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AN ELEPHANT IN THE GARDEN: THE ALLIES,  
SPAIN, AND OIL IN WORLD WAR II

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### **ABSTRACT**

During World War II the Allies controlled Spain's oil supply in order to limit Spain's support for the Axis. This experiment with sanctions is unusually informative because a wide range of policies was tried over a long period. Three episodes are of special interest: (1) a total embargo on oil for Spain in 1940 that was surprisingly successful in dissuading Spain from joining the Axis; (2) a period of reduced supplies in 1941-42 that we call "the Squeeze" that was only partially successful; and (3) a second total embargo in 1944 that was a disappointment for the Allies, given the course of the war, that produced a rift between Churchill and Roosevelt. Our analysis is based on new monthly estimates of Spain's imports of gasoline and other petroleum products, which we describe in the text and report in the appendix. These estimates allow us to draw a clearer picture of the oil sanctions than has been possible in the past.

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## 1. Forging the Oil Weapon

*When a large, strong, healthy elephant (no reference intended to GOP) comes into a garden and tramples down the flower beds some perturbation is natural among the local gardeners.*

*Churchill to Roosevelt, February 13, 1944*

One of the best ways of analyzing economic sanctions is by studying historical cases. Here we look at the attempt by the Allies to use their control of Spain's oil supply to influence Spain's relationships with the nations at war during World War II. This case is unusually informative about the strengths and weaknesses of economic sanctions for several reasons. (1) It was a long experiment: The Allies controlled the flow of oil into Spain from August 1940 to November 1945. (2) The amount of oil allowed Spain varied considerably over the course of the war: from nothing during two total embargoes, to a very small amount during a period we call the Squeeze, to moderate but larger monthly allowances at other times. The amounts allowed Spain also varied from product to product: The embargo on aviation gasoline lasted much longer than the embargo on other products. (3) The information that we have about the supply of oil entering Spain is extremely reliable. The Allies were the sole supplier. The information about Spanish consumption, moreover, is complete because there was a monopoly, CAMPSA, that distributed the oil at 54 installations in Spain, and because Allied experts were stationed in Spain (after some pressure from the Allies that we describe below) who kept track of the stock of petroleum products and supervised its distribution.<sup>1</sup> (4) Spain was controlled

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<sup>1</sup> CAMPSA is the Compañía Arrendataria del Monopolio de Petróleo Sociedad Anónima. There was another Spanish company, CEPESA, that was active only in the Canary Island and Morocco.

by a powerful dictator, a common case when sanctions are contemplated in the modern world.

Aspects of this case have been explored by a number of scholars: David L. Gordon and Royden Dangerfield (1947), Herbert Feis (1947), James Cortada (1971), Paul Preston (1993), Christian Leitz (1996), and Gabriel Tortella (2003). Our contribution is based on new estimates of the flow of petroleum products into Spain that we have compiled from shipping records in the Spanish Archives. With this data, which is available month-by-month and product-by-product, we are able to present a much clearer picture of the sanctions applied by the Allies than was available to previous students.

Our main concern is with the relationship between the changes in Allied oil policy and the changes in the Franco regime's relationships with the Allies and the Axis. Our analysis allows us to draw some interesting conclusions about the effectiveness of these sanctions based on the timing of events, statements by the participants, and so on. However, there is a limit to how firm we can be about our conclusions. Spain, as we noted, was ruled by a powerful dictator who was not obliged to explain his motives or reasoning, even if he was capable of doing so. We should also note that we will not be able to quantify the economic effects of the sanctions on the Spanish economy. Even in the case of the United States in the 1970s, as recently shown by Robert Barsky (2004), a period for which there is an abundance of quantitative data, it turns out to be extremely difficult to quantify the economic effects of changes in the supply of oil. The lack of monthly data for Spain during the war years makes it far harder.<sup>2</sup>

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<sup>2</sup> Annual data of various kinds is available in the *Estadísticas Históricas de España*, but we need higher frequency data to see the effects of the changes in oil policy, which were often moderated or reversed after a few months. In any case, our ultimate interest is with the effects on the relationship between Spain and the Axis.

The paper is organized as follows. Section 2 discusses how the controls worked and how they evolved during the war. It identifies three critical episodes: a total embargo, a period of reduced supplies that we call the Squeeze, and a second total embargo. Section 3 discusses the origins and the effects of the First Embargo, that proved surprisingly effective, and the more extended embargo on aviation gasoline. Section 4 discusses the Squeeze during which supplies were severely reduced although not completely halted, a policy that proved only partially successful. Section 5 discusses the effects of the Second Embargo that proved to be a disappointment given that the Allies were well along the road to victory. Section 6 summarizes the main conclusions.

## **2. The Structure and Evolution of Allied Controls**

Throughout the war the Allied naval blockade assured that only supplies of oil approved by the Allied governments could reach Spain. Spain's only conceivable alternatives were German or Rumanian sources, but in practice neither alternative was feasible. German needs were too heavy to justify supplying Spain; Rumanian oil was too expensive and the costs of transport too high. In the end therefore, the Allies had complete control of Spanish oil supplies.

Over the course of the war the Allies used their control of Spanish oil to attempt to achieve a number of goals whose importance for the Allies varied over time. The most important goal, of course, was to persuade Spain to remain neutral, rather than join the Axis. But there were also several subsidiary goals. These included turning the Spanish Press from its virulent pro-Axis stance, reducing the presence of German spies in Spain, and forcing Spain to withdraw the famous Blue Division from the eastern front. The

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major economic goal was preventing Spain from exporting or re-exporting crucial raw materials to Germany. First of all, there was oil itself and among oil products, aviation gasoline. But thanks to the Allied naval blockade, Spain became a key supplier to Germany of a number of other essential raw materials including iron, pyrites (for sulfuric acid, a key ingredient in a number of chemical processes), mercury, and tungsten. Spain had been a major supplier on world markets of iron ore, pyrites, and mercury before the war. But now it was tungsten that took center stage. Tungsten, which was used to toughen steel and as the core for armor-piercing shells, was crucial to the German war effort, and was extremely difficult for the Germans to acquire elsewhere.<sup>3</sup> Spain also supplied labor to Germany, but Spain's ability to supply labor to Germany does not seem to have played a significant role in Allied thinking.<sup>4</sup>

To control the Spanish oil supply Britain activated its "Navicert system" shortly after the war began. In every port around the world shippers were required to obtain a certificate from the British consul authorizing transportation of their cargo to Spain. The Royal Navy would turn away any ship entering Spanish waters that did not have Navicerts for its cargo. Initially, the Americans protested the Navicert system as a violation of the rights of neutrals, but soon the Americans decided to cooperate.

Previous discussions of Allied oil policy have relied on qualitative accounts of the supply of oil or isolated quantitative estimates. To determine the degree of success or failure of the oil weapon, however, requires precise data on the flow of oil into Spain, so that changes in Spanish policies can be linked chronologically to changes in oil policy.

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<sup>3</sup> We tell the story of tungsten in Caruana and Rockoff (2003).

<sup>4</sup> In August 1941 Spain signed an agreement to supply Germany with 100,000 workers. But fewer than 15,000 would actually go. About 10,000 worked for the British in Gibraltar. (Payne 1999, 342).

For that reason we have put together new monthly estimates of Spain's petroleum imports by product during World War II. For the period September 1940 to October 1941 we rely on ship-by-ship data compiled by CAMPSA, the Spanish oil monopoly.<sup>5</sup> For the period November 1941 to December 1945 we rely on ship-by-ship data reported in telegrams between the Spanish Ambassador in Washington, Juan Francisco de Cárdenas, and the Spanish foreign ministers. Our estimates of the monthly imports are in the Appendix.<sup>6</sup> The continuing involvement of the Spanish foreign ministers shows that the supply of oil was a matter of the highest importance to the Spanish government throughout the war. Similarly in the United States, the Spanish oil supply was frequently attended to by the Under Secretary of State and on occasion by the Secretary of State.

For the most part, as shown in the Appendix table, Spain imported refined petroleum products. Crude oil amounted to less than 3 percent of total imports over the course of the war. The largest items were gasoline and fuel oil, each constituting about 35 percent of total imports. Diesel fuel, the third most important item, made up about 20 percent of total imports. The division among products was generally determined by the

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<sup>5</sup> See Tortella, Ballester, and Diaz Fernandez Madrid (2003) for a comprehensive history of CAMPSA.

<sup>6</sup> The following table compares our estimates at the annual level in equivalent metric tons of coal with the currently available annual figures. Our estimates seem to be roughly in the same neighborhood, although there are some substantial differences. We used a factor of 1.75 to convert our annual totals of metric tons of petroleum products to equivalent metric tons of coal. This was the factor that minimized the differences in the two sets of estimates. At this time we could only speculate on the sources of the differences.

	Sudria (1995)	Caruana and Rockoff	Percentage Difference
1941	1,023,000	912,319	-11
1942	532,000	837,916	45
1943	908,000	960,799	6
1944	771,000	601,545	-25
1945	981,000	888,592	-10

structure of demand in the Spanish economy: The amounts needed for ground transportation, the fishing fleet, lubrication, and so on. Since the structure of demand did not change much during the war it is sufficient, generally, to focus on the total amount of oil products. The one exception was aviation gasoline, which although making up only about 0.2 percent of total imports, was a somewhat different case because of its potential importance for the military effectiveness of the Franco regime, and for the Axis war effort.

Figure 1 plots the monthly imports of total petroleum products (dotted line) and the averages during six phases of control that we have identified (solid line). The basic series shows considerable month-to-month variation, what is often called a sawtooth pattern. (The average for August 1940 to December 1945 was 39,992 metric tons; the standard deviation was 20,115 tons.) The high variance reflects the small size of the Spanish fleet. There were normally about 10 Spanish tankers that could make the crossing. On average it took each tanker about 3 weeks to load and cross. Evidently, then, the torpedoing, the breakdown, or even the delay (by accident or design) of a single tanker could perceptibly affect the Spanish supply.

The phase averages eliminate much of the month-to-month variation and reveal the underlying policies more clearly. We identified these phases partly by examining the quantitative data and partly from other historical information. These phases were: (1) the First Embargo, August 1940, (2) the period of British control, September 1940 to July 1940, (3) what we call the Squeeze, August 1941 to April 1942, (4) the first period of American control, May 1942 to January 1944, (5) the Second Embargo, February 1944 to May 1944, and (6) the second period of American control, June 1944 to November 1945.



Table 1 shows these phases and the average imports of oil during each of them, and for comparison purposes the average in 1935, the last year before the Spanish Civil War disrupted the economy. Of these phases three were critical: the First Embargo, the Squeeze, and the Second Embargo, because they were drastic attempts to limit the amount of aid that Spain was providing the Axis.

Some additional evidence that our periodization makes sense is presented in Table 2, which shows the results of a least squares regression of total monthly oil imports on dummy variables for the period of British control, the Squeeze, the First Period of American Control, the Second Embargo, and two lags of the dependent variable. The First Embargo and the Second Period of American control were omitted.<sup>7</sup> The dummies for the period of British control, the Squeeze, and the Second Embargo have the expected signs and magnitudes, and are statistically significant. The negative and significant coefficient on the Squeeze is especially reassuring because this phase has not received much attention in the historical literature. The dummy for the first period of American control has the right sign compared with the second period of American control (the omitted period) but is not statistically significant. The first lagged value of the dependent variable is also significant and negative, perhaps because the delay of some ships in one month would increase the likelihood of a full complement arriving in the following month. This coefficient is the statistical counterpart of the "sawtooth pattern" we noted above. We kept just two lags. Additional lags were not significant and adding them did not improve the fit. When the regression is run in first differences the coefficients are signed correctly, but the coefficient on the Squeeze does not reach statistical significance.

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<sup>7</sup> The equation could not be estimated when both the constant and the First Embargo were included.

The First Embargo has been neglected in the literature except for a brief discussion in our previous work, Caruana and Rockoff (2003). The Squeeze, has also been neglected, although it was mentioned by Herbert Feis (1947), who mistakenly believed that it was a total embargo. The Second Embargo has received more attention. The first detailed discussion of the Second Embargo in English was by James Cortada (1971) who thought that the Second Embargo was a great success. However, as we will show below, more recent evidence shows that the initial view was mistaken.

### **3. The First Embargo**

The defeat of France in June 1940 produced a significant change in the rhetoric, actions, and possibly in the real intentions, of the Spanish government. Spain had been maintaining that it was "neutral." Now Spain declared that it was merely "non-belligerent," the same phrase Mussolini had used prior to joining the war. Spanish troops, moreover, occupied the international zone of Tangier in Morocco on June 14, 1940 without seeking international permission. We also now know that on June 19 Franco sent General Vigon in secret to Berlin to negotiate Spanish entrance in to the New Order, demanding in return an expansion of Spain's empire, mainly in North Africa, at the expense of the collapsing French. (Hamilton 1944).

The possibility that Spain would join the Axis posed a significant threat to Britain because with Spanish help Germany could capture Gibraltar, and fortify the coasts of Southern Spain and Northern Africa. The Mediterranean would become an Axis lake. Indeed, we now know that Hitler developed detailed plans, code-named Felix, to take

Gibraltar with Spanish cooperation.<sup>8</sup> This possibility forced the British government to change its policy towards Spain. Upon the recommendation of the British Ambassador to Spain, Sir Samuel Hoare, Britain adopted a “go-slow” policy on oil, with the aim of reducing stocks in Spain to a minimum, preventing re-exports to Germany, and discouraging Spain from joining the Axis. (Smyth 1986, 30).

In the United States, the public discussion of an oil embargo began on July 3, 1940 when the *National Petroleum News* reported that Spain had received what appeared to be large quantities of oil products. This report was reprinted in the *New York Times* on July 20, and caused an immediate reaction in the United States and in the United Kingdom.<sup>9</sup> The *Times* noted that there had been a substantial increase in the amount of oil going to Spain. The amounts exported to Spain between September 1939 and April 1940, according to the *Times*, "were greatly in excess of the comparable period of 1938-39." The *Times* also noted that much of the oil was supplied by Texaco whose chairman, Torkild Rieber, had helped Franco during the Civil War, and was assumed to be sympathetic to the Axis (Alvarez Alonso 1970).<sup>10</sup> The inference, left to the reader by the *Times*, was that Spain was either building up her own stocks of oil prior to entering the war, or re-exporting oil to Germany.

To be sure, a more benign interpretation of the figures reported in the *Times* is possible. The Spanish Civil War ended in April 1939, so the *Times* was comparing a period after the end of the War with the last months of the War. The increased imports

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<sup>8</sup> Operation Felix is discussed in Burdick (1968) and Goda (1993).

<sup>9</sup>"U.S. Exports of Oil to Spain Increase," *New York Times*, July 20, 1940, p. 3.

<sup>10</sup> Texaco had extended credits to Franco's Nationalists shortly after the Civil War began. As the war progressed Franco was able to raise hard currency through his control of Spanish raw material exports and use it to purchase oil from American companies. (Whealey 1977, 146).

may have simply reflected the beginning of a recovery in the Spanish economy. Overall the figures reported in the *Times* for the most recent months imply monthly consumption at a rate of about 61,029 metric tons per month. This was actually less than our estimate of 67,200 metric tons per month in 1935, the last year before the Civil War (Table 1).

Some figures reported by Herbert Feis (1947, 384) are also consistent with the idea that Spain could have been consuming most, if not all of its imports. Over the period from July to December 1939 monthly imports of three key petroleum products (gasoline, fuel oil, and lubricants), according to Feis, averaged 56,461 metric tons per month; over the period from January to June of 1940 the average was considerably higher 70,954. The first figure is about the same as our estimate for these three products in 1935, 56,533 metric tons. The second figure is higher, although still only 6 percent higher than our estimate of 67,200 metric tons monthly for all petroleum products for 1935, so Feis's estimates are consistent with a postwar recovery, especially if we allow for some shift toward gasoline.

Whatever the ultimate use of the oil going to Spain in early 1940, the strategic reasons for concern about Spanish oil imports were clear and compelling. Hitler's successes in the Nordic countries and in France had solved some of his raw material problems. Iron ore was no longer an important issue. However, the problem of oil remained. The British naval blockade cut off Germany from most potential sources.<sup>11</sup> The fall of France, however, had effectively brought Germany to Spain's border. If Spain was allowed to import large amounts of oil and then re-export them overland to Germany, the blockade would be broken.

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<sup>11</sup>Hitler could, at that time, obtain oil from plants that produced synthetic oil from coal, from Rumania, and from the Soviet Union. How much Stalin would supply, however, was a question mark.

To eliminate the danger of Spain re-exporting oil to Germany or even joining the war militarily, Britain and the United States began considering an oil embargo. There is some disagreement about which country took the initiative. Preston (1993, 365) maintains that it was the British who convinced the Americans to take action. Other historians, such as James W. Cortada (1971, 51), Stanley Payne (1987, 294), and Antonio Gómez Mendoza (1994, 78), believe that the United States did not agree with the British policy of supplying Spain' legitimate needs and decided to enforce a stricter policy. A communiqué that we have located dated July 16, 1940 in which the British ask the Americans not to export oil to Spain, confirms the view that it was the British who pushed for the embargo.<sup>12</sup> Cortada's idea that the British were more willing to accommodate Spain because of their long-run economic and strategic interests in Spain, appears to be more applicable to the Second Embargo discussed in section 5. The embargo began officially on the first of August 1940 (although in fact it began at the end of July) and lasted until the seventh of September of 1940.

The Embargo produced an immediate sense of crisis in Madrid. The Spanish Foreign Minister, Juan Beigbeder, sent a telegram to the Spanish Ambassador in Washington expressing anxiety about the supply of oil: "...The Spanish government needs urgent and specific guarantees that our ships can dock and fuel up; in the case of a negative reply we will consider taking action (please refrain from excesses)." At home the prospect was for immediate economic disaster. According to Ramon Serrano Súñer, then the interior minister, "...The stocks of oil will last a month if we limit consumption to the essential need; we will have to stop activities in industry and agriculture that use

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<sup>12</sup> National Archives of the United States, Microfilm Publications 1244-1.

petrol, reduce the fishing fleet by 40%, causing severe damage to the Spanish vital necessities."<sup>13</sup> Suñer, by the way, was a leader of the Falange, and at that time an influential figure in Spain beyond what might be suggested by his role as Interior Minister; in October he would replace Beigbeder as foreign minister.<sup>14</sup> Thirty days was an exaggeration, Spain could have held out longer as it would in the Second Embargo, but the situation was extremely serious.

Franco naturally turned to Germany for help as it had during the Civil War; Spain asked for 400,000 tons of gasoline, 200,000 tons of fuel oil, 600,000 tons of wheat, 200,000 tons of coal, and large quantities of other raw materials, including cotton, rubber, wood pulp, hemp, and jute. (Preston 1993, 372). These were large amounts by Spanish standards. The amount of gasoline, for example, represented about a year's supply at current rates of consumption. Franco may well have assumed that he was opening a bargaining process, and that the Germans were going to cut his initial requests. But he probably did not realize, initially, how tight German supplies were. At that time Franco probably shared the common assumption that Germany had made immense preparations for war, and that its stocks of raw materials were sufficient to meet all eventualities. It was not until after the war that scholars learned just how dilatory Germany's preparations for the war had been. In July 1939, for example, we later learned, the Wehrmacht was estimating that Germany had sufficient stocks of gasoline on hand to cover only a few months fighting. (Klein 1948, 56).

Franco's request was by no means negligible when compared with German

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<sup>13</sup> Archivo de Ministerio Ausuntos Exteriores, 2246 E. 75.

<sup>14</sup> Suñer was Franco's brother-in-law. This may have added to his authority early in the war, but it did not prevent his losing power when the tide turned against Germany.

production. In 1940 Germany and its occupied territories were producing about 330,250 tons of gasoline per month (Jensen 1968, 551), so Franco was asking for more than a month's production from Germany's hard pressed industry. Germany's gasoline deficit (consumption less domestic production) averaged about 157,750 tons per month. So Franco's request, to put it somewhat differently, would have increased the deficit for the year by about 20 percent. Even filling half of Franco's request would have had a measurable impact on the German gasoline budget. By way of contrast, Franco's gasoline request amounted to less than two day's worth of production from America's much larger production. (U.S. Bureau of the Census 1975, 596, series M167). A report issued by the German High Command on August 10, 1940, recommended that Spain should not enter the war because "without foreign help Spain can wage a war of only very short duration." (Preston 1993, 372). Under these circumstances it is hardly surprising that Germany turned down Franco's requests.

Spain's requests from Germany included wheat as well as oil. This was also an important request. In 1940 the recovery of the Spain's agricultural sector from the Civil War was far from complete. Spain was hungry, and dependent on the United States and Canada for wheat. In January of 1941 the Franco regime would be forced to ration bread. (Payne 1999, 356). Franco, moreover, was well aware of the importance of bread for the maintenance of internal stability: His ability to restrict the supply of bread to Spain's cities was a significant factor in his ability to win the Civil War. The food shortage magnified the significance of the oil embargo. In the first place, oil was important for transporting food, and as we noted above, for fueling the fishing fleet, an important source of protein. Second, the oil embargo reified the potential for a total embargo that

included wheat. The United States would have been reluctant to embargo food while still at peace because of the public reaction, particularly by Catholic Americans sympathetic to Spain. An oil embargo with the suggestion, however inaccurate, that it was directed against the military power of Spain, or Spain's ability to re-export oil to Germany, was easier to defend in the court of public opinion. Nevertheless, the possibility that Spain could be cut off from food as well as oil if Spain departed too far from neutrality must have been clearer to the Franco regime as a result of the First Embargo.

If Germany would not supply Spain with oil who could? No crude oil was produced in Spain. There had been an attempt to produce synthetic oil but it was a failure (Martin and Comín 1991). Spain had an additional problem: it could refine only 20-25% of its total requirement, and this limited refining capacity, moreover, was in Tenerife (Canary Islands) where imports of crude oil or exports of refined petroleum products could be blocked by the Allied navies. CAMPSA, the Spanish oil monopoly in mainland Spain, did not have refineries (Tortella, 2003).

Spain also looked to Rumania, which had a military government similar to Spain's, and was a major oil exporter. CAMPSA sent two experts to Rumania at the end of July, perhaps even before the embargo started. In addition, the Spanish Foreign Minister, Beigbeder, asked the Rumanian diplomat F.C. Nano a number of questions about importing oil on July 24.<sup>15</sup> On closer inspection, however, the Rumanian solution appeared impractical. Oil from Rumania would have to travel across the Black Sea and the Mediterranean. In the Black Sea the Soviet Fleet could stop Spanish ships while in the Mediterranean the British Royal Navy could do so. Even if these difficulties could be

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<sup>15</sup> Archivo de Ministerio Ausuntos Exteriores, 2246 E. 75.



surmounted, the Rumanian price was high, and Spain was short of hard currency.

In the end the only solution that the Spanish government considered practical was to reach an agreement with the Allies. The key issue in the negotiations that ensued was how much oil Spain would be allotted. Spain provided estimates of consumption before the Civil War, and the British and Americans agreed that they would allow Spain to have about 80 percent of this amount. In return for oil Spain agreed to remain neutral and not re-export oil to Germany. The process of verifying Spanish oil stock and achieving a solution lasted until the agreement was signed on September 7, 1940. (Medlicott, 1952).

Figure 2, based on data compiled by CAMPSA, shows the Spanish stocks of key petroleum products from October 1940 until October 1941 measured in months of consumption. Generally, it is considered normal for a country to have stocks equal to about three month's consumption. At the start of this period Spain had stocks equal to between two and three months, so it was below but not dangerously below normal. By the end of the period Spain was down to one-month's consumption. At that point Spain, it might be said, was on a very short leash. Any attempt to re-export a significant amount of oil to Germany would produce an immediate deprivation in Spain. And the Allies could threaten Spain with a fresh embargo knowing that Spain would have little time to take countermeasures before the embargo would begin to bite.

As you will notice in Figure 2, the stocks of aviation gasoline were substantially higher than the other stocks. Aviation gasoline, moreover, was of special concern to the Allies because of its military uses. We show two estimates of the stocks of aviation gasoline. The lower is based on the information supplied to the Allies by CAMPSA; the higher estimate includes a hidden stock subsequently discovered by Allied experts. Both

estimates decline rapidly because the Allies imposed a total embargo on aviation gasoline until the stock was reduced to a low level similar to the stocks of other products. The amounts involved were small compared with German requirements. At the initial peak Spain had stocks of aviation gasoline that would have covered German requirements in 1940 for about one week. Even small amounts, however, had some significance. They could be used, for example, to refuel German planes forced to land in Spain. The aviation fuel embargo has gone unnoticed until now because of the absence of data.

A similar policy of treating aviation gasoline differently from other oil products was followed, as is well known, with respect to Japan. It is interesting to note that the United States began its licensing of aviation gasoline exports to Japan at about the same time as the First Embargo was imposed on Spain. In the Japanese case the timing was due to Roosevelt's siding with the hardliners at the State Department. (Hosoya 1968, 107). The aviation gasoline embargo of Spain, as shown Figure 3, lasted three years. After the end of the total embargo on aviation gasoline, small quantities were provided from time to time.<sup>16</sup>

In the month following the end of the First Embargo, Hitler took the extraordinary step of journeying to meet Franco and persuade him to join the war.<sup>17</sup> They met at Hendaye on the French side of the border on October 23. Accounts of this famous meeting differ. A famous story that Hitler said afterwards that he would rather have "two or three teeth removed" rather than go through the experience again, may be apocryphal.

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<sup>16</sup> Hosoya (1968) describes the sequence of increasingly stiff U.S. sanctions on Japan – the licensing of aviation gasoline and certain forms of iron and steel scrap in July 1940, the total embargo of iron and steel scrap exports in September 1940, and the complete embargo on oil exports in August 1941 – that strengthened the hardliners in Japan and propelled them toward war.

<sup>17</sup> This was part of a trip in which Hitler also met with the French and Italian leaders.

But one thing is clear, Franco, at least for the time being, refused to be drawn into the war.

Most previous discussions of the temptation have stressed geo-political factors. Norman Goda (1993) among others argues that it was the frustration of Franco's imperial ambitions that were the deciding factor. In return for joining the war Franco wanted an expansion of Spain's North-African empire at the expense of France, but Hitler would offer Franco only vague assurances about future rewards.<sup>18</sup> Hitler was concerned to pull Vichy France further into the Nazi orbit, and to prevent the defection of French territories in North Africa to Charles de Gaulle, as had happened to French Equatorial Africa. Both goals would be harder to achieve if it came to light that French territories were promised to Franco. Hitler also wanted permanent bases in Morocco and the Canaries to forestall Allied attacks, and even to lay the basis for future actions against the United States. Long-range bombers based in the Canaries, in Hitler's fevered imagination, would defeat the United States, thus assuring German domination of the world. The idea of permanently ceding Spanish bases to Germany, however, did not sit well with Franco, a fierce nationalist.

It may well be true, as implied by Goda's argument, that Hitler could have lured Franco into the war with an airtight promise of a sufficiently large territory in North Africa, and satisfactory arrangements for Spanish sovereignty over German bases. But even without such an offer there was still much on the table to tempt Franco. By joining the war at the end of 1940 Franco could be on the winning side in the World War, he could repay his debt to Nazi Germany for its help during the Spanish Civil War, and he

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<sup>18</sup> We focus on Goda's paper because it develops the argument in detail, but we should note that his argument, or variants of it, seems to be the most widely accepted explanation for the failure of Hitler to lure Franco into the war.

could earn the good will of Adolf Hitler, who Franco assumed would be the master of Europe for years to come. Franco would get, moreover, at least vague assurances of land in North Africa. Perhaps most important, he would participate in the capture of Gibraltar. Gibraltar, it must be remembered, had been an ongoing affront to Spanish honor ever since it was captured by an Anglo-Dutch force in 1704. Franco would return to the issue of Gibraltar after World War II. Indeed, it remains to this day a factor in relations between Britain and Spain. Evidently, Franco must have realized that while there were potential benefits to joining the war, there were also heavy costs that outweighed those benefits, costs that were brought home to him by the First Embargo.

Goda (1993, 306) also notes that in declining another German request made in December 1940 that Spain join the war, Franco cited Spain's economic difficulties as the reason for not joining. Goda dismisses this argument on the grounds that the Spanish economy had been weak throughout 1940. Why should Franco now be so concerned about the economy? Again, the simplest and most compelling answer is that the First Embargo had taught Franco a painful lesson about the vulnerability of his economy.<sup>19</sup>

In August 1940, to summarize, Spain learned a hard lesson. Spain would not be able to get oil from either Germany or Rumania. Spain could avoid economic disaster only by remaining neutral and cooperating with the Allies. As Herbert Feis (1947, 385) asserts “the refusal of Germany to do so [to export oil to Spain] during the next three months was to prove one of the reasons why the drive for intervention finally failed.” The

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<sup>19</sup> Zamagni (1998) describes the enormous losses suffered by Italy during World War II. Presumably this is the fate that awaited Spain if it chose to join the war, and if the Allies had attempted to enter Europe through Spain rather than Italy. Zamagni emphasizes, however, that Italy recovered rapidly after the war, reaching the prewar level of output by 1948.

oil embargo, therefore, is a good explanation of why Spain avoided what the new Spanish historiography refers to as "the temptation."<sup>20</sup>

#### **4. The Squeeze**

In the latter part of 1941, after the German invasion of the Soviet Union, the Allies reduced Spain's oil ration. The initiating event may have been Franco's shocking speech on July 17, 1941, the fifth anniversary of the outbreak of the Spanish Civil War. This speech was extremely pro-Axis and announced that Spain was sending troops, the Blue Division, to fight on the eastern front.<sup>21</sup>

The Blue Division had been formed within days after the German attack on the Soviet Union (June 22, 1941). The Division was commanded by professional officers, and was equipped and financed by the Spanish government. The Franco regime maintained, however, that the men were volunteers and not a unit of the Spanish army – so they wore the blue shirts of the Spanish Fascists, and not the uniforms of the Spanish army. This legal fiction reflected the caution created by the First Embargo. The Germans pressed Spain for a formal declaration of war against the Soviet Union, but as Suñer explained to the German ambassador to Spain, a formal declaration of war risked an Allied blockade. (Kleinfeld and Tambs 1973, 8). A division of "volunteers" would repay Spain's blood debt to the Axis, while, hopefully, avoiding a renewal of the oil embargo.

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<sup>20</sup> Our interpretation of the First Embargo and Ristuccia's (2000) interpretation of the attempt to impose sanctions on Italy in 1935 to stop her invasion of Ethiopia reinforce each other. Our interpretation of the First Embargo of Spain strengthens the case for thinking that an oil embargo might have had the desired political outcome in the Italian case. Ristuccia's careful estimate of the high cost of an oil embargo to the Italian economy strengthens the case for believing that the costs were high in the Spanish case, because the two economies were comparable.

<sup>21</sup> The history of the Blue Division is described in Kleinfeld and Tambs (1973) and Krammer (1973).

As it turned out, this strategy worked, at least to an extent. The formation and commitment of the Blue Division may have been a cause of the Squeeze that we describe below, but it did not lead to a renewal of the total embargo.<sup>22</sup>

Although the formation of the Blue Division was the major concern of the Allies, there were several others. (1) The Spanish press was extremely pro-Axis and might push Spain even further into the Nazi orbit. (2) There was evidence that German U-boats had refueled in Spanish waters. The Spanish Ambassador to the United States, Cardenas, told S  n  r that the Royal Navy had captured a German U-boat and that the British were sure that it had been refueled close to the Spanish port of Vigo on Spain's Atlantic Coast by a Spanish merchant ship. Normally, the Spaniards were so short of oil that the refueling was done by German tankers. (3) There was the ongoing concern Spain might aid Germany in military actions against Gibraltar or in North Africa.

In response to these concerns the Americans wanted a better system for monitoring Spain's use of oil, and a reduction in Spain's monthly allowance. The U.S. State Department asserted a right to authorize the loading Spanish tankers.<sup>23</sup> The State Department then demanded that Spain provide a complete accounting of the imports and consumption from the end of the First Embargo. Perhaps most offensively from the point of view of the Franco Regime, the Allies demanded that they be permitted to station American experts in Spain to supervise the collection of information about imports and consumption on a day-by-day basis. In addition, the new American policy was to reduce

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<sup>22</sup> The Blue Division fought with great valor and suffered heavily. An estimated 47,000 men served in the Division. Of these, about 21,000 were casualties, and about 4,500 were killed in battle or died of wounds, disease, or frostbite. (Kleinfeld and Tambs 1973, 12).

<sup>23</sup> Columbia and Venezuela cooperated with the American policy.

Spanish consumption to about two-thirds of 1935 consumption. Obviously, these were potentially harmful and humiliating demands.

The British were mainly concerned with preventing the re-export of oil to Germany. They were reluctant to press Spain further. Spain's trade with Britain was important – the Basque region in particular was an important source of iron ore – and Britain had extensive investments in Spain. The British were also concerned because Spain occupied a strategic position with respect to the Battle of the Atlantic. The Americans on other hand were not dependent on trade with Spain so they could go much further. Political differences may also have played a role. During the Spanish Civil War the Roosevelt Administration had, it is true, maintained an embargo on the shipment of arms to both side, an embargo that in practice helped Franco's Nationalists. The reason may have been the strong support for the Nationalists in some quarters of the U.S. Catholic community during the Civil War. (Valaik 1967). Nevertheless, there was bitter resentment toward Franco among American leftists who had been deeply stirred by the plight of the Loyalists during and after the Spanish Civil War. They were not without influence in the Democratic Party, and their hostility was increased by Franco's pro-Nazi statements and aid for the Axis. The differences between the Americans and British grew as the end of the war approached, and the Allies began to give more weight to the configuration of the postwar world, as we will see when we turn to the Second Embargo.

During the Squeeze the United States followed a policy of decreasing the supply oil by slowing the authorizations of new shipments. For example, the tanker *Campechano* was held in Port Arthur Texas and not allowed to go to Spain for several months. Overall the flow oil to Spain was reduced, as shown in Table 1, from a bit more than 50,000 tons

per month to a bit more than 30,000 tons per month. Spain was obliged to reduce her consumption to levels far below those of 1935 during the Squeeze because her stocks had already been reduced to a minimum as shown in figure 2. Industry had severe problems, agriculture machinery could not be used, and the fishing fleet was functioning at only a fraction of capacity.

Spain held out without making any concessions from August 1941 to December 1941 when it began, grudgingly, to comply with the Allies by sending the information about consumption and stocks of oil that had been demanded in August. The entrance of the United States into the war and the problems of Germans on the eastern front finally must have persuaded the Franco regime that it would need to cooperate more fully with the Allies. But still the Franco regime dragged its feet. In January 1942 Secretary of State Cordell Hull lectured the Spanish Ambassador about the changes in its policies that Spain would need to make to get more oil. It would not be until April 1942 that the American Undersecretary of State, Sumner Welles, would certify that American investigators in Spain, led by Walter S. Smith, had confirmed the Spanish estimates provided by CAMPSA. At this point the Squeeze seems to have been lifted. But this did not mean that Spain's cooperation was now complete. Spain would wait until October 1943 to withdraw the Blue Division. And then Spain would leave a smaller unit, the Blue Legion, fighting on the eastern front.

Prior to the Squeeze, Spain had been supplied at a rate close to British estimates of normal consumption, which were close to the 1935 level, as shown by the first three bars in Figure 4. In June 1942 Spain requested a substantial increase based partly on the destruction of the railroad network during Civil War, which according to the Spanish



negotiators meant that motor vehicles had to provide a larger share of transport. This estimate, the fourth bar in Figure 4, was close to 40 percent above the 1935 level. The U.S. State Department, however, asked Smith to estimate normal Spanish consumption so that the United States could follow a policy of supplying only two thirds of normal consumption. Smith's estimate of normal consumption is represented by the last bar in Figure 4. It became the basis for supplying Spain until 1944.

Even Operation Torch, the Allied invasion of North Africa, failed to produce a major change in Allied oil policy. There were two practical military concerns. First, the Luftwaffe might use Spanish airfields to refuel so that they could attack the landing forces. Second, the Spanish forces in Morocco, thought to be as many as 100,000 battle hardened veterans, might join the Axis. The British downplayed these risks. In August Franco had replaced Suñer with General Count Francisco Gomer Jordana. Jordana was widely assumed to be more pro-Allied and especially pro-British than his predecessor. Indeed, Jordana made it clear that his only concern during this period was to insure that Spain remained well clear of the fighting. The Americans took the dangers of Spanish interference with Operation Torch more seriously than did the British, but not seriously enough produce a major change in the oil policy. (Hinsley 1990, Volume 2, 469).

After a long struggle, to sum up, the Squeeze achieved two of its goals: Spain accepted the American system of on-the-ground monitors and the new policy of limiting Spanish supplies to two thirds of normal consumption. Several goals, however, were not achieved. The Blue Division remained on the eastern front at least for a time; the Spanish Press remained violently pro-Axis; and Spain continued to export large amounts of raw materials to Germany. Spain chose not to interfere with Operation Torch, but given

Spain's earlier decision to avoid military confrontations with the Allies, and the shift in Spanish foreign policy signalled by the replacement of Suñer with Jordana, it is hard to credit this decision to the Squeeze. At best the Squeeze must be considered a partial success.

### **5. The Second Embargo**

Although Spain remained neutral, the frustration of the Allies, especially the Americans, with the Franco regime continued to mount for a number of reasons. Some were the same as those that had provoked the Squeeze. (1) Although the Blue Division was recalled in October 1943, the smaller Blue legion, as we noted above, continued to fight on the eastern front. Although the participation of the Blue legion, some 1500 men, would not affect the outcome of the war between the giant armies fighting on the eastern front, their presence was nevertheless a continuing affront to the Allies. (2) The government controlled Spanish press continued its violent pro-Axis propaganda. (3) Germans spies continued to operate freely in Spain, in the Canaries, and in Spanish controlled territories in North Africa.

In addition, some new issues arose or at least took on greater significance as the war progressed. (4) Spain allowed German planes that were forced to land in Spain or Spanish controlled territories to refuel and return to the air, while Allied planes were impounded and their flyers interned. (5) Spain had recognized the puppet regime of Jose P. Laurel installed in the Philippines by Japan. (6) Spain had impounded a number of Italian ships that the Allies wanted transferred to their command. (7) Perhaps most important, Spain was selling large amounts of tungsten ore to Germany and to the Allies

(who decided to compete for it) at astronomical prices. (Caruana and Rockoff, 2003). As time for the Allied invasion of France approached, and thus the time when Allied tanks would face German Antitank shells with tungsten cores, the Allies, especially the Americans, became more and more insistent that the sales of tungsten be halted.

We should note that a major concern developed in the United States at this time about the overall supply of oil. The United had increased its production substantially, from 174.3 million tons per year in 1939 to 234 million tons per year in 1945. But the U.S. military had increased its share of U.S. consumption from 1 percent in 1939 to 29 percent in 1945. (Goralski 1987, 166). Exports to Spain, however, amounted to not quite 0.3 percent of U.S. production in 1944. This suggests that the Americans could not have expected to solve their petroleum needs by reducing exports of oil to Spain, and that it was items listed above that were the main concerns.<sup>24</sup>

Given these concerns, and given the success of the First Embargo, it is not surprising that the Allies would contemplate another embargo. The Second Embargo was imposed in January 1944. This embargo however would last longer and prove less successful than the First, even though the circumstances seemed more propitious. After all, the Axis was close to defeat and Spain's stocks of oil, thanks to years of Allied control were at a bare minimum.

Franco immediately declared a temporary ban on exports of tungsten ore to Germany while the dispute was resolved. The German archives, however, show that the Germans did import tungsten ore from Spain during the embargo. In February 104.6 tons

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<sup>24</sup> Harold Ickes, who was America's "Petroleum Administrator for War," does not show much interest in the Spanish situation in *Fightin' Oil* (1943) his optimistic but surprisingly revealing memoir. Similarly Stoff's (1980) more recent treatment does not discuss any connection between events in Spain and U.S. thinking about the overall oil supply.

were exported from Spain. In March there were no exports. But in April another 198 tons were exported to Germany. (Leitz 1996, 189). The Spanish government was clearly in a difficult spot. There was a question of law and honor: Why could not Spain, a neutral country export to both sides, a right the United States had insisted on throughout its history. And there was a matter of business: The competition for tungsten between the Allies and Germany was proving enormously profitable.

During the Second Embargo, the Allies concentrated on different demands: The British focused on the removal of German spies and the Americans on ending exports of tungsten ore to Germany. This division, however, was tactical. The more fundamental issue was how far the Allies should push Spain. The British assumed they would have to deal with the Franco regime during and after the war. Britain, as we noted above, imported important raw materials such as iron ore and potash from Spain. An immediate cut off would be extremely costly, and in the long-run transport costs from alternative sources would be higher. Britain also had important investments in Spain. Rio Tinto, the great pyrite mine that produced a significant part of the world's output, for example, was British owned. Franco's nationalists had commandeered part of its output during the Civil War, but they had recognized British ownership. (Harvey 1978). After the World War, it was natural to assume, Franco's treatment of Rio Tinto and other investments would reflect how well Britain had treated Franco during the war. The fall of Franco, of course, might well mean a leftist government and the nationalization of Rio Tinto and other British investments. The Americans, on the other hand, were not dependent on Spain for raw materials, and had limited investments. Stopping the export of tungsten ore would

save American lives when the invasion of Europe began. For the Americans the long-term consequences of offending Franco were minimal.

This split between the British and the Americans was mirrored among the Americans. The American ambassador to Spain, Carleton J. Hayes, was more sympathetic to Jordana and the Franco regime than the U.S. State Department, and more willing than the State Department to accept minor concessions from the Spaniards. In April, in the midst of the Embargo, Hayes became so frustrated with the State Department's hardliners that he was moved to write a letter to the Administration that was tantamount to a letter of resignation. The Roosevelt administration, however, refused to accept it. (Halstead 1975, 397).

The split between Britain and the United States was so great, and the issue so important, that Churchill and Roosevelt were drawn into the fray. Initially, Churchill was content to support Roosevelt and the State Department hardliners, and merely to remind Roosevelt that British and American interests in Spain were different.

“When a large, strong, healthy elephant (no reference intended to GOP) comes into a garden and tramples down the flower beds some perturbation is natural among the local gardeners. As you know, we have had our own point of view about this....” February 13, 1944. (Kimball 1984, Volume 2, 726).

Roosevelt, on the other hand, was convinced that the oil embargo would force Spain to cut off all exports of tungsten ore to Germany:

“I believe that as a result of our suspension of tankers loading the Spanish situation is developing satisfactorily and that if both our Governments hold firm we can obtain a complete and permanent Spanish embargo on the export of wolfram [tungsten] to any country. Our information indicates that the Germans are very short of wolfram and that supplies obtained at this time can be directly translated into terms of British and American casualties. We have had some indications of a disposition on the part of your ambassador and ours at Madrid to accept some compromise short of

a complete embargo. I do not consider this satisfactory..." February 15, 1944. (Kimball 1984, Volume 2, 728).

On March 14 Churchill replied, stressing two reasons for desiring a quick compromise with Spain. (1) There was the possibility that Spain would hand over as much as 1000 tons of tungsten ore stored in the Pyrenees to the Germans in exchange for oil, if the Allies did not reach an agreement with Spain. (2) Spain could cut off the supply of iron ore to Great Britain (42 percent of Britain's supply), and potash that was needed by British farmers. Britain relied on the Spanish financial system to effect these purchases so the cut off could occur in a very short time. In concluding Churchill dropped the metaphor, and wrote more forthrightly about the differences between the United States and Britain.

"...we feel entitled to ask you to take our views seriously into account in the Iberian Peninsula, where our strategic and economic interest are more directly affected than are those of the United States." March 24, 1944. (Kimball 1984, Volume 3, 68). March 30, 1944.

After further exchanges, Churchill let it be known On April 25 that he was prepared to enter into a separate agreement with Spain, and to supply oil. (Hayes 1945, 222-23). This was not an idle threat. Most of the oil going to Spain was supplied by Texaco and Standard Oil. Beginning in November 1942, however, some supplies had come from Britain's Asiatic Petroleum company. The British could also supply aviation gasoline. Indeed, the first supplies of aviation gasoline that ended the aviation gasoline embargo were from British sources.

Now Roosevelt was forced to go along with Churchill. And on May 2 an agreement to end the Second Embargo was reached. The solution was to accept a minor export of tungsten ore from Spain: 20 tons in May and June and 40 tons per month

afterwards. D-day, of course, was taken into consideration by the Allies. Once France was under Allied control, exports from Spain to Germany would cease.

Shortly afterwards the rift between Churchill and Roosevelt became public knowledge. On May 24 Churchill gave a speech in the House of Commons in which he expressed some "kindly words" for the Franco regime, and looked forward after the war to "increasing good relations and fruitful trade." This speech, understandably, provoked a storm of protest. Much of the protest, of course, came from the left, but even some of Churchill's centrist supporters were dismayed. A week later, at a press conference, Roosevelt responded by criticizing Spain's aid for the Axis.<sup>25</sup>

Despite its weak position Spain was able to frustrate the Allies and achieve some of its goals. It defended its national interest and its right as a neutral to trade with Germany. The American goal of stopping all exports of tungsten ore was frustrated partly by official exports and partly by smuggling with the help of sympathetic Spanish officials. According to Leitz (1996, 192-193) the Germans imported up to 512 tons from April through the first days of July 1944 aside from the legal imports. To be sure, it would have taken bold efforts by the Franco regime to stop the smuggling. The Spanish Foreign minister, Jordana, argued with some justification that it was impossible to stop smuggling with the fabulous prices that tungsten ore had achieved.<sup>26</sup> Spain closed the German consulate in Tangier, and expelled some Axis agents, but others remained. In his *Memoirs*, Hoare, the British ambassador, complains that two months after the end of the

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<sup>25</sup> "Roosevelt Criticizes Spain, Taking Issue With Churchill," *New York Times*, May 31, 1944, p. 1, and related news items. Eleanor Roosevelt also criticized Churchill's position, although she carefully refrained from attacking Churchill personally.

<sup>26</sup> Archivo de Ministerio Ausuntos Exteriores, 2.304, E. 1.

Second Embargo 201 of 220 German spies on a British list given to Spain remained at large. (Hoare 1946, 270). The Press became less pro-Axis, although that was to be expected given the trend in the war. The Blue Legion was removed, although several hundred men remained and fought alongside the Germans until the end.

In short the Second Embargo must be regarded as a major disappointment from the American viewpoint. This was not because Spain had found substitutes for Allied oil or because Spain had somehow built up reserves of oil or become less dependent on oil. The failures of the Second Embargo instead reflected the difficulties the Allies had in dealing with a dictatorial regime that controlled the press. The Franco regime could, if it chose, allow its people to undergo great hardships in order to make a point to the Allies. The failure of the Second Embargo also reflected, even more, the inability of the Allies to maintain a common front in the face of divergent long-run interests.

## **6. Learning from the Spanish Experiment**

Several conclusions emerge from a comparison of the critical episodes during the time the Allies controlled Spain's supply of oil in World War II that may be applicable in other cases. (1) The outcomes of sanctions are hard to predict because the factors that influence the outcomes are so diverse. In prospect, the First Embargo, undertaken when the military situation facing Britain was desperate, would appear to have been a desperate gamble. It might have driven the Franco regime deeper into the arms of the Axis. Yet an agreement favorable to the future Allies was reached within a short time. The Second Embargo, on the other hand, although undertaken when the Allies were in sight of victory, was a disappointment: Negotiations dragged on, a rift developed between Britain



and the United States, and Spain's compliance with Allied demands was mixed at best. Part of the explanation for the difference in outcomes is that in the First Embargo the Allies were pointing Spain in the direction of its own long-run economic interests; in the Second Embargo, on the other hand, Spain was being asked to give up its lucrative export trade without financial compensation. Another part of the explanation is political. By 1944 the Franco regime was more confident of its hold on power and on the press, and thus of its ability to survive adverse public reactions to the hardships imposed by Allied sanctions.

(2) The choice of goals that can be monitored effectively is an important determinant of whether goals can be achieved. It was relatively straightforward to monitor the re-export of oil products from Spain to Germany with the tools developed by the Allies. The Allies knew the amount of oil entering Spain and the amount consumed in Spain or that entered Spanish stocks. In the case of aviation gasoline, a potentially important re-export for military purposes, the Allies simply maintained a total embargo for three years, to limit the amount that could be used to fuel Spanish or German planes. In a number of other cases, however, it was hard to measure the extent to which Spain had complied. The Allies wanted Spain to tone down its pro-Axis press, to force out German spies, to remove the Spanish forces from the eastern front, and to stop exporting tungsten ore to Germany. In all of these cases it was possible for Spain to comply only in part, and difficult for the Allies to monitor the degree of compliance.

(3) Cooperation among the countries imposing sanctions is critical for success. In the First Embargo Britain and the United States were agreed on the purpose of the embargo. In the Second Embargo, however, Churchill was concerned that following the

hard line favored by the Roosevelt administration would undermine British interests. This led to a rift between Churchill and Roosevelt that ultimately produced, after protracted negotiations, a face-saving compromise, rather than capitulation by Franco.

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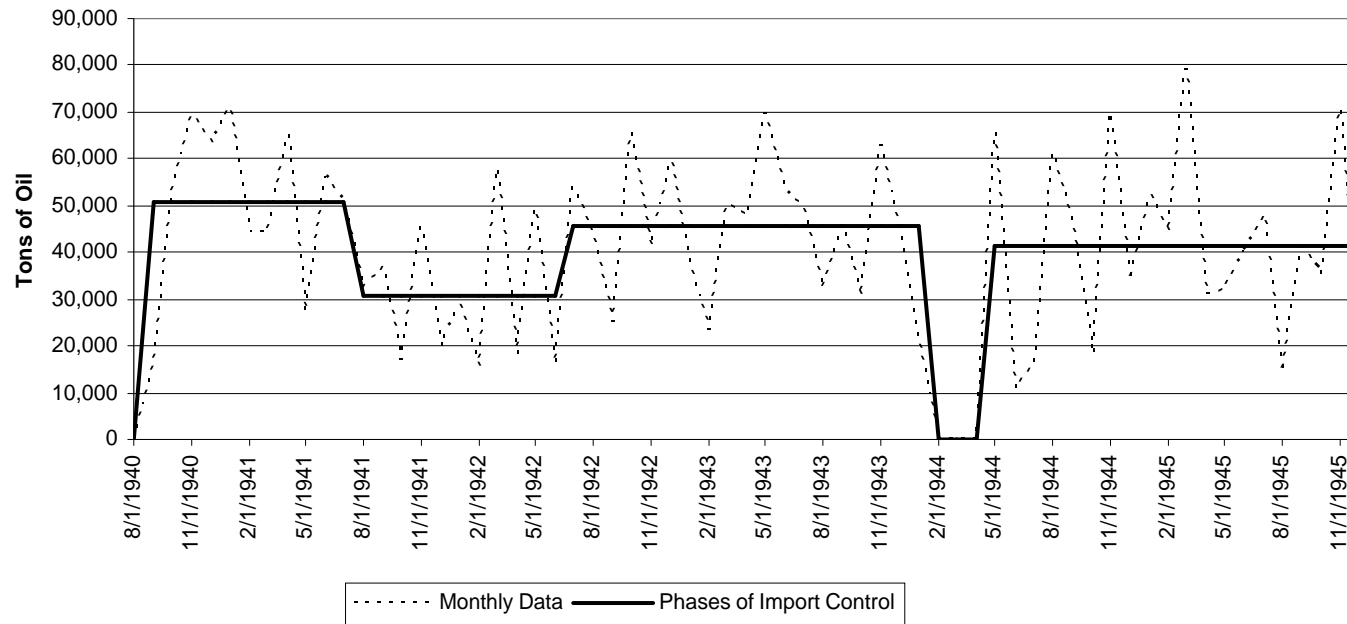
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<b>Table 1. Spanish Oil Imports in World War II, key Phases</b>		
Dates	Phase	Average Monthly Oil Imports (metric tons)
1935	The last full year of peace.	67,200
1936-1939	The Spanish Civil War.	Not Available
September 1939 to July 1940	Imposition of the Navicert system. The main goal of the Allies was to limit re-exports of oil to Germany.	Not Available
1. August 1940 <sup>a</sup>	<i>First Oil Embargo.</i> The main goal of the Allies was to deter Spain from entering the war on the side of the Axis.	0
2. September, 1940 to July 1941	<i>British Control.</i>	50,928
3. August 1941, April 1942	<i>The Squeeze.</i> The main goal of the Allies was to establish a better system for monitoring Spanish consumption.	30,398
4. May 1942 to January 1944	<i>The First Period of American Control.</i>	44,326
5. February 1944 to May 1944	<i>Second Oil Embargo.</i> The main goal of the Allies was to stop exports of tungsten ore to Germany.	0
6. June 1944 to December 1945	<i>The Second Period of American Control.</i>	42,801
<sup>a</sup> More precisely, the First Embargo was imposed on July 27, 1940 and removed on September 7, 1940.  <i>Sources:</i> 1935, Archives Archivo General de la Administración, Box 54/8928; 1940-45, Appendix.		

<b>Table 2. Determinants of Spanish Oil Imports in World War II</b>				
Dependent Variable: Total Monthly Oil Imports				
Method: Least Squares				
Sample (unadjusted): August 1940 to December 1945				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	49,911	6,854	7.28	0.000
British Control	14,052	6,322	2.22	0.030
Squeeze	-13,430	6,375	-2.11	0.040
First Period of American Control	3,443	5,044	0.68	0.498
Second Embargo	-42,974	9,030	-4.76	0.000
Total Oil (-1)	-0.251	0.114	-2.21	0.031
Total Oil (-2)	0.0727	0.102	0.71	0.480
R-squared	0.414			
Adjusted R-squared	0.351			
S.E. of regression	15,668			
Log likelihood	-694.22			
Durbin-Watson stat.	2.06			
Source: Appendix				

**Figure 1**

**Monthly Imports, September 1940-December 1945**

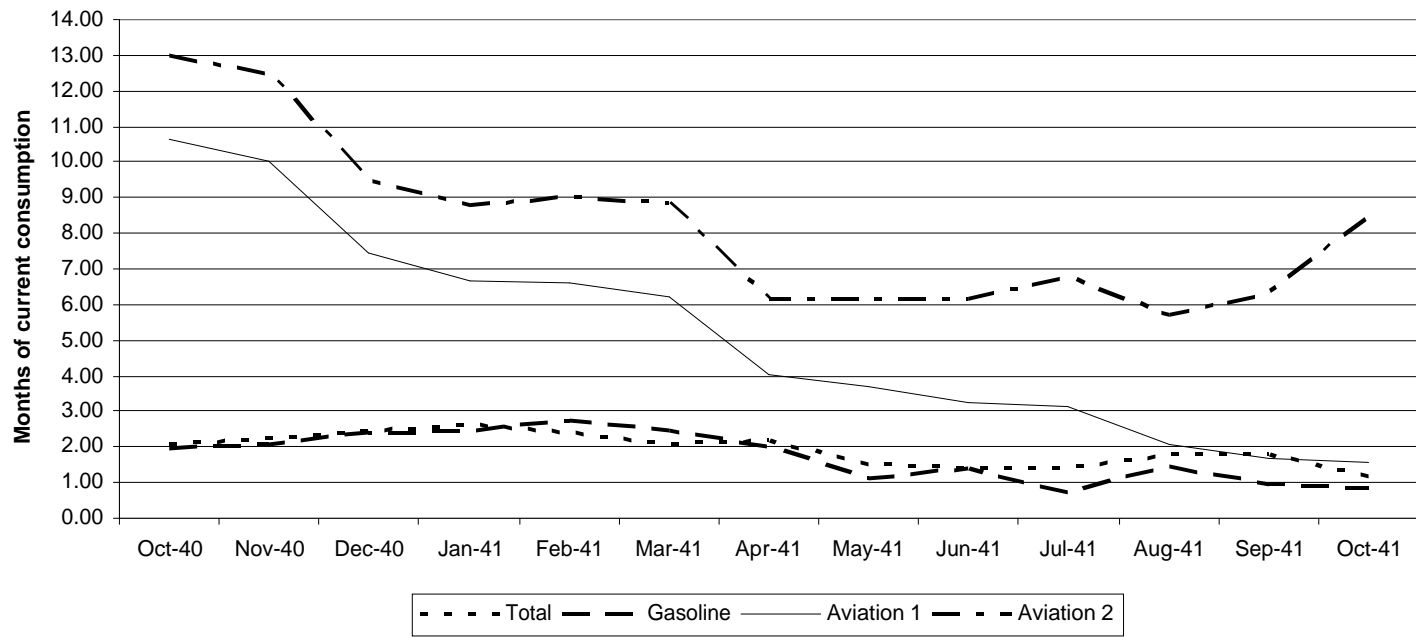


**Source: Appendix.**



**Figure 2**

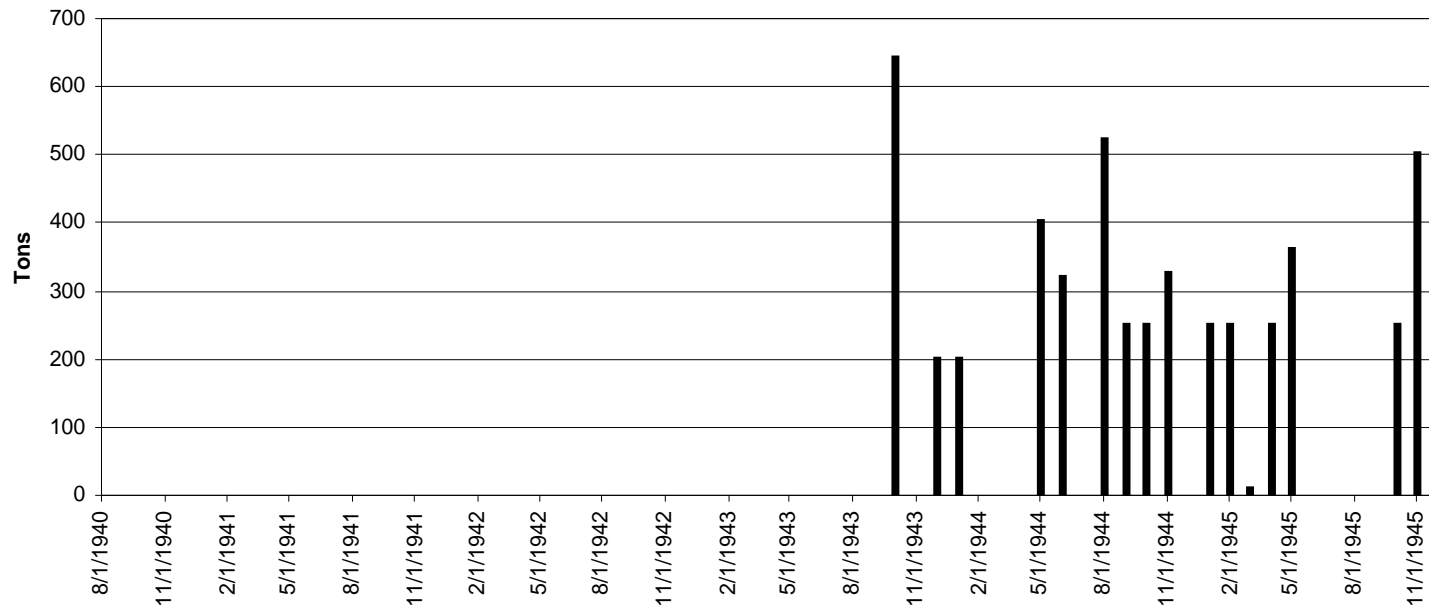
**Spanish Stocks of Petroleum Products, 1941**



**Source: Data compiled by CAMPSA for the Allies, Archivo General de la Administración, Box 54/8928.**

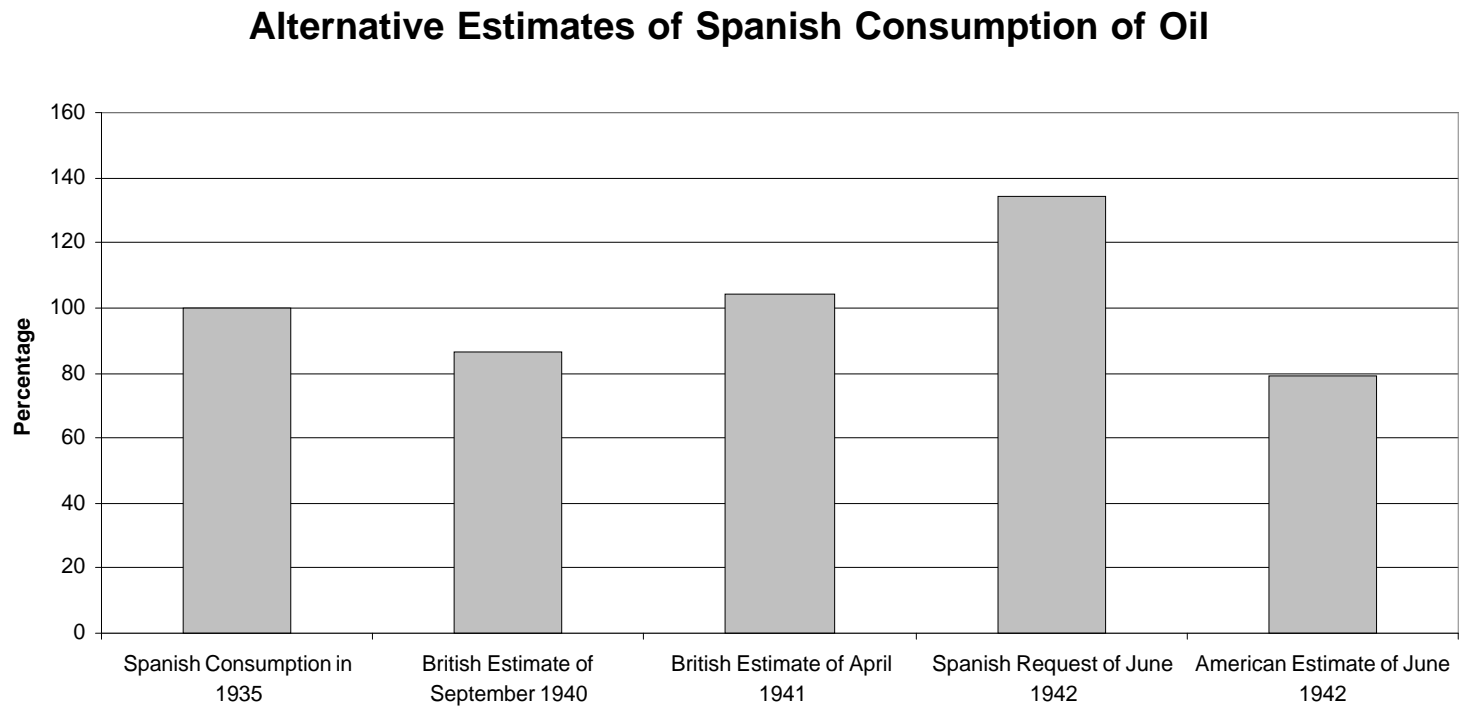
**Figure 3**

### Imports of Aviation Fuel



**Source: Appendix.**

**Figure 4**



**Source: Archivo General de la Administración, Box 54/8928.**

**Appendix: Spain's Oil Imports, monthly August 1940 – December 1945, metric tons**

	Total	Gasoline	Gasoline for planes	Kerosene	Diesel	Fuel Oil	Lubricants	Other such as pale oil	Kerosene + Petrol	Crude Oil
Aug-40	0	0	0	0	0	0	0	0	0	0
Sep-40	15,605	0	0	0	7,619	7,986	0	0	0	0
Oct-40	52,258	15,133	0	2,529	13,520	18,905	2,171	0	2,529	0
Nov-40	69,399	22,084	0	3,523	8,455	35,117	220	0	3,523	0
Dec-40	63,561	22,904	0	0	10,590	29,761	306	0	0	0
Jan-41	71,183	22,922	0	1,470	17,817	27,768	1,206	0	1,470	0
Feb-41	44,236	22,537	0	0	11,514	8,419	1,766	0	0	0
Mar-41	44,220	17,615	0	714	6,699	16,028	3,164	0	714	0
Apr-41	65,235	20,596	0	2,092	14,643	27,117	787	0	2,092	0
May-41	27,361	7,594	0	0	17,694	1,447	626	0	0	0
Jun-41	56,456	32,487	0	1,286	3,759	10,443	8,481	0	1,286	0
Jul-41	50,700	9,542	0	0	11,733	27,010	2,415	0	0	0
Aug-41	32,515	29,263	0	1,995	0	0	1,257	0	1,995	0
Sep-41	36,934	0	0	0	11,261	18,060	7,613	0	0	0
Oct-41	17,261	14,909	0	1,996	0	0	356	0	1,996	0
Nov-41	45,822	17,182	0	0	8,713	13,598	6,329	0	0	0
Dec-41	19,849	7,561	0	0		12,288	0	0	0	0
Jan-42	29,000	18,000	0	0	0	11,000	0	0	0	0
Feb-42	15,800	0	0	0	15,800	0	0	0	0	0
Mar-42	58,200	24,500	0	1,000	18,300	13,700	700	0	1,000	0
Apr-42	18,200	0	0	0	8,300	9,900	0	0	0	0
May-42	49,274	21,156	0	1,050	10,234	13,134	1,300	2,400	1,050	0
Jun-42	16,171	0	0	0	1,869	6,047	0	0	0	8,255
Jul-42	54,079	16,497	0	1,951	5,469	14,895	4,000	0	1,951	9,316
Aug-42	43,765	17,225	0	1,020	16,165	0	0	0	1,020	8,336
Sep-42	25,054	9,517	0	0	0	15,537	0	0	0	0
Oct-42	65,832	28,101	0	0	0	37,731	0	0	0	0
Nov-42	41,463	23,704	0	1,623	6,400	5,800	1,200	0	1,623	1,113
Dec-42	59,920	14,400	0	1,000	12,099	17,700	3,800	0	1,000	9,921
Jan-43	38,023	7,752	0	0	10,725	9,135	0	0	0	10,411
Feb-43	23,491	22,291	0	600	0	0	0	0	600	0
Mar-43	50,188	14,488	0	688	11,200	12,592	0	0	688	10,532
Apr-43	47,860	13,158	0	0	5,097	14,796	4,209	0	0	10,600
May-43	70,150	35,953	0	2,245	15,211	14,496	0	0	2,245	0
Jun-43	53,162	15,218	0	0	19,992	17,952	0	0	0	0
Jul-43	50,090	18,345	0	0	13,238	18,007	0	500	500	0
Aug-43	32,600	7,000	0	0	3,000	21,400	0	600	600	0
Sep-43	46,250	17,145	0	0	3,727	20,028	4,150	600	600	0
Oct-43	30,854	19,214	640	0	3,000	8,000	0	0	0	0
Nov-43	63,260	14,640	0	0	13,000	33,700	0	960	960	0
Dec-43	42,600	1,900	200	0	18,900	14,600	4,000	1,500	1,500	0
Jan-44	21,000	15,000	200	0	0	4,600	0	600	600	0

Feb-44	0	0	0	0	0	0	0	0	0	0
Mar-44	0	0	0	0	0	0	0	0	0	0
Apr-44	0	0	0	0	0	0	0	0	0	0
May-44	65,730	23,930	400	0	11,800	23,400	3,800	1,200	1,200	0
Jun-44	11,000	9,480	320	0	0	0	0	600	600	0
Jul-44	16,400	7,800	0	0	7,800	0	0	400	400	0
Aug-44	61,320	26,600	520	0	13,800	19,400	0	500	500	0
Sep-44	45,950	14,100	250	0	5,800	12,000	4,000	4,900	4,900	0
Oct-44	18,300	3,250	250	0	2,400	11,400	0	500	500	0
Nov-44	70,080	22,663	324	0	14,099	27,585	3,469	970	970	0
Dec-44	33,960	11,500	0	0	2,140	19,000	0	660	660	0
Jan-45	52,610	15,640	250	0	8,800	22,600	4,000	660	660	0
Feb-45	44,235	17,225	250	0	8,440	17,000	0	660	660	0
Mar-45	79,458	23,250	8	0	12,600	38,000	4,000	800	800	0
Apr-45	31,300	12,450	250	0	3,150	15,450	0	0	0	0
May-45	32,160	9,900	360	0	6,500	14,600	400	200	200	0
Jun-45	40,500	9,700	0	0	13,100	11,300	0	3,200	3,200	0
Jul-45	48,250	18,500	0	0	7,850	17,000	3,000	950	950	0
Aug-45	14,378	6,000	0	0	1,178	5,800	0	700	700	0
Sep-45	41,400	12,750	0	0	6,950	20,300	0	700	700	0
Oct-45	35,500	14,600	250	0	5,450	8,000	4,000	1,600	1,600	0
Nov-45	70,700	19,850	500	0	15,450	34,900	0	0	0	0
Dec-45	17,276	8,000	0	0	3,800	3,076	0	1,200	1,200	0

Sources: Archivo General de la Administración, Box 54/8927 and 54/8928.