The Spanish autarky and the Marshall Plan. A welfare loss analysis.‡

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Abstract

This paper provides an assessment of a country's welfare loss when it goes from an allowed trade situation to a non-allowed one based on international trade theory analysis. The evolution of domestic import and export prices in Spain for those years fits international trade theory assumptions for a more restricted commerce situation. This allows calculating an upper bound of welfare loss of 8% over the total GDP during the Spanish autarky period (1940-58 agreed-upon dates). Furthermore, data let to considerer the main autarky years not those commonly admitted but 1947-55. This period, and its welfare loss, is clearly marked by the exclusion of Spain of the Marshall Plan and the end of international isolation for Spain that the Madrid Treaty with U.S. supposed.

JEL Codes: F 00, F 14, N 74.

Key Words: Autarky, international trade, Marshall Plan, welfare loss Spain.

1. Introduction

International trade theory calculates a country's gains obtained from international commerce comparing welfare in equilibrium with no trade with welfare that the country achieves after opening up to trade and reaching a different sort of equilibrium. Through the comparative advantage literature there are a lot of theoretical papers that explore the commonly accepted hypothesis that the opening to the free commerce raises welfare of the nation.[1] However, from the empirical point of view, this is a low explored field. Due to the fact that the comparative advantage is established in relative terms on autarky prices and these are not usually known, most empirical papers have taken autarky prices relating them to measures more visible, such as technological differences or factor supplies. In doing this, they did not explain the contribution of the comparative advantage and the specialization of the economy when it opens to the welfare of the

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[1] See Corden (1984) for a survey of the main theoretical aspects of the comparative advantage.

country.[2] Although there are some recent exceptions. One of them is Bernhofen and Brown (2005). They study the contribution to the income of Japan of the opening up to the free trade of this nation during the nineteenth century. They use this historical fact as a natural experiment to measure the gains from trade. They obtain an upper bound of these gains about 8 to 9 percent of Japan's GDP.

As some eminent economists have pointed out,[3] an economy where trade has not been allowed should be contrasted with one where trade has been allowed to measure the gains from trade. It seems likely that if the situation is the opposite, that is, from an allowed trade equilibrium to a non-allowed trade one, there will be some losses in welfare. Taking this idea, Irwin (2005) has analyzed the loss of welfare that the US economy suffered because of the trade embargo (1807-09) that President Jefferson imposed during the Napoleonic wars, prohibiting all US ships taking any cargo to foreign countries and foreign ships from US ports. His calculations show that this embargo negatively affected about 5 percent of 1807 U.S. GNP.

In this way, we find another example, or natural experiment, of a country going from an allowed trade position to another where trade was quite well restricted: the case of Spain during the so-called autarky period. This country suffered a Civil War from 1936 to 1939 and then a dictatorship of General Franco. During the first part of this regime, as we will see later on, the country stayed out of the European Recovery Plan (ERP), popularly known as the Marshall Plan, and those initiatives linked to it in order to open the European markets, such as the Organization for European Economic Cooperation (OEEC) and the European Payments Union (EPU). These exclusions supposed a period of isolation in the international political scene and a non-allowed international trade time in Spain that extended from 1940 to 1958: "The undemocratic nature of the Franco regime caused Spain's exclusion of all the initiatives at international cooperation after World War II. The institutions which resulted form these initiatives embodied the sort of welfare capitalism responsible for one of the fastest and most solid patterns of economic growth, social consensus, and democratic political stability which Western Europe has ever enjoyed. The main consequence of exclusion from this institutional set was thus to condemn the Spanish population to a lower

[2] Most empirical studies of this literature have focused on the identification of the reasons of international commerce. See Harrigan (2003) for a revision of the main papers.
[3] Helpman and Krugman (1985) page 39.

standard of living than would have been the case had Spain not become a political *rara avis* among its peers."[4] The aim of this paper is to analyze the influence of restrictions to trade in Spain on the welfare of that country and attempt to measure the welfare loss.

Previous works have given different versions about the importance of the trade restrictions. During Franco era, some papers claimed that the international isolation until 1953 was the main factor of the slow recuperation after the Civil War.[5] In the other hand, some critical authors with the dictator have argued that the boycott was no very hard and the international commerce was an opportunity for Franco more than a restriction.[6] This paper tries to contribute to the debate with a measure of missed welfare during those years.

From the international perspective, it is interesting to know how was the experience of the unique Western Europe country that stayed out of the Marshall Plan, the most successful foreign aid program, in order to learn on the consequences of not be in this kind of international recovery plans, and apply the conclusions to other future aid programs. As an example of the threats of stay out of the ERP, Jean Monnet advised before the Plan to U.S. that without financial aid, French recovery would take longer and operate within a closed economy. This was finally the case of Spain. This country could serve as an example of how a nation could suffer staying out of this kind of plans. While Western European countries continued their recovery, Spain was on the verge of international bankruptcy. The ERP supposed 13000 millions dollars of financial aid very necessary in Europe to import capital goods with positive influence in the whole economy. It was, as well, a boost in the international and political relations among European countries. Spain, been isolated of these arrangements, deprived its economy to the necessary margin to accelerate the recovery and modernization. Thanks to recent data series, such as Carreras and Tafunell (2005) and Prados de la Escosura (2003), the task of measure the welfare loss can be developed more easily and confident.

[4] Guirao (1998) page 189.
[5] Velarde (1963) and Paris (1965).
[6] Esteban (1976).

In next Section, I present some historical background necessary to understand the period object of study. Section 3 provides the theoretical framework to analyze the change in welfare from a situation of allowed trade to another of non-allowed commerce. Section 4 sets out some economic hints that will be useful to calculate the welfare loss. In Section 5, the main calculation are shown to preset that the welfare net loss adds up to 8% of the total Spanish GDP from 1940-58. Last Section concludes the paper.

2. Historical main facts

In order to develop a welfare study, we need first to have a look to the history of those years to understand the links between economics and politics and their implications.

In the years of World War I, Spain was a parliamentarian monarchy with a young king, Alfonso XIII, in the throne. The political system was a heritage of the XIX century. During the Great War, Spain stayed neutral and, from the point-of-view of the economy, it was benefited from this situation. After the conflict, an economic and social crisis began followed by a political crisis. The coup of General Primo de Rivera in 1923 installed a military dictatorship under the umbrella of the monarchy. However, at the end of the twenties, the dictatorship was very weak. This regime finally ended when, in 1931, the republican parties won the local elections and Alfonso XIII exiled with the proclamation of the 2nd Republic.

In the early 1940's situation was marked by post Spanish Civil War period, World War II, and its post-war period. The Spanish Civil War happened from 1936 to 1939 and the origin was the coup of General Franco against the Government of the 2nd Republic, ruled at that time by left-side parties. After 3 years of war Franco won and imposed a personal dictatorship prolonged until his death, in 1975, and the monarchy was restored.

At the beginning of Franco's Regime, most of the Western democracies did not recognize new General Franco's government because of its origin and its non-democratic nature. However, during the war and the immediately pos-war period, Europe needed the Spanish supplies. During the war, it was because of its liability as a neutral power. After the war, European countries required a source of non-dollar supply in a general ambiance of low level of dollar earnings. Political aspects of the Spanish regime were left in a side.[7]

However, after the very beginning of European reconstruction, the political characteristics became more important. The public opinion was asking for a stronger action against Franco's regime, viewed as the last bastion of the authoritarian regimes that they had been fighting against. The blockade started when, after WWII, on 12 December 1946 the General Assembly of the UN condemned Franco's dictatorship and recommended withdrawal of all embassies in Spain in its resolution 39(I). This resolution was approved after the description of Franco's regime by Poland in the Assembly as a threat to world peace. The reasons were three: elevated concentration of Spanish troops along the French border, the numerous German population in Spain, and the works carried by German scientists on the production of atomic bombs in Spain. These arguments were qualified by US and British intelligence services as very doubtful. The UN measure was not very significant because of the low number of ambassadors: three of them were gone, staying only those of Portugal, the Vatican, and Switzerland, but an important point in the isolation policy against the regime.

In 1947 Spain was expelled from the Worldwide Postal Organization, from the International Telecommunication Union, and from the International Civil Aviation Organization. The lack of representation in these key international organizations for trade and the political isolation made the world commerce more difficult to Spain.

However, more important was for Spain, though neutral in WWII, the fact that it was punished and not included in the European Recovery Program (ERP). The Marshall Plan was signed in Paris on July 12 1947 by all the European Western Countries, except Spain and Finland. Finland rejected to join the ERP because of its special status with respect to the U.S.S.R. The Eastern countries and the U.S.S.R. previously rejected the invitation to join the Plan. Spain was never invited (the only country in Western Europe not invited to join). Several facts were the causes of this exclusion.

[7] For a complet view on the links between politics and economics, the Marshall Plan, and the reconstruction of Spain, during those years, see Guirao (1998).

One reason to be out of the Marshall Plan was the origin of the Franco's dictatorship, not really its political system. At that time, Greece and Portugal were also dictatorships and they were invited to the European Recovery Program, but their geneses were not as turbulent as the Spanish one. The intervention of the Nazi Germany and the fascist Italy in favour of Franco was not a good point for Madrid government. For U.S. public opinion, go toward deeper relations with Franco it was unacceptable. For the U.S. military interest, the Spanish strategic value was low. In any case, in February 1948, Marshall declared that U.S. had no objection to Spain joining the ERP as far as the 16 ERP countries agreed. British trade unions and the Labour British Foreign Secretary complained that aim.

For the British, they cannot accept the inclusion of Spain because it would increased the negative image that U.S.S.R. were trying to impose about the ideology of the plan. The British government considered politically impossible to cooperate with Spain within the Marshall Plan.

In France, that had already closed the border with Spain, things were even worst in the internal political arena. The French Communist Party were very strong and if Spain were invited, France could not join the European Recovery Program. French proposal to the Three Power Conference of 27 June 1947 was the participation of all European countries in the Marshall Plan except Spain.

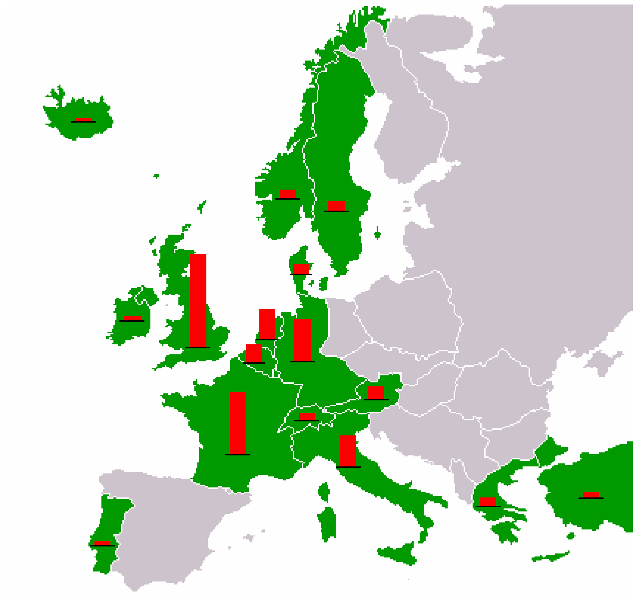
The rest of ERP nations left the French and British to settle the problem. Furthermore, any delegation did not accept the invitation to discuss the incorporation of Spain presented by Portugal at the Commission for European Economic Cooperation.

This exclusion was carried out in spite of the disappointment of the last Spanish republican Prime Minister in the exile, Juan Negrín, chief at that time of the socialist group, with a remarkable communist view. However, the exclusion of Spain was a condition for the success of the Plan.

Previously to the exclusion, Spain seemed to be sure to be included because from 1945 to 1947 the Spanish economy reached a high compatibility between its economic policy and its contribution to the European recovery by trade. The Spanish authorities drafted a program of imports to be financed by the Marshall Plan in order to reconstruct the country. Unfortunately for that recovery, Spain was excluded.

The Marshall Plan supposed an economic aid of 13000 million dollars from 1947 to 1952. However, the importance of the European Recovery Plan must be considered not only in nominal value but also because it allowed importing some commodities very important for the reconstruction, such as capital goods from U.S., in spite of their payment troubles. The Organization for European Economic Cooperation (OEEC) and the European Payments Union (EPU) were created to support some aspects of the ERP. The OEEC was founded in 1948 with the task to organize the distribution of Marshall Plan aid and to implement treaties for the liberalization of trade between European ERP-countries. The EPU, founded in 1950, was also an instrument to boost intra-European trade acting as a central clearinghouse through which the 18 Marshall Plan countries could make all their trading payments with a system in which surpluses and deficits were balanced for each country with the whole group. It was not only that Spain stayed outside the ERP aid, but also outside the international organisms born from it.

Figure 1. Countries included in the Marshall Plan and amount of aid.



In the domestic political scene, the fascist group of the Spanish regime embraced the "autarky ideals" that Spain was forced to follow as a nationalistic way to improve the economy, under a demagogical campaign of self-supply. The foreign pressure was exploded to promote domestic political support to Franco's personal power and to legitimate repression. The exclusion was the perfect excuse to implement even more nationalistic and interventionist policies. This reaction was previously anticipated by the Policy Planning Staff of the State Department in October 1947, which advised international isolation would make Franco to ask for domestic support as a proof of patriotism. Also, this office claimed for a relaxation of official restriction to trade and for financial assistance because excluding Spain from economic aid seemed unnecessary and ineffective. These considerations were finally correct and Franco demanded the Spanish proud to stay out of any international pressure and to be capable to recover with their own resources. This period is named the "first Francoism". As an example of this auto-supply way policy, the Spanish legislation increased, in July 1947, the limits to the contribution of foreign capital to capital formation, balance of payments, and productivity, affecting all companies.[8] These rules stayed until 1957.

At that time, Spanish international commerce could not be considered as free due to those kind of domestic policies and to the international isolation. A clue to understand that to be outside of the Marshall Plan implied to stay as a close economy was the offer of the Spanish administration, once they realised that Spain was out of the ERP, to U.S. of a commitment toward economic liberalization in change of American aid. Unfortunately, in that moment, the U.S. administration rejected the proposal. It was the weak European efforts, later on, to reach military integration that caused a change in the U.S. policy toward Spain.

It is necessary to note that Spanish commerce did not reduce to zero. Spain signed bilateral agreements with some Western countries. However, the fact that not to be in the ERP nor in the EPU deprived Spain of the benefits of that system and was a great obstacle to expand the international trade. It is clear that this politically unfriendly environment in the international panorama and the self-supply policy imposed some barriers and costs to the Spanish growth and they had some negative impact in welfare

[8] Foreign holdings of more than 25% in Spanish firms were forbidden, as well as the transfer of dividends and royalties.

Some signs of international openness were visible beginning in 1953 with some new international treaties. The first one was the Concordat signed between Spain and the Vatican. More important was the Madrid Treaty (September 23rd, 1953) with the United States that created collaboration in the defence and economic fields between these two countries. Thanks to the Madrid Treaty, 589 millions of dollars arrived to Spain for several concepts from 1955 to 1958.[9]

In the context of the cold war era, in 1955, Spain, a declared anti-Bolshevik country, was admitted as a member of the UN and afterwards in other international organizations as the IMF, the World Bank, and the OECD.

The end of the isolation period for Spain is situated in historical books in 1959. This is due to different factors. In 1957, with a worsening economic situation (inflation, loss in the value of the peseta, and a high deficit in the balance of payments) and after two months of student protests, there was a very important ministerial change: a group of young technocrats linked to the religious group Opus Dei entered into the government. In 1959, this new government presented the Stabilization Plan, which abandoned the "autarky ideals" and sought more openness of the Spanish economy to international trade, foreign direct investment, and admittance to international economic institutions. As a colophon, on December 22nd 1959, President Eisenhower, in the context of the block policy of the cold war, visited Spain certifying the end of its international isolation. Thus, the agreed-upon date, among historians for the Spanish autarky experience was from 1940 to 1958.

The analysis will centre in those years when free trade was not been allowed and autarky and it will show the loss welfare produced in the autarky period. In order to do that, next Section presents the theory which supports later calculations.

3. Theoretical framework

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9 Martínez Ruiz (2003), p. 113.

International trade theory considers that if a country moves from an autarky situation to a free-trade status it will experiment some gains in welfare. Thus, if the evolution is the opposite, the country will have losses in welfare. The objective is to measure this welfare loss. An easy graphical intuition is given in the following Figure.

Figure 2. Welfare loss

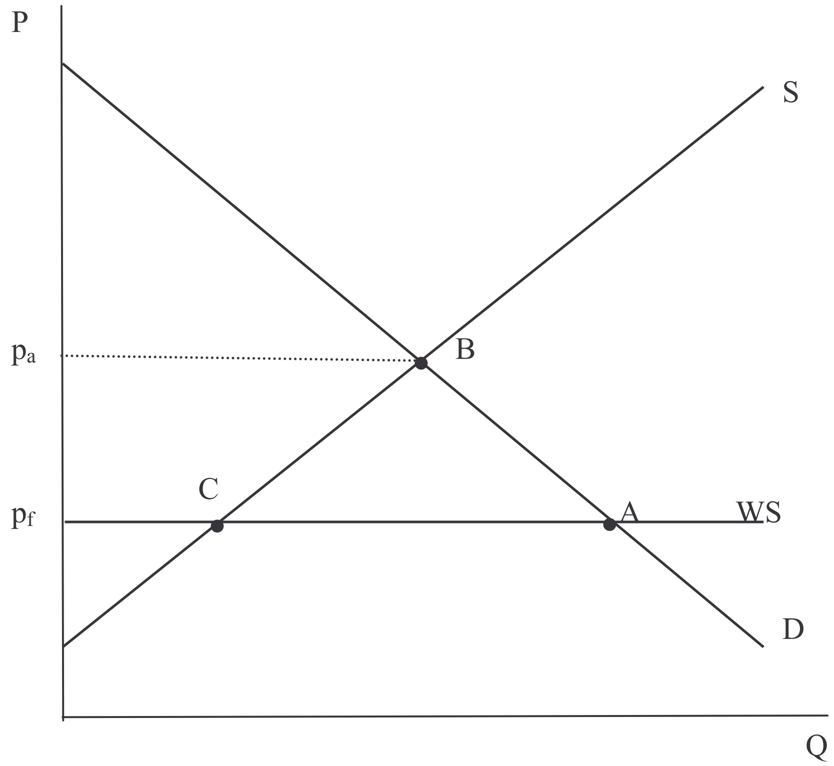


Figure 2 supposes a country open to free trade that is importing a determined good, being p_f the world price for such good. In this situation, the equilibrium is situated in the point *A*, when the domestic demand of the country (line *D*) crosses the horizontal world supply (line *WS*) at level p_f. If the country closes to the international commerce, the price in autarky, p_a, will be fixed by the intersection of domestic demand the domestic supply (line *S*). The welfare net loss caused by the new non-trade situation in the economy is represented by the area of the triangle defined by vertexes *ABC*.

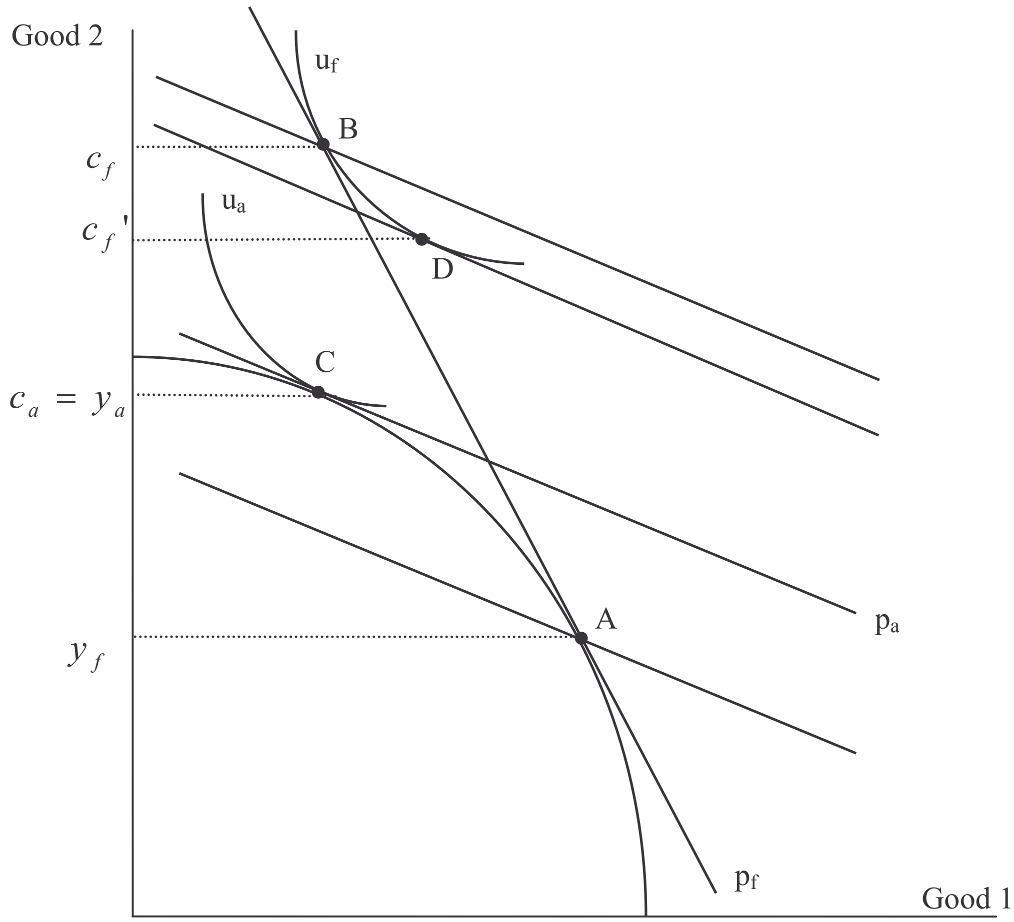
Using a simple general equilibrium background, following Grinols and Wong (1991), that deadweight losses from non-trade can be figured out with the difference in the utility level of the allowed trade situation and the utility level of the non-allowed one:

$$\Delta W = e(p_a, u_a) - e(p_a, u_f) \qquad (1)$$

This equation, with subscripts *a* for the autarky situation and *f* for the free trade period, represents the difference in the utility level associated with the autarky consumption bundle, u_a, and the utility level associated with the free-trade consumption bundle, u_f. Both levels computed at domestic autarky prices, p_a.

We can see in next Figure the variation of welfare in a context of two goods, *1* and *2*, when going to an autarky situation coming from a free trade state, from good *2* perspective.

Figure 3. Price and bundle variation



The line p_f, in Figure 3, represents relative prices in the free trade situation (p_1/p_2). Here, we are assuming that this economy has a comparative advantage in good 1 because relative prices under free trade are larger than relative prices under autarky, the line p_a. In the free trade situation, the level of production, y_f , is determined by the point in which p_f is tangent to the production possibility frontier: point *A*. Furthermore, the level of consumption is represented by c_f, when p_f is tangent to the indifference curve, u_f, point *B*. Then, in this situation, the economy is importing good 2 and exporting good 1.

When autarky is established domestic prices are p_a. Now, the production and consumption levels, y_a and c_a, are situated in the point where p_a is tangent to the production possibility frontier and to the indifference curve, u_a, point *C*. In the autarky equilibrium, only that is been producing by itself is consumed by this economy and there are no exports.

If the economy goes from the free trade situation to the self-supply state, relative prices change: the price of the exported good, in this case good 1, goes down, and the price of the imported good increased.

Taking into account equation (1), the welfare variation, ΔW , is the consumption bundle in autarky in the indifference curve u_a, c_a, evaluated at autarky prices, p_a, minus the optimum consumption bundle in the indifference curve u_f for prices in autarky, c_f', evaluated at p_a. The last consumption bundle is represented by point *D*. We can see in the previous Figure that, from the perspective of good 2, $\Delta W = (c_f' - c_a) \cdot p_a$, and this can be breakdown in:

$$\Delta W = (c_f - y_f) \cdot p_a - (y_a - y_f) \cdot p_a - (c_f - c_f') \cdot p_a \qquad (2)$$

The first addend[10] represents the amount of net imports evaluated at autarky prices, the second one is the substitution effect in production as a result of the change in relative prices, and the last one is the substitution effect in consumption for the same cause.

[10] One can easily study Figure 3 to decompose those elements: we need to calculate the distance in the vertical axis, from good 2 perspective, between c_f' and c_f. This distance is the total, $(c_f - y_f)$, minus $(y_a - y_f)$ and $(c_f - c_f')$, all of them evaluated at p_a.

As we already know from previous Section, trade in Spain in those years was not totally reduced to zero. We need to add to the welfare effect tariff revenues and net international transfers. Using the definition of the expenditure function and following Grinols and Wong (1991), we can express $e(p_a, u_a)$ as:

$$e(p_a, u_a) \equiv p_a \cdot c_a = p_a \cdot y_a + (p_a - p_a^*) \cdot (c_a - y_a) + B_a \quad (3)$$

Being p_a^* the world price vector during the autarky period, and B_a the net transfers or borrowing from abroad during the autarky time. Following Irwin (2005), the adjustment in welfare is:

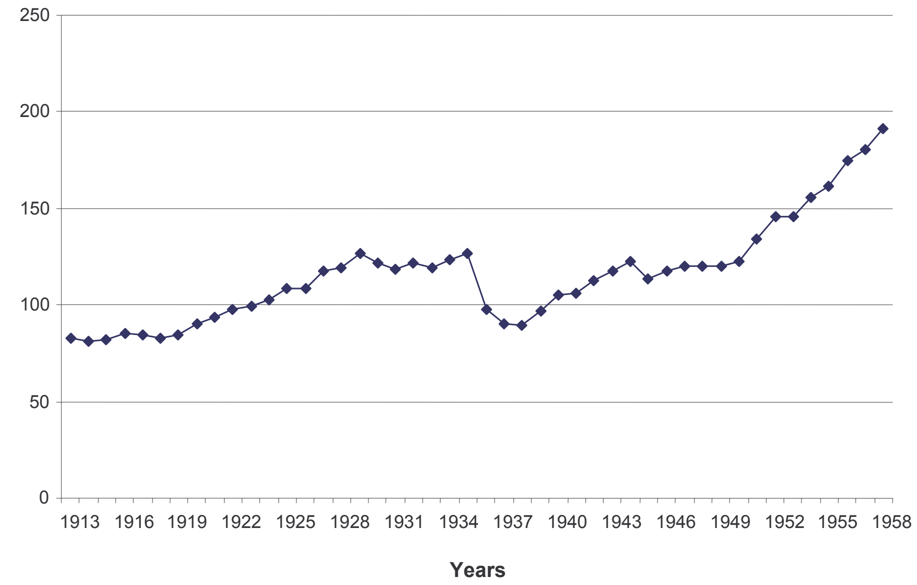
$$\Delta W = -(c_f - y_f) \cdot p_a + (y_a - y_f) \cdot p_a + (c_f - c_f') \cdot p_a + (p_a - p_a^*) \cdot (c_a - y_a) + B_a \quad (4)$$

All welfare Figures during the autarky period are presented in this equation: the first addend is the variation of welfare due to the change in prices valued at the amount of trade in the free trade period; the next one is the substitution effect on production; then, the substitution effect on consumption; the tariff revenue and, finally, net transfers. These addends will serve in Section 5 to calculate the welfare loss on those years. However, previously, we check in the following Section the characteristics of some economic numbers of those years related with welfare and with our calculations.

4. Economic clues

Looking to the Spanish GDP of our studying years, Figure 4, we see the decrease of it from mid 30's. The Spanish Civil war (1936-39) was the primary cause. However, it was not until mid 50's that Spain recovered the level achieved before the Civil War. Precisely, Spain did not achieve the highest level of the industrial production per capita before the Civil War until 1952. Other European economies with higher destruction during the WWII attained it faster, like Italy in 1949, Germany in 1949 as well, or France in 1951, only a few years after the end of the conflict. The length of the rationing for Spaniards was thirteen years after the Civil War, from 1939 to 1952. Then, this long walk to the recovery from 1939 to 1952 was more difficult because of the influence of WWII in the Spanish economy and because of the welfare loss during the autarky period.

Figure 4. GDP 1913-58, prices 1913 (millions of euros)



Author's calculations with data from Prados de la Escosura (2003).

The low level of international commerce in Spain during the 40's and 50's is clearly exposed in Figures 5 and 6. Both graphics are pointing out the big decrease of international trade in the level of imports and exports compared with other years of the recent Spanish history. It is remarkable the collapse of international commerce in the autarky period, 1940-58. Both exports and imports highly declined compared with previous periods and they did not get over until the sixties.

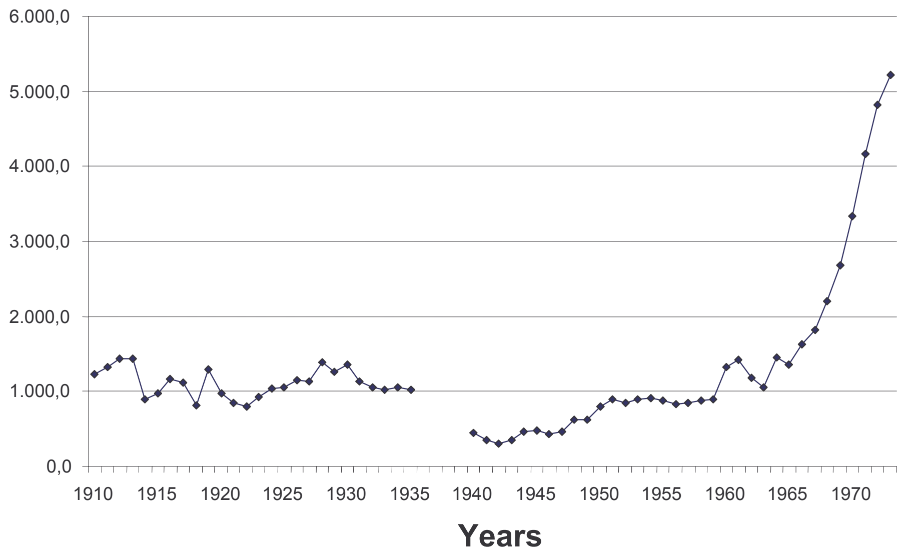


Figure 5. Spanish Exports, constant prices

Data from Tena (2005).

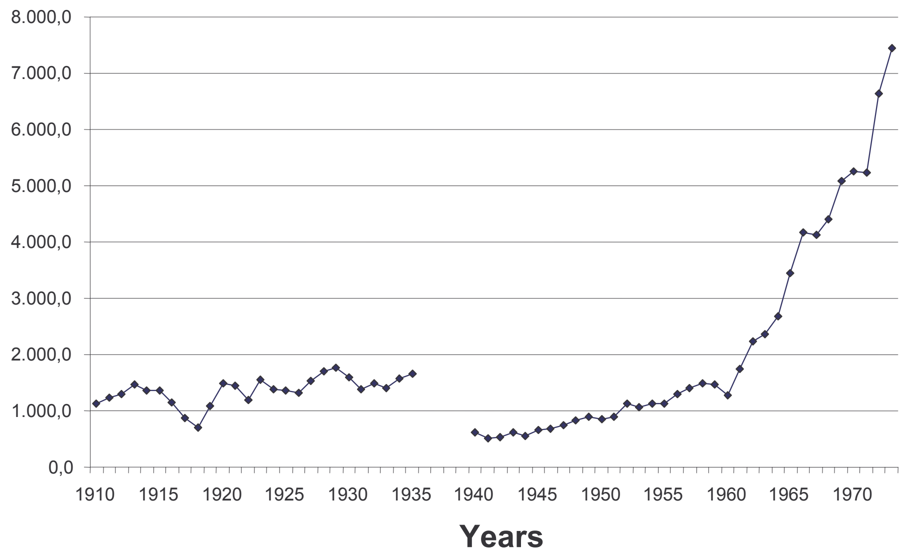
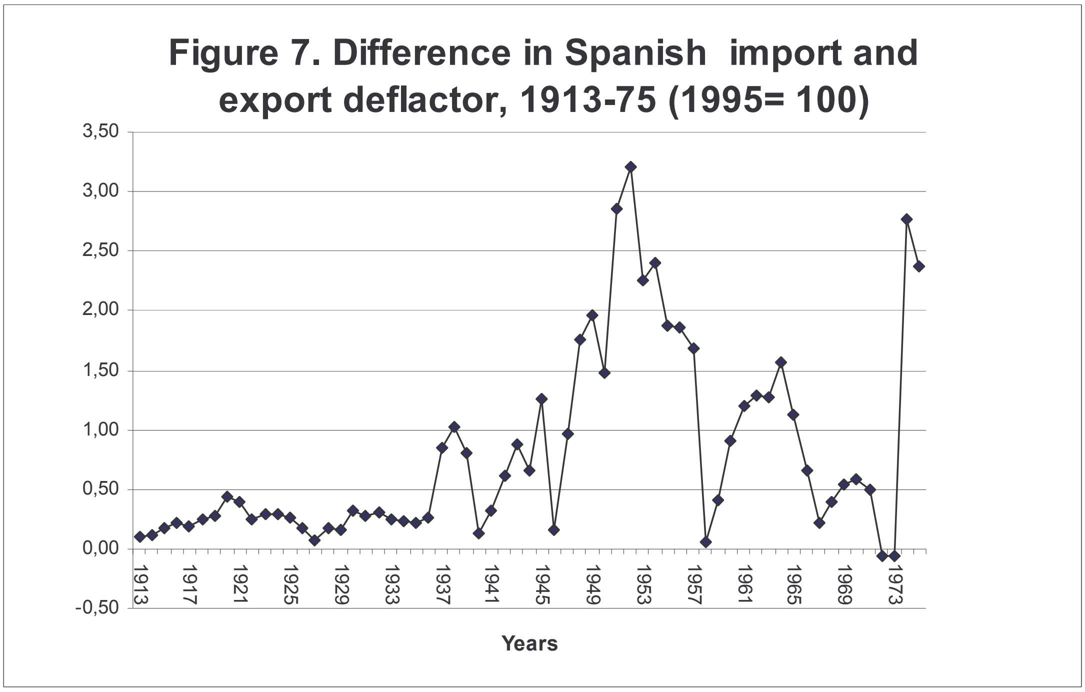


Figure 6. Spanish Imports, constant prices

Data from Tena (2005).

In this line, Tena (2005) has shown imports and exports growth rates for several periods from 1821 to 2001.[11] He observes low levels of growth, negative growth indeed, in the period 1935-50 with -1.6 for exports and -4.3 for imports. In the following period, 1950-59, the values recovered somehow, but still with low in relative terms with other periods: 1.1 for exports and 5.7 for imports.

Next Figure is presenting the evolution of the difference between and export and import deflactors. A very striking fact is how this evolution is reflecting the historical facts that have been mentioned in Section 2.



Author's calculations with data from Prados de la Escosura (2003), Table A.13.6.

The mapped line is a bit increasing around the years of World War I and at the beginning of the 20's is decreasing. In those years, the countries are opened to commerce and there are not great differences between export and import prices, such as international trade theory claims. The year with the lowest difference is 1927. In 1930, there is a pike after the crack in October 1929. Countries in those years stayed more close to trade: the Hawley-Smoot Tariff Act, July 1930, increased the U.S. tariffs and then it was

[11] Tena (2005) Table 8.2.

followed all over the world departing to a closer international commerce. The next pike correspond to the years of the Spanish Civil War. At that time, for obvious reasons, it is more difficult to import, then import domestic prices are higher; and also to export, so export prices fall down. The difference between domestic prices to export and to import is bigger. In 1940 the Civil War is finished and prices return to previous positions. However, with WWII another rise arrives until 1945. In those years (1943), we observe a peak that can be reflecting the difficulties to trade after the Civil War and during WWII, as well as the American oil ban to force the end of Spanish exports to Germany. The restrictions finished in April 1944 due to the lack of support of the British.

In 1946, the situation again comes to the position of the twenties. It is important the evolution of the difference between the deflactors because is reflecting a situation described by Guirao (1998).[12] This author explains that from the summer of 1945 to the spring of 1947, in spite of the political nature of the Spanish Regime, trade relations stayed even stronger with European Western nations. Spanish trade took advantage of world food scarcity, wishes to get better standards of living, liberalization of purchasing power after war, and dollar shortage. For European countries, importing from Spain was a way to get non-dollar supply of foodstuffs and raw materials, contributing to improve people diet and balance-of-payments deficits, and to recover industrial production. All of those contributions were made independently of political circumstances, avoiding economic sanctions or blockade against Franco regime. Trading with Spain during 1946 had a positive effect on Western Europe countries.

However, in 1947 started the international isolation of Spain and the Marshall Plan in the rest of Europe. From then, differences in prices became very huge. Spanish international trade decreased as well because Spain had serious difficulties on financial resources. An important obstacle to import was the dollar shortage. Spanish exports fell with a stronger competition from other European countries that were fostering domestic production, imposing imports restrictions, and distorting trade in agricultural commodities. Foreign capital was extremely limited. Spanish assets in U.S. remain blocked by the Truman administration and were not eligible to guarantee any bank credit. The Spanish Foreign Exchange Institute

[12] Chapter 1.

could not sell gold in several countries because it could not be proved that the gold had not been acquired from Axis powers. U.S. officials declared that they would not grant any credit to Spain unless a change in its political regime took place. Spain relied on its own resources to finance any good or raw material from abroad. Imports reduced significantly.

Spain was confident in U.S aid to restore pre-war levels of output and consumption and to promote economic modernization. This financial support via ERP never arrived.

Through bilateral agreement, Spain tried to boost trade. However, the financial limits represented the main obstacle to expand commerce. Spain's exclusion from the European Payment Union, in place from July 1950 and originated through the ERP, constituted an enormous troubling characteristic of relations with the institutionalized forms of economic interdependence. Spain was out of a system in which surpluses and benefits were balanced as a whole of trading partners. Again, the exclusion of the Marshall Plan was terrible for Spanish trade.

These are the central years of autarky. The peak is reached in 1952, and in 1953, the year of the Madrid Treaty, the difference takes a down trend. In 1958 the difference is at the same level of the twenties. Then, in the sixties, another rise is produced but not as huge as in previous years and very much short in time. Price then goes down again until the petrol crisis of the seventies. In any case, the biggest difference between import and export prices in the whole period, including the 1929 crack and the seventies crisis, was in the autarky period.

Figure 7 shows that the evolution of import and export domestic prices in Spain is confirming international trade theory assumption about that: if the economy goes from a free trade status to an autarky situation, export domestic prices fall down and domestic prices for imported goods drive up.

Once the trend for domestic import and export prices is proved, the economic analysis of the welfare impact can continue. To do that, we need a reference year of allowed trade. This is not an easy choice.

During XIX century and almost all the XX century, there was a strong protectionism in Spain, a well implanted tradition. Most part of academics consider[13] a free trade period from 1869[14], under the influence of the 1860 Cobden-Chevalier treaty, until 1892[15]. This period is clearly very far away from our interest time to be considered as the reference period.

It was usual hear that during the first third of XX century, the level of Spanish protection was very high compared with other countries, even more after 1922 with Cambó's trade act, and higher for the industrial sector than for foods or semi manufactured goods[16]. However, some authors have claimed that the protection in that period was decreasing in comparative terms with other European countries.[17] And, of course, it was lower than during the autarky period. For instance, the average in the degree of openness (exports plus imports as a percentage of the GDP) between Spain and three European countries (Germany, France, and Italy) was 17.9% for 1920-29 and only 8.7% for 1940-58 .[18]

After 1929 crack, European economies clearly closed to international trade, and also Spain. [19] The 1929 depression and the subsequent crisis as well as the Spanish Civil War (1936-39), make the thirties a difficult period to choose as a reference. Thus, the reference time should be a period before 1929.

Furthermore, due to the influence of the WWI in the Spanish economy, this year needs to be sufficiently far from this conflict. Also it needs to have enough degree of openness to be considered a reference for free trade. After studying the statistical series such as the difference between domestic import and export prices (see Figure 7), the year 1927 seems the best option. This year has the lowest difference between export and import domestic prices of the period. It is also far enough from the Great War and presents a good degree of openness, 14.8%[20] (of course, higher than any of the years of the period considered non-allowed free

[13] See, for instance, Tena (2001).
[14] Figuerola's trade act.
[15] Canovas' trade act.
[16] See Tena (1992).
[17] For instance, Comin (1987) and Tena (1992).
[18] Author's calculation with data from Tena (2003).
[19] Tena (2005).
[20] Tena (2003), Table 8.3.

trade). The level of exports and imports in this year is also remarkable[21]. For all these reasons 1927 is the reference year of allowed trade chosen for calculations of next Section.[22]

5. Empirical results

Equation (4), presented again below, is estimated to calculate the total loss of welfare taken into account that the allowed-trade year of reference is 1927, and the autarky period 1940-58. I explain the calculations for each addend of the equation but all numerical results are shown in Table 1 together.

$$\Delta W = -(c_f - y_f)\cdot p_a + (y_a - y_f)\cdot p_a + (c_f - c_f')\cdot p_a + (p_a - p_a^*)\cdot(c_a - y_a) + B_a \quad (4)$$

The first element in this equation, $(c_f - y_f)\cdot p_a$, is the variation of welfare due to the change in imports and exports prices (caused by the restriction in commerce) for each year, valued at the amount of trade during the free trade, also known as the vector of trade. There, exports are negative and imports are positive. In order to calculate it, I has normalized to (*1, 1*) for 1913 import and export deflactors given by Prados de la Escosura (2003)[23] and multiplied these prices from 1940 to 1958 by imports and exports quantities of the reference year at constant prices of 1913 offered by Tena (2005).[24]

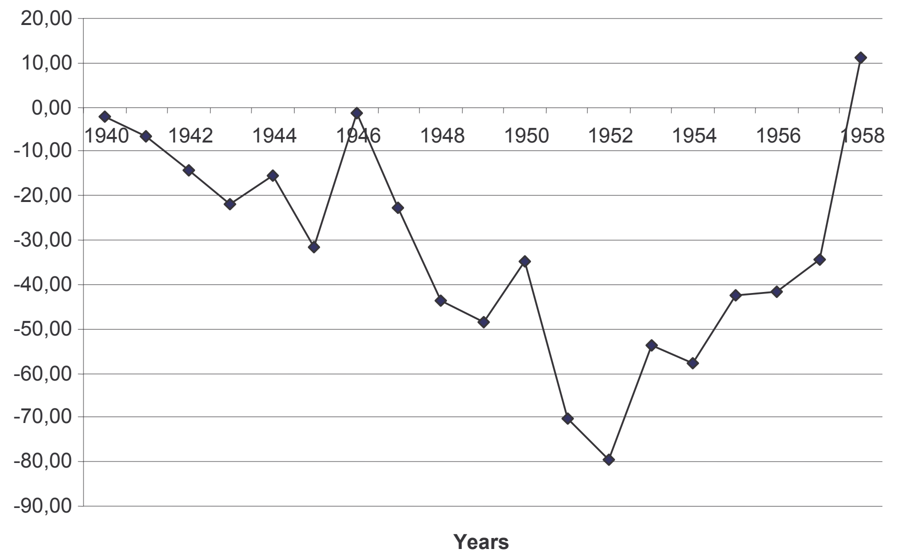
Taken into account that during the autarky period domestic prices for imported goods were driving up and domestic prices of exported goods were driving down, the loss of welfare collected by the vector of trade is shown in the next Figure.[25] There are losses for all years except for the last one. Looking to the Figure we see two periods of welfare losses separated by the year 1946, with the vector of trade closest to zero. The first period of welfare loss can be picking up the influence of WWII. During the war, the world commerce was more difficult then, export prices went down and import prices went up. The American oil ban to Spain of 1943 can be reflected there.

[21] See Figures 5 and 6.
[22] Other possibilities were explored. On of them was to choose the period 1913-29, a period considered more or less uniform between historicians, and to calculate all the formulae for the allowed-trade numbers as an average. In doing that, we could avoid the effect of any particularity occurred in 1927. I did the calculations but the results were not very different of those that it will be presented in next section.
[23] Table A.13.6.
[24] Table 8.4 page 604.
[25] All numbers in the next Figures and table are normalized to 1913 prices.

Both two periods are divided by the year 1946. After the war, the commerce was easier and the Spanish economy and trade was recovering. In Figure 6 we have already observed an evolution towards free trade behaviour of prices. In the very beginning of the European reconstruction, European countries need Spanish raw materials and foodstuff. 1946 was a year in which the behaviour of import and export prices was more similar to the usual way, without autarky, with closer import and export price levels.

However, in 1947 a negative trend started. It is the year of the Marshall Plan, the international isolation and the beginning of the self-supply domestic policy. Spain begun to go to a non-allowed trade situation. This evolution is reflected in the increasing losses of welfare from 1947. The peak of welfare loss is in the year 1952, the final year of the Marshall Plan. In 1953, the year of Madrid Treaty, a positive trend starts until 1958 when there are some gains of welfare thanks to the vector of trade, the last year of the named autarky period. The second period is caused by the international isolation and the autarky ideals of the regime. The subsequent difficulties to trade for Spain caused the same evolution on export and import prices.

Figure 8. Vector of trade (millions of euros)

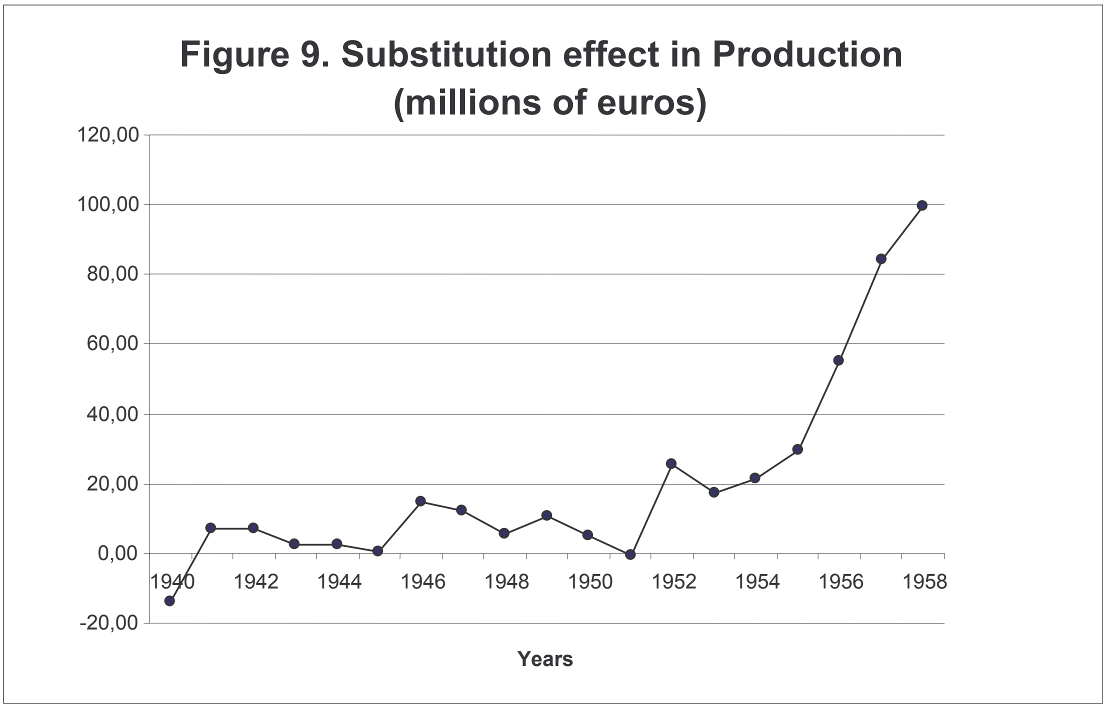


Source: Author’s calculations.

The second addend of equation (4) is the substitution effect in production $Sp = p_a \cdot (y_a - y_f) = p_a \cdot y_a - p_a \cdot y_f$. It represents changes along the domestic production possibilities frontier in order to produce more of the goods that were imported in the free market period and less of the goods that were exported,. Following Irwing (2005), domestic firms could afford to substitute a percentage of the good previously imported but they would have difficulty replicating some commodities[26] and others such as raw materials. Viñas et al. (1979)[27] considerer that in the twenties raw materials were 30 per cent of the Spanish imports. Taking into account this, I suppose that the Spanish economy could substitute around 70% of the goods previously imported. In that way, the substitute effect is weighted with this percentage. This effect is shown in Figure 9 and in column 3 of Table 1, with data for the deflactor coming from Prados de la Escosura (2003) and quantities from Tena (2005).

Looking to Figure 9, one can observe that the first year is negative, probably reflecting the negative impact of the Civil War in the economic structure. Then, a smooth increase follows. In 1946 the recovery is bigger, but then, the year of the beginning of the Marshall Plan, starts a decrease that stops in 1952. After a hesitating couple of years, the recovery is increasing. This is normal. More time far from the reference period, more time to recover and to increase. However, the length of the recovery was especially long, as we saw before, in comparison with other European countries. 1952 was the year of the end of the rationing and when Spain achieved the pre-war level of GDP.

[26] Guirao (1998), pages 3 and 4.
[27] Page 25.



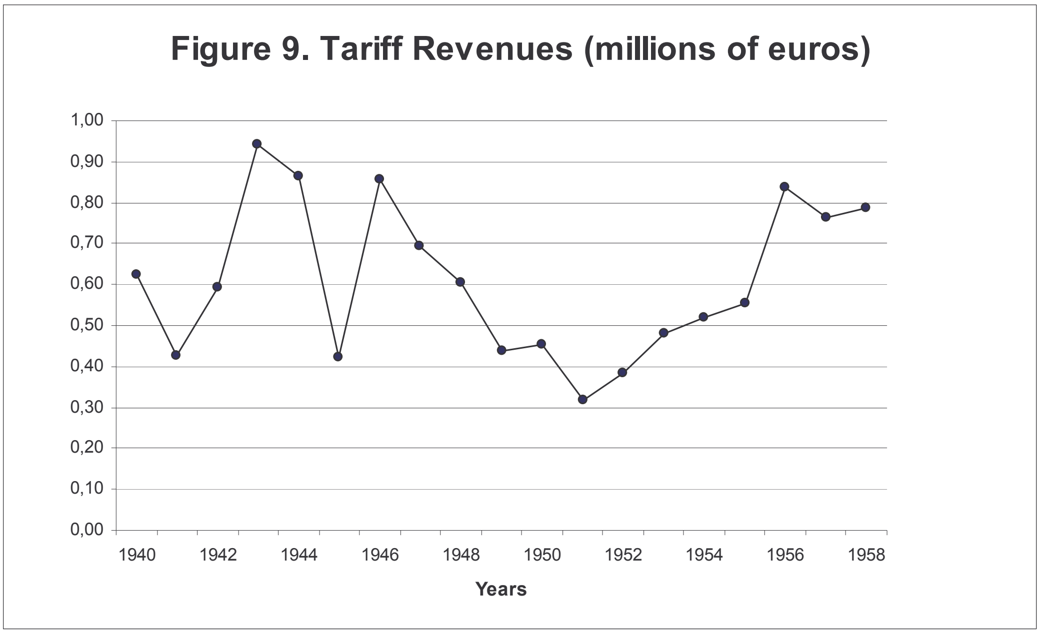
Source: Author's calculations.

The next member of equation (4) is the substitution effect in consumption, $Sc = (c_f - c_f') \cdot p_a$, that is the difference between the optimum consumption bundle in u_f with price p_f and the consumption bundle in u_f with price p_a, both two evaluated at autarky prices. One more time, following Grinols and Wong (1991) and I omit the calculation of this effect because of the bias that this effect could cause in the results.[28] Grinols and Wong aim that "the term for consumption substitution depends on any knowledge of utility and its contribution is bounded in many cases". Therefore, I present an upper bound of the losses in welfare during the autarky period.

Another element of equation (4) is that of tariff revenues for each autarky year: $(p_a - p_a^*) \cdot (c_a - y_a)$. We can find data for the tariff revenues in Comín and Díaz (2005) but we need to normalize them making 1913

[28] These authors didn't calculate in their empirical example that they showed in their paper any substitution effect in consumption, simple they omitted it. I have tried some possibilities like: $(p_a - p_f) \cdot c_f$ or $(c_f - c_a) \cdot p_a$, with no satisfactory results. For this reasons, and after several fruitless attempts so approximate it, I prefer also to omit it.

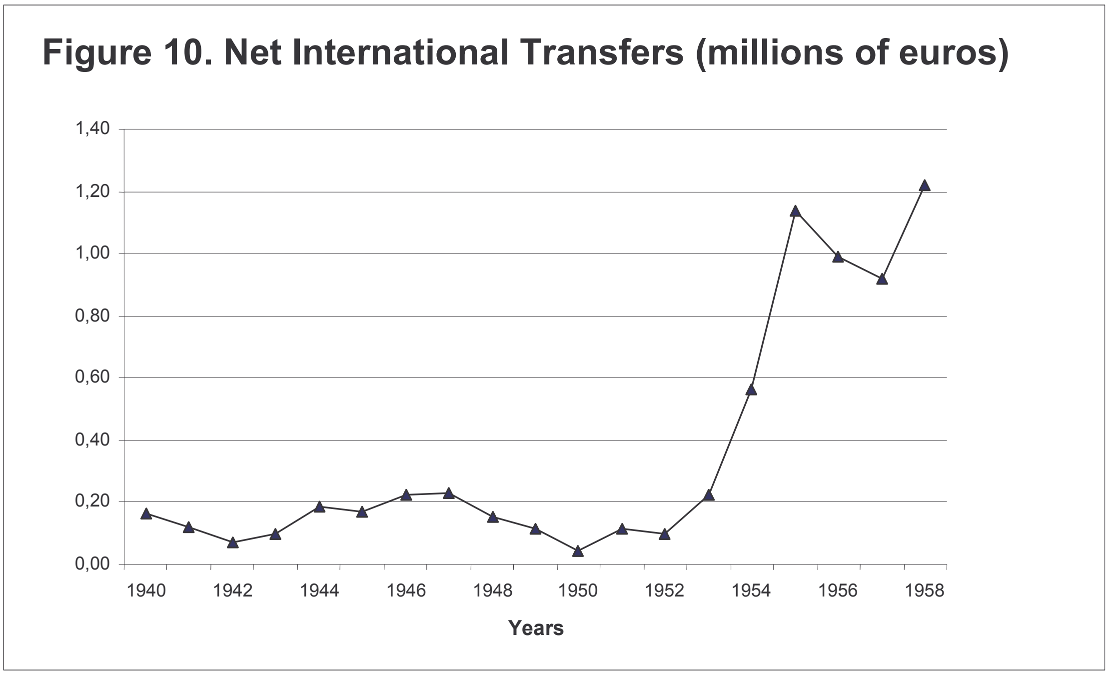
prices I. The data are shown in column 4 of Table 1. This element is not influenced by the election of the free-trade reference period.



Source: Author's calculations with data from Comín and Díaz (2005).

We can see in Figure above that in central years of WWII tariff revenues are very high. At the end of the war they decline. In 1946, the beginning of the post-war reconstruction, tariffs revenues are again high, but in 1947 they start a negative trend. Then, after that great decrease, in 1952 the trend is the opposite recovering previous levels.

The last member of equation (4) is B_a. These are net transfers for each year. Data come from Martínez Ruiz (2003) for the autarky period and they have been normalized as well. This element is not depending on the reference period neither.



Source: Author's calculations with data from Martínez Ruiz (2003).

We observe in this Figure a decrease in net transfers from 1947, the beginning of the international isolation period. During the years 1946 to 1949, most part of the capital transfers came from Argentina. The help was 322.5 millions of dollars.[29] This aid, because of its characteristics, did not provide a general basis for economic growth and development, in spite of its importance for the population in general. We see that, even with the Argentinean aid, there is a negative trend from 1947. The trend starts to be clearly positive in 1953, when the Madrid treaty was signed and the US help begun to be received. All the increase is due to the US aid. The pick was in 1955 thanks to the McCarran amend in the U.S. Congress, and then the aid decrease.[30] Between 1955 and 1958 589 millions of dollars arrived to Spain in form of transfers from U.S.

As Tena (2005) claims, in the 50's, the inflow of foreign capital in Spain was more influenced by reputation and by the economic policy than in other European countries. Furthermore, it did not start until U.S. changed their attitude for Spain and begun the end of the international isolation.

[29] Martínez Ruiz (2003), p. 112.

[30] More details in Chamorro et al. (1975) and in Martínez Ruiz (2003).

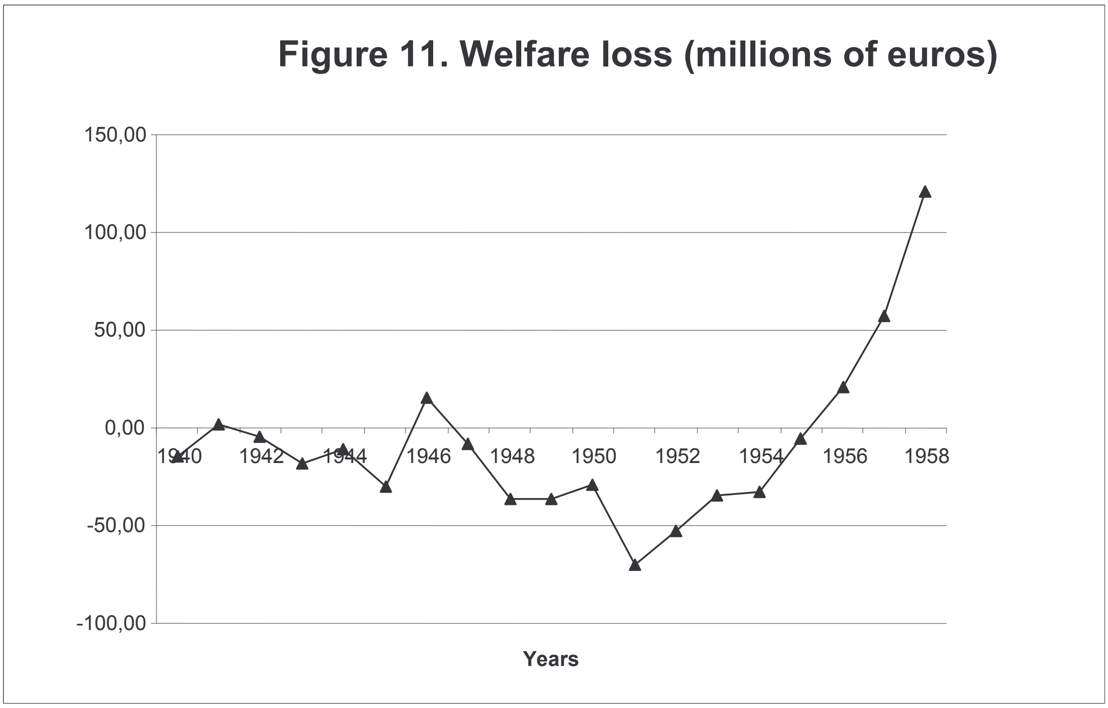
Table .1 Components of the loss of welfare. Free trade reference year: 1927. (Millions of euros)

Years (1)	Tariff revenues[a] $(p_a - p_a^*)\cdot(c_a - y_a)$ (2)	Transfers[b] B_a (3)	Vector of trade[c] $-(c_f - y_f)\cdot p_a$ (4)	Substitution production[c] Sp_a (5)	Loss of Welfare[c] (6)
1940	0.62	0.16	-2.22	-13.75	-15.18
1941	0.42	0.12	-6.47	7.08	1.15
1942	0.59	0.07	-14.21	6.88	-6.67
1943	0.94	0.10	-21.77	2.32	-18.41
1944	0.86	0.18	-15.30	2.60	-11.65
1945	0.42	0.17	-31.39	0.40	-30.40
1946	0.86	0.22	-1.40	14.89	14.57
1947	0.69	0.23	-22.55	12.26	-9.37
1948	0.61	0.15	-43.56	5.48	-37.32
1949	0.44	0.11	-48.51	10.73	-37.23
1950	0.45	0.05	-34.67	4.93	-29.24
1951	0.32	0.12	-70.19	-0.68	-70.43
1952	0.38	0.10	-79.54	25.49	-53.56
1953	0.48	0.22	-53.70	17.16	-35.83
1954	0.52	0.56	-57.88	21.60	-35.20
1955	0.55	1.13	-42.43	29.46	-11.28
1956	0.84	0.99	-41.60	55.31	15.54
1957	0.76	0.92	-34.28	84.26	51.66
1958	0.79	1.22	11.32	99.71	113.04

Sources

a. Author's calculations with data from Comín and Díaz (2005).
b. Author's calculations with data from Martínez Ruiz (2003).
c. Author's calculations, see the text.
d. Author's calculations with data from Prados de la Escosura (2003).

This table collects calculations for elements of equation (4) presented before and the welfare loss for each year in the last column, which is mapping in Figure 11.



Source: Author's calculations.

Summing up the total evolution of welfare during the some how official period of autarky in Spain, including positive and negative numbers, the welfare net loss adds up to 205.81 millions of euros.[31] This represents a welfare cost of 8% over the total GDP from 1940-58.[32]

However, looking to Figure 11, the year 1946 marks the limit of two periods of welfare losses. The first one happened from 1940 to 1945. Summing up the losses from 1940 to 1945 it results 81.16 millions of euros, that is 12% of total GDP of those years. This period is clearly influenced by the effects of the Spanish Civil war and WWII. These conflicts made more difficult free trade at that time.

In 1946, WWII ends and Spain has a gain in welfare. International commerce was easier and it seemed that the recovery started. Europe needed Spanish foodstuff and row materials to recover.

[31] All those numbers are in 1913 prices.
[32] Remember that those are upper bounds.

Then, in 1947, the year of the Marshall Plan, another period of losses of welfare began. This period did not finish until the world isolation finished, after the Madrid Treaty was signed and the admission of Spain in the UN and other international organization, such as the IMF and the World Bank, in 1955, the last year with welfare losses. During those years, the western countries include in the European Recovery Plan increased their GNP in one third; and excluding UK, the increased was about 70 percent.[33] However, Spain suffered a welfare loss of 319.47 millions of euros between 1947 and 1955, 26% of those years total GDP.

I considerer, after these results, these years are showing the real period of autarky for Spain. The first years of the decade are clearly marked by the end of the Spanish Civil War and WWII. Then, when Spain and other European countries started the recovery, the international isolation and the autarky ideals of the regime appeared. 1947 is the beginning of the real autarky period prolonged until 1955. Then, the gains in welfare are constant and increasing, thanks to the en of the autarky.

4. Conclusions

This paper reflects a special case in the world economic history of a country going from free trade to autarky. Following international trade theory, it has been compared a previous period of allowed trade with the non-allowed trade period to address how non international trade affects the wealth of this nation. This example fits the assumption of international trade theory which supposes that going to a closer trade status drives up domestic import prices and drives down domestic export prices. Then, losses of welfare are calculated: during the whole period in the agreed-upon date for the Spanish autarky time, 1940 to 1958, there was a negative total welfare loss of 205.81 millions of euros, 8% over the total GDP of that time.

The paper distinguishes between two sub-periods divided by the year 1946. In this year, the situation is closer to allowed trade. The first period, probably with high influence of the Spanish Civil War and World War II, is 1940-45. The loos of wealth in Spain during this period were 81.16 millions of euros, 12% of total GDP of this first period. The second period is 1947-55. The welfare loss in those years was up to

[33] Hogan (1987), p. 431.

319.47 millions of euros, 26% of total GDP. These are the real years of autarky in Spain. After 1955, there are gains from trade and high standards of living are achieved.

The international isolation and the autarky ideals embraced by Franco's regime characterize the main isolation years. The most important facts of forties and fifties for Spain, the exclusion of the European Recovery Program (1947) and the Madrid Treaty (1953), marked the main trend of the Spanish autarky period: 1947-55. Welfare loss begins to finish thanks to the end of the international isolation with the Madrid Treaty between Spain and U.S. and the admission of Spain in the UN and other important international organizations.

In the political field, the ostracism of Franco's regime as a way to achieve a political change in Spain failed. It only served as an excuse to provide union and support to Franco against foreign intervention. The main consequence of that policy was that Spain was left one decade behind of the reconstruction process and economic liberalization. Anyway, trade restriction in Spain during those years can not be only stress to external constraints but also to the trade controls and interventions of the regime.

From mid 1950s, the Spanish economy achieved a higher level of performance. I agree with some scholars that have qualified this performance as not really poor, just the opposite. As this papers shows, from 1956 there are evident gains in welfare and those years cannot be considered as typical of an economy with an autarky regime. From those years on and with the new government in charge, the goal of the Spanish economic policy was to open to Europe and to give up any self-supply objective. In any case, if Spain would have been inside the Marshall Plan it would have avoid a decade of retardation in growth and the welfare loss measured here.

This paper shows the high price paid by the Spaniards for being isolated of the international trade and it is still marked in the memory of them as one of the hardest periods in the recent history.

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