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Ángel Luis González, Vicente Pinilla and Raúl Serrano<sup>∞</sup>


DT-AEHE N°1513  
www.aehe.net



asociación española de historia económica

Octubre 2015

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## INTERNATIONAL AGRICULTURAL MARKETS AFTER THE WAR, 1945-1960

Ángel Luis González<sup>α</sup>, Vicente Pinilla\* and Raúl Serrano<sup>•</sup>

DT-1513, October 2015

JEL: F13, N50, N70, Q17I

### ABSTRACT

The objective of the present study is to offer a general overview of the evolution of international trade in agricultural and food products between 1945 and 1960. The developed countries not only maintained policies of stimulating agricultural production implemented during the war, but also deepened their intervention and support with regard to the agricultural sector. The culmination of such policies was, in the case of Western Europe, the creation of the European Economic Community in 1957 and the implementation of the Common Agricultural Policy. This was one of the first community-wide policies and had a notable impact on international agricultural trade. To achieve the objective proposed we concentrate on two principal themes. On the one hand a reconstruction will be performed of the international flows of agricultural trade for that period. Furthermore, we shall attempt to analyse the principal determinants of the development of agricultural trade, paying special attention to the political economy which led to the taking of crucial decisions for its evolution, such as its exclusion from the GATT agreements.

**Keywords:** Agrifood trade, GATT, Agricultural protectionism, Agricultural trade policies, Post-war agricultural policies.

### RESUMEN

El objetivo de este trabajo es ofrecer una visión general de la evolución del comercio internacional de productos agroalimentarios entre 1945 y 1960. Durante este periodo, los países desarrollados no sólo mantuvieron las políticas de estímulo a la producción que habían implementado durante la guerra, sino que profundizaron el intervencionismo e incrementaron la protección de sus sectores agrícolas. La culminación de esas políticas fue, en el caso de Europa Occidental, la creación de la Comunidad Económica Europea en 1957 y la implementación de la Política Agraria Común. Esta fue una de las primeras políticas comunitarias y tuvo un impacto notable en el comercio internacional agrario. Para lograr el objetivo propuesto, nos centramos en dos temas principales. Por una parte se realiza una reconstrucción de los principales flujos comerciales agroalimentarios durante este periodo. Por la otra, tratamos de analizar los principales determinantes del desarrollo de este comercio, prestando especial atención a la economía política que llevó a la toma de decisiones cruciales para su evolución, como por ejemplo la exclusión de la agricultura del Acuerdo General sobre Aranceles Aduaneros y Comercio (GATT).

**Palabras clave:** Comercio agroalimentario, GATT, Proteccionismo agrario, Políticas comerciales agrícolas, Políticas agrarias en la post-guerra.

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<sup>α</sup> Universidad de Salamanca, Spain. Correo electrónico: [algonzal@usal.es](mailto:algonzal@usal.es)

\* Universidad de Zaragoza, Spain. Correo electrónico: [vpinilla@unizar.es](mailto:vpinilla@unizar.es)

• Universidad de Zaragoza, Spain. Correo electrónico: [raser@unizar.es](mailto:raser@unizar.es)

# **INTERNATIONAL AGRICULTURAL MARKETS AFTER THE WAR, 1945-1960\***

## **Introduction**

The volume and composition of international trade is dependent on many variables: differences in national factor endowments, preferences, technology, income, prices, transport costs, etc. Two of these are, however, of crucial importance: the set of national trade policies implemented in different countries and the international framework regulating the design and execution of those policies. As shall be explained, both national trade policies and the international set of regulations after World War II were extremely dependent on the domestic agricultural aims pursued at that time by the industrialised countries, particularly by the United States. In analysing world agricultural trade trends in the post-war period, a special mention of the so-called farm adjustment problem is necessary.

## **International flows of agricultural trade**

To understand the evolution of international trade in agricultural and food products after 1945 it is essential to understand that the Great Depression of the 1930s had severely affected this trade. From 1929 to 1934 its volume diminished by 13 per cent in absolute terms, although a slight recovery in the latter years of the decade resulted in an annual negative growth rate of 1.2 per cent for the 1930s as a whole. Average international prices fell by approximately 50 per cent, which particularly affected countries producing agricultural goods; the value of international agricultural trade declined even more sharply than its volume<sup>1</sup>. But probably the most serious legacy of the years of depression was the general spread of protectionism worldwide. A remarkable increase

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\* This text is a chapter in the book edited by Paul Brassley, Carin Martiin and Juan Pan-Montojo, entitled *From Food Shortages to Food Surpluses: agriculture in capitalist Europe, 1945-1960* that will be published by Ashgate in its series Rural Worlds: Economic, Social and Cultural Histories of Agricultures and Rural Societies. This work has been partially supported by the Ministry of Science and Innovation of the Spanish Government, projects ECO 2012-3328, HAR2013-40760-R and ECO2012-36290-C03-01 and the Department of Science, Technology and Universities of the Government of Aragon and the European Social Fund (Agrifood Economic History and COMPETE research groups). Ángel Luis González gratefully acknowledges aid from the Ministry of Science and Innovation of the Spanish Government. The usual disclaimers apply.

<sup>1</sup> G. Aparicio, V. Pinilla and R. Serrano, 'Europe and the international agricultural and food trade, 1870-2000', in P. Lains and V. Pinilla (eds.), *Agriculture and Economic Development in Europe since 1870*. London: Routledge, 2009, pp. 56-57.

in tariffs and also the use of other unconventional measures to protect domestic agriculture was one of the most important legacies of the depression for post-war years.

The Second World War profoundly affected world trade in general and both agricultural production and its commerce. The effects of the war varied greatly; on the one hand, the war zones, mainly Europe, were the most affected. They reduced their imports and suffered massive devastation of their agriculture<sup>2</sup>; elsewhere, other regions were only indirectly affected by the conflict, since their traditional export markets were radically reduced. Thus, the volume of exports of agricultural and food products from South America fell overall by 42 per cent throughout the war<sup>3</sup>.

The return to the pre-war trade level occurred in a relatively short time. According to our estimates, between 1934-38 and 1948-50 international agricultural trade had contracted by 4.4%, which means that the recovery after 1945 was quite fast, considering that its fall during the war was very important. Since 1951, the pre-war volume of trade was exceeded. Thus, in 1952-1954 it was already 9.2 per cent higher than in 1934-38 (Table 1).

Table 1. International trade in agricultural and food products, 1938-1954 (in thousands of US dollars at 1925 prices)

	1934-38	1948-50	1952-54
U.S. dollars (thousands)	14,157,433	13,531,753	15,462,611
Index numbers	100	96	109

Source: Authors' calculation, based on the Food and Agriculture Organization of the United Nations, Yearbook of Food and Agricultural Statistics 1955, vol. IX, Part 2, Rome, 1956. This estimate includes 55 products for which the International Institute of Agriculture provided information in the 1930s.

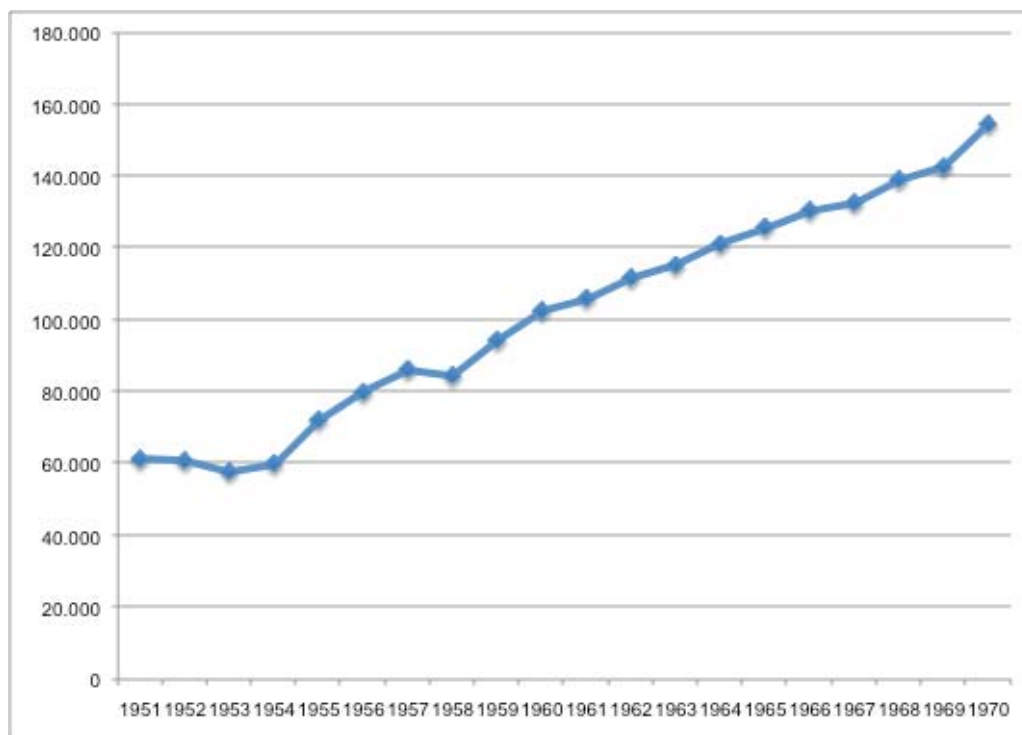
In the nineteen fifties and sixties, agricultural trade underwent spectacular growth. By 1963 its volume had more than doubled the level of 1951, with annual average growth of 4.2 per cent for the years 1951-1955 and 7.3 per cent for 1955-1960. Income growth,

<sup>2</sup> P. Brassley, 'International Trade in Agricultural Products, 1935-1955', in P. Brassley Yves Segers, Leen Van Molle (eds.), *War, Agriculture, and Food. Rural Europe from the 1930s to the 1950s*, London: Routledge, 2012.

<sup>3</sup> V. Pinilla and G. Aparicio, 'Navigating in Troubled Waters: South American Exports of Food and Agricultural Products, 1900-1950', *Revista de Historia Económica-Journal of Iberian and Latin American Economic History*, 33, 2, 2015.

through its impact upon effective demand, was the principal reason for this expansion. This fundamental role of income in explaining agricultural trade expansion was no different than for general trade<sup>4</sup>. However, its income elasticity has been estimated as being predictably low (approximately unity), which is logical given the type of products in question<sup>5</sup>. Precisely, the lower elasticity than that of manufactured goods explains, in part, that growth in the volume of agricultural trade was significantly lower in those years than total trade, beginning a trend that would continue in subsequent decades.

Graph 1. International trade in agricultural and food products, 1951-1970(in millions of 1980 US dollars)



Source: R. Serrano and V. Pinilla, 'Causes of World Trade Growth in Agricultural and Food Products, 1951 – 2000: A DemandFunction Approach', *Applied Economics*, 42, 27, 2010, pp. 3503-3518. In this estimate are included more than 125 products for which the F.A.O. provides information on its *Trade Yearbook*.

<sup>4</sup> S.L. Baier and J.H. Bergstrand, 'Do free trade agreements actually increase member's international trade?', *Journal of International Economics*, 71, 2007, pp. 72-95; D. Irwin, 'Long-run trends in world trade and income', *World Trade Review*, 1(1), 2002, pp. 89-100.

<sup>5</sup> R. Serrano and V. Pinilla, 'Causes of World Trade Growth in Agricultural and Food Products, 1951 – 2000: A Demand Function Approach', *Applied Economics*, 42, 27, 2010, pp. 3503-3518.

In addition, due to a combination of supply and demand factors, such as increased production and the low income elasticity of farm products, prices of agricultural and food products rose less than total trade prices; between 1951 and 1961 real agricultural prices fell approximately 20 per cent<sup>6</sup>.

As a result the share represented by agricultural trade in total trade already contracted in the fifties and sixties, but would fall rather faster from the 1970s due to the further deterioration in their real prices.

In the second half of the twentieth century the North-South pattern forged in the period of the first globalisation was gradually replaced by a trade pattern based principally on exchanges of manufactures between developed nations. In the case of agricultural trade, flows of processed goods between high-income countries grew significantly. However, these changes did not begin to become truly important until the mid-1960s. In the 1950s, European agricultural exports gained weight in the world total, with respect to the interwar period, while its share of imports remained stable<sup>7</sup>. This means that the increase of agricultural trade in Europe tended to be largely a result of flows within the continent itself. Since the mid-1960s, and largely as a result of successful European integration, the continent gained appreciably in importance regarding world agricultural trade. In the 1960s, access to new technologies made self-sufficiency possible, reduced the volume of imports from non-European Community partners and even allowed EC countries to become net exporters of agricultural products. The fall in European imports, especially bulk products, in relative terms is a clear example of this process. The counterpoint was the rise in food imports from Asia, which was undergoing a far-reaching process of industrialisation, demographic growth and urbanisation. Thus, Asian imports of farm products and foodstuffs grew in general, and the share of the continent increased in all product categories (bulk products, plantation products, high value foodstuffs and processed agricultural products)<sup>8</sup>.

In the case of exports, changes in the geographical constitution of trade flows were even more marked. Governments in the developed nations provided agriculture with more support than any other sector, while many developing nations discriminated against

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<sup>6</sup> R. Serrano and V. Pinilla, 'Terms of Trade for Agricultural and Food Products, 1951-2000', *Revista de Historia Económica-Journal of Iberian and Latin American Economic History*, 29, 2, 2011, pp. 213-243.

<sup>7</sup> Aparicio, et al., 'Europe and the international agricultural and food trade'.

<sup>8</sup> R. Serrano and V. Pinilla, 'The Evolution and Changing Geographical Structure of World Agri-food Trade, 1950-2000', *Revista de Historia Industrial*, 46, 2011, pp. 95-123.

farmers. This was especially the case in South America, where many countries opted early on for policies based on industrialisation and import substitution, which severely penalised their agro-export sectors. As a result, the continents that were most dependent on the export of bulk products (Africa, Oceania and South America) saw their share in world agricultural trade fall. Thus, both Africa and South America experienced a progressive decline in their relative share of the regional distribution of exports.

The counterpoint of this decline was the increasing share of high-income nations, and in particular the rise of European exports, which grew from 32 per cent of the world total in the 1950s to 40 per cent in the 1970s. This growth in the share of European exports was basically achieved by the bulk and processed products groups, while the region consolidated its already dominant position in high-value foodstuffs (around 70 per cent of world exports).

### **The historical framework: a postwar overview**

In the immediate aftermath of the Second World War, the main concern throughout Western Europe was to raise agricultural production as rapidly as possible<sup>9</sup>. Agricultural systems in Europe and Asia had been devastated during the war or lacked huge amounts of essential supplies. World food production per capita with respect to the pre-war level had fallen by 15 per cent<sup>10</sup>, and only the United States was in the position to provide the food supplies required by the rest of the world<sup>11</sup>. The Marshall Plan significantly contributed to the economic recovery of Western European countries, and the world soon witnessed a boom in global production. By 1950 agricultural production in Western Europe had already exceeded its prewar level<sup>12</sup>. Rapid growth and tariff reductions led to an even faster rate of growth in international trade. However, world trade in agricultural products expanded less rapidly, as the previous section underlines,

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<sup>9</sup> M. Tracy, *Agriculture in Western Europe*, New York: Praeger, 1964, pp. 225.

<sup>10</sup> FAO, *The State of Food and Agriculture 2000*, Rome: Food and Agriculture Organization of the United Nations, 2000.

<sup>11</sup> The United States was the only contender nation to end the war in a healthy economic state. American incomes had risen and its farmers had higher productivity than any country. In fact, rather than experimenting shortages, soon after the War the United States would have to deal again with the problem of agricultural surpluses and low farm prices. See L. Collingham, *The Taste of War: World War II and the Battle for Food*, New York: Penguin Press, 2011; P. McMahon, *Feeding Frenzy. The New Politics of Food*, Great Britain: Profile Books, 2013.

<sup>12</sup> M. Martín-Retortillo and V. Pinilla, 'Patterns and causes of the growth of European agricultural production, 1950 to 2005', *Agricultural History Review*, 63, I, 2015, pp. 112-139.

and the share of agricultural products in world trade declined during the 1950s. The low demand elasticity for agricultural products and food, their meagre share in intra-industrial trade and the high degree of protectionism to which they were subjected were the principal causes of their relatively slow growth<sup>13</sup>. To a great extent, the high level of agricultural protectionism was the consequence of the domestic agricultural policies implemented over the period.

In contrast to the case of manufactured products, no European government dared to liberalise its domestic market for agricultural products after the War. Under the stimulus of the wartime experiences of food shortages, European countries “set as paramount the aim of increasing total output to achieve, whenever possible, self-sufficiency and to raise farmer’s incomes”<sup>14</sup>. The United States, struggling with the farm income problem, “largely ignored its responsibilities for the development of sound world trade policies for farm products, and lent its power and prestige to the distortion of the principles of liberal trade in the establishment of the GATT”<sup>15</sup>. The Cold War and growing ideological confrontation also made international cooperation in agriculture increasingly difficult<sup>16</sup>. This led to a marked change in the pattern of agricultural trade: a growing concentration of trade amongst developed countries, a significant part of this occurring within regional blocks, the growing dependence of less developed countries and centrally planned economies upon the developed countries for more of their food imports, and a diminishing concentration of trade among centrally planned economies<sup>17</sup>.

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<sup>13</sup> R. Serrano and V. Pinilla, ‘The Long-Run Decline in the Share of Agricultural and Food Products in International Trade: A Gravity Equation Approach of its Causes’, *Applied Economics*, vol. 44, 32, 2012, pp. 2199-2210; ‘Changes in the structure of world trade in the agri-food industry: the impact of the home market effect and regional liberalization from a long-term perspective, 1963-2010’, *Agribusiness: an International Journal*, 30, 2, 2014, pp. 165-183.

<sup>14</sup> G. Federico, *Feeding the World: An Economic History of Agriculture, 1800-2000*, Oxford: Princeton University Press, 2005, pp. 198.

<sup>15</sup> D.G. Johnson, *World Agriculture in Disarray*, London: MacMillan, 1987, pp. 24.

<sup>16</sup> FAO, *The State of Food and Agriculture 2000*, pp. 114.

<sup>17</sup> K.A. Ingersent and A.J. Rayner, *Agricultural Policy in Western Europe and the United States*, Northampton: Edward Elgar, 1999, pp. 123; S.C. Schmidt, H.D. Guiter and A.B Mackie, ‘Quantitative dimensions of agricultural trade’, in Agricultural Extension Service (ed.), *Speaking of trade: its effect on agriculture*, St. Paul: Agricultural Extension Service, University of Minnesota, 1978, pp. 76; R. Serrano and V. Pinilla, ‘Agricultural and food trade in European Union countries, 1963-2000: a gravity equation approach’, *Économies et Sociétés, Série Histoire économique quantitative*, AF, 43, 1, pp 191-219, 2011.



## **The farm adjustment problem and the conformation of post-war agricultural policies in the USA and Europe**

Trends in agricultural trade after World War II cannot be understood without examining both national trade policies and the domestic agricultural aims behind those policies. A powerful coalition of forces assembled after WWII to create a stable regime of global agricultural policy referred to as the 'Cold War Regime', the 'Aid Regime', the '2<sup>nd</sup> Food Regime' or the "U.S. Food Regime"<sup>18</sup>. This new world organization reflected the enormous political, economic and agricultural power of the United States<sup>19</sup>. To a great extent, it was also the expression of a political economy equilibrium within the United States itself, one which reflected its particular agricultural situation.

Throughout the 1930s, the United States witnessed how food surpluses accumulated while farmers went bankrupt and millions of consumers went hungry. As Lamartine Yates pointed out, "here were re-verses the gloomy predictions of Malthus, with practical consequences as gloomy as he ever predicted"<sup>20</sup>. President Herbert Hoover (1929-1933) even said that the farm issue was the most important problem the nation was facing<sup>21</sup>. The grave agricultural situation in 1933, when Roosevelt entered the White House, led to the approval of the Agricultural Adjustment Act (AAA) with the ultimate goal of raising the purchasing power of most agricultural products to their 1909-1914 parity ratio<sup>22</sup>. The AAA marked the beginning of the end for laissez-faire in agriculture<sup>23</sup>. The farm income problem, that is to say that gains in agricultural efficiency and output were not matched by a comparable advance in farm incomes, was soon perceived as structural rather than temporary and intervention measures were undertaken in order to raise and stabilise agricultural income. The theoretical nature of

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<sup>18</sup>R. Almas and H. Campbell, 'Introduction: emerging challenges, new policy frameworks and the resilience of agriculture, in R. Almas and H. Campbell (eds.), *Rethinking agricultural policy regimes: food security, climate change and the future resilience of agriculture*, Bingley: Emerald, 2012.

<sup>19</sup>R. Patel, *Stuffed and starved: markets, power and the hidden battle for the world food system*, London: Portobello, 2007, pp. 89.

<sup>20</sup>P. L. Yates, 'Food and Agriculture Organization of the United Nations', *Journal of Farm Economics*, vol. 28 (1), 1946, pp. 54-70.

<sup>21</sup>B. Winders, *The Politics of Food Supply; US Agricultural Policy in the World Economy*, New Haven and London: Yale University Press, 2009.

<sup>22</sup>A. Olmstead and P. Rhode, 'The Transformation of Northern Agriculture from 1910-1990', in S. L. Engerman and R. E. Gallman (eds.), *The Cambridge Economic History of the United States, Volume 3. The Twentieth Century*, New York: Cambridge University Press, 2009, pp. 639-742.

<sup>23</sup>G. D. Libecap, 'The Great Depression and the Regulating State: Federal Government Regulation of Agriculture', in M. D. Bordo, C. Goldin and E. N. White (eds.), *The Defining Moment. The Great Depression and the American Economy in the Twentieth Century*, Chicago: University of Chicago Press, 1998, pp. 181-226.

the problem was thoroughly discussed after the war, since many others industrialised countries were facing a similar situation. The continuing disparity between farm incomes and incomes in other sectors inevitably became a major concern of governments<sup>24</sup>, and therefore a major determinant of their agricultural trade policies.

The farm adjustment problem was characterised as “a persistent tendency for the aggregate supply of agricultural commodities to grow faster than the aggregate demand for them, so that agriculture is burdened constantly with an excess supply of labour, even when business is expanding and there are brisk job opportunities in non-agricultural industries”<sup>25</sup>. According to Earl Heady, the problem of agricultural surplus<sup>26</sup> creation was the result of (1) the low income elasticity of demand for farm products (2) the determination of the prices of farm capital inputs by economic forces in the non-farm sector (3) the continual decline in the price of capital inputs relative to the price of labour and (4) technological exogenous shocks<sup>27</sup>. As far as agricultural policy is concerned, there was a conflict between the need to adapt supply to demand and the desire to give farmers a ‘fair income’<sup>28</sup>. The idea that low farm incomes were due at least in part to deficiencies in the structure of agriculture itself and to the existence of barriers to the outflow of labour from agriculture<sup>29</sup> became increasingly accepted over the 1950s<sup>30</sup>. However, policy developments in the rich countries over the period following World War II tended to ignore the supply side and were mainly focused on raising farm returns via price supports (i.e. acting on the “demand side” and assuming that incomes were primarily determined by demand<sup>31</sup>). One paradoxical outcome of those policies was to encourage production, thus aggravating the problem of surpluses.

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<sup>24</sup> Tracy, *Agriculture in Western Europe*, pp. 231.

<sup>25</sup> T. W. Schultz, *Food for the World*, Chicago: Chicago University Press, 1945.

<sup>26</sup> An official definition of surplus was provided in 1949 by the Food and Agriculture Organization (FAO): “supplies of food and agricultural commodities for which no effective demand exists at current price levels, on the basis of payment in the currency of the producing country”; S. Marchisio and A. di Blasé, *The Food and Agriculture Organization (FAO)* Boston: Dordrecht, 1991, pp. 26.

<sup>27</sup> E. Heady, *Agricultural problems and policies of developed countries*, Oslo: Bodenesforlag, 1966.

<sup>28</sup> Tracy, *Agriculture in Western Europe*.

<sup>29</sup> Low agricultural mobility could be due to: “(1) lack of non-farm employment opportunities (2) lack of industrial employment skills (3) attachment to the rural way of life (4) unacceptable costs of migration (5) lack of knowledge about alternatives”. See Ingersent and Rayner, *Agricultural Policy in Western Europe and the United States*, pp. 171.

<sup>30</sup> P.L. Yates, *Food, Land and Manpower in Western Europe*, London: MacMillan, 1960; Tracy, *Agriculture in Western Europe*.

<sup>31</sup> Johnson, *World Agriculture in Disarray*, pp. 32.

The farm problem and the notion of an equitable income for those engaged in agriculture were at the heart of most policy statements in post-war industrialized countries<sup>32</sup>. However, agricultural policy was also driven by other considerations. As Johnson has pointed out, some of them were national self-sufficiency or autarky for food, reducing balance of payments difficulties, and benefits to consumers in the form of an assured source of supply and stable prices<sup>33</sup>. For instance, British agricultural policy after WWII was strongly influenced by the fear of a continuing balance of payments problem. Many other European countries also tried to achieve a certain degree of self-sufficiency in food after the experience of the war. However, as food shortages disappeared, price supports were maintained and even reinforced, thus revealing that the objective of sustaining higher incomes in agriculture was the major driving force behind policymaking<sup>34</sup>. Of course, national farm policies strongly reflected private and public interests underlying their national political economy systems. In the U.S case, there is no doubt that post-war agricultural policy was deeply influenced by the farm lobby (in fact, it reflected a powerful coalition of interests within agriculture itself)<sup>35</sup>. By strengthening these coalitions of interests, the Second World War contributed to the consolidation of state-directed agriculture both in the United States and in Western Europe.

During World War II, the position of supply management<sup>36</sup> as the fundamental core of the United States' national agricultural policy became entrenched in two ways: (1) an expansion of the number of commodities eligible for price supports, together with an increase in the support levels for the pre-eligible commodities and (2) the elimination of alternative agricultural policies such as rural reform. The weakening of the ideas defended during the New Deal by bureaucracies such as the Bureau of Agricultural Economics (BAE) or the Farm Security Administration (FSA) meant that agricultural

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<sup>32</sup> Ingersent and Rayner, *Agricultural Policy in Western Europe and the United States*.

<sup>33</sup> Johnson, *World Agriculture in Disarray*; At least in the case of the United States over the Cold War period, another farm policy objective has often been mentioned: to exercise what has been called "food power" ("to seek coercive advantage by manipulating -or threatening to manipulate- the volume and timing of their food exports"; R. L. Paarlberg, *Food Politics: what everyone needs to know*, Oxford: Oxford University Press, 2010. This aim, however, can be understood as secondary, or as one corollary of the surplus-stimulating policies already implemented.

<sup>34</sup> As explained in the chapter written by Emanuele Bernardi in this book, higher incomes in agriculture were perceived by many European governments as an instrument to achieve social stability.

<sup>35</sup> Winders, *The Politics of Food Supply*.

<sup>36</sup> The term *Supply Management Policy* refers to the set of agricultural policies comprising price supports and production controls initiated in 1933 –when the Agricultural Adjustment Act (AAA) was approved– and whose major aim was to boost farm income.

policy would be biased in favour of the largest and wealthiest farmers<sup>37</sup>. Importantly, the fact that interventionist policies expanded during the war –when wartime demand eliminated surpluses and raised farm prices, thus solving the problems that farmers had faced over the previous 20 years– clearly shows the political power of agricultural interests within the state. In 1945, the wheat, corn and cotton sectors joined forces to favour the extension of price support policies, and it would not be until the 1950s that the corn sector would start advocating for more market oriented policies<sup>38</sup>.

The wartime years in Europe were characterised by even stronger state intervention<sup>39</sup>. Britain entered the war with a prepared plan for maintaining food supplies: the Ministry of Food became the sole buyer and importer of all major agricultural products, price controls were imposed, existing stocks of the main products were requisitioned and rationing was introduced<sup>40</sup>. In France, prices of foodstuffs were officially fixed and progressively raised in the course of the war, and the philosophy of the '*retour à la terre*' gained adepts as the conflict developed. Highly interventionist policies were set in motion by many other Western European governments. Some of these policies were abandoned after the War, but the main elements of state intervention were maintained or even reinforced in all major European countries when the conflict was over<sup>41</sup>. Moreover, it has been said –for countries such as Britain–that “the war years were pivotal in the acceptance of state-directed agriculture at a time when the farms of Britain were, in Churchill’s words, ‘the front line of freedom’”<sup>42</sup>. The experience of the Second World War “cemented the idea of a ‘National Farm’ in both the popular and the

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<sup>37</sup> Winders, *The Politics of Food Supply*.

<sup>38</sup> It is widely acknowledged that producers who dominate their respective world markets are more likely to favour free trade than those that face competition. See H. de Gorter and J. Swinnen, 'Political Economy of Agricultural Policy', in B. Gardner and G. Raussier (eds.), *Handbook of Agricultural Economics*, vol. 2, 2002, pp. 1893-1943; Shifts in the world economy over the late 1940s and the 1950s were characterised by an overall expansion of the livestock sector. Meat consumption was increasing enough to prevent corn surpluses on the scale that cotton and wheat were experiencing. The corn segment in the United States dominated world markets, and corn producers soon perceived that supply management policy was negatively affecting their interests. According to Winders, that is the reason why they started to advocate market oriented policies, even when they had supported supply management in its initial stages. Winders, *The Politics of Food Supply*.

<sup>39</sup> P. Brassley et al. (eds.), *War, Agriculture and Food. Rural Europe from the 1930s to the 1950s*, London: Routledge, 2012.

<sup>40</sup> Tracy, *Agriculture in Western Europe*; B. Short, C. Watkins and J. Martin (eds.), *The Front Line of Freedom: British Farming in the Second World War*, British Agricultural History Society, 2006.

<sup>41</sup> G. Federico, 'Natura Non Fecit Saltus: The 1930s as the Discontinuity in the History of European Agriculture', in P. Brassley et. al (eds.), *War, Agriculture, and Food. Rural Europe from the 1930s to the 1950s*, London: Routledge, 2012, pp. 15-32.

<sup>42</sup> Short, *The Front Line of Freedom*.

governmental psyche”<sup>43</sup>. In the immediate post-war years an increase in agricultural production was considered necessary all over Europe, both to meet food shortages –for instance, in France agricultural production by 1945 had fallen to two thirds of its pre-war level<sup>44</sup>– and to relieve the balance of payments. European countries enthusiastically embraced the Marshall Plan in 1947, which served as an outlet for U.S agricultural surpluses while alleviating food shortages in Europe<sup>4546</sup>. Britain maintained fixed prices and Government purchase of foodstuffs with the aim of raising net farm output to 50 percent above pre-war levels. In France, the Monnet Plan for 1947-50 introduced a campaign to modernize French agriculture and raise its productivity. Germany, Norway and Sweden also announced policies to expand agricultural output<sup>47</sup>. Since 1939 on, Spain also introduced a system of mandatory prices at which farmers had to sell some essential commodities, such as wheat or oil, to ensure supply to the population. However, the result was disastrous, as intervention prices were too low. In a context of international isolation and difficulties in importing inputs, intervention did not boost production and also encouraged the development of a significant black market<sup>48</sup>. However, European price support measures were not removed once the immediate problem of food shortages had been solved. In Britain, “the guarantees given during the war were put on a permanent basis by the Agriculture Act of 1947”<sup>49</sup>. In Germany, imports of food were still being subsidised in 1949, but different policy measures were implemented in order to keep up German prices as soon as the food situation eased and world prices declined. French aims of self-sufficiency were soon transformed into the objective of developing exports of basic agricultural goods, and export subsidies were established. Spain developed policies to support farmers somewhat later, beginning in

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<sup>43</sup> D. Harvey and M. Riley, "Fighting from the fields": developing the British 'National Farm' in the Second World War', *Journal of Historical Geography*, vol. 35, 2009, pp. 495-516.

<sup>44</sup> Tracy, *Agriculture in Western Europe*.

<sup>45</sup> A. Magnan, 'Food Regimes', in J.M Pilcher (ed.), *The Oxford Handbook of Food History*, 2012, Oxford Handbooks Online.

<sup>46</sup> Scholars usually agree that postwar US food aid policies were also largely motivated by its fear of the expansion of communism. For instance, see J. McGlade, 'More a Plowshare than a Sword: The Legacy of US Cold War Agricultural Diplomacy', *Agricultural History*, vol. 83 (1), pp. 79-102.

<sup>47</sup> Tracy, *Agriculture in Western Europe*, pp. 231.

<sup>48</sup> E. Clar and V. Pinilla, 'The contribution of agriculture to Spanish economic development', in P. Lains and V. Pinilla (eds.), *Agriculture and Economic Development in Europe since 1870*, 2009, London: Routledge, pp. 311-332; T. Christiansen, *The reason why. The post civil-war agrarian crisis in Spain*. Zaragoza: Prensas Universitarias de Zaragoza, 2012.

<sup>49</sup> Tracy, *Agriculture in Western Europe*, pp. 254.

the 1960s, through subsidies and price support policies<sup>50</sup>. As in the case of the United States, some European farmers became fairly affluent through subsidies, the larger part of them going to the biggest farmers who probably needed them least<sup>51</sup>. There is no doubt that agricultural interest groups such as the German Farmer's Union or the *Fédération Nationale des Syndicats des Exploitants Agricoles* (France) played an important role in the configuration of such interventionist policies after World War II. However, as mentioned above, those policies tended to encourage production and therefore contributed to aggravate the problem of surpluses and falling agricultural prices. By the 1950s the farm income problem was far from being solved in industrialized countries.

On the other hand, the farm problem was not shared by developing countries. For instance, Latin American countries at that time were mostly following industry-driven development strategies, which often had an anti-agricultural bias and affected trade, reducing its agricultural exports<sup>52</sup>. The intention was to provide cheap food for urban workers in order to foster industrialisation. However, "the emphasis on increased food production and self-sufficiency, clearly at odds with the anti-agricultural bias", often created ambiguous policy settings in many countries<sup>53</sup>.

National agricultural aims affected world farm trade via the limits imposed on their own national trade policies, and the configuration of the international trade framework (where the 'national interest'<sup>54</sup> of the United States was crucial). Overall, agricultural protectionism in the highly industrialised countries was a major factor restricting world trade in such products<sup>55</sup>.

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<sup>50</sup> Eva Fernández, Las políticas redistributivas de la España no democrática: Del objetivo industrializador al sostenimiento de los ingresos de los agricultores (1950–1975), *Investigaciones de Historia Económica*, 4, 12, pp. 11–42.

<sup>51</sup> Tracy, *Agriculture in Western Europe*.

<sup>52</sup> Roy Hora, 'La evolución del sector agroexportador argentino en el largo plazo, 1880–2010', *Historia Agraria*, 58, 2012, pp. 145–181; R. Serrano and V. Pinilla, 'The Declining Role of Latin America in Global Agricultural Trade, 1963–2000', *Journal of Latin American Studies*, forthcoming.

<sup>53</sup> FAO, *The State of Food and Agriculture 2000*, pp. 117.

<sup>54</sup> Here, the national interest can be understood as a balance of five institutional and economic factors: strength of national lobbies, relative benefits and costs, public interest (viewed as the Pareto optimal set of measures for each country), electoral system and the style of government; P. B. Philipps, *Wheat, Europe and the GATT: a political economy analysis*, New York: St. Martin's Press, 1990.

<sup>55</sup> GATT, *Trends in International Trade. Report by a panel of experts*, Geneva: GATT, 1958, pp. 87.

## Policy instrument types and trade repercussions

As mentioned above, there were two different -yet complementary- approaches for tackling the farm income issue: (1) agricultural reform focusing on the supply side (regrouping of small holdings into larger units, action to facilitate the ‘inevitable’ movement of labour from farms into other occupations or into retirement<sup>56</sup>), and/or (2) applying some kind of price support measure. The latter was the overwhelmingly preferred way of raising farm income in rich countries. There were, however, many diverse forms of intervention directly affecting farm returns, all of which had different effects in terms of efficiency costs, income distribution, governmental resources required, and of course, trade. After WWII, industrialised countries pursued different aims regarding the prices received by farmers for their sales of many commodities: fixed prices, target prices, minimum prices, guaranteed average prices, etc. Each of these was achieved through the combination of different policies and the implementation of diverse institutional mechanisms. For example, the pursuing of fixed/target/minimum prices often required the control of imports and exports (i.e. the implementation of tariff or non-tariff barriers, quantitative restrictions or prohibitions, etc.). In some countries and with some commodities, limiting output<sup>57</sup> was also part of the scheme. Some of the price support aims required specific policy measures in order to be implemented, and others admitted a certain degree of flexibility in the choice of instruments. Whatever the case, all the above forms of price support had an impact on trade, but some of them were far more distortive than others. For example, the deficiency payment system -frequently used to grant guaranteed average prices- is often said to be the least harmful: it allows prices to be determined by the free market and it provides a means of reconciling support for farmers with the free entry of food imports<sup>58</sup>. However, the system was liable to stimulate increased production (at the expense of imports) insofar as the guaranteed prices were set as levels above international prices. Limiting output is also a policy distorting trade: “it is almost inevitable that a nation that attempts to limit the output of a crop or product that it normally exports, and uses price support as the primary means for transferring benefits

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<sup>56</sup> Tracy, *Agriculture in Western Europe*, pp. 251.

<sup>57</sup> It is generally assumed that small reductions in output would result in much larger price increases, since the elasticity of demand for crop products is low.

<sup>58</sup> Tracy, *Agriculture in Western Europe*.

to farmers, will sooner or later resort to export subsidies”<sup>59</sup>. As mentioned previously, the pursuit of target/fixed/minimum prices often requires the implementation of complementary trade-distorting measures, and they are usually more distortive than those required for the pursuit of guaranteed average prices. Therefore, the aim of raising farm income through price supports was not compatible with the liberalisation of international agricultural trade.

### *Trade policies*

Trade in manufactured products was gradually liberalised after the Second World War, but the same was not true for agricultural products. As has been stated, many forms of domestic intervention were implemented and maintained all over Europe and the U.S after the war. The aim of raising farm income was the main driver of such policies and, therefore, a major determinant of trade policies. “It is not possible to have free international markets for agricultural products and tightly controlled and managed domestic markets”<sup>60</sup>. In fact, the agricultural trade measures that each country adopted were “an adjunct of its domestic farm policies. In most cases, a specific trade restrictive or interfering device has been adopted, not for its particular benefits, but because it is a device that will make it possible for a domestic measure to function”<sup>61</sup>.

*If a nation adopts a farm program that establishes the domestic price for a product above the world market price, it must have some technique for preventing imports from entering its market and making it impossible to support the domestic price at the specified level. And if a nation sets a support price for a product that it exports at a level above the world market price, it discovers that if no action is taken exports fall to zero. Thus in order to maintain its ‘fair share’ of the world market, or for some other equally transparent reason, it resorts to an export subsidy [...] Agriculture surely stands out as the most important single case in which the governments of most industrial countries are willing to permit domestic policy considerations to over-ride so completely their interest in achieving the advantages from increased international specialization in production”<sup>62</sup>.*

International agricultural trade after WWII was, therefore, greatly distorted by trade policies that were an adjunct of domestic farm policies. Intervention was widespread among industrialised countries, and was actually permitted by the set of international

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<sup>59</sup> Johnson, *World Agriculture in Disarray*, pp. 34.

<sup>60</sup> D.E. Hathaway, *Agriculture and the GATT: rewriting the rules*, Washington DC: Institute for International Economics, 1987, pp. 133.

<sup>61</sup> Johnson, *World Agriculture in Disarray*, pp. 20.

<sup>62</sup> Johnson, *World Agriculture in Disarray*, pp. 20.



rules regulating trade. Those rules were, in turn, shaped mostly by the agricultural interests of the United States.

### *GATT*

After WWII plans were made to establish an International Trade Organization (ITO). Its charter was drawn up in Havana, 1947, but the Organization never became a reality (mainly because the U.S Senate refused to ratify it)<sup>63</sup>. However, the trade provisions of the Havana charter and the tariff reductions negotiated in parallel were signed by 23 countries (including the U.S) and formed the General Agreement on Tariffs and Trade (GATT). Those provisions became “the legal basis for the conduct of trade policies of all countries which were and later became contracting parties of that agreement”<sup>64</sup>. The basic principles of the GATT were: most favoured nation treatment (trade benefits conferred on one country should be extended to all other suppliers); national treatment (imports should be treated no less favourably than domestic products); prohibition of all forms of protection except customs tariff; and reciprocity and transparency<sup>65</sup>.

Although it is frequently said that agriculture remained largely outside the GATT, agriculture “has always been fully in the GATT, in the sense that all the provisions of the Agreement have applied to agricultural products”<sup>66</sup>. However, it is also true that special rules were applied to agricultural trade and agricultural protectionism was largely untouched<sup>67</sup>. In fact, “not only did agriculture receive special treatment in the GATT, but the special treatment also appears to have been tailored to the US farm programs then in existence”<sup>68</sup>.

Opposition to special treatment for agriculture came from certain countries whose agricultural policies did not require the use of protective measures or export subsidies (for instance, Australia) and developing countries which had an interest in promoting manufacturing but were denied the means to protect their domestic industries with

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<sup>63</sup> Ingersent and Rayner, *Agricultural Policy in Western Europe and the United States*.

<sup>64</sup> D.A. Sumner and S. Tangermann, 'International Trade Policy and Negotiations', in B. Gardner and G. Rausser (eds.), *Handbook of Agricultural Economics*, vol. 2, 2002, pp. 1999-2005.

<sup>65</sup> Sumner and Tangermann, 'International Agricultural Policy and Negotiations'; P. Moser, *The Political Economy of the GATT: with application to U.S trade policy*, Grösch: Rüegger, 1990.

<sup>66</sup> Sumner and Tangermann, 'International Agricultural Policy and Negotiations', pp. 2003.

<sup>67</sup> Ingersent and Rayner, *Agricultural Policy in Western Europe and the United States*.

<sup>68</sup> Hathaway, *Agriculture and the GATT: rewriting the rules*, pp. 187.

similar measures to those allowed for agriculture<sup>69</sup>. However, the U.S “was prominent amongst the GATT member countries who insisted on agricultural commodities being accorded exceptional treatment under the GATT”<sup>70</sup>. As a result, the following protective devices were eventually either not covered by the original GATT or were included without any provision for regulating their use<sup>71</sup>:

1) Variable import levy protection. These were periodically adjusted to raise the price of imports to a level as least as high as the domestic price, thus giving domestic producers the most complete form of protection from outside competition. They were scarcely in use at the beginning, but later, since their use was not considered in the GATT, they became the main instrument of protection in the new European Community.

2) Voluntary export restraints (VER), or voluntary restraint agreements (VRA) which were, of course, not voluntary<sup>72</sup>. They were mainly used because the exporting country was threatened with import controls expected to be less favourable.

3) The use of producer subsidies was not forbidden. Their application, whether to stimulate domestic production at the expense of imports or to facilitate the disposal of surpluses at a price lower than that prevailing in the domestic market, was only required to be reported by the contracting parties (Article XVI). When this article was extended in 1955, in recognition of the harm that export subsidies could cause to the interests of competing exporters, an exception was made for agricultural products (Article XVI:3). This exception stated vaguely that subsidies should not be used to obtain a “more than equitable share” of world trade. Of course, the interpretation of “equitable share” would be the subject of many subsequent disputes<sup>73</sup>.

4) Quantitative restrictions on both exports and imports were permitted in defined circumstances (Article XI: 2). Quantitative import restrictions “could be applied only if

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<sup>69</sup> Hathaway, *Agriculture and the GATT: rewriting the rules*.

<sup>70</sup> S. Harris, A. Swinbank and G. Wilkinson, *The Food and Farm Policies of the European Community*, Chichester: John Wiley and Sons, 1983, pp. 275.

<sup>71</sup> Ingersent and Rayner, *Agricultural Policy in Western Europe and the United States*. Besides GATT statements regarding specific protective devices, there were also GATT rules related to the practice of state trading. In reality, none of the provisions were enforced and states that used state trading entities were essentially free to operate without regard to the rules normally applied to trade (Hathaway, 1987). For instance, “a country using state trading in a product can limit imports, and thus maintain high internal prices without resorting to overt import quotas [...] On the export side, state agencies can be used to sell products abroad at prices well below domestic prices without resorting to export subsidies”; Hathaway, *Agriculture and the GATT*, pp. 111.

<sup>72</sup> Hathaway, *Agriculture and the GATT*.

<sup>73</sup> Hathaway, *Agriculture and the GATT*.

measures were in force to restrict the production or marketing of the like domestic product or a product which is a close substitute”<sup>74</sup>. This was clearly designed to fit the American case, because the U.S was the only major agricultural producer with acreage and marketing controls (in addition to price supports)<sup>75</sup>. However, it seemed insufficient for the United States, because Section 22 of the Agricultural Adjustment Act (AAA) allowed the government to use quantitative restrictions on any agricultural commodity for which a domestic support or other government program existed (regardless of whether there were output restrictions or not). That is why in 1951 the United States Congress declared that “No trade agreement could be applied in a manner inconsistent with Section 22”<sup>76</sup>. Moreover, in 1955 the U.S obtained the famous Section 22 waiver that allowed it to apply import quotas to agricultural products without adopting measures to restrict domestic output. Importantly, this waiver applied only to the US and not to other members of the GATT<sup>77</sup>. It has been said that this waiver “sanctified the full range of U.S. interference in agricultural trade”<sup>78</sup>.

The U.S-backed exceptions looked “like a laundry list of the trade complaints of American producers”<sup>79</sup>. In general, GATT rules relate to how governments may intervene to protect domestic markets, and the idea is that governments bring their practices into line with these rules. However, “for agriculture the process was exactly the reverse. The GATT rules were written to fit the agricultural programs then in existence, especially in the United States. Since then, the rules have been adopted or interpreted to fit various other national agricultural policies”<sup>80</sup>.

The position of the United States regarding agricultural liberalisation in the post-war years may be somewhat surprising from a historical point of view. After all, powerful agricultural interest groups had historically been advocates of free trade policies, including U.S wheat producers –which had dominated world markets since the 1860s– and cotton growers in the South<sup>81</sup>. Almost all sectors of U.S agriculture supported expanding trade after World War II, but opposition existed to the reinstitution of free

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<sup>74</sup> Hathaway, *Agriculture and the GATT*, pp. 108.

<sup>75</sup> G. Rausser, 'GATT negotiations and the Political Economy of Policy Reform', New York: Springer, 1995, pp. 6.

<sup>76</sup> Ingersent and Rayner, *Agricultural Policy in Western Europe and the United States*.

<sup>77</sup> Ingersent and Rayner, *Agricultural Policy in Western Europe and the United States*, pp. 126.

<sup>78</sup> Rausser, 'GATT negotiations and the Political Economy of Policy Reform', pp. 7.

<sup>79</sup> Rausser, 'GATT negotiations and the Political Economy of Policy Reform', pp. 6.

<sup>80</sup> Hathaway, *Agriculture and the GATT*, pp. 104.

<sup>81</sup> Winders, *The Politics of Food Supply*.

agricultural markets because of the fear that surpluses and falling prices would reappear<sup>82</sup>. The historically unprecedented hostility to free trade that prevailed within the cotton-wheat coalition after the war was a major factor influencing GATT and intimately shaped it to reflect the domestic policy aims of the United States' farming bloc. Importantly, all major Western European countries agreed with the special treatment conferred on agriculture by the GATT<sup>83</sup>. By allowing agricultural protectionism, a permissive international trade framework would better serve the European aims of increasing the revenues of farmers, improving the balance of payments, reducing dependence on the dollar area and achieving food security. Therefore, the negotiations towards European integration throughout the 1950s were not obstructed by the international trade framework<sup>84</sup>.

### **From shortages to surplus disposal**

At the end of the war, the objective of raising farm income was shared by most industrialised countries<sup>85</sup>. However, they had different positions regarding other policy aims, such as the need to increase agricultural production or to solve balance of payments problems. The choice of policy instruments for tackling the farm income issue was, therefore, deeply influenced by national factors such as the level of self-sufficiency in agriculture or the government's willingness or ability to finance specific price support programs. Political economy equilibria and policy outcomes were different in each country, but they followed a similar pattern over the years following World War II: the emphasis changed from raising production at all costs to achieving selective expansion, raising agricultural efficiency and, in some cases, finding ways of getting rid of surpluses. Of course, this pattern accompanied the general tendency of shortages to become surpluses in world markets. European countries suffered a serious lack of agricultural supplies and farm inputs in the aftermath of the war. In France, essential transportation and storage facilities had been destroyed and much agricultural acreage

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<sup>82</sup> A. J. Matusov, *Farm Policies and Politics in the Truman Years*, New York: Atheneum, 1967; W. W. Wilcox, *The Farmer in the Second World War*, Ames: Iowa State College Press, 1947.

<sup>83</sup> L. Coppolaro, 'The Six, Agriculture and the GATT. An International History of the CAP Negotiations, 1958-1967', in K.K. Patel (ed.), *Fertile Ground for Europe?: the History of European Integration and the Common Agricultural Policy since 1945*, Baden-Baden: Nomos, 2009, pp. 201-219.

<sup>84</sup> G. Thiemeyer, 'The Failure of the Green Pool and the Success of the CAP. Long Term Structures in European Agricultural Integration in the 1950s and 1960s', in K.K. Patel (ed.), *Fertile Ground for Europe?: the History of European Integration and the Common Agricultural Policy since 1945*, Baden-Baden: Nomos, 2009, pp. 47-59.

<sup>85</sup> Federico, *Feeding the World*.

remained inaccessible. Italian farmers could not transport their crops to markets because one third of all railways had been destroyed<sup>86</sup>. Bread was rationed for the first time in the U.K in 1946<sup>87</sup>. Desperate conditions led to food riots in Germany and other European countries in 1948. However, all over Europe the shift in emphasis became apparent from about 1953, as agricultural production caught up with demand<sup>88</sup>. In the U.K, fixed product price guarantees were supplemented by production grants or input subsidies and minimum guaranteed prices for cereals (backed by deficiency payments) were introduced in 1953<sup>89</sup>. The Labour Government also restrained the output of certain products to prevent surpluses from increasing. In France, agricultural surpluses began to reappear from 1950 onwards and the aim of self-sufficiency changed into a new plan for developing exports of basic agricultural products<sup>90</sup>. Export subsidies were soon implemented in products such as wheat and sugar. While traditionally importer countries such as Germany were not particularly troubled by surpluses, other European countries such as Belgium soon had to rely on export subsidies in order to dispose of the excess production of certain products (eggs, butter, etc.). Other European countries also had to take measures in order to control overproduction (rice in Italy, the dairy sector in Switzerland, etc.) Nevertheless, as mentioned earlier, it was in the United States where the problem of surpluses first reappeared and led to major policy interventions.

The motivation for export subsidies in the United States arose because world prices were usually lower than American prices, which had been artificially inflated by price supports. In order to keep exports flowing from American ports, the government had to pay trade companies for the difference between wheat prices inland and the gateway price at which foreign customers would buy it at the ports<sup>91</sup>. Export subsidies started to be USDA's principal tool for maintaining exports of U.S wheat in 1949<sup>92</sup>, and they were fully established when Public Law 480 was approved in 1954. Under P.L 480 (the "food for peace" law), government-owned surplus commodities were shipped directly to recipient governments in the developing world, and "payment was accepted for the food in nonconvertible local currencies that could only be spent by the U.S embassy inside

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<sup>86</sup> J. McGlade, 'More a Plowshare than a Sword'.

<sup>87</sup> Collingham, *The Taste of War*, pp. 472.

<sup>88</sup> Tracy, *Agriculture in Western Europe*.

<sup>89</sup> Ingersent and Rayner, *Agricultural Policy in Western Europe and the United States*, pp. 130.

<sup>90</sup> Tracy, *Agriculture in Western Europe*, pp. 274.

<sup>91</sup> D. Morgan, *Merchants of Grain*, New York: Viking Press, 1979.

<sup>92</sup> Morgan, *Merchants of Grain*.

the local economy"<sup>93</sup>. Export subsidies, in the form of international food aid, "became the third pillar of supply management policy"<sup>94</sup>, the other two being price supports and production controls. American food alleviated hunger all over the world, but at the same time it helped the U.S government to dispose of its grain surplus when commercial markets were stagnant<sup>95</sup> and became a convenient tool for American foreign policy. However, as already mentioned, the United States was probably the first, but not the only, country that produced significant grain surpluses and aimed to dispose of them abroad: several countries participating in the process of European integration soon intended to do the same. Of course, this is not to say that EU/US interests have been synonymous. They indeed "constituted very large and significant agricultural powers in global terms, and have disproportionately influenced and dominated the discourse", but "they have played agricultural brinkmanship too many times to secure the deal each wanted"<sup>96</sup>. This dynamic has indeed marked the evolution of international agricultural policy and trade since the 1950s.

### **The level of agricultural protectionism**

In order to measure protectionism in agricultural markets the Nominal Protection Coefficient (NPC) can be employed, as an indicator of the degree to which domestic prices exceed border prices for the same products i.e. it measures the degree of protection resulting from the distortions produced by both sectorial and trade policies.

To measure the degree of protectionism in agricultural markets we calculate an aggregate index of the NPC. This coefficient is defined as follows:

$$NPC_i = \frac{P_{di}}{P_{bi}}$$

where  $P_{di}$  are producer prices and  $P_{bi}$  border prices. The index was constructed from a representative sample of 13 countries and 20 homogeneous agricultural products<sup>97</sup>. Both the producer and border prices were calculated using FAO Statistical Yearbooks<sup>98</sup>.

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<sup>93</sup> R. L. Paarlberg, *Food Politics: what everyone needs to know*, Oxford: Oxford University Press, 2010.

<sup>94</sup> Winders, *The Politics of Food Supply*.

<sup>95</sup> R.C. Eggleston, 'Determinants of the Levels and Distribution of P.L 480 Food Aid: 1955-79', *World Development*, vol. 15(6), 1987, pp. 797-808; Paarlberg, *Food Politics: what everyone needs to know*.

<sup>96</sup> R. Almas and B. Muirhead, 'The Evolution of Western Agricultural Policy since 1945', in R. Almas and H. Campbell (eds.), *Rethinking agricultural policy regimes: food security, climate change and the future resilience of agriculture*, Bingley: Emerald, 2012, pp. 25.

<sup>97</sup> These products accounted for approximately 42% of international trade in 1961. The countries are: Australia, Germany, Belgium-Luxembourg, Canada, China, Egypt, France, India, Italy, Japan, Portugal, Spain, the United Kingdom and the United States. The product groups are: Wheat and wheat flour, Rice,

To construct an aggregate index of the NPC, we first calculated protection coefficients for each product, weighting the share in the coefficient of each country by its weight in the world trade in each product in 1961. Secondly, to calculate the total NPC of agricultural trade we weighted the share of each product group by its weight in agricultural and food trade in 1961.

The NPC, despite its simplicity, nevertheless quantifies trade barriers, both tariff and non-tariff, which are difficult to measure in the long term. However it does not reflect other factors, such as production subsidies, which also distort agricultural trade.

A second deficiency, according to Tyres and Anderson, is its extreme sensitiveness to fluctuations in international prices; in particular, the value of this coefficient falls significantly when prices increase rapidly<sup>99</sup>.

Turning to long-term evolution, and as Graph 2 shows, the level of protection in agricultural markets increased between 1951 and 1970, in contrast to the sharp decrease which occurred in the case of manufactures. The initially severe international protection of agricultural products was even heavily increased, throughout the fifties. It must be emphasised that the decreasing trend reflected by the indicator for the sixties appears to be more a result of falling international prices than of a reduction in protection.

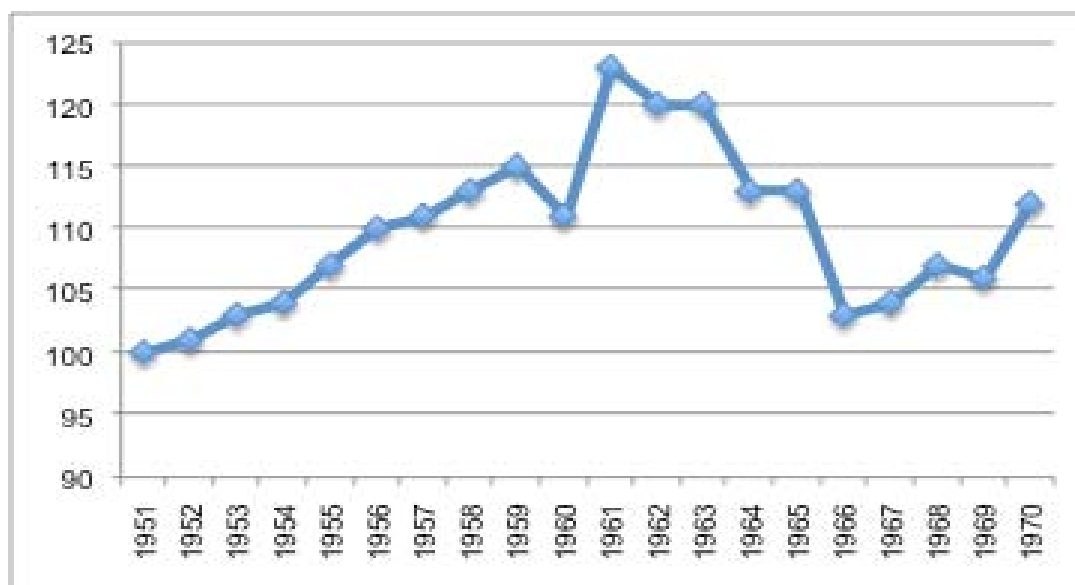
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Barley, Maize, Potatoes, Tomatoes, Onions, Apples, Oranges, Bananas, Bovine meat, Pig meat, Poultry meat, Fresh cow's milk, Eggs, Tobacco, Soybeans, Linseed, Cotton, Wool.

<sup>98</sup> Producer prices in domestic markets are data from FAO production handbooks (for the period 1950-1973), and the FAOSTAT database (for the period 1990-2004). For the period 1974-1990, the series were provided directly by the FAO Statistical Office, since they are not published. Border prices were calculated using the database compiled from the FAO and FAOSTAT yearbooks, dividing the value of imports/exports by their quantities for each country in the sample.

<sup>99</sup> R. Tyres and K. Anderson, *Disarray in World Food Markets: A Quantitative Assessment*, Hong Kong: Cambridge University Press, 1992.

Graph 2. Evolution of the Nominal Protection Coefficient, 1951-1970 (1951=100)



Source: R. Serrano and V. Pinilla, 'Causes of World Trade Growth in Agricultural and Food Products, 1951 – 2000: A Demand Function Approach', *Applied Economics*, 42, 27, 2010, pp. 3503-3518.

To take into account other factors which also distort agricultural trade we can use the nominal rate of assistance (NRA), defined as 'the percentage by which government policies have raised gross returns to producers above what they would be without government intervention (or lowered them, if the NRA is below zero)'<sup>100</sup>. Reasonably reliable estimates exist of the impact of these policies on agriculture in a significant group of European and developed countries since 1955. The figures are telling: the NRA was positive in weighted average terms in the developed world at least since 1955, the first year for which data are available. Thus, developed countries' public policies increased farm incomes by 44% in Western Europe, 39% in Japan and 13% in the US in the years 1955-59. In later years support to farmers grew considerably, especially in Western Europe and Japan<sup>101</sup>.

<sup>100</sup> K. Anderson, *Distortions to Agricultural Incentives. A Global Perspective, 1955-2007*, Washington/New York: Palgrave Macmillan and the World Bank, 2009.

<sup>101</sup> Anderson, *Distortions*.



## **Conclusions: Disarray in world agriculture and the new food regime**

The above described set of national and international policies led to a major “disarray” in world agriculture<sup>102</sup>. The farm subsidies operating in rich countries tended to distort production and trade, causing “too much food to be produced in regions not well suited to farming [...] and too little to be produced in the developing countries of the tropics, where agricultural potential is often more bountiful”<sup>103</sup>. On the one hand, agricultural trade was severely restricted by import control measures, but on the other hand it was actually expanded by the use of export subsidies and restitutions. On average, agricultural trade experienced considerable growth throughout the 1950s and 1960s, although this growth was significantly lower than that of industrial products. The Harberler Report<sup>104</sup> considered agricultural support schemes to be the principal culprit of reduced agricultural trade, and “recommended that countries refrain from using trade policy to achieve domestic agricultural stabilization”<sup>105</sup>.

The disarray in world agriculture was visibly significant because of the distortions in prices and trade, the large cost imposed upon taxpayers and consumers, the uneconomic expansion of farm output in the industrial countries and the associated effects upon the developing countries<sup>106</sup>. Some of the principal features of the new post-war food regime were, according to Friedmann<sup>107</sup>: grain surpluses, sustained mainly for domestic reasons by the American government; American policies, particularly food aid, designed to dispose of these surpluses abroad; an increase in the American share of world grain exports; a consequent downward pressure on world prices and on grain production in other countries; “cheap food” policies in developing countries and the opening of new grain markets in those countries. The international agricultural trade framework that was shaped by the GATT after World War II reflected the interests of a powerful coalition of forces within U.S. agriculture. Importantly, this international framework did not

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<sup>102</sup> Johnson, *World Agriculture in Disarray*.

<sup>103</sup> Paarlberg, *Food Politics: what everyone needs to know*, pp. 104.

<sup>104</sup> GATT, *Trends in International Trade*.

<sup>105</sup> Almas and Muirhead, *The Evolution of Western Agricultural Policy since 1945*, pp. 32.

<sup>106</sup> Johnson, *World Agriculture in Disarray*.

<sup>107</sup> H. Friedmann, 'The Political Economy of Food: the Rise and Fall of the Post War International Order', *American Journal of Sociology*, vol. 88, 1982, pp. 248-286.

obstruct negotiations for a Common Agricultural Policy (CAP) in Europe<sup>108</sup>, which can be considered as the culmination of interventionist agricultural policies.

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<sup>108</sup> Negotiations for a Common Agricultural Policy for Europe over the 1950s were not uncritically embraced by U.S officials and farm lobbies. However, Washington adopted a pragmatic policy and decided to negotiate in the framework of the CAP rather than opposing the process of European integration (L. Coppolaro, 'The six, agriculture and the GATT'). It has been pointed out that the benefits of a politically united and capitalist Europe for the United States outweighed the costs of a custom union (M. Spoerer, '"Fortress Europe" in long-term perspective: agricultural protection in the European Community, 1957-2003', *Journal of European Integration History* 16 (2):143-162. In addition, negotiations resulted in corn and soy products being exempted from European import controls and, as a result, the United States became essentially the sole supplier of feedstuffs such as corn and soybeans.. See B. Winders, *The Politics of Food Supply*.