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ABSTRACT

In the last two hundred years, agricultural trade has grown at a remarkably rapid rate. In the first globalizing wave, international trade was based on the exchange of primary products for manufactured goods. This provided important opportunities for complementarity in certain countries on the periphery that took advantage of the opportunity to base their economic development on the growth of their exports and the linkages between them and the rest of the economy. However, most of the agricultural exporting countries, obtained few benefits from this model of development. In the second wave of globalisation, an intra-industrial trade increasingly replaced this pattern of trade. In addition, the more developed countries tended to protect their agricultural production, which have been a major obstacle to agricultural trade.

Keywords: Agricultural and Food Trade, Globalisation, World Periphery.

RESUMEN

En los dos últimos siglos, el comercio agrario ha crecido a un ritmo rápido. En la primera globalización, el comercio internacional se basó en el intercambio de manufactura por productos primarios. Ello ofreció oportunidades de complementariedad a algunos países de la periferia que aprovecharon esta oportunidad para llevar a cabo un desarrollo económico basado en el crecimiento de sus exportaciones y en los efectos de arrastre de ellas con el resto de la economía. Sin embargo, la mayor parte de los países exportadores de productos agrarios, lograron escasos beneficios de este modelo de desarrollo. En la segunda oleada globalizadora, este patrón de comercio fue progresivamente reemplazado por otro basado en el comercio intra-industrial. Además, la mayor parte de los países desarrollados tendieron a proteger su producción agraria, lo que constituyó un serio obstáculo para el comercio agrario.

Palabras clave: Comercio agrario, Globalización, Periferia mundial.

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1.- Introduction

Between 1870 and 2000, international trade in food and agricultural raw materials underwent unprecedented growth. This long period may be divided into two distinct stages. In the first of these, lasting until the Second World War, agricultural and food trade grew at a very similar rate to that of total trade. In the second period, however, its relative growth, both in terms of volume and value, was considerably lower, to the extent that, by the end of the period, it represented a very minor part of trade as a whole.

International trade expanded continuously since the end of the Napoleonic wars until WW I, and the reasons for this growth are clear: incomes rose as the cost of maritime and overland transport fell, resulting in market integration and a general trend towards free trade, encouraged most particularly by the United Kingdom. Moreover, a highly stable international monetary system, based on the gold standard, gradually included more and more countries (O'Rourke and Williamson, 1999; Estevadeordal *et al.*, 2003). Farm products were a key component of the increase in international trade, approximately half of which consisted of food products and agricultural commodities. Moreover, inter-industrial trade (i.e. between manufactured goods and primary goods) is fundamental to the explanation of international exchanges of goods. In the first wave of globalization, many economies of the non-industrialized periphery based their development on export-led growth models (Anderson, 2017; Martín-Retortillo *et al.*, 2017; Pinilla and Rayes, 2017). Therefore, as their economies specialized in that direction, their weight in world trade, and especially in agricultural and food products, increased.

WW I and, above all, the disruption of the international economy caused by the crisis of 1929 and the collapse of the free trade system, radically affected trade patterns (Findlay and O'Rourke, 2007). First, the war caused a temporary contraction of trade, which gradually recovered during the 1920s and resumed a clear growth path by the end of the decade. The 1929 crash, however, had far-reaching effects; international trade shrank in terms of both

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volume and value. Agricultural products were not immune to these problems, suffering heavily from falling prices and the protectionist barriers erected in this period.

Following WW II, and especially during the years of the "golden age of capitalism", the world economy accelerated at an unprecedented pace. Generalized growth, the liberalization of international trade, improvements in transport and communications, and exchange-rate stability provided a tremendous boost to international trade. Furthermore, trade grew at a faster rate than production, causing markets to become intensively integrated.

Thus, agricultural trade experienced unprecedented growth between 1951 and 2000, expanding much faster than in earlier periods (Aparicio *et al.*, 2009). This period also witnessed changes in the direction, constitution and structure of international trade, in favour of the exchange of manufactured goods between industrialised nations. Thus, trade between the developed countries increasingly took the form of exchanges of differentiated products and the circulation of semi-finished goods and parts between the subsidiaries of vertically-integrated multinational companies. Consequently, the percentage of total international trade represented by agricultural goods declined sharply in this period. Thus, the North-South trade pattern forged in the period of the first globalisation was gradually replaced by a pattern based principally on exchanges of manufactured goods. In the case of agricultural trade, flows of processed goods between high-income countries grew significantly.

2.- International agricultural and food trade in the first wave of globalisation

2.1.- Globalisation and agricultural trade

In the second half of the nineteenth century, international trade expanded rapidly. The estimations performed by Lewis (1952 and 1981) for primary products as a whole indicate an annual growth rate of 3.7% between 1850 and 1900. This rate of expansion was considerably higher in the third quarter of the century than in the fourth, which is logical when we take into account the first globalisation, which began around 1850, the low initial level of exchanges, and the return to protectionism that took place in the last two decades of the century, as a result of the "invasion" of Europe by agricultural products from overseas and the Russian Empire (O'Rourke, 1997).

Rising incomes, technological change, and falling transport costs were key factors in this pronounced growth in international trade (O'Rourke and Williamson, 1999; Meissner *et al.*, 2011; Pinilla and Ayuda, 2010). The trend towards liberalism, in the form of a multilateral trade network in which bilateral treaties played a central role, and the existence of the gold standard, which other countries (following the example of Great Britain) progressively adopted, smoothed the way for this expansion of world trade (Jacks, 2005 and 2006).

Table 1
World agricultural and food trade
 By volume, annual growth rate

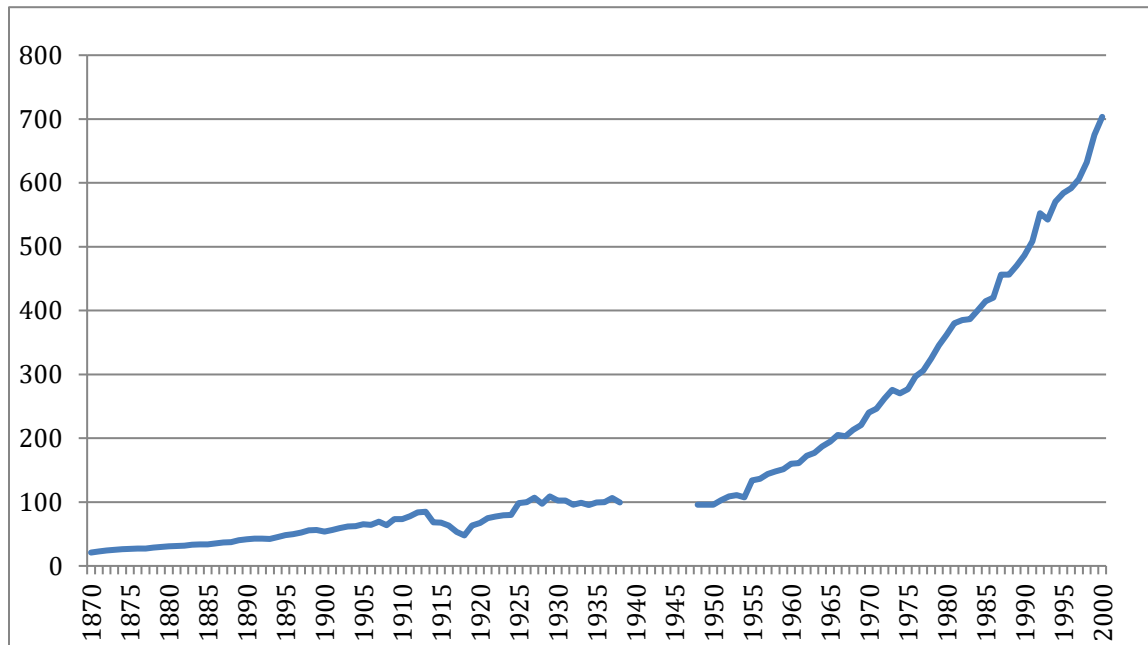
1850-1902	3.7
1850-1875	4.6
1875-1902	3.0
1903-1938	1.4
1903-1913	3.3
1913-1918	-10.9
1918-1929	7.8
1929-1938	-1.1
1951-2000	4.0
1951-1973	4.6
1974-2000	3.5
2000-2010	3.4

Source: 1850-1902, Lewis (1981); 1903-2000, Aparicio *et al.* (2009), 2000-2010: Own calculation based on United Nations COMTRADE database. The Lewis' data for 1850-1902 are all for primary products and include non-agricultural commodities such as minerals. Neither the Lewis data nor its main source, which is the publication of the League of Nations, Industrialisation and Foreign Trade, distinguish between agricultural commodities and the rest. Therefore in this table and in figures and 1 and 2, we have assumed that the growth rate of the agricultural trade was similar to that of the primary commodity trade. From this assumption we have used the index numbers of the Lewis series to push back our agricultural trade data from the early 20th century.

Between 1900 and 1913, trade in agricultural and food products prolonged the growth trend witnessed in the preceding century, which then fell sharply during WW I, to then recover and expand rapidly until the crash of 1929, when it initially dipped and then stagnated (Table 1 and Figure 1). Over this period as a whole, agricultural trade grew at an annual rate of 1.4%, considerably less than the rate of 3.7% achieved in the second half of the nineteenth century. Thus, the pattern of international trade until 1914 was very similar to that of the late nineteenth, and was only interrupted by the outbreak of war.

Initially, trade plunged during these years, since Europe (the principal importer of agricultural products in this period) was the region most affected by the war, and its countries were obliged to divert huge sums of money in order to finance the conflict. Consequently, there was little cash available to fund food imports, although these were needed more than ever to compensate for the distortion of production caused by the war; money, if available, was spent on war material. Second, one of the Allied strategies was to blockade Germany, in the hope of achieving a swift victory by undermining the morale of soldiers at the front through war-weariness and food shortages at home and the effects of hunger on the civilian population (Offer, 1989). Finally, the shortage of merchant shipping to carry cargoes not directly related to the conflict, and the potential risk to maritime traffic considerably increased transport costs, further depressing agricultural trade.

Figure 1
International agricultural and food trade
 By volume, 1952-54=100



Source: 1870-1902: Lewis (1952) and (1981); 1903-1938: and 1951-2000: Aparicio *et al.* (2009).; 1949-54 González *et al.* (2016).

The period between the end of the First World War and the beginning of the Depression was marked by a rapid recovery in international trade in physical terms. This process commenced in 1919 and by 1925 trade was once again at 1913 levels, and between 1921 and 1929 the world volume of exports grew at an annual rate of 7%.

The recovery in the volume of trade was mainly due, in the short term, to strong European demand. After the war the blockade was lifted, while other obstacles to trade that were directly related to the war disappeared. Furthermore, European agricultural production had suffered severely from the war, and countries had no alternative but to purchase food or agricultural raw materials in international markets until output recovered. Despite strong growth in the world demand for food, problems soon became apparent in the countries producing and exporting primary goods. European agriculture began to recover during the 1920s, although international prices for some foodstuffs and agricultural commodities fell. At the same time, many European countries erected tariff barriers against food imports, thereby intensifying protectionism.

The United States also played its part in the consolidation of protectionism, raising import tariffs, after the 1929 crash, to their highest ever level. By 1931, almost all European countries had significantly increased their own import tariffs in response; the average level of

tariffs in continental Europe rose to 39.5% in 1931, compared to 24.6% in 1913 and 24.9% in 1927 (Bairoch, 1989: 91-92). The agrarian tariffs were even higher, with levels over 50%. In the three greatest agrarian import markets of continental Europe (Germany, France and Italy) the increase in tariff levels was enormous, reaching in Germany a general agrarian tariff level of 82.5% (Liepmann, 1938: 106). The tendency to seek protection from economic depression by insulating domestic markets gained strength in the following years, as further restrictions on foreign trade, such as quotas, import licenses, exchange controls, etc. were adopted.

Economic crisis, and the general spread of protectionism worldwide, caused average international prices to fall by approximately 50%, which particularly affected countries producing agricultural goods (Ocampo and Parra, 2010); between 1929 and 1932, the value of international trade declined even more sharply than its volume, a phenomenon known as the contractive spiral of international trade.

From 1929 to 1934 the volume of international trade in agricultural products diminished by 13% in absolute terms, although a slight recovery in the latter years of the decade resulted in an annual negative growth rate of 1.2% for the 1930s as a whole.

2.2- The role of the periphery in international trade in agricultural and food products

Since the mid-nineteenth century, non-European countries, such as the Latin American republics, British Dominions, and the territories colonized by the European powers, tended to insert themselves as exporters of primary products in the international division of labor that took place in the first globalisation. European demand for these products, in the context of the reduction of international transport prices and of trade liberalization, generated interesting opportunities to increase exports from those countries specializing in such products.

To achieve the increase in exports, it was first necessary to reorientate land towards crops for which there was demand in the international market, or to cultivate new lands. In certain countries, such as the settler economies (Argentina, Australia, Canada, New Zealand, Uruguay) the vast existing plains, used until then by the indigenous populations, had first to be conquered. Subsequently, there commenced a formidable process of agricultural frontier expansion usually carried out by European immigrants (Willebald and Juambeltz, 2017)². In the tropical regions of the world, this agricultural reorientation was generally directed in the colonies by an elite of large metropolitan landowners, and in the Central American republics by multinational companies, with large plantations being the most common way of organizing production for export (Byerlee and Viswanathan, 2017). However, in some countries, small

² In Settler economies, the agricultural sector's share of GDP remained fairly constant, and until trade costs fell substantially, exports were concentrated in a small number of high-volume goods (Anderson, 2017).

local farmers were also actively involved in the development of export-oriented production, stimulated by expectations of greater profit.

The most successful cases for the economic development of this type of specialization were the countries recently colonized by European powers (New Europes), including Argentina, Australia, Canada, New Zealand, and Uruguay, which undertook in this period an intense process of territorial colonization and expansion of their exports³. An abundant provision of land capable of being designated for agricultural production, characteristic of temperate zones, a significant supply of workers proceeding from Europe, and a considerable entry of foreign capital, facilitated and stimulated this process of export-led growth.

In the case of Settler countries, the rapid development of their exports of primary products and the linkages between the export base and the rest of the economy produced spectacular economic growth and substantial diversification of their economies. In 1913, these countries had the highest per capita income in the world, along with the first-comers of European industrialization, and the United States. Their industrialization had already clearly taken off, very often with the support of protectionist measures, as for example in the case of Australia since 1900.

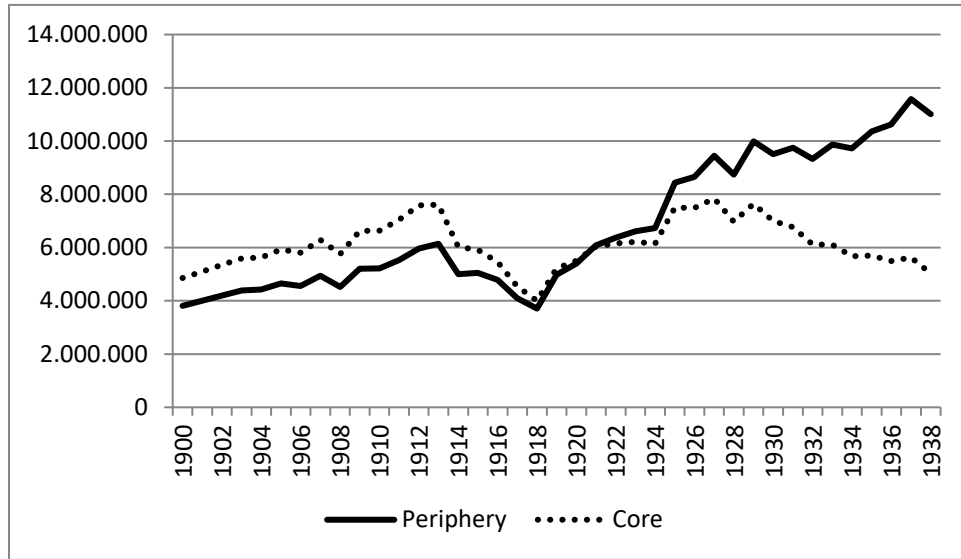
Most of the remaining non-European world oriented their economies in this same direction, although the results were much more modest. The growth of exports was much slower and the linkages with the rest of the economy were very weak. As a consequence, income levels remained low and the economy did not experience deep transformations. A comparison of the levels of per capita exports and per capita income for the Latin American republics shows a clear correlation between both variables (Bulmer-Thomas, 1994; Martín-Retortillo *et al.*, 2017).

Up to the beginning of the twentieth century, we have no data on agricultural trade that would allow us to analyze its evolution on a global scale. However, the new data for total trade provided by Federico and Tena (2016) show that, until 1890, there were improvements in the shares of trade for Oceania, Africa, and Latin America. Between 1850 and 1914, exports from the Latin American countries increased at an impressive annual rate of 3.5% (Bértola and Williamson, 2006: 28). Since 1890, the growth of exports from the periphery was substantial and all non-European regions, except Oceania, gained substantial weight in world trade (Federico and Tena, 2016).

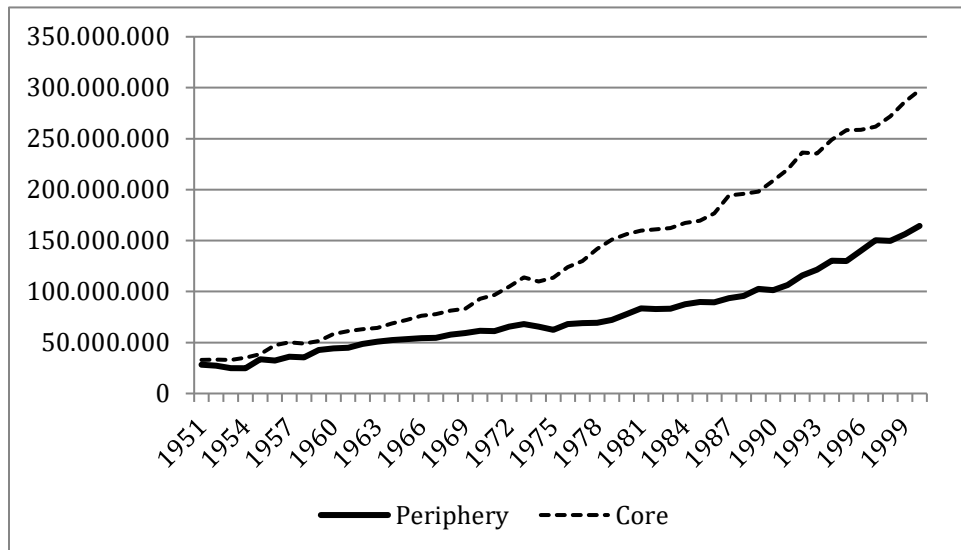
³ We include in this group only the Settler economies whose development was based on the exploitation of under-utilized natural resources and the export of the products obtained to the core countries, and where the European immigrant population ended up being a large majority of the population. See Sutch (2013). The Europeans had hardly colonized these countries until the nineteenth century and, given the high transport costs, it was not profitable to export their agricultural products, similar to the European ones. All of these countries were ranked among the world's top fifteen economies in terms of per capita income in 1913.

Figure 2
World agricultural trade: The Periphery vs. the Core countries

A. 1900-1938 Volume index at 1925 prices (USA \$)



B. 1951-2000 Volume index at 1980 prices (USA \$)

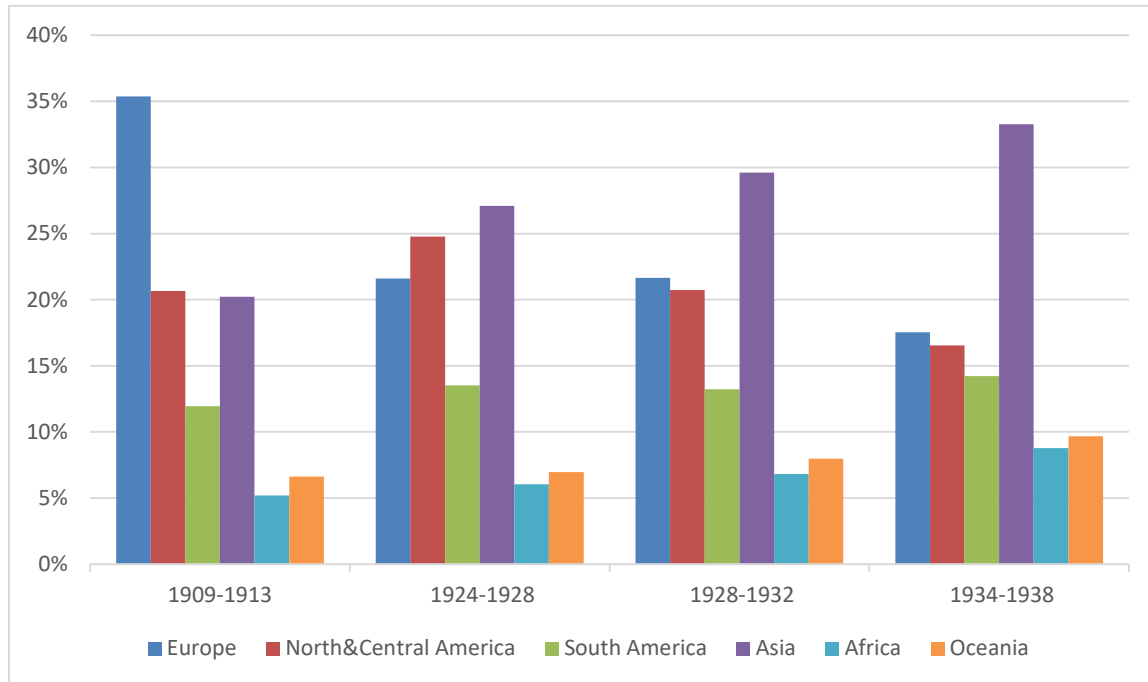


Source: Own calculation based on Institut International d'Agriculture (I.I.A., 1910-1939) and FAO (1947-2000) and FAOSTAT (2009).

Figure 2 shows that after WW I the world trade in agricultural products underwent crucial changes. The dynamism of the countries of the periphery contrasts with the stagnation

and subsequent fall of the core countries⁴. The countries of the periphery increased their agricultural export specialization, while the more developed countries turned to industry. In addition, the problems of some large European agricultural exporters, such as Russia since 1917, seriously affected the results of the central countries.

Figure 3
Breakdown by regions of world trade of agricultural and food products, 1900-1938
 Exports at 1925 prices, %



Source: Own calculation based on I.L.A. (1910-1939).

Figure 3 allows for a greater degree of regional disaggregation. Until 1929, all regions of the world, except Europe, substantially increased their exports of agricultural products. Especially important was the case of Asia, which surpassed all others in its expansion. The impact of the crisis and the 1930s depression was very uneven. Paradoxically, the most dynamic behavior during the 1930s took place in the European colonies (and the British dominions), while the independent republics of Latin America saw their exports stagnate. The developed countries experienced a much greater impact on their exports of agricultural products and food. This diversity of results could be explained mainly by the impact of the growing protectionism of the European countries and the United States. The colonies usually had privileged access to the metropolitan markets, which greatly alleviated the effect of

⁴ We consider countries on the periphery to be those located outside the European continent that did not experience a significant process of industrialization in the nineteenth century, including Africa, Latin America and the Caribbean, Asia (excluding Japan), and Oceania.

protectionism on their exports, while the territories located in tropical areas had the advantage that their products did not compete with European or North American production, which also facilitated the maintenance or increase of their exports.

Finally, it should be noted that the expansion of export agriculture in Africa and Asia was later than in Latin America. This explains why their productive capacity grew very quickly after WW I.

2.3.- The structure of agro-food exports in the periphery

The structure of agri-food exports in the different regions of the periphery shows clearly differentiated profiles. South America, for example, was specialized in food, which accounted for more than two-thirds of its agri-food exports (table 2). Within this group of products, the two most important were cereals and tropical products, particularly coffee, and meat also had significant weight. In fact, this specialization reflected the profiles of two very different sub-regions. On the one hand, the Southern Cone, and particularly Argentina and Uruguay, were large exporters of wheat, maize, linseed oil, and meat. On the other hand, countries in the tropical latitudes, such as Brazil or Colombia, exported mainly plantation products and had a significant weight in world coffee exports.

Table 2
Breakdown of exports in agricultural and food products, 1900-1938
At 1925 prices, %

EXPORTS/REGION	AFRICA		ASIA		OCEANIA		SOUTH AMERICA	
	1909-13	1934-38	1909-13	1934-38	1909-13	1934-38	1909-13	1934-38
Food and live animals chiefly for food	21.4	35.5	46.6	32.1	42.6	58.1	69.5	71.2
Meat and meat preparations	0.1	0.8	0.2	0.1	12.2	11.7	10.7	10.9
Dairy products and eggs	1.9	1.5	2.1	1.1	7.5	18.2	0.3	0.6
Cereals and cereal preparations	5.9	6.1	16.6	10.5	11.9	13.0	24.1	26.4
Vegetables and fruit	2.5	4.9	2.8	2.7	0.9	2.0	3.1	3.0
Sugar, sugar preparations and honey	6.3	7.3	10.5	8.6	9.9	13.0	3.0	4.2
Coffee, tea, cocoa, spices & manufactures thereof	3.6	11.9	13.8	8.0	0.2	0.2	27.7	25.0
Beverages and tobacco	9.3	8.6	2.1	1.4	0.0	0.1	0.9	0.9
Crude materials, inedible, except fuels	64.9	50.8	50.5	63.9	57.3	41.8	29.6	27.7
Oil seeds and oleaginous fruit	15.4	15.7	11.4	8.5	1.2	1.9	5.0	7.8
Crude rubber	4.1	0.7	4.7	31.2	0.0	0.1	4.4	1.0
Textile fibres	45.4	34.4	34.4	24.2	56.0	39.9	20.2	18.9
Animal and vegetable oils, fats and waxes	4.4	5.1	0.8	2.6	0.1	0.0	0.0	0.2
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Own calculation based on I.L.A. (1910-1939)

Africa and Asia were, however, specialized in the export of agricultural raw materials. The trajectory of both regions in the first third of the twentieth century diverged. While in Africa, the weight of agricultural raw materials declined, because of the rapid increase in exports of plantation products such as coffee, cocoa, and tea, the opposite happened in Asia, especially from the boom in rubber exports.

3.- World agricultural trade in the second wave of globalisation, 1950-2000

3.1.-The evolution of agricultural and food trade

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; imports were reduced and these regions suffered massive devastation of their agriculture (Brassley, 2012). Elsewhere, other regions were only indirectly affected by the war, 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 from the late 1930s to the mid-1940s (Pinilla and Aparicio, 2015).

The return to pre-war trade levels occurred in a relatively short time. According to our estimates (Figure 1), 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 so dramatic (Brassley, 2012). 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.

The second half of the twentieth century saw unprecedented economic growth, particularly in the decades of capitalism's golden age. *Per capita* incomes rose, generally, the world over until the crisis of the 1970s, and that expansion continued overall in the ensuing decades, although the pattern of development varied widely. This phenomenon is reflected in the spectacular growth of international trade. In this context, agricultural trade experienced unparalleled growth between 1951 and 2000, expanding much faster than in earlier periods.

Two clearly distinct phases can be observed in this evolution. The first of these took place between 1951 and 1973 (the years of the 'golden age'), when international agricultural trade grew continuously, at an annual growth rate of 4.6%. Farm trade grew faster in this period than it had at any other time since the early nineteenth century. The second, between 1973 and 2000, saw trade grow at an annual rate of 3.5%, a pace somewhat lower and less stable than in the preceding years.

The strong economic growth that had begun after WW II came to an end in the early 1970s. The world economy was wracked by the energy crisis, inflation, exchange-rate

instability, slower growth in the industrialised nations and a general atmosphere of uncertainty. Despite recession, instability, and increased trade barriers, agricultural exports responded strongly to the first energy crisis, and average annual growth of 5.1 per cent was achieved between 1974 and 1980, the highest figure in the second half of the twentieth century. This vitality of trade was encouraged by a very rapid improvement in the real prices of agricultural products after their gentle but persistent decline from 1951 until 1972⁵.

The second oil crisis forced governments to toughen their monetary and fiscal policy, resulting in a painful economic slowdown that particularly affected developing countries. Demand for imports fell and problems of overcapacity emerged, reflected in the steep fall in international commodity prices (Serrano and Pinilla, 2011b). Structural adjustment programs were launched to mitigate the effects of the crisis, and agricultural trade increased only very slowly in the early 1980s. The poor performance of trade compared to the economy in general suggests the existence of significant constraints. Trade growth slowed, in part, due to the stagnation of demand. The two main reasons for the stagnation of demand for foodstuffs were the decline in the rate of growth in the world population and the saturation of what had become a mature market. At the same time, growth in agricultural trade was blocked by increasing protectionism. In an effort to shield farmers from the crisis, Europe, Japan, and the United States, among others, raised non-tariff barriers sharply and sought to isolate their agriculture from falling prices and volatility. In addition, real prices of agricultural products experienced a downward trend that persisted until the mid-1980s, when prices tended to stabilise (Serrano and Pinilla, 2011b).

Finally, the years between the 1980s and 2000 could be described as the most significant political transformation since the end of WW II. A sequence of extraordinary events resulted in the collapse of Communism in the Soviet Union and Eastern Europe, and the emergence of a new political, economic, and trade order (Findlay and O'Rourke, 2007). The 1990s were characterised by wide divergence in the economies of the leading industrialised nations, the drive toward European integration, rapid economic growth in the United States, a severe recession in Japan, and growth in many developing countries, especially China. Two consequences of events in the preceding period were to have a positive influence on agricultural trade. These were the massive debt loads of many developing countries, and the deterioration in the terms of trade. Those countries that had formerly operated policies penalising the agro-export sector now sought to expand production for export as a way of increasing revenues, despite slack international demand for agricultural goods in this period. This rise in agri-food trade was enhanced by lower trade barriers resulting from the liberalisation of international markets in agricultural products and commodities, the impact of Regional Trade Agreements covering agricultural trade, and accelerating income growth after

⁵ On the evolution of the terms of trade of agricultural products, see Serrano and Pinilla (2011b) and Pfaffenzeller (2007).

the crisis, especially in Asia, which would gradually become a major importer of agricultural products.

The primary cause of agricultural trade growth during the second half of the twentieth century was the growth in world income, although Regional Trade Agreements and, especially, the creation of the European Union, also played a major role. Finally, falling agricultural prices and the exchange rate stability that lasted until the early 1970s also contributed to growth in agricultural trade, although to a much lesser extent (Serrano and Pinilla, 2010).

It was also in this period when the direction, make-up, and structure of international trade shifted in favour of exchanges of manufactured goods between industrialised nations. In fact, the percentage of total international trade represented by agricultural goods declined sharply over this period. While agricultural and food products accounted for 43.0 per cent in 1951, this share had shrunk to just 6.7 per cent at current values by 2000. Among the reasons for this significant loss of importance, and doubtless one of the most important, is the relative fall in prices. This is evident when we consider the difference between the drastic loss of share of agricultural trade in total trade in terms of value, compared to the more moderate (albeit important) decline in terms of volume, which demonstrates an extremely serious fall in relative prices. This occurred most sharply between 1973 and 1982, and especially conditioned the incomes of countries specialised in the export of the most basic products (Serrano and Pinilla, 2011b).

With regard to the causes of the loss of share in terms of volume, one reason was the generalised protectionism in the international markets for agricultural products (Anderson, 2009 and 2016). While other types of trade, such as manufacturing, enjoyed greater multilateral liberalisation of their markets, strong market intervention caused agricultural trade growth to be based on the proliferation and success of regional trade agreements, in addition to important changes in consumption patterns related to rising income levels. Thus, the slower growth in farm trade had much to do with the significant fall in agriculture's share of world GDP. The smaller share of intra-industrial trade for the majority of agricultural products was also crucial. The home market effect for agricultural exchanges had an extremely limited importance, which explains why these markets grew less dynamically than those of manufactured goods and total trade (Serrano and Pinilla, 2012).

The period also witnessed changes in the direction, composition, and structure of international agricultural trade. On the one hand, agricultural trade became increasingly concentrated among the developed countries. On the other, trade in high-value-added products and processed foods grew ever more important, tending to displace basic products (Serrano and Pinilla, 2014).

3.2.- Changes in the geographical distribution of trade: The reversal of traditional roles in agricultural and food trade

International economic integration made a comeback in the second half of the twentieth century, but the North-South pattern forged in the period of the first globalisation was gradually replaced by a trade pattern based principally on exchanges of manufactured goods between developed nations. In the case of agricultural trade, flows of processed goods between high-income countries grew significantly. In general, the industrialised nations supported their agriculture in pursuit of food self-sufficiency, a goal that most had adopted after the scarcity of the war and post-war years. Importantly, widespread state support of the agricultural sector in these countries was also driven by the aim of tackling the so-called ‘farm-income problem’, thus trying to guarantee farmers a ‘fair’ income (Tracy, 1964).

This strategy, which Díaz-Bonilla and Tin (2002) call Import Substitution Agriculture (ISA), was deployed by all of the world’s leading countries, with Europe and Japan at the forefront (González *et al.*, 2016). Access to new technologies made self-sufficiency possible, reduced the volume of imports, and even allowed these countries to become net exporters of agricultural products from very early on in the period. To take into account how much these protectionist policies distorted 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). 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. On the contrary, developing countries heavily discriminated against their farmers, specifically by setting strong anti-trade biases in the structure of assistance (Anderson, 2009 and 2016).

The above-described set of national and international policies led to a major “disarray” in world agriculture (Johnson, 1987; Tyres and Anderson, 1992). The farm subsidies operating in rich countries tended to distort production and trade. 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. When it comes to developing countries, some implemented import subsidies -which could foster farm trade to a certain extent- but they also, and commonly, taxed food exports. The net effect of government intervention on farm trade was probably negative, mainly because the assistance to import-competing commodities was, on average, significantly more important than that conceded to exportables (GATT, 1958; Anderson, 2016). 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 on the developing countries.

The fall in European imports, especially bulk products, in relative terms is a clear example of this process, as may be observed in table 3, which reflect the main changes in the regional distribution of trade in agri-food products. The counterpoint was the rise in food imports to Asia, which was undergoing a far-reaching process of industrialisation, demographic growth, and urbanisation. Thus, Asian imports of farm products and foodstuffs grew across the board, and the continent's share increased in the four product categories considered.

In the case of exports, changes in the geographical make-up of trade flows are even more marked. Governments in the developed nations provided agriculture with more support than any other sector, while many developing nations discriminated against 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 (Serrano and Pinilla, 2016).

As a result, the countries 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 relative share in the regional distribution of exports. Moreover, some of these countries not only saw their exports fall in relative terms, but also experienced a sharp deterioration in the ratio of agricultural exports to imports. Thus, Africa and Asia became net importers of agricultural products, where they had once been net exporters.

The flip-side 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 44 per cent by the end of the century.

The lion's share of this increase is explained by the combination of two factors. First, the rise in self-sufficiency was made possible by technological progress, high levels of protectionism, and support for farming through the Common Agricultural Policy (CAP). Second, domestic markets were progressively deregulated, which greatly favoured the increase in intra-regional trade. The creation of the European Union as a common market is a case in point, as it brought about a spectacular increase in farm trade between the member States (Pinilla and Serrano, 2009; Serrano and Pinilla, 2011a).

The antithesis of the European case is Latin America. The significant decline in this region's share is explained by four factors, namely the retention of exports due to the demographic boom, specialisation in low income-elasticity products, the failure of agreements aimed at achieving regional economic integration, and the anti-export bias of economic policies (Serrano and Pinilla, 2016).

Table 3
Percentage regional distribution of trade of agricultural and food products
US dollars, 1980

A. Exports

Region	1952-59	1966-73	1980-87	1994-00
<i>Total agricultural and food products</i>				
Europe	32	36	41	44
North and Central America	24	24	25	21
Oceania	8	6	6	5
Asia	14	14	14	17
South America	13	9	9	9
Africa	8	10	5	4
Total	100	100	100	100
<i>Bulk products</i>				
Europe	24	30	33	37
North and Central America	30	33	37	30
Oceania	11	9	8	7
Asia	14	13	12	16
South America	10	6	5	7
Africa	12	9	4	3
Total	100	100	100	100
<i>Plantation products</i>				
Europe	19	15	20	35
North and Central America	19	20	24	13
Oceania	2	3	3	4
Asia	24	22	21	24
South America	25	20	17	4
Africa	12	20	15	10
Total	100	100	100	100
<i>High value foodstuffs</i>				
Europe	54	55	60	56
North and Central America	15	12	12	17
Oceania	15	10	7	7
Asia	5	11	12	12
South America	9	7	6	7
Africa	2	5	2	2
Total	100	100	100	100
<i>Processed products</i>				
Europe	44	53	52	48
North and Central America	29	25	20	19
Oceania	1	1	1	2
Asia	11	10	14	19
South America	4	5	10	10
Africa	11	7	2	2
Total	100	100	100	100

B. Imports

Region	1952-59	1966-73	1980-87	1994-00
<i>Total agricultural and food products</i>				
Europe	59	58	54	48
North and Central America	19	16	13	14
Oceania	1	1	1	1
Asia	14	18	24	29
South America	4	2	2	3
Africa	3	4	6	5
Total	100	100	100	100
<i>Bulk products</i>				
Europe	62	56	48	38
North and Central America	8	7	7	12
Oceania	1	1	0	1
Asia	21	29	33	37
South America	3	3	3	5
Africa	5	5	8	8
Total	100	100	100	100
<i>Plantation products</i>				
Europe	45	49	54	49
North and Central America	35	29	20	18
Oceania	1	1	1	1
Asia	10	15	18	24
South America	5	1	2	2
Africa	3	5	5	5
Total	100	100	100	100
<i>High value foodstuffs</i>				
Europe	71	68	60	58
North and Central America	15	17	15	14
Oceania	1	1	1	1
Asia	6	10	19	23
South America	4	2	2	2
Africa	3	3	4	2
Total	100	100	100	100
<i>Processed products</i>				
Europe	61	63	56	49
North and Central America	20	18	14	13
Oceania	2	1	1	1
Asia	8	11	20	29
South America	3	2	2	3
Africa	6	5	7	5
Total	100	100	100	100

Source: Own work based on FAO (1947–2000) and FAOSTAT (2004). Europe includes the Soviet Union and, after 1991, Russia and the ex-Soviet economies.

Figure 2 clearly shows the differences in export behaviour between the countries of the centre and the periphery. Both groups of countries began in 1950 with a similar volume of exports of agricultural and food products. However, by the end of the twentieth century, the exports of the centre's countries were almost double those of the periphery.

4.- Final remarks

In the last two hundred years, agricultural trade has grown at a remarkably rapid rate. Trade has also grown faster than production, which has led to greater international integration of the agricultural and food markets. However, there are notable differences between the two waves of globalisation. In the first globalizing wave, international trade was based on the exchange of primary products for manufactured goods, with an international division of labour based on the comparative advantages of the respective countries. This provided important opportunities for complementarity in certain countries on the periphery that took advantage of the opportunity to base their economic development on the growth of their exports and the linkages between them and the rest of the economy to boost their industrialization. However, most of the agricultural exporting countries, mainly located in the tropics, obtained few benefits from this model of development.

In the second wave of globalisation, this pattern of trade was increasingly replaced by an intra-industrial trade, in which the exchange of manufactured goods has been its most dynamic engine. In addition, the more developed countries tended to protect their agricultural production with high protectionist barriers, which have been a major obstacle to agricultural trade. Finally, the developing countries themselves turned to the inward-looking models of economic growth, mainly based on the substitution of industrial imports, penalizing their agrarian export sectors and also damaging the agricultural trade. As a result, the second half of the twentieth century saw an important increase in the participation of the developed world in the export of agricultural products and foodstuffs, at the same time as its share in agricultural imports declined. Logically, traditional exporters of agricultural products saw their participation in world agricultural trade fall significantly.

The final years of the twentieth century and the first decade of the twenty-first century seem to mark an appreciable change of trend. Trade in agricultural and food products has continued to grow at a rate similar to that of the last quarter of the twentieth century (table 1), but a change in development models in the 1990s, a certain smoothing of agricultural protectionism in more developed countries, and a strong boost in the demand for agricultural products from emerging countries, mainly China, has favoured developing countries regaining prominence in such trade. Between 2000 and 2010, the share of the periphery in world exports of agricultural products and food has increased by about eight percentage points. The regions of the developing world that have been the stronger protagonists of this new export dynamism

have been South America and Asia, while the rest of Latin America and Africa have not experienced a similar expansion of their trade in agricultural products and foodstuffs⁶.

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⁶ Based on United Nations Comtrade database.

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