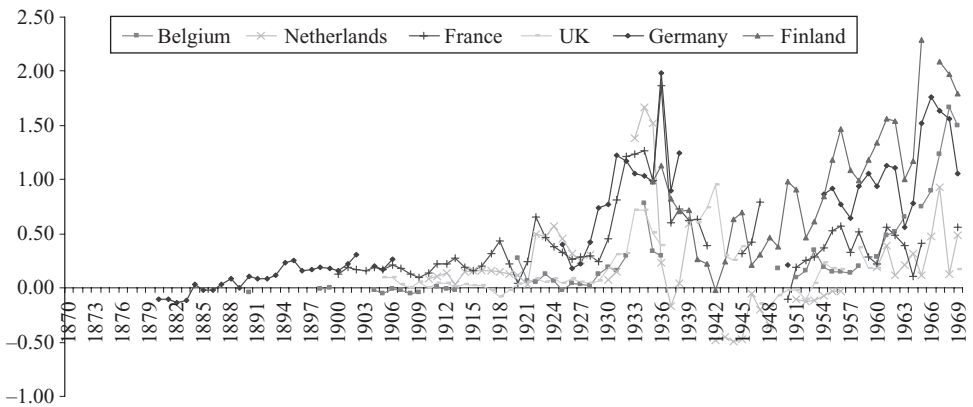
data were available or that the calculated indicators appeared unrealistic due to poor quality of the data.

In compiling the data, choices needed to be made regarding the coverage of the commodities included in the study. Across the century and countries covered, the importance of certain commodities varies importantly. The choice of commodities was determined by importance in production and consumption, by data availability – and accuracy and consistency, by their relevance for country comparisons, and by the commodities’ importance in the major policy debates in the countries concerned. Overall the analysis concentrates on the main commodities (such as grains and livestock products).

The analysis uses annual data from 1870 to 1970. The start of the period is determined by the availability of data. The end of the period is determined by the integration into the CAP.⁵ France, Belgium, the Netherlands and Germany were initial members of the European Economic Community (EEC), which implemented the CAP as of 1968. The UK joined the EEC in 1973 (although there was some transition period). Since Finland and Sweden joined the EU much later (in 1992) I have collected data for these countries until 1990.

The results of the calculations are summarised in Figures 1 and 2, which show yearly and five-yearly averages, respectively, of NRAs across countries. An important conclusion from these indicators is that the growth of agricultural protection,

FIGURE 1
NRA Average over Main Commodities, 1870–1969



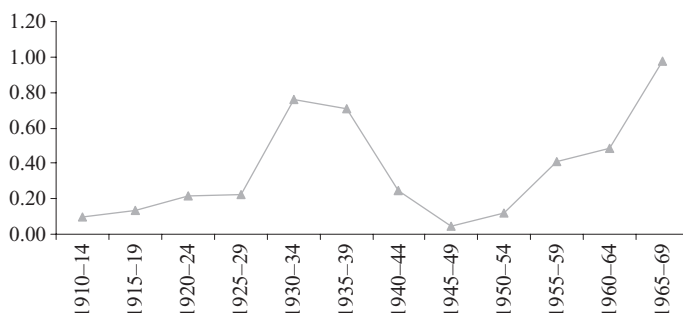
Note:

Belgium: wheat, barley, butter, beef, sugar; Netherlands: wheat, barley, butter; France: wheat, barley, butter, pork, sugar; UK: wheat (including deficiency payments), barley, butter; Germany: wheat, barley, beef, sugar; Finland: wheat, barley, milk, sugar.

Source: Own calculations.

⁵ See Josling (2009) and OECD (2009) for agricultural protection indicators for more recent periods.

FIGURE 2
Average NRA for Belgium, Netherlands, Germany, France and UK, 1910–69



Note:

Belgium: wheat, dairy, beef, sugar, barley; Netherlands: wheat, dairy, barley; France: wheat, pork, dairy, sugar, barley; Germany: wheat, beef, sugar, barley; UK: wheat (including deficiency payments), butter, barley.

Source: Own calculations.

as measured by the NRA, has not been a linear process between the 1860s and the 1960s. Instead there has been substantial fluctuation. The average NRAs are close to zero in the 1870s and increase in the 1880s and 1890s. They fall again somewhat in the beginning of the 20th century, and increase substantially in the 1930s, before declining rapidly in the 1940s. In the 1950s and 1960s the NRAs increase strongly, to a level close to 1 in the second half of the 1960s.

In the next section I relate these calculated indicators to actual policy decisions.

3. THE EVOLUTION OF AGRICULTURAL POLICIES AND PROTECTION

At the start of the 19th century there was substantial government intervention in agricultural markets in Europe. Probably the most well-known form of protection was the Corn Laws in the UK. The Corn Laws were introduced centuries earlier to regulate grain prices and imposed import tariffs on grains in the early 19th century (Kindleberger, 1975; Schonhardt-Bailey, 2006). Other European countries also had import tariffs for agricultural commodities. For example, in the Netherlands, import tariffs were increased in the 1820s in response to a strong increase of grain exports from the Black Sea region which caused a sharp decline in grain prices in Western Europe in 1818 (Vander Vaeren, 1930; van den Noort, 1980).⁶

⁶ In 1825 import tariffs were 22 per cent for wheat, 7 per cent for oats, 11 per cent for barley and 15 per cent for rye (Jansma and Schroor, 1987; Priester, 1991).

TABLE 1
 Import Tariffs in Prussia, the Zollverein and Germany (in Dmark per ton, 1857–1914)

	<i>Wheat</i>	<i>Rye</i>	<i>Barley</i>	<i>Oat</i>
1857–1864	5	1	2	2
1865–1879	0	0	0	0
1880–1885	10	10	5	10
1885–1887	30	30	15	15
1887–1891	50	50	23	40
1892–1902	35	35	20	28
1902–1914	75	70	70	70

Source: Hoffmann (1965).

a. The Liberalisations of the Mid-19th Century

Most of the 19th century, from the late 1820s to the late 1870s, was characterised by a move towards free trade. In the UK, reforms in 1828 and 1842 relaxed the import regulations of the Corn Laws, which were finally abolished in 1846 (Schonhardt-Bailey, 1998, 2006). Around the same time import tariffs on live animals, meat, potatoes and vegetables were abolished. In the Netherlands, as grain prices recovered after 1835, the government reduced import tariffs under the Grain Laws in the mid-1840s and abolished all import tariffs in the 1870s (Sneller, 1943; Bieleman, 1992). Similarly in Prussia, import tariffs were reduced after the Napoleonic wars in the early 19th century. These reduced tariffs were extended to other parts of Germany with the establishment of the Zollverein. In 1853 grain tariffs were abolished. As Table 1 shows, tariffs were zero or very low in the 1850s until the 1870s.

A series of trade agreements contributed to the spread of free trade throughout Europe. The first was the English–French trade agreement in 1860 which was followed by several other trade agreements between European countries, including the 1862 French–German trade agreement, reducing tariffs also on manufacturing goods.⁷ The French–German Peace Treaty of 1871 renewed trade relations indefinitely and established the principle of the ‘most favoured nation’ on a reciprocal basis. The German agricultural sector was strongly in favour of free trade. The large Junker estates in Prussia benefited from grain exports and feared that import tariffs on industrial goods would increase their costs or could lead to reprisal grain tariffs (Tracy, 1989).

The NRA calculations are consistent with these policy evolutions. During the earliest period for which I have data (for grains from 1870 onwards) the NRAs

⁷ Between 1861 and 1867 France concluded 11 commercial treaties: with England, Belgium, the German Zollverein, Italy, Switzerland, Sweden and Norway, the Hanseatic League, the Netherlands, Spain, Portugal and Austria; and each of the treaties included the most favoured nation clause (Tracy, 1989).

TABLE 2
NRA Wheat, 1870–1969

	<i>Belgium</i>	<i>Netherlands</i>	<i>France</i>	<i>UK</i>	<i>Germany*</i>	<i>Finland</i>
1860–69	.	0.09	–0.05	.	.	.
1870–79	0.01	0.07	–0.01	0.01	.	.
1880–89	–0.01	–0.01	0.06	–0.03	0.13	.
1890–99	0.03	.	0.18	–0.04	0.27	.
1900–09	–0.02	.	0.18	–0.07	0.25	.
1910–19	–0.02	.	0.00	–0.07	0.25	.
1920–29	–0.08	–0.07	0.01	–0.09	0.03	.
1930–39	0.13	0.99	0.32	0.35	0.95	0.64
1940–49	0.35	–0.19	0.19	0.16	.	–0.02
1950–59	0.31	–0.08	0.31	0.03	0.26	0.54
1960–69	0.48	0.26	0.27	0.09	0.46	1.02

Note:

* Germany refers to West Germany after 1945. (This applies to all tables and figures.)

Source: Own calculations.

indicate no protection in the grain market in the 1870s. The NRA for wheat was around zero in Belgium, the Netherlands, France and the UK during the 20-year period 1860–80 (Table 2).

While the move towards free trade is associated with the intellectual contributions of Adam Smith and his colleagues, it comes as no surprise that liberalisation of imports came in a period of relative prosperity for farmers. The 1840s, and through to most of the 1870s, was generally a period of relatively high incomes and productivity growth.⁸ In England it is referred to as the period of ‘high farming’. It was also a period of relatively high grain prices partly due to the Crimean War which reduced exports from Russia and the Black Sea region.

⁸ Productivity growth in agriculture was interrupted in the mid-1840s by the first appearance of *Phytophthora infestans* (‘potato disease’) in Europe which caused disastrous potato harvests in 1845 and the following years. The effects were worsened by poor grain harvests. This led to a period of food shortage and hunger in 1845–48 in several European countries. Prices increased dramatically. In Belgium, prices for potatoes increased three-fold between 1845 and 1846, wheat prices increased by 70 per cent and rye prices doubled. Urban consumers and landless rural workers were hurt most. In reaction, the Belgian government abolished all import tariffs on food products and prohibited the export of staple foods (Vander Vaeren, 1930). In Holland, the central government refused to intervene and relied on the market mechanism to solve the crisis. However, local governments introduced maximum bread prices to protect urban consumers and compensate bakers (van Tijn, 1977). It took three years before the food crisis was fully settled; and many suffered from hunger in the meantime or migrated: for example, the hunger induced massive migration to the US from Ireland. Following the food crisis, governments initiated a series of policies to support innovation and productivity growth in agriculture, including investments in agricultural schools, extension agencies, demonstration fields, etc. It was to be the last food shortage crisis in Europe. From then on, except for the two world wars, there would only be surplus crises.

b. The Agricultural Crisis of the End of the 19th Century

The period between 1880 and 1895 was marked by a sharp reduction in grain prices due to a dramatic increase in imports from Canada, the United States, Argentina and Russia. There are two reasons for this. First, there was a major expansion of agricultural production, especially in the United States where land was abundant and cheap. Second, technological innovations dramatically decreased production costs, both through agricultural machinery which allowed for the exploitation of vast areas, and through transport prices, as the steam engine allowed much cheaper transport via trains and the steamboat. The dramatic fall of transport costs is summarised in Table 3.

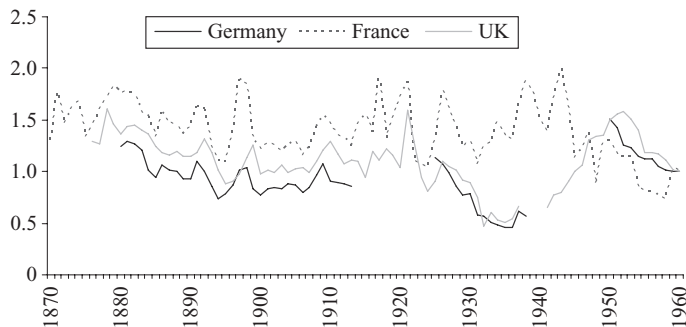
As a consequence of these changes, imports in Western Europe surged and wheat prices fell by almost 50 per cent over the period 1880–95. The decline in wheat prices was particularly intense during the periods 1881–86 and 1891–94 (see Figure 3). With wheat being an important part of the agricultural sector and

TABLE 3
Evolution of Transport Costs (1870–1900, in pence/quarter)

	1870–74	1875–79	1880–84	1885–89	1890–94	1895–99
Freight Costs						
Chicago–New York (by train)	113	72	63	61	53	47
New York–Liverpool (by steamboat)	66	60	35	25	20	23
Price of US wheat (c.i.f. Liverpool)	625	568	531	402	379	356

Source: Tracy (1989).

FIGURE 3
Evolution of Wheat Prices (as percentage of the price in 1960)



Source: Swinnen (2010).

because of the spillover effects on other (especially arable) commodity markets, incomes of arable farmers decreased significantly throughout Europe.

The dramatic changes in the agricultural markets induced strong pressure from farmers on governments to intervene. The reactions of European governments to these changes and pressures were mixed. It is impossible to summarise in this chapter all the details of the policy proposals, debates and decisions, but I can distinguish different patterns in government reactions. The wheat NRAs, as summarised in Table 2, reflect these different government reactions. After 1880 the NRA stays very low (less than 10 per cent) for Belgium and the UK for the entire period until 1930, while it increases in France and Germany after 1880. In France the NRA increases to 18 per cent on average in the 1890s. In Germany the NRA increases in the 1880s to 13 per cent on average and further increases to an average of 25 per cent for the 30-year period between 1890 and 1920.

These variations in NRAs reflect real differences in policy choices: the UK and Belgium (as well as other countries such as the Netherlands and Finland) did not impose import tariffs, while the French and German (as well as the Swedish) governments protected their farmers by increasing import restrictions.

First, the governments in Belgium and the UK refused any increase in import tariffs in grains.⁹ Both countries were already quite industrialised by the time of the agricultural crisis. In both countries a coalition of industrial capital owners and workers opposed protection to arable farmers. Workers and industry opposed tariffs because they benefited from low food prices (and thus low wages) with cheap grain imports. While the UK landlords had always been very powerful (e.g. through the representation system in parliament) their influence was waning and they were now confronted with a strong opposition of labour and industrial capital, who had gained increasing political power.¹⁰

In addition, the 'agricultural sector' was far from united in its support for import tariffs. This was particularly pronounced in the UK, which had very heterogeneous interests within agriculture. The main group hurt by the low grain prices were

⁹ Import tariffs were only introduced for tea, tobacco and alcoholic beverages (to raise taxes) in the UK and for butter and oats in Belgium.

¹⁰ Other interest groups also played a role in the political debate. For example, in Belgium, import tariffs on oats were opposed by the transport industry and the coal mines, where horse power was important. Tariffs on barley were opposed by the brewing industry. This coalition prevented protection against barley imports, although oats tariffs were later introduced as a compromise, with more farmers producing oats and no opposition from brewers (Van Molle, 1984, 1989). An additional player was the Antwerp harbour. The harbour has been an important industrial employer in the past (and still is). Given the size of Belgium and the fact that Antwerp is a major city – for a long time the largest – the economic and political power of the city and its harbour were important. Until recently, all Antwerp politicians – independent of their party – opposed any agricultural protection that would hurt the interests of the Antwerp harbour. For example, tariffs on grains would limit the trade volume in Antwerp. Representatives of the Antwerp region have consistently voted against any tariffs on agricultural products. This opposition has declined throughout the 20th century as agricultural products have become a smaller share of total trade volume.

large landlords, mostly located in the southern regions of England. However, many of the other actors in agriculture actually favoured low grain prices. This was the case for livestock farmers, mostly located in the northern part of the country who benefited through low feed prices. Moreover, livestock had become more important. At the time of the crisis, grains only accounted for 12 per cent of agricultural output, while meat (42 per cent) and milk (21 per cent) were much more important.¹¹ In fact, the divergent interests of the farms caused a split among farm organisations.

Furthermore, the English landlords were not even supported in their demand for protection by those who worked on their farms (Burnett, 1969). Farm workers were paid in wages.¹² They were generally very poor and they benefited more from low prices of staple food (grains) than they lost from the negative pressure on their wages, which were strongly influenced by industrial wages. A budget survey from 1874 shows that farm workers spent 90 per cent of their income on grains and potatoes; and that meat or milk was an unknown luxury. Their welfare actually increased during the agricultural crisis (Royal Commission on Labour, 1893). While farm worker interests had little influence during most of the 19th century, this changed with the political reforms of 1885 which gave them equal voting rights, and thus substantial political representation in parliament (see further).

Second, in contrast to the free trade position of the UK and Belgium, the governments of France and Germany introduced import tariffs to protect their grain farms. Both countries were characterised by a large agricultural population, a less industrialised economy and a more important crop sector.¹³ For example, in France crops made up more than 70 per cent of total agricultural production during all of the 19th century, and still accounted for 60 per cent by 1950 (Table 4).

In France the government initially opposed import tariffs, but when grain prices kept falling the government gave in to strong pressure from the French grain farms, and import tariffs were introduced in the 1880s (Agulhon, 1976).

¹¹ The share of the livestock sector grew from 55 per cent in 1860 to 70 per cent of agricultural output in 1900.

¹² Tenants and landlords suffered when prices fell. However in the UK in the mid-19th century about 70 per cent of the farm population were farm workers, although this share declined significantly during the 19th century with rapid industrial migration (Burnett, 1979). In countries such as France and Belgium the share of farm workers was only 50 per cent in the mid-19th century (and 25 per cent by 1940) as more family farms had their own land following the French Revolution which transferred land from the feudal landlords and the Church to farmers.

¹³ The other European countries for which no NRAs could be calculated for the 19th century can also be separated into these different patterns. Sweden, another country with a large part of employment and output in agriculture (and then still part of the Sweden–Norway political union), introduced import tariffs for grains in 1888 which were adjusted a few times over the next decade. In contrast, Finland (then still part of Russia) provided little or no protection (Crommelynck et al., 1999). Similarly, the Dutch government opposed import tariffs and instead argued that policy should focus on farm modernisation and stimulating more efficient production (Van Zanden, 1986).

TABLE 4
Value of Crops and Livestock as Percentage of Total Agricultural Output, 1867–1903

	<i>UK</i>		<i>France</i>		<i>Germany</i>	
	<i>Crops</i>	<i>Livestock</i>	<i>Crops</i>	<i>Livestock</i>	<i>Grains</i>	<i>Beef, Pork</i>
1815–24	.	.	0.76	0.24	.	.
1865–74	0.45	0.55	0.76	0.24	.	.
1885–94	0.38	0.62	0.71	0.29	0.37	0.22
1925–34	0.30	0.70	0.65	0.35	0.41	0.38
1950–54	.	.	0.59	0.41	0.30	0.43
1965–74	.	.	.	.	0.27	0.54

Sources: Toutain (1961), Hoffmann (1965) and Fletcher (1973).

In Germany, the introduction of grain tariffs signalled a major reversal of policy, not just of the government but even more of the main farmers' organisations. In the second half of the 19th century it was German industry which lobbied for import tariffs as it sought protection from competition from British industrial products. But until the 1870s the large grain farmers of Prussia opposed any tariffs. They were the main proponents of the German free trade regime to protect their export position. However, as grain started arriving on the world market and even inside Germany at prices below which the Prussian farms could compete, they changed position. During the 1880s there was considerable debate among farmers as to what the best position was, but when prices kept falling they ultimately shifted to a protectionist stance. Since the German industry had already demanded trade protection, import tariffs were introduced across the entire economy and gradually increased in Germany, also for grains (see Table 1).

Third, *all* governments introduced some protection in the livestock sector when the crisis spread to this sector a decade later. Initially there was no surge of imports in livestock or meat and livestock farmers benefited from declining grain prices as their feed costs fell. However, a decade after the surge in grain imports, technological innovation, in particular the dispersion of new freezing technology, then also allowed long-distance transport of frozen meat. When freezing technology spread in the meat processing and trading sectors, meat imports from overseas grew and prices started falling also in the European livestock sector. As livestock prices also started falling in the 1890s there was additional pressure on the government to intervene, now also from the livestock farms. This occurred despite the fact that the price decline in livestock was considerably less than in grains: in the UK, crop prices fell on average by more than 40 per cent between the 1870s and the 1890s, while by only around 25 per cent for livestock (Tracy, 1989).

France early on raised import tariffs on livestock products. Its NRA for meat increased from 12 per cent on average in the 1890s to 40 per cent on average in the 1900s. Belgium also introduced small import tariffs on livestock and meat in

1887 and import tariffs on butter and margarine in 1895. NRAs for dairy in Belgium increased from around 0 in the 1880s to 7 per cent in the 1890s and 16 per cent in the 1900s. In addition a series of payments were made from the budget in the animal disease prevention programme.

Governments use a combination of instruments to protect the livestock sector. They use tariffs, subsidies and non-tariff barriers, such as animal disease controls. In fact, with the implementation of import tariffs on livestock, border controls increased and, with that, the use of health arguments as protectionist instruments also increased. This type of hidden protectionism through sanitary regulations increased particularly in the 1890s. In Germany in 1880 a law restricted the import of live animals, ostensibly for sanitary reasons. By 1889 the government had all but closed the border to imports of live animals; and meat imports were restricted as well. Also in the other countries borders were closed regularly to prevent the 'import of infections'. In 1892, the French government imposed a ban on imports of cattle and the UK introduced the 'Animal Disease Act' which prohibited the import of live animals under cover of safety rules; while it allowed frozen meat imports. The impact on consumers was mixed: the Act mainly hurt richer consumers since poor consumers could continue to benefit from cheap frozen meat imports.

Fourth, there were substantial investments by governments to support the restructuring of the agricultural sector from grains to livestock production, particularly in countries which did not introduce import tariffs (or limited them), such as Belgium, the Netherlands and Finland. The governments of these countries considered that the modernisation and restructuring of agriculture through the stimulation of livestock production, was the only realistic development strategy in the face of cheap grain imports, which made competition in grains more difficult but also made feed costs cheaper for the livestock sector. A series of government initiatives were taken to stimulate and help farmers shift to livestock production: research and extension; the subsidisation of activities that provided incentives for improved quality of livestock breeding; and compensation for farmers for the slaughter of infected animals.¹⁴ Furthermore, some governments stimulated the creation of dairy marketing and processing cooperatives.

¹⁴ For example in the 1890s, the Belgian government approved important increases in the system of damage refunds in case of livestock diseases. This system existed since the 1860s, but in 1892, 1893 and 1894 the refunds were increased substantially, tuberculosis of cows was included as a refundable disease, preventive measures were increased and local livestock farmers' organisations were subsidised for their initiatives in the fight against animal diseases. These government actions were the main reasons for a strong increase in the budget of the Ministry of Agriculture between 1891 and 1894. In 1891, damage refunds made up 10 per cent of the total budget. By 1894 they accounted for 25 per cent. The increase in compensating amounts and an extension of the diseases or infections for which they could be claimed, continued after 1894. By 1900, the total amount of compensation payments accounted for 40 per cent of the budget of the Ministry of Agriculture. The strong increase in government expenditures on compensation for animal diseases halted and yearly expenditures stabilised after 1900, when agricultural incomes had improved considerably.

More generally, European governments increased investment in public goods, such as agricultural research, extension and education, to increase agricultural productivity. Policies to reduce fraud and to improve rural transport were introduced. Ministries of Agriculture and agricultural schools and universities were established.

c. 1900–1920: The Pre-War Period and the First World War

In the 1900–1910 period the crisis started subsiding. Prices started increasing because production costs increased in grain exporting countries and because industrial growth increased demand for food, in particular for livestock and horticultural products. The demand for protection by farmers declined with an improvement in their incomes. In a review of the political debates on agricultural policy in Belgium, Van Molle (1989) concludes that, in strong contrast to the long and ardent debates in the 1880s and 1890s, there was no substantial debate on agricultural protection in most of the period between the turn of the century and the First World War.¹⁵ The members of parliament representing farm interests voiced little interest or did not sponsor new laws for supporting agriculture between 1910 and the end of the 1920s.¹⁶

The First World War started in 1914 and brought destruction and disruption in the food production and distribution systems. International trade broke down with warships controlling the sea and blockades being set up. During and immediately after the war, food markets were strongly regulated. The policy focus shifted from protecting producers to protecting consumers. Food was generally scarce and expensive and government regulation was introduced in order to secure sufficient food for consumers under war conditions. Maximum prices, compulsory deliveries and export restrictions were introduced. However, where governments imposed maximum prices and mandatory deliveries on farmers, a black market emerged, yielding high prices. Hence, despite the war-related problems, the war years typically yielded high prices for farmers.

¹⁵ Van Molle (1989, p. 288) provides details: in contrast to the long debates in the 1880s and 1890s, in 1902, 1910 and 1911 the budget of the Ministry of Agriculture was discussed and voted on in a single day; on three days in 1912 and 1914. In 1905, there was no debate at all. In 1901, 1906, 1907 and 1908 there were complaints about absenteeism in the Parliament. The budget increases on average with 2.5 per cent annually between 1901 and 1914, compared to a 7 per cent average annual increase for 1885–1900 and 4.1 per cent between 1879 and 1884. And, on 30 October, 1908, the Ministry of Agriculture was, as before 1884, reduced to a department within the Ministry of the Interior.

¹⁶ There are two minor exceptions over this period. One of the discussions involved Belgian beer. Belgian hop producers were increasingly confronted with imports of cheaper and better quality hop. Two proposals for hop protection were presented in Parliament in 1903 and 1907. They were defeated because of the perceived negative effects on the breweries and on the ‘price of the worker’s beer’.

d. The Interwar Period: 1920–40

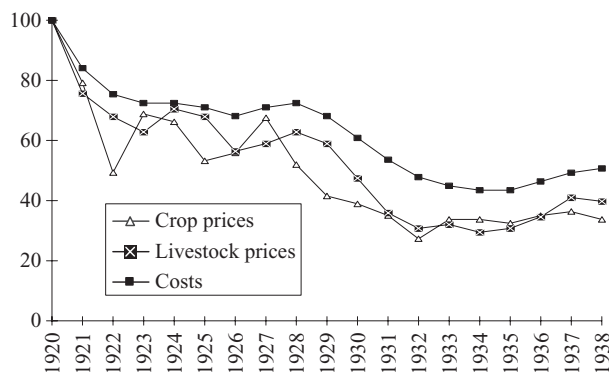
Immediately after the war, food was still expensive and many governments continued to apply strict regulations to food consumption, production and trade. With the high prices, important farm investments took place immediately after the war. More land was taken into production and the number of the livestock increased, as well as yields. At the same time, land prices and rents increased both due to increasing prices and the large war savings of farmers.

Protection rates were low, in particular for basic food such as grains. On average NRAs for wheat were close to zero (or slightly negative) in the 1920s in Belgium, the Netherlands, France, the UK, Germany and Sweden (see Table 2).

However, things changed again in the late 1920s and 1930s. With the liberalisation of war regulations, in the early 1920s, agricultural prices fell. This price decline was further reinforced in the late 1920s as the investments by farmers resulted in substantial increases in productivity and supplies. At the same time, demand fell with the general economic crisis following the 1929 stock market crash on Wall Street. As a result real farm prices fell substantially in the 1930s. Figure 4 illustrates this general trend in Europe with data from the Netherlands: agricultural prices fell by around 40 per cent between 1920 and 1923 and fell another 30 percentage points between 1927/28 and 1932. While costs also declined, their decline was lesser (about 20 percentage points).

As in the late 19th century, this resulted in strong pressure on the governments to intervene and support farmers. However, at the same time the government faced strong pressure from industry and workers to keep basic food prices low in the midst of the depression. Again I see different reactions among European governments with some more likely to protect agriculture than others. Yet, overall, there

FIGURE 4
Farm Prices and Costs in the Netherlands, 1920–40



Source: Centraal Bureau voor de Statistiek.

was a greater willingness of governments to protect farmers than in the 1880s, and import constraints were introduced in many countries, in particular in the early 1930s. Compared to a decade earlier (the 1920s), the average NRAs increased substantially in the 1930s in all the countries. I have data for: from 8 to 35 per cent in Belgium; from 34 to 61 per cent in the Netherlands; from 32 to 98 per cent in France; from 6 to 32 per cent in the UK; and from 39 to 115 per cent in Germany (see Table 5). Moreover, these average NRAs are substantially above those in the 1880s and 1890s, i.e. during the previous agricultural crisis, in all countries.

Governments increased protection to livestock, a sector which they had already invested in during the preceding decades, and whose products were less crucial for the poorest workers. Substantial increases in import protection emerged in the 1930s for animal products. For example, NRAs for butter increased from 4 to 44 per cent in Belgium, from 13 to 80 per cent in France, and from 16 to 46 per cent in the UK (Table 6).

There was much more opposition from industry and workers to raising import tariffs on (bread) grains. For example, a 1935 proposal by the Belgian government, under pressure from farmers, to increase grain import tariffs caused a general strike which resulted in the fall of the government, after which the tariff proposal

TABLE 5
NRA Average over Main Commodities, 1880–1969

	<i>Belgium</i>	<i>Netherlands</i>	<i>France</i>	<i>UK</i>	<i>Germany</i>	<i>Finland</i>
1880–84	.	.	.	.	-0.09	.
1885–89	.	.	.	.	0.02	.
1890–94	-0.04	.	.	.	0.13	.
1895–99	0.00	.	.	.	0.19	.
1900–04	-0.02	.	0.17	.	0.22	.
1905–09	-0.03	.	0.16	0.06	0.21	.
1910–14	-0.01	0.10	0.21	0.03	.	.
1915–19	.	0.15	0.27	-0.02	.	.
1920–24	0.11	0.34	0.36	0.06	.	.
1925–29	0.04	0.33	0.29	0.06	0.39	.
1930–34	0.36	0.82	1.00	0.45	1.05	.
1935–39	0.32	0.44	0.96	0.45	1.28	0.87
1940–44	.	-0.48	0.51	0.57	.	0.27
1945–49	0.19	-0.27	0.51	0.00	.	0.41
1950–54	0.20	-0.10	0.20	0.03	0.54	0.76
1955–59	0.16	-0.03	0.45	0.22	0.87	1.18
1960–64	0.49	0.25	0.35	0.18	0.90	1.32
1965–69	1.21	0.43	0.49	0.17	1.51	2.04

Note:

Belgium: wheat, barley, butter, beef, sugar; Netherlands: wheat, barley, butter; France: wheat, barley, butter, pork, sugar; UK: wheat (including deficiency payments), barley, butter; Germany: wheat, barley, beef, sugar; Finland: wheat, barley, milk, sugar.

Source: Own calculations.

TABLE 6
NRA Dairy, 1870–1969

	<i>Belgium Butter</i>	<i>Netherlands Butter</i>	<i>France Butter</i>	<i>UK Butter</i>	<i>Finland Milk</i>
1870–79	-0.01	.	.	.	.
1880–89	0.00	.	.	.	.
1890–99	0.07	.	.	.	.
1900–09	0.16	.	0.00	0.09	.
1910–19	0.14	0.13	0.11	0.06	.
1920–29	0.04	0.98	0.13	0.16	.
1930–39	0.44	0.24	0.80	0.46	0.45
1940–49	0.14	-0.37	0.33	0.05	0.22
1950–59	0.09	-0.09	0.61	0.32	0.66
1960–69	2.06	0.65	0.66	0.28	1.32

Source: Own calculations.

was abolished. Because of this strong opposition from industry and workers, support to grain farmers occurred to an important extent through other measures than through import tariffs. One policy measure which was used in several European countries was the compulsory use of domestic grain by millers. Millers were obliged by the government to use a minimum percentage of domestic grain in their flour. Another measure was government payments to grain producers, such as deficiency payments in the UK and per hectare subsidies in Belgium – measures which did not increase grain prices, quite the contrary.¹⁷

Despite the stronger opposition against tariffs for grains than for livestock, the NRA for wheat increased substantially in the 1930s compared to the 1920s: from 1 to 32 per cent in France, from -8 to 13 per cent in Belgium, and from -9 to 35 per cent in the UK (Table 2).¹⁸ In the UK tariff protection remained roughly the same (from -9 per cent to -3 per cent) but spending on deficiency payments increased the NRA from -9 per cent to +35 per cent.

¹⁷ Governments also intervened in other ways to assist farmers, particularly if the measures did not affect consumers. During the 'good years' of the 1920s, farmers rented more land and signed contracts with high land rents, which they were unable to pay as agricultural prices fell. Both in the Netherlands and Belgium, the government intervened to assist tenants. Examples are the Belgian 'Crisis Land Lease Law' in August 1933 that restricted 'exaggerated' lease contracts. Land leases were, since the tenure law of 1929, based on nine-year contracts. Under the 'Crisis Land Lease Law' the government gave the authority to the local courts to judge whether some lease contracts included 'exaggerated' rents, and this with special reference to the 'extreme economic conditions' (Desmecht, 1987).

¹⁸ The very strong increases in the Netherlands and Germany should be interpreted with care as they are strongly affected by macroeconomic factors, in particular hyperinflation and a collapse in their exchange rates in the 1930s.

By the end of the 1930s, prices recovered as war preparations began. Many protectionist measures were sustained until 1939, but relaxed from the mid-1930s onwards as farm profits started recovering (Bublout, 1980; Tracy, 1989).

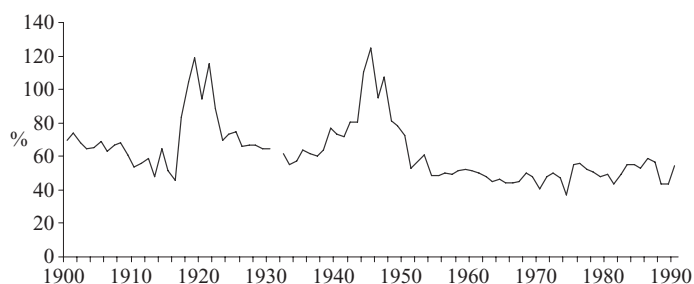
e. The Second World War and the Post-War Period

There are major changes in protection as indicated by the NRAs over the 1940–70 period. In the 1940s there was a reversal of the protectionism of the 1930s in most countries: average NRAs fell back to substantially lower levels in Belgium, France, Finland, the Netherlands and the UK. While there was variation across countries, the period 1950–70 was characterised by, again, substantial increases in NRA. Average NRAs increased steadily in the 1950s and 1960s, to 43 per cent in the Netherlands, 49 per cent in France, 121 per cent in Belgium and 151 per cent in Germany; and 204 per cent in Finland.

These variations in NRAs reflect important policy changes. During the Second World War, food production and consumption were strongly regulated. As in the First World War, food prices were high on the black market and farmers' incomes soared, certainly compared to incomes in the rest of the economy. Figure 5 illustrates, using long-run income data from Finland, how farm incomes were lower than incomes in the rest of the economy during the entire 20th century, except during the two world war periods when food was scarce.

The developments after the Second World War were similar to those after the First World War. During the war, food production and consumption were strongly regulated. Immediately after the war the existing regulatory system was sustained in most European countries and used to ensure a sufficient and 'affordable' food supply. Maximum prices were imposed and harvests and stocks were claimed by the government. In the next years the strongly regulated agricultural markets were slowly liberalised.

FIGURE 5
Income in Agriculture as Percentage of Incomes in Industry in Finland, 1900–90



Source: Crommelynck et al. (2001).

Agricultural prices started declining again from the late 1940s onwards. Farmers' incomes started falling behind incomes outside the agricultural sector (Figure 5). Economic growth was strong in the rest of the economy and the income gap between farmers and people working in other sectors increased strongly in favour of the non-agricultural sectors. There were two reasons for the income gap. The first was the strong growth in the industrial and service sectors of the economy. The second was the introduction of labour-saving technologies in agriculture. Because demand for food had become more inelastic, there was downward pressure on agricultural incomes.

From the 1950s onwards and for the next decades, 'income parity' became a central issue in agricultural policy. In the speeches of politicians, in political discussions and in the agricultural press, the relative income situation of farmers was at the top of the agricultural policy agenda. Farmers pressured European governments to intervene in the market to correct these growing income gaps by introducing a series of measures to support farm incomes.

This led to a series of government interventions in European agriculture in the 1950s and 1960s. Minimum prices, target prices, import quotas etc. were introduced. The regulatory system installed during the war now became an instrument to support farm incomes by intervening in markets in favour of farmers.

An argument often invoked to support these measures, especially in continental Europe, is the importance of food security (self-sufficiency). On a continent twice devastated in a 50-year period and twice facing food shortages during war times, the argument of sufficient food through local production touches a nerve. Politicians who had to address the nation's basic concerns and consumers who faced hunger and food shortages during times when food imports and long-distance food supplies were interrupted were sympathetic to the call for local food production.

In the 1960s several of these national policy measures became the building blocks on which the EU's Common Agricultural Policy was constructed. The CAP was designed at the Stresa Conference in 1958 and introduced in 1968. The introduction of high guaranteed prices at the EU level in the 1970s and 1980s resulted in large trade distortions. This led to the EC's wine lakes and butter and grain mountains and a budget crisis in the 1970s and 1980s, and to increasing tensions with the traditional agricultural exporting countries on the world markets (Josling, 2009).

4. THE POLITICAL ECONOMY OF AGRICULTURAL PROTECTION: KEY FACTORS

In a recent review of the literature on the political economy of agricultural protection, Swinnen (2009) highlights three sets of variables that have been identified as important causes of (changes in) agricultural protection in the literature: (a) comparative advantage and market fluctuations which affect market returns

and incentives to demand government protection from market forces; (b) the structure of the economy – which is typically affected by economic development and which affects both the costs of distribution and the ability to organise politically; and (c) political institutions and organisations. I will first briefly review the conceptual arguments and the evolution of these factors in Europe over the relevant time period and then relate these developments to the policy changes. The last part of this section discusses a series of additional factors.

a. Relative Income and Market Returns

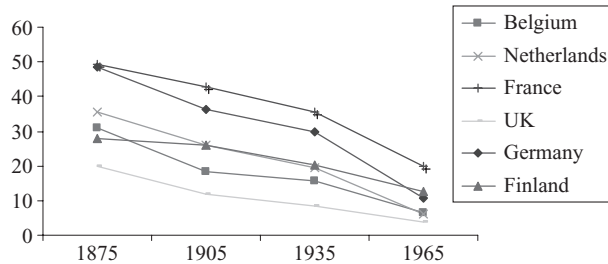
A first set of variables relate to the relative income situation of farmers. Both theoretical and empirical studies show that changes in market returns will affect political activities of farmers as well as changes in political incentives for governments to intervene.¹⁹ This creates political incentives, both on the demand (farmers) side and the supply (politicians) side, to give up government transfers in exchange for political support. Empirically, one can identify at least two ‘variables’ which affect agricultural protection through this mechanism. The first is (potentially) short-term changes in, for example, world markets, exchange rates etc., which affect the relative income position of farmers; the other is more long-term (structural) and has to do with economic development and comparative advantage. With economic development, incomes in the rest of the economy typically grow faster than in agriculture causing both a reduction of the share of agriculture in the economy and incentives for those who remain in agriculture to seek government support.

In all European countries agriculture was a much more important share of the economy in the 19th century than it is today. With the Industrial Revolution, agriculture’s share declined strongly, albeit with major differences between countries (see Figure 6). In the UK, where the Industrial Revolution started, agricultural employment had fallen to 20 per cent of total employment by 1880. On the continent, the shares were lowest in Belgium and Finland (less than 30 per cent) and the Netherlands (35 per cent). In contrast, farmers and farm workers still accounted for almost one-half of the population in France and Germany in 1880. By the 1960s, the employment share was close to 5 per cent in the UK and Belgium and around 10 per cent in the Netherlands, Finland, Sweden and in Western Germany, as the more agricultural part of the country was separated into East Germany.²⁰

¹⁹ Theoretically, the relative income hypothesis in agricultural policy is developed formally in de Gorter and Tsur (1991) and Swinnen and de Gorter (1993). A related general theory is by Hillman (1982). Empirical evidence is in Anderson and Hayami (1986), Gardner (1987) and Swinnen et al. (2001).

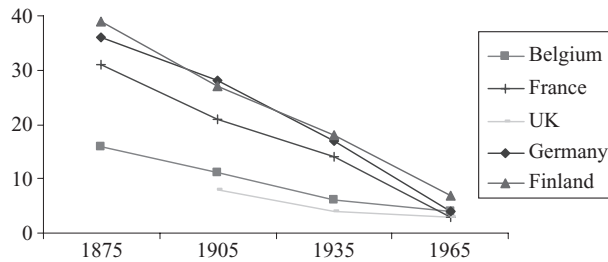
²⁰ Agricultural technology and factor use changed dramatically as well. Agricultural production became increasingly capital intensive, capital intensity increased particularly in the 1950s and 1960s.

FIGURE 6
Share of Agriculture in Active Population (%)



Source: Swinnen (2010).

FIGURE 7
Share of Agriculture in GDP (%)



Source: Swinnen (2010).

Only France still had a much larger share of its population in agriculture (around 20 per cent).

Everywhere and always the contribution of agriculture to total output was even lower than its share in employment (Figure 7). By the late 19th century the share of agriculture in GDP had fallen to around 10 per cent in Belgium and the UK while it was around a quarter of total output in France and around a third in Germany. By the 1960s these shares had fallen to around 6 per cent or less in all the countries in this study.²¹

When farm incomes from market decline relative to other sectors, farms look for non-market sources of income such as government support, either because returns to investment are larger in lobby activities than in market activities, or because willingness to vote for/support politicians is stronger as the impact on utility is relatively stronger. For similar reasons governments at a given stage of development are more likely to support sectors with a comparative disadvantage than sectors with a comparative advantage. These explanations are consistent with

²¹ Within agriculture, the share of crop production has consistently fallen, while livestock (including meat and dairy production) and horticulture have become relatively more important (Table 4).

observations of agricultural protection being countercyclical to market conditions and protection being higher in countries with less comparative advantage in agriculture.

As I explained already in the previous sections, over the 1870–1969 century, there were three periods when either world market prices were depressed and imports increased strongly, putting pressure on domestic farms, or when the gap between incomes in farming and those in the rest of the economy grew significantly. This was at the end of the 19th century (1880–95), during the interbellum (and especially the period 1928–35), and the post-1950 period. Inversely, during and in the years after the world wars, food prices were high and incomes of farmers were high relative to the rest of the economy.

b. Structural Changes in the Economy

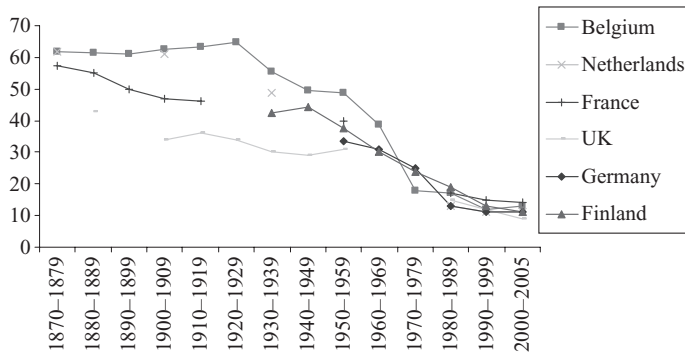
Changes in the structure of the economy affect the distribution and the size of political costs and benefits of agricultural protection and thus the governments' political incentives in decision making.²² For example, with a higher share of food in total consumer expenditures, the opposition of consumers to agricultural protection will be stronger as they are hurt more. Similarly, the opposition of industry – or capital owners in other sectors – will be stronger since the (wage) inflation pressures that come from increased food costs with agricultural protection are larger. Another factor is that with a larger share of farmers in the economy, the (per unit) burden of farm support on the rest of society is higher.²³

I already documented (Figures 6 and 7) that the share of agriculture in employment and output fell strongly over the 1870–1970 period. Also the share of food in consumer expenditures reduced substantially. Food expenditures remained a very large share of total consumer expenditures well into the 20th century in several countries (Figure 8). However, these aggregate figures hide the fact that there were major differences among groups in society, with the poorest spending much more on food and major changes within the broad category of 'food' consumption. For example, in Belgium the share of staple foods, such as bread and potatoes, declined from around 40 per cent of total expenditures in 1850 to around 10 per cent by 1920, despite that the aggregate share of food expenditures remained almost constant over this period (at 60 per cent) (see Table 7). The food shares declined particularly fast in the decades after the Second World War.

²² See e.g. Swinnen (1994) and Anderson (1995) for theoretical analyses of the impact of these structural variables on agricultural policy.

²³ In addition, political economy theories predict that exports will be subsidised less (or taxed higher) than imports because of differences in demand and supply elasticities, affecting the induced distortions. The distortions (deadweight costs) and transfer costs of policy intervention typically increase with the commodity's trade balance, i.e. when its net exports increase (Gardner, 1987). These arguments depend to some extent on the policy instrument that is used.

FIGURE 8
Share of Food in Consumption Expenditures (%)



Source: Swinnen (2010) and Eurostat.

TABLE 7
Food Expenditures as Share of Total Consumer Expenditures in Belgium (%)

	<i>Bread</i>	<i>Potatoes</i>	<i>Beef</i>	<i>Pork</i>	<i>Poultry</i>	<i>Butter</i>	<i>Eggs</i>	<i>Sugar</i>	<i>Beer</i>
1853	30.08	10.72	1.71	2.04	0.33	4.76	1.25	0.56	0.72
1891	18.38	7.20	4.07	4.36	1.26	6.61	1.75	0.77	1.00
1928	7.92	3.11	5.34	5.04	2.29	8.50	2.25	1.00	1.29
1947	6.90	2.15	4.41	3.13	3.77	4.90	1.77	0.93	0.98
1961	5.06	1.01	3.12	1.54	6.06	2.88	1.01	0.68	0.96
1973	3.65	0.64	2.75	1.49	4.65	0.65	0.88	0.30	1.10
1985	1.09	0.17	2.10	1.12	3.78	0.51	0.31	1.11	1.36

Source: Creten (1982) and N.I.S.

c. Political Organisations and Institutions

The impact of political systems on protection has been the subject of a series of recent theoretical and empirical studies (e.g. Beghin and Kherallah, 1994; Olper, 2001; Swinnen et al., 2001; Dutt and Mitra, 2005; Grossman and Helpman, 2005; Olper and Raimundi, 2009). The political regime determines the degree of ‘insulation’ of policymakers.²⁴ Greater insulation of decision-makers implies that

²⁴ While the importance of political systems for policy (and thus agricultural policy distortions) has long been emphasised, for example in the seminal work by Buchanan and Tullock (1962), the past decade and a half has witnessed a growing set of studies analysing the role of political regimes and ideology on policy making. These issues not only relate to the differential effects of democracy and autocratic regimes, but also between different electoral systems – such as proportional versus majoritarian systems, and the autonomy given to bureaucrats and implementing institutions (see e.g. Persson and Tabellini, 2003; Acemoglu and Robinson, 2006; Prendergast, 2007, for important contributions and Swinnen and Rozelle, 2009, for an overview of applications to land and agricultural policy issues).

they can follow their private preferences – or those of the ruling class – to a greater extent. Changes in the political system, either because of changes in the institutions (such as changes in voting rights) or because some interest groups become better organised, will affect the policy outcome.

Important political reforms occurred in all the European countries in the second half of the 19th century (see Table 8). In the first part of the 19th century votes were restricted to the richest in society, often the landed nobility. France was the first to allocate voting rights to all men, in 1848. In England, a series of voting reforms gradually eroded the parliamentary power of large landowners. While landlords maintained 60 per cent of parliamentary seats in 1880, even after the changed social relationships led to votes being given to industrial workers in 1867. However, this share fell dramatically after the extension of voting rights to farm workers and tenants in the late 19th century (see Table 8, section B). In Belgium and the Netherlands voting rights were given to middle-size farmers at the end of the 19th century and to all men in the wake of the First World War.

There were also major changes in the political organisation of farmers. Studies drawing on Olson's (1965) logic of collective action have long argued that a declining share of agriculture in employment makes political organisation of farmers less costly and is therefore likely to increase effective lobbying of farmers. However, the empirical observations on the political organisation of farmers in Europe is only partially consistent with this.

Prior to 1880, political organisation of farmers was limited and mostly included large farms or landlords.²⁵ However, following the agricultural crisis and industrialisation, the political organisation of farmers grew significantly at the end of the 19th and the beginning of the 20th century. The agrarian crisis in the 1880s induced farmers to organise themselves to pressure for government support.²⁶ This process of organisation of small farmers and rural households is also related with

²⁵ In most countries there were also agricultural organisations with educational and extension objectives, such as agricultural committees or the 'Chambres d'Agriculture' in France.

²⁶ In Germany, mainly large landowners formed the 'Association of Tax and Economic Reformers' in 1876, but the main political organisation of the Prussian landlords occurred with the *Bund der Landwirte* in 1893 when Germany was negotiating a series of trade agreements to lower tariffs in the midst of falling grain prices. In France, the first, and most influential, political organisation of agricultural interests is '*La Société des Agriculteurs de France*' (SAF) which was already founded in 1860 and represented mainly large farm and former nobility interests. A series of additional farm organisations emerged in the 1880s. In Belgium, several farm organisations were formed in the 1880s, including the *Belgische Boerenbond* (Belgian Farmers Association) in 1890 which later became the dominant political farm organisation. In some countries farmers formed their own political parties, such as the *Agrarian Party* in Finland and in Sweden. In other countries the farm organisations associated themselves politically with specific parties, typically conservative and often Christian/Catholic. Both the German *Bund der Landwirte* and the French *Société des Agriculteurs de France* were right wing and conservative. In Belgium, the *Boerenbond* was closely aligned with the Catholic Party – later the Christian Peoples Party (CVP).

TABLE 8
Voting Rights Reforms in Western Europe

A. France

1814:	Voting rights restricted to large landowners (those who paid more than 300 FF taxes, equivalent to taxes on 50 hectares property); i.e. 100,000 people out of 30 million total.
1831:	Reduction to 200 FF minimum tax: now 200,000 people can vote.
1848:	Voting rights for all men.
1944:	Voting rights for women.

B. England

	<i>Voting Reform Act</i>	<i>Main Beneficiaries</i>	<i>Share of Parliamentary Seats by Large Landowners (%)</i>
1832	I	Farm managers	
1867	II	Industrial workers	
1880			60%
1885	III	Farm workers and tenants	
1885-post election			30%
1906			20%
1918	IV	Women	
1919			10%

C. The Netherlands

Before 1887:	Census voting rights
1887:	Extension of voting rights to 27% of the population, including many larger (richer) farmers
1917:	General voting rights

D. Belgium

Before 1893:	Cijns voting rights	Votes based on tax payments
1893:	Plural general voting rights	All men over 25 years old at least one vote, but number of votes depends on education and wealth (taxes)
1919:	Singular general voting rights	One man, one vote
1948:	Voting rights for women	One person, one vote

E. Germany

1871:	Singular general voting rights (two votes per man; second vote counts when no majority is obtained by first votes)
Before 1918:	Prussia: three classes have equal voting rights One-third of votes attributed to class of rich landowners (4% of population)
1918:	Voting rights for women

F. Finland

Before 1906:	Under Russia: <i>Lantdag</i> with representatives of four classes (nobility, clergy, citizens, farmers)
1906:	Voting rights for women

Source: Swinnen (2002).

the intensified political competition that was characteristic of the democratisation process at the end of the 19th and early 20th centuries. With voting rights being extended to the general population, conservative parties saw rural households as an important source of votes. A crucial political strategy of conservative and religious parties in continental Europe at the end of the 19th century was the social and political organisation of the rural areas to create a strong power base and a reliable source of votes.²⁷

Farm organisations were often dominated by large farmers and nobility but, in order to enhance their political clout, they tried to project an image of defending interests of all farmers. Sometimes they were successful in this, sometimes not.²⁸

In the next section I will relate (changes in) agricultural protection, as identified in the previous section, to (changes in) these three sets of variables.

²⁷ This social organisation included the political organisation of farmers and the establishment of a broad social and educational network of Catholic schools, hospitals and other rural organisations. Village priests often played a key role in the local organisation. This strategy was very successful in several countries. For example, in Belgium the Catholic Party created a dominant political and social network in the rural areas in collaboration with the Catholic Church and the farmers' union. Similarly, in France, the conservative coalition of the Catholic Church and the (former) nobility in France was organised through the *Société des Agriculteurs de France (SAF)* – and in reaction the Republican political movement established alternative farm organisations, focusing on small farmers (see further). In Germany in the 1920s and 1930s, the National Socialist (Nazi) Party in Germany rose to power initially targeting urban areas. However, the Nazi Party soon realised the potential voting strength of a discontented peasantry and designed rural policies to address farmers' concerns. While their strategy focused strongly on the broad rural population, which dominantly voted for them in the 1930 elections, at the same time they joined forces with the large Prussian landlords with whom they shared preferences about the importance of protecting domestic food production and an autocratic political regime.

²⁸ The German and Belgian farm unions were relatively successful in keeping all farmers within one farm organisation. For example, the Belgian *Boerenbond* succeeded in keeping this unified organisation despite the fact that for a long time small farmers had no voice at the highest level of decision making. This was reserved for leaders of the Catholic Party, Church officials and large farmers and landowners. One reflection of this bias was the organisation's support of the existing land tenure laws, which in the first part of the 20th century were heavily criticised by small farmers and mainly benefited landowners (Craeybeckx, 1973). In France and the UK small and large farmers separated into two organisations. In the UK, the large inequalities in tenure relationships and in land ownership were such that they induced tenant farmers to organise themselves to defend their interests against large landlords, rather than forming a coalition with them. In France, the (former) rural nobility was organised in the *Société des Agriculteurs de France (SAF)*, in a conservative coalition with the Catholic Church. Small farmers organised in other farm organisations, including the *Société Nationale de l'Encouragement à l'Agriculture (SNEA)*. This small farmer organisation was actively supported by the Republican political movement which wanted to counter the conservative influence of the nobility and the Church in the rural areas. Interestingly, these conflicts were typically reflected at the village level in the local priest representing and organising the SAF while the Republican organisations (SNEA) were represented by the local schoolteacher.

5. AN EXPLANATION OF THE GROWTH OF AGRICULTURAL PROTECTION IN EUROPE

As documented in previous sections, important changes took place in agricultural policies in Europe in the 19th and 20th centuries. In the 1860s free trade spread across the continent. A century later, in the 1960s, European integration coincided with an agreement on heavy government intervention in agricultural markets and strong protection against imports. In the final section of this chapter I will argue that the growth of agricultural protection in Europe is due to a combination of factors, in particular the combination of increased incentives for farmers to demand protection, decreased opposition to protection from the rest of society, and political changes that have given farmers' demands greater influence at the decision-making level.

If I want to explain the growth in protection, it is important to realise – and account for – the fact that agricultural protection in Europe did not increase monotonically over time. There were very important fluctuations over time. From the mid-19th to the end of the 20th century, there were three periods when European farmers intensely demanded protection from international competition. This was at the end of the 19th century (1880–95), from the late 1920s to the late 1930s, and in the post-1950 period. In other periods, there was less or no demand for protection. In some periods consumers demanded that governments protect them from increasing food prices, in particular during and just after the two wars when food was scarce and food prices very high.

However, while farmers' demands for protection were intense during three periods in the century when incomes from market returns were relatively low (the end of the 19th century, the interbellum and the post-1950 period), there was a very different government response to these demands for protection by farmers. Governments mostly resisted protectionist demands at the end of the 19th century, except in France and Germany. European governments provided more protection in the 1930s, and substantially more so from 1950 onwards. Hence, governments responded more favourably to farmers' demands to provide protection as decades passed.

First, a key factor is that with economic development the importance of expenditures on food, and in particular on staple foods, declined. This reduced opposition to import protection by the coalition of workers and industrial interests. This opposition coalition was so strong at the end of the 19th century, and for some basic food commodities still into the 1930s, that they were able to block substantive import tariffs for agriculture, and in particular for (bread) grain farms. The opposition was strongest in the most industrialised countries, such as the UK, Belgium and the Netherlands. There, the share of employment in agriculture was lowest and both capital investment and employment in industry was largest (see Figures 6 and 7). In France and Germany, the economic importance of agriculture

was comparatively larger (and that of industry still smaller). In those countries grain tariffs were introduced in the late 19th century.

Second, differences in comparative advantage in industry and in farm structure appear to have been important factors in explaining the difference in protection policies between the UK on the one hand and France and Germany on the other in the early 20th century. In all three countries large grain farms were important, and relatively well organised. However, in the UK they were unsuccessful in obtaining protection against imports as the opposition from industry, workers and the rest of agriculture (see further) was stronger. In Germany and France they were able to obtain support. Both countries had an industry (manufacturing sector) which was under pressure from imports from more advanced industrial nations such as the UK. Both in Germany and France the manufacturing industry wanted import protection. In Germany the main group opposing import tariffs were the Prussian grain-exporting farms. But this changed when cheap grain swamped the European markets in the second half of the 1870s. With French and German farmers now switching sides in favour of protection, an anti-free-trade coalition of industry and agriculture emerged in both countries – in contrast to the UK (and Belgium) where industry wanted export opportunities and cheap food. This caused the introduction of general import tariffs, not just on agricultural products but also on industrial products, in 1879 in Germany and in 1892 in France.²⁹

Interestingly, in Germany this alliance was only temporary. By the 1890s, German industry was in a much stronger competitive position and started becoming worried about the negative effects of high food costs and high wages. In addition, it was being harmed by tariffs which the United States had imposed in reaction to the German agricultural tariffs. However, by the 1890s industrial interests had changed. Industry, and industrial workers, wanted cheaper food and access to international export opportunities. This effectively led to a reversal of German trade policies: despite strong opposition from farming interests, especially the Prussian landlords, a series of new trade agreements in the 1890s lowered agricultural tariffs and brought benefits for manufacturing (see Table 1). New trade agreements with Romania and Russia, through the most favoured nation principle, also reduced tariffs on grains from the US and other grain exporters (Tracy, 1989; Schonhardt-Bailey, 2006).

Third, so far I have mostly discussed the political coalitions in fairly simple terms, referring mostly to those with agricultural interests as ‘farmers’. However there were important heterogeneities among ‘farmers’ both in terms of their economic interests and their political organisations. These heterogeneities had important impacts on the policy decisions. One element is that livestock farms typically opposed grain import tariffs. In countries where livestock farming was well

²⁹ In France, the main exceptions were agricultural raw materials used as inputs in industry, such as wool, skins, cotton, flax etc.

established (for example, in the UK, livestock farms represented more than 60 per cent of agricultural output by the 1880s, compared to less than 30 per cent in France), livestock farms formed a powerful lobby against import tariffs for grains, rather than forming a coalition with grain farms. In addition, in feudal systems (as in the UK) the role and divergent interests of farm workers are important. In low-income societies, such as the UK at the end of the 19th century, farm workers – even those working on grain farms – opposed import tariffs on staple foods because they were to lose more as consumers (poverty was widespread and 80 per cent of a farm worker’s expenditure was on bread) than they would gain through increased wages. Moreover, in feudal systems small farms and tenants were more concerned with their tenure rights than with import tariffs at the end of the 19th and early 20th centuries. They saw landlords and large grain farms as their main problem, not cheap imports. Their political struggle focused on improving tenure conditions by opposing landlords, rather than forming a coalition with them to increase farm prices.³⁰

Fourth, the impact of political reforms and organisation on agricultural protection is complex. A simple comparison between 1860 and 1960 would suggest that agricultural protection had increased with the political organisation of farms. However, such simple comparison ignores important periods in the course of this century when farms were well organised and when protection was not given to agriculture. While landlords and large farms were already powerful and politically well organised in the 19th century, many new farm organisations, in particular representing small farmers, emerged during the crisis at the end of the 19th century, and a network of rural organisations linked to farming grew in importance in the first decades of the 20th century. In addition, voting rights were extended to small farmers and farm workers in the beginning of the 20th century. Yet, both factors seem to have had relatively limited impact on the protection debate at the end of the 19th century because by the time the organisations were working effectively and small farmers and workers had voting rights, the agricultural crisis had subsided (the late 1890s and 1900s). However, these political developments did enhance the influence of farmers when the next crisis emerged: in the late 1920s and 1930s.

³⁰ The agrarian crisis in the 1880s not only induced farmers to politically organise themselves to defend their interests against other interest groups (such as industrial capital) and to demand protection, but also to fight for changes in relationships within agriculture. This was particularly clear in the UK. As farmers were forced off their land as they could no longer pay their rents with declining prices, the crisis induced social revolts by small farmers and tenants against the feudal relationships. In England tenants and small farmers organised themselves to defend their rights in the Farmers Alliance (1879) and the Society of the Land for the People (1883). Their main objectives were to get a better deal from landlords, rather than import tariffs, as reflected in their demands for ‘the Three F’s’: Fair land rents, Fixity of land tenure, and Free sale of their commodities (Cannadine, 1992).

But opposition from industry and workers was still strong in the 1930s. Food still accounted for a major part of worker expenditures, and, moreover, the general economy was hit by the economic crisis of the late 1920s and early 1930s, making cheap food an important concern. As a result there was an increase in agricultural import tariffs, but less on food staples such as bread grains or potatoes. For these commodities support was more likely given under the form of non-tariff measures such as direct payments (in the UK) and milling ratios (in other countries).

After the Second World War, all factors in favour of more protection and more support to agriculture came together and opposition was reducing fast. Most importantly, after the Second World War, opposition of industry and workers in the rest of the economy fell strongly. With strong growth in the rest of the economy, the share of food in total consumer expenditures and its impact on wages declined strongly and with this so did opposition to protection from workers and industry. At the same time, farm incomes fell increasingly behind incomes in the rest of the economy, increasing demands for agricultural support. Farm demands were now politically influential since political organisations of farms were well established and because of their votes. In addition, farm-related cooperatives and business organisations in the agri-food sector became important interest groups, with, for example, dairy and sugar processing companies joining farm unions in actively lobbying for government support and import protection for their sectors. The combination of these factors caused an important and structural shift of the political equilibrium towards more protection – resulting in high levels of government intervention and support to agriculture in the decades following the Second World War.³¹

Finally, it is important to explicitly discuss the impact of the wars in Europe. I already explained above that the specific circumstances during the wars affected the relative income position of farmers and consumers, and hence government interventions. But agricultural policies were affected also in the years leading up to the wars and the following years. For example, Imperial Germany in the early 20th century sought re-armament and made food self-sufficiency an important consideration on the home front. During the Weimar Republics the Nazi's nationalistic (emphasising the importance of domestic production) and right-wing ideology found a close ally (and many votes) in the conservative rural population and the large Prussian landlords. The farm organisations reorganised in a Nazi-dominated Green front.

After the war, the political cause of supporting domestically-produced food resonated well with consumers who had suffered from trade blockades, food shortages and high food prices in the war. The emergence of the 'cold war' in the 1950s

³¹ In Germany this occurred despite – or as some would argue because – of the fact that an important part of agriculture is now separated from Western Germany. The farms in western and southern Germany were smaller and less well structured to compete in international markets, making them significant demanders of protection.

and 1960s reinforced these arguments. In some countries these arguments resonated earlier concerns. For example, in Finland food shortages following its separation from Russia and the disruption of trade ties in the early 20th century, made food self-sufficiency an important political objective during the first half of the 20th century and was reinforced later by the experience in the wars. After the Second World War, when West Germany had lost most of its grain production areas, it became preoccupied with stimulating domestic food production through high prices on the smaller western and southern farms.

6. CONCLUSION

Important changes took place in agricultural policies in Europe in the 19th and 20th centuries. In the 1860s free trade spread across the continent. A century later, in the 1960s, European integration coincided with an agreement on heavy government intervention in agricultural markets and strong protection against imports. In this chapter I quantified the extent of agricultural protection and related it to the history of agricultural policies and offered a series of hypotheses on the causes of these dramatic changes in agricultural and trade policies.

The growth of agricultural protection was not linear, but there was substantial fluctuation in the century that was analysed. Factors that appear to have played an important role in causing the increase in agricultural protection in Europe are: the decline of income from markets for farmers, in particular in comparison with incomes from the rest of the economy; the reduced share of consumer expenditures for food; the farm structure; the political organisation of farmers and the growth in government administrative capacity for regulating markets; the food shortages during the world wars in Europe, and democratisation.

However, the impact of each of these factors is complex and almost always interrelated with other factors. Periods of substantial increases in agricultural protection were characterised by three conditions. First, farmers had substantive political influence, either through votes in parliament or through extra-parliamentary political organisations. Second, a crisis in agriculture or growing income gap with the rest of the economy triggered strong political action by farmers to influence governments. Third, the opposition to protection was sufficiently low, either because support to agriculture had relatively little effect on consumers and the rest of the economy, or because the rest of the economy had relatively little political influence. The combination of these three factors was needed to induce major increases in protection. Such a combination was present to some extent in the 1930s, but especially in the 1950s, when protection grew strongly.

An interesting element addressed in this chapter which is the subject of important current research is the impact of democracy on (agricultural) protection. The growing literature on this issue suggests a subtle and non-linear effect of democ-

racy on agricultural protection.³² The conclusions from the analysis in this chapter seem to be consistent with this argument. Extending voting rights ‘from the rich to the poor’ (as is the standard evolution) shifts parliamentary power from the landlords and industrial capital (the rich) to industrial and farm workers and small farmers (the poor). Conceptually, it is not clear why this would lead to an increase in agricultural protection in general. While democratisation and the growth of farm associations have enhanced the political influence of small farmers, tenants, and farm workers, it also enhanced the influence of industrial workers and labour unions. Those benefiting from the vote extensions and improved political organisation have opposing interests on protection. And this is consistent with the empirical evidence in this chapter. In fact, the evidence here suggests that in the UK agricultural protection was negatively affected by democratisation during the 19th and the first half of the 20th centuries: almost all the poor, even the farm workers and small livestock farms, benefited from cheap grains and therefore opposed import protection which landlords and grain farmers demanded. As electoral reforms gave these groups voting rights this reinforced the political opposition against grain import tariffs in the 19th and early 20th centuries.

The enhanced political influence of small farmers and farm workers in the first part of the 20th century seems to have been more important in affecting the distribution of rents within the agricultural sector rather than average protection for agriculture as a whole. Tenure rights of tenants were enhanced through a variety of regulatory changes in many continental European countries, as well as increases in land taxes and inheritance taxes contributing to the break-up of large estates and the growth of (smaller) operator-owned farms in the UK (Swinnen, 2002).

Finally, there are a number of important elements that require further analysis and attention than is paid to them in this chapter. One element is the relation between agricultural protection (distortions in agricultural markets) and government policies such as land reforms and public investments in infrastructure, research, extension etc., which benefit farmers through enhanced productivity. Another element is the relation between trade protection and macroeconomic variables, in particular exchange rates and the budget. Several studies point at important interactions.³³ These effects require further research.

³² This is consistent with Swinnen et al.’s (2001) econometric findings that the impact depends crucially on the details of the political reforms, i.e. who precisely benefits from the electoral changes. They find that over the course of a century only one out of four political reforms in Belgium had an impact on agricultural/trade policy. The extension of voting rights in the early 20th century, which disproportionately benefited small farmers and landless rural workers, was associated with an increase in agricultural protection, *ceteris paribus*, in the following years.

³³ For example, both in Germany and in France in the 1880s governments wanted to increase tariffs for public revenue purposes: Bismarck, the German leader, needed revenues for his imperial objectives and so did the French (in the wake of the French–German war) (Tracy, 1989). Similarly, European governments ran into budgetary problems in the 1930s, which led to increased taxes and devaluations and to important changes in relative prices for farmers.

APPENDIX A: METHODOLOGY OF CALCULATING NRA

The methodology used for measuring agricultural protection is based on Anderson et al. (2008). In the most simple open and distortion-free economy the domestic farm product price and domestic consumer price of a product equals $E.P$, which is the currency price of foreign exchange, E , times the foreign currency price of this identical product in the international market, P . Agricultural protection is measured as the diversion from this equality between the distorted domestic and the undistorted international market price, as a fraction of the undistorted price.

Our measure of the nominal rate of assistance (*NRA*) includes trade distortions through an import tariff t_m and direct producer support through production subsidies s_f^1 . The overall measure of distortion is then:

$$NRA = [(P_d + s_f) - E.P] / E.P = [((1 + t_m)E.P + s_f) - E.P] / E.P,$$

where P is the (undistorted) unit price at the border (c.i.f. import or f.o.b. export price), expressed in the local currency using the exchange rate E . The (distorted) price P_d is the price observed in the domestic market $P_d = (1 + t_m) E.P$ and s_f is a production subsidy.

APPENDIX B: ADDITIONAL TABLES

TABLE A1
Self-Sufficiency Rates

1A. SSR Belgium (1870–1969)					
	<i>Wheat</i>	<i>Barley</i>	<i>Sugar</i>	<i>Dairy Butter</i>	<i>Meat Beef</i>
1870–79	0.45	0.37	.	.	.
1880–89	0.36	0.34	.	0.83	0.81
1890–99	0.20	0.29	0.93	0.87	0.86
1900–09	0.19	0.24	0.89	.	0.90
1910–19	0.17	0.19	0.91	0.87	0.89
1920–29	0.26	0.28	.	0.91	0.93
1930–39	0.26	0.17	.	0.89	0.94
1940–49	0.57	0.75	.	0.89	0.92
1950–59	0.55	0.42	1.08	0.88	0.97
1960–69	0.68	0.69	1.30	0.90	0.90

TABLE A1 *Continued***1B. SSR France (1870–1969)**

	<i>Wheat</i>	<i>Barley</i>	<i>Sugar</i>	<i>Dairy Butter</i>	<i>Meat Pork</i>
1870–79	92.25	105.91	74.09	.	.
1880–89	87.92	101.55	93.06	.	.
1890–99	88.98	88.68	113.92	.	.
1900–09	97.76	88.77	105.24	.	.
1910–19	77.77	82.93	45.71	.	.
1920–29	85.36	95.95	78.05	.	.
1930–39	96.23	84.40	87.04	101.46	113.77
1940–49	93.56	92.59	102.59	.	100.50
1950–59	106.39	104.43	105.09	82.71	99.56
1960–69	116.21	.	.	.	.

1C. SSR Germany (1870–1969)

	<i>Wheat</i>	<i>Barley</i>	<i>Sugar</i>	<i>Meat Beef</i>
1870–79	98.50	97.41	208.63	105.04
1880–89	87.00	86.85	251.20	103.21
1890–99	77.50	75.37	258.97	98.02
1900–09	66.94	64.35	177.90	97.28
1910–19	69.89	62.45	160.96	97.59
1920–29	72.11	74.46	105.56	85.48
1930–39	91.27	91.61	103.28	100.79
1940–49	51.82	86.44	66.94	97.17
1950–59	58.75	65.69	85.16	96.81
1960–69	76.08	75.30	92.31	90.77

1C. SSR Finland (1930–1989)

	<i>Wheat</i>	<i>Barley</i>	<i>Sugar</i>	<i>Dairy Milk</i>	<i>Meat Beef</i>
1930–39	45.30	105.72	18.61	102.56	100.15
1940–49	65.30	92.69	23.89	76.01	98.57
1950–59	44.70	110.42	18.13	122.47	100.00
1960–69	90.70	98.73	24.94	100.33	100.23
1970–79	94.80	111.60	41.96	101.09	102.10
1980–89	92.84	111.54	62.51	102.79	114.34

Source: Swinnen (2010).

TABLE A2
Additional NRAs, 1870–1969

2A: NRA meat, 1870–1969

	<i>Belgium</i> <i>Beef</i>	<i>France</i> <i>Pork</i>	<i>UK</i>		<i>Germany</i> <i>Beef</i>	<i>Finland</i> <i>Beef</i>
			<i>Beef</i>	<i>Mutton</i>		
1870–79	.	-0.24	.	.	.	.
1880–89	0.00	-0.17	0.15	0.57	-0.12	.
1890–99	-0.10	0.12	0.23	0.58	0.00	.
1900–09	-0.12	0.40	0.39	0.69	-0.07	.
1910–19	-0.07	0.99	0.45	0.65	.	.
1920–29	0.13	0.89	0.65	0.64	0.79	.
1930–39	0.93	0.76	0.62	0.61	1.03	-0.86
1940–49	0.60	0.39	.	.	.	-0.83
1950–59	0.19	-0.07	.	.	0.79	0.56
1960–69	0.66	-0.19	.	.	0.64	0.43

2B: NRA sugar, 1870–1969

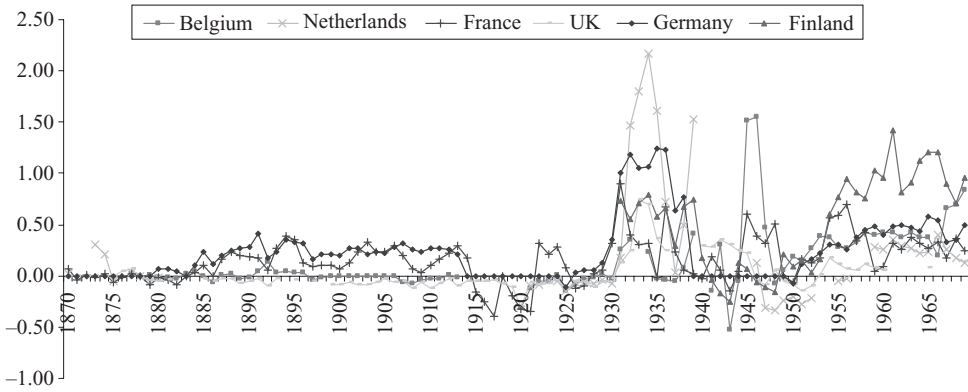
	<i>Belgium</i>	<i>France</i>	<i>Germany</i>	<i>Finland</i>
1870–79	.	.	.	.
1880–89	.	0.09	-0.15	.
1890–99	-0.03	0.02	0.13	.
1900–09	-0.16	0.13	0.39	.
1910–19	0.02	-0.01	0.28	.
1920–29	0.20	0.49	0.38	.
1930–39	0.17	2.74	1.69	2.46
1940–49	0.44	0.65	-0.01	1.48
1950–59	0.20	0.79	1.20	2.60
1960–69	0.88	1.17	3.18	3.80

2C: NRA barley, 1870–1969

	<i>Belgium</i>	<i>Netherlands</i>	<i>France</i>	<i>UK</i>	<i>Germany</i>	<i>Finland</i>
1860–69	.	.	0.11	.	.	.
1870–79	0.00	.	0.02	0.30	.	.
1880–89	-0.02	.	0.02	0.27	0.08	.
1890–99	0.00	.	0.10	0.32	0.32	.
1900–09	0.00	.	0.10	0.18	0.36	.
1910–19	0.04	.	0.11	0.03	0.43	.
1920–29	0.09	0.09	0.09	0.11	0.41	.
1930–39	0.20	0.61	0.29	0.54	1.53	-0.05
1940–49	0.08	-0.13	0.18	0.79	.	-0.07
1950–59	0.10	0.06	-0.03	0.04	0.42	0.09
1960–69	0.29	0.07	0.01	0.00	0.73	0.46

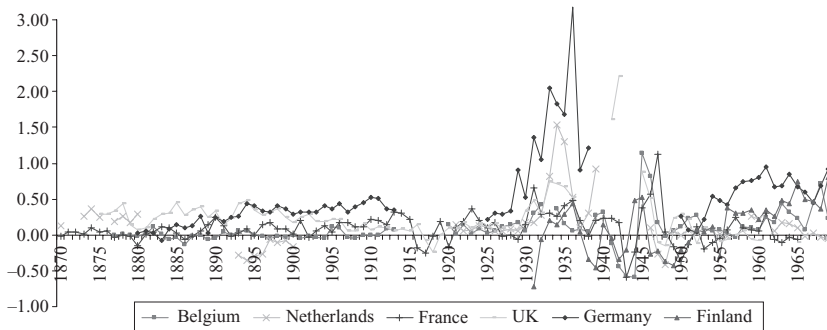
APPENDIX C: ADDITIONAL FIGURES

FIGURE A1
NRA Wheat, 1870–1969



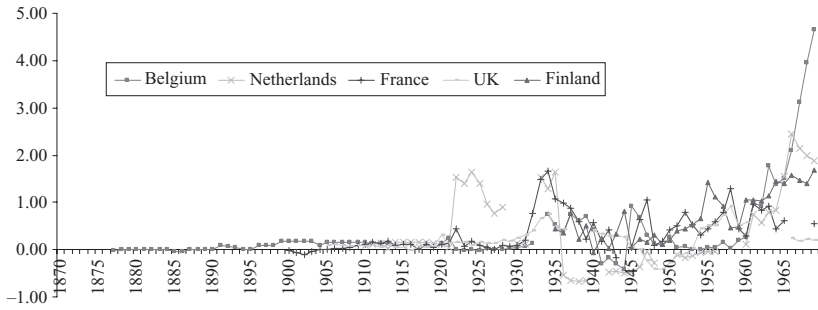
Source: Own calculations.

FIGURE A2
NRA Barley, 1870–1969



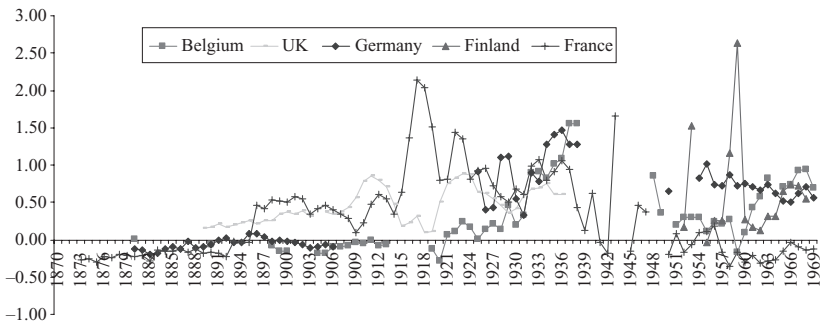
Source: Own calculations.

FIGURE A3
NRA Dairy, 1870–1969



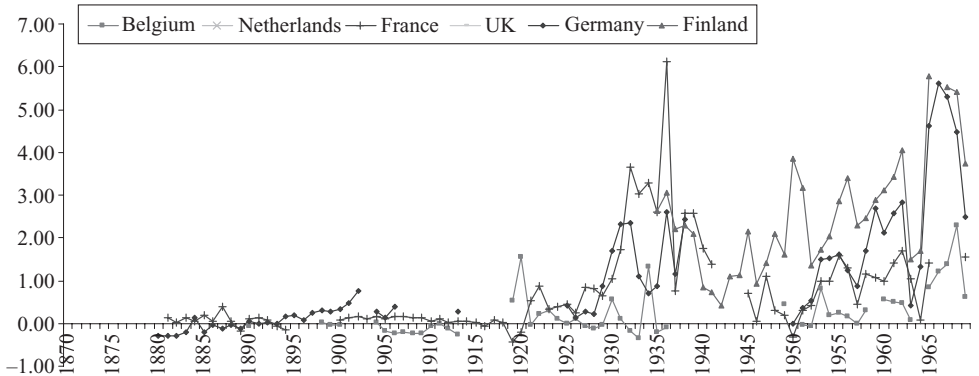
Note:
Belgium, Netherlands, France, UK: butter; Finland: milk.
Source: Own calculations.

FIGURE A4
NRA Meat, 1870–1969



Note:
Belgium, UK, Germany, Finland: beef; France: pork.
Source: Own calculations.

FIGURE A5
NRA Sugar, 1870–1969



Source: Own calculations.

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