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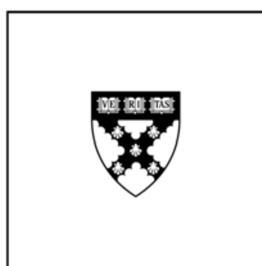

The Empire Struck Back: The Mexican Oil Expropriation of 1938 Reconsidered

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ABSTRACT

The Mexican expropriation of 1938 was the first large-scale non-Communist expropriation of foreign-owned natural resource assets. The literature generally makes three assertions: the U.S. government did not fully back the companies, Mexico did not fully compensate them for the value of their assets, and the oil workers benefitted from the change in ownership. This paper musters data and evidence that supports only the first of those assertions, and only to a limited extent: the companies devised political strategies that maneuvered Roosevelt into supporting their interests, and they were more than fully compensated by the Mexican government as a result.

The Mexican petroleum expropriation of 1938 looms large as the apogee of Latin American resource nationalism and America's "Good Neighbor" policy. In Mexico, the expropriation is viewed as a patriotic triumph, in which the federal government seized control of the country's most valuable natural resource. In the U.S., the temperate reaction of the Roosevelt Administration is seen as the decisive break with Washington's imperial relationship towards Latin America. Washington "curbed its finance capital" and downgraded the protection of American overseas private investments.[1]

The only problem with both narratives is that they do not fit the facts. President Lázaro Cárdenas nationalized the oil industry in response to the companies' defiance of a Supreme Court decision in a labor dispute. The U.S. companies went to the mattresses over the dispute because their Mexican assets consisted of high-cost declining fields. Only the recently-discovered Poza Rica fields showed promise, and they were in the hands of a British company. The U.S. companies, therefore, were willing to gamble in order to send a signal to labor unions in other jurisdictions — like Venezuela — that they were not to be trifled with.

Why did FDR, no friend of the oil men, defend their interests? Oil was not a strategic commodity in 1938: the U.S. in fact imposed tariffs on lower-cost foreign suppliers to protect domestic producers. The expropriation, however, gave FDR a credible excuse to threaten to suspend silver price supports, which he could use as a political cudgel to extract concessions from Congress. The oil companies held out for the best possible deal until 1941, when Washington finally imposed a resolution that fully compensated the companies for the market value of their assets.

The British-owned Mexican Eagle Oil Company fared even better than the U.S. firms. Britain imposed an oil boycott and cut diplomatic relations. Mexico resisted British pressure, causing the U.K. to change strategies in 1943. Rather than pressure Mexico, it adroitly used its connection to the growing American hegemon to force Mexico into paying. The U.S., desirous of supporting its weakened British ally, made commercial rate loans to Mexico *de facto* contingent on a settlement of the oil dispute. Mexican Eagle received massively more than its market value for its assets.

The paper proceeds as follows. First, we present evidence that the Mexican oil industry was in decline by the 1930s. Second, we show that the American companies were in financial distress

[1] Wood, *Good Neighbor Policy*, pp. 344 and 360.

during the same period. Third, we demonstrate that the U.S. succeeded using the threat of sanctions to compensate — in fact, *overcompensate* — American companies. Finally, we show that the expropriation did not increase the Mexican government's petroleum revenues or the wages paid to Mexican oil workers.

The Decline of the Mexican Oil Industry

Mexican oil production declined monotonically between 1921 and 1933. The decline in output was not due to declines in investment or exploration. Under every available measure, investment peaked *after* output peaked. This is not consistent with the hypothesis that the companies cut back on investment from fear of future taxes or expropriation. It does, however, square with contemporary accounts of the invasion of Mexico's oil deposits by salt water. The deposits that had been tapped were not particularly large. It took only a few years for the sheets of salt water that lay beneath them to invade the petroleum.[2]

FIGURE 1 AROUND HERE

The oil companies kept searching for oil. They simply could not find enough to maintain their 1918-21 levels of production. Table 1 presents data on drilling. Exploration increased until 1926, but fewer and fewer new wells found oil. Even when the companies sank successful wells, the initial output per well continuously fell. At its peak in 1921, the average initial capacity of a new well was 3.7 million barrels per day (bpd). By 1924, the average initial capacity of new wells had fallen to 1.0 million bpd. By 1930, the average new well produced only 61,327 bpd. The combination resulted in, as one contemporary observer put it, "a very pronounced increase in the cost of obtaining a barrel of crude oil."[3]

TABLE 1 AROUND HERE

The one exception to the lack of new discoveries was the Poza Rica fields controlled by the Mexican Eagle Oil Company, also known as *El Águila*. Mexican Eagle discovered oil in the region in 1930, when it hit a gusher after attempting to re-drill a deep well that had been abandoned in 1927. Production started in 1932, but ran into a series of related problems. First, the cost of production at Poza Rica was higher than in the company's previous fields. In addition, the company needed to construct new pipelines for the fields to be viable. Second, roughly 41% of the new fields were located on federally-owned lands, requiring long negotiations with the government. (The same applied to the company's need to exercise eminent domain for pipelines.)[4] Labor troubles and a commercial conflict over an older field with a small Mexican company further complicated development. A final arrangement wasn't reached with the federal government

[2] Hall, *Oil, Banks, and Politics*, pp. 105, 109, 111; Brown, *Oil and Revolution*, pp. 143 and 164.

[3] Sterret and Davis, *Economic Condition*, p. 204.

[4] Mexican Eagle owned only 7,700 the field's 13,000 proven acres. "Business: Poza Rica," *Time Magazine*, Nov. 22, 1937.

until May 1937: Mexican Eagle gained the right to exploit federal lands, in return for a 35% in-kind federal royalty on the gross value of production.[5]

Data on net investment levels follow the same pattern as the data on new wells. The financial statements of the major Mexican oil companies can be found in *Moody's Manual of Investments*, including the Mexican Petroleum Company, Mexican Eagle, Pan American Petroleum and Transport, the Mexico-Pánuco Oil Company, the Mexico Seaboard Oil Company, and the Penn-Mex Fuel Company. These firms accounted for 76 percent of total output in 1918.[6] Table 2 presents an index of the nominal value of each firm's fixed assets, that is to say, their assets *excluding* cash, securities, loans to other firms, accounts receivable, and other liquid investments.[7]

TABLE 2 AROUND HERE

By 1931, every company in the sample was disinvesting. The only variance was the year in which investment peaked. Mexican Petroleum's investment peaked in 1924. Mexican Seaboard peaked in 1925, Mexico-Pánuco and Penn-Mex in 1930, and Mexican Eagle in 1931. (The latter firm's new investment at Poza Rica was not enough to compensate for disinvestment elsewhere.) The most extreme case came from Penn-Mex, which announced in May 1932 that is was shutting down its operations in Alvarez, Barra Sur de Tuxpan, and Veracruz, due to "diminishing production of the company's wells" and the "generally unfavorable petroleum situation in Mexico."[8]

The data in Table 2 are generally consistent with the estimates made by the Mexican government of total investment in the oil industry. The estimates indicate a rapid run-up of investment from 1912 to 1924 — three years after production peaked — followed by an accelerating decline through 1936. (See Table 3.)

TABLE 3 AROUND HERE

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[5] Since the royalty was paid in barrels of oil, the agreement was more akin to a modern production-sharing agreement than a true royalty. The federal share declined to 15% for low-quality crudes. See Cabrera, *La Suprema Corte*, pp. 64-65. The agreement did not go into effect until November 1937. "Business & Finance: Mexican Wages," *Time Magazine*, December 27, 1937.
[6] Market shares were calculated from data in Brown, *Oil and Revolution*, p. 125.
[7] We look at fixed assets (land, equipment, buildings) not total assets. The reason is that total assets can increase through the purchase of securities or increases in cash balances, without these assets being invested in productive apparatus. In fact, total assets can increase even if a firm is selling its productive assets and holding the proceeds as cash. Our figures are the book values of fixed assets, calculated at acquisition cost minus depreciation. Optimally, we would have converted these figures into replacement costs. This involves applying the same depreciation schedules across companies by asset type and adjusting the value of new acquisitions of productive apparatus for inflation. Unfortunately, many of our financial statements either lumped depreciation in with other expenses (making it difficult to back out) or failed to break down productive assets into sufficiently detailed sub-categories.
[8] "Penn Mex Cuts Operations," *Wall Street Journal*, May 5, 1932.

Since Mexico produced no oil drilling equipment, pipes, casings, or storage tanks, gross investment flows can be measured by the real value of oil equipment imported into Mexico from the United States. Figure 2 presents the data. New investment flows begin to decline in 1925, four years after output peaked.[9] They then fell through 1938, save for a brief uptick in 1932-34 as the Poza Rica fields came on-line.

FIGURE 2 AROUND HERE

The State of the Oil Companies

The implication of declining production and rising costs is that the Mexican oil industry should have been in increasing financial distress. The financial data for the companies bear out this implication. Three traded companies — Mexican Eagle, Mexican Petroleum, and Penn-Mex — produced almost all their oil in Mexico. A fourth, Mexican Seaboard, produced 62% of its oil in Mexico in 1930, although this number fell to 20% by 1937.[10]

Most of the majors had some exposure to Mexico. The Texas Company (later Texaco), for example, entered the Mexican market in 1912 and established a subsidiary in 1917 with an initial capital of $5.3 million, although it never took much of the market; nor did Mexican oil ever provide Texaco with a substantial portion of its output. Gulf Oil arrived in 1912. Union Oil, Sinclair, and Standard Oil of California followed by 1917.[11] Shell began production in Mexico in 1912, through a small subsidiary operation called La Corona, S.A. In 1919, Royal Dutch-Shell purchased a controlling interest in Mexican Eagle, Mexico's largest oil firm.[12] In 1932, Standard Oil of New Jersey (aka "Jersey Standard," now ExxonMobil) re-entered the Mexican market when it acquired the Pan-American Petroleum and Transport Corporation (the holding company that held at 98.3% interest in the Mexican Petroleum Company) from Standard Oil of Indiana and became the largest producer of petroleum in Mexico.[13]

TABLE 4 AROUND HERE

The share prices of the three listed companies that produced primarily in Mexico went into a sustained decline during the 1920s and '30s. Mexican Eagle shares declined 89% (in real terms) between 1920 and 1930. They briefly rallied when Poza Rica came on line, but then declined again. With some vertiginous ups and downs, Mexican Seaboard shares similarly fell, collaps-

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[9] This is not the same thing as saying that the stock of investment declined. As long as new investment flows exceeded the depreciation of old equipment and the re-export of used equipment from Mexico to third countries, the stock of investment would have increased. Without estimates of re-exports of petroleum equipment and estimates or the rate at which equipment depreciated, it is not possible to estimate the stock of investment. It is unlikely, however, that re-exports and depreciation would have exceeded new flows, at least through the late 1920s.

[10] *Moody's Manual of Investment*, 1938, pp. 792-794.

[11] Brown, *Oil and Revolution*, p. 141, and Rippy, *Mexican Revolution*, p. 137.

[12] Rippy, *Mexican Revolution*, p. 154.

[13] Pan American was purchased by Standard Oil of Indiana in 1925. then sold it to Standard Oil of New Jersey. Meyer, *Mexico*, p. 4.; Brown, *Oil and Revolution*, p. 45. For the size of its share, see "Mexican Petroleum offer may be made," *Wall Street Journal*, 6/16/1927.

ing by half in 1922 and then losing almost all their value between 1925 and 1931, before recovering somewhat. Mexican Seaboard's recovery, however, coincided with a monotonic decline in Mexico's share of the company's production from 57% in 1931 to 20% in 1936 and 1937.[14] Penn-Mex shares slid in value due to a 1932 decision by its owner, the South Penn Oil Company, to liquidate most of the enterprise. South Penn (which owned 55% of Penn-Mex) arranged to swap the company's existing stock, with a par value of $25, for new shares with a par value of $1. It then authorized Penn-Mex's directors to "pay dividends out of any available funds … regardless of whether or not the excess was created through net earnings."[15] The directors immediately paid out of a special dividend of $5.18. Four days later, South Penn sold its remaining stake in the company to Sinclair Consolidated for $1 per share immediately plus an additional $18.75 to be paid out over an unspecified period of time.[16]

Mexican Petroleum's share price was rescued from oblivion by negotiations by Jersey Standard and Standard Oil of Indiana (later Amoco) over the latter's overseas assets. Standard of Indiana owned 97.3% of the shares of the Pan-American Petroleum and Transport Company, which in turn owned 96% of Mexican Petroleum. Mexican Petroleum (which was separately traded) made up 21% of Pan-American's assets, by market value, the rest of which were located in Venezuela and the Dutch Antilles. (Pan-American Petroleum refined Venezuelan crude in Aruba.) In April 1932, with Congress debating oil import tariffs, Standard of Indiana agreed to sell Pan-American to Jersey Standard.[17] (Jersey Standard possessed a widespread distribution network in South America and Europe, and thus could more easily divert Mexican production to those markets than could Standard Oil of Indiana. Moreover, Standard Oil of Indiana refused to sell Mexican Petroleum independently of their other foreign properties.) In 1935, Jersey Standard decided to buy up the remainder of Mexican Petroleum shares at their par value and delist the stock.[18] The price, unsurprisingly, rose to the par value of $100 before disappearing.

Data from the companies' published financial statements bears out the verdict of the stock market. Mexican Eagle's return on assets declined from 9% in 1921 to nil by 1928, and remained low until the Poza Rica discoveries boosted it back to 7%. Mexican Petroleum steadily lost money over the 1930s. The market shares of the two companies reflected their fortunes. Between 1930 and 1937 Mexican Eagle's share of production steadily climbed from 32% to 60%, while Mexican Petroleum's fell from 37% to 14%.[19]

TABLE 5 AROUND HERE

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[14] *Moody's Manual of Investments*, various issues.

[15] "Penn Mex Cash Aids South Penn," *The Wall Street Journal*, 3 October 1932, p. 5.

[16] "Consolidated Oil in Deal in Mexico," *The New York Times*, 5 October 1932, and "Acquires Penn Mex Fuel," *The Wall Street Journal*, 6 October 1932, p. 2. The smaller company paid dividends of 50¢ in 1932; 75¢ in 1933, 1934, and 1935; 50¢ in 1936; and 30¢ in 1937. *Moody's Manual of Investments*, various issues.

[17] "S.O. N.J. Acquiring Foreign Properties," *Wall Street Journal*; Apr 20, 1932

[18] "Mexican Petroleum And Utah Copper To Leave Exchange," *Wall Street Journal*, 1935 (Jul 12).

[19] Calculated from data in Moody's Manual of Investments and *Mexico's Oil*, p. 141.

Did the Mexican government contribute to the oil companies' parlous financial state? The answer appears to be no. First, as discussed above, the oil companies continued to prospect for oil during the 1920s and 1930s. When they found it, as in Poza Rica, they invested. This is not consistent with a poor political environment. Second, Share prices of all oil companies, not just those exclusively operating in Mexico, rose and fell along with the price of petroleum. Oil prices fell from a peak of $26.10 per barrel in 1920 (in 2009 dollars) to $13.76 by 1923. They then recovered somewhat before beginning a long and painful slide to a low of $11.92 in 1932. (See Figure 4.)

Might the Mexican government have engaged in creeping expropriation via the tax system? Gross receipts from petroleum taxes as a percentage of the value of crude oil production rose from a low of 15% of the gross value of crude oil production in 1925 to more than 30% by 1931. By the 1930s, however, production charges, export duties, royalties, and income taxes made up less than a third of oil taxes. The remainder came from oil import duties and excises on domestic sales of refined products, overwhelmingly gasoline. The burden of import duties, obviously, did not fall on Mexican oil producers. Gasoline excises might have fallen on crude producers, but for two factors. First, such charges came out of the value-added during the refining process, not the value of the crude itself. Second, the United States imposed no tariffs on oil or gasoline imports until 1932. If a foreign-owned Mexican refinery could not pass along the burden of excise taxes to consumers, it would simply choose to export. In fact, most of Mexico's production of refined products was exported. (See Figure 5.) The maximum burden of Mexican refined product taxes was therefore equal to the cost of transporting refined products to the United States, which a Congressional report estimated to be $3.78 (in 2009 dollars) per barrel in 1931.[20]

FIGURE 3 AROUND HERE

A government action did reduce the value of the Mexican oil companies in 1933 … but the government in question was not Mexico's. Rather, the U.S. Congress imposed tariffs on imported oil. In 1930, Congress reported that refineries using imported oil earned a profit of 26¢ per barrel while refineries using domestic oil earned only 11¢. Despite the opening of the Panama Canal, which made it feasible for the first time to export Californian oil to the east, foreign oil was often cheaper in East Coast markets. The independent producers and refiners argued that the "Big Four" oil companies used their access to foreign oil as a club to "coerce the independent and to break American markets." Moreover, they presented evidence that the Big Four did not fully pass along the benefits of lower crude oil prices to consumers. In 1931, the governors of Oklahoma, Texas, Kansas and New Mexico urged President Hoover to impose "voluntary" import reductions on the oil companies. Jersey Standard, Standard Oil of Indiana, Gulf Oil and Sinclair agreed to voluntary reductions of a quarter, and Shell cut imports by half. (Since Shell controlled Mexican Eagle, this move particularly impacted its subsidiary.) Nonetheless, protectionist pressure continued to build — abetted by concern over budget deficits — and on June 6, 1932, President Hoover signed a bill that imposed tariffs of 21¢ per barrel on crude oil, $1.05 per

[20] 28¢ nominal. Data from U.S. House of Representatives, 'Production Costs of Crude Petroleum and of Refined Petroleum Products', House Document No. 195, 72nd Congress, 1st Session (Washington: GPO, 1932), p.49.

barrel on gasoline, and $1.68 per barrel on lubricants.[21] The result was a doubling of the gap between the export price of Mexican crude and the New York price for oil of the same grade. (See Figure 4.)

FIGURE 4 AROUND HERE

The Labor Disputes

The parlous state of oil company finances was on collision course with the increasing militancy of the oil unions. The unions saw some success at raising wages and cutting hours between 1915 and 1934. Strikes hit the Mexican Eagle refineries in Tampico in Minatitlán in April 1915, followed by a second set in 1916 and 1917. In May 1917 the labor unrest spread to Pierce's operations in Tampico and Mexican Petroleum's refinery in Mata Redonda.[22] The government of the state of Tamaulipas stepped in and settled the Pierce strike, mandating a 25% wage increase.[23] In June, Mexican Petroleum conceded the same benefits.[24] Mexican Eagle gave in to a 1924 strike, conceding an 8-hour workday, wage hikes, and the first collective bargaining agreement in the history of the Mexican industry.[25] One Mexican government report related, "Most workers do not agree with the movement and on various occasions told us that if most of them didn't return to work, it was from fear of becoming victims of the violence committed against the persons of some other workers."[26] The other companies soon signed similar contracts.[27]

Follow-up strikes, however, met a more determined response, *with the support of the Mexican government*. Mexican Petroleum, for example, conceded a collective bargaining agreement to the Huasteca union after a 1925 strike. When workers from a competing union killed a Huasteca member in 1925, the union declared a second strike. With government support, management fired the striking workers. It then rehired only a third.[28] Mexican Eagle ended a refinery strike that same year by paying $123,000 to the leadership of the national Confederación Regional de Obreros Mexicanos (CROM), which got the strike declared illegal.[29] Nevertheless, overall, wage rates rose from 6¢ (U.S.) per hour in 1913 to 16¢ per hour in 1934.

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[21] McBeth, "Oil Industry," pp. 427-462.

[22] Brown, "Sindicalización," p. 39.

[23] Warren to H.C. Pierce, 5/8/17, National Archives, Record Group 59, 812.504/97.

[24] McHenry to Secretary of State, 6/17/1917, National Archives, Record Group 59, 812.504/110.

[25] Dawson to Secretary of State, 4/20/24, National Archives, Record Group 84, Tampico post records, 850.4.

[26] H.R. Márquez, "Memorandum al C. Presidente," 10/27/24, AGN Fondo Obregón-Calles, 407-T-13, anexo II.

[27] Dawson to Secretary of State, 4/20/24, National Archives, Record Group 84, Tampico post records, 850.4.

[28] Araujo to Jefe, 5/13/25, AGN Departamento de Trabajo, box 725, file 2, and Bay to Secretary of State, 5/26/1925, National Archives, Record Group 84, Tampico post records, 850.4.

[29] "Conflicto: La Compañía Petrolera El Águila y sus empleados, 1925-26," AGN Depto. de Trabajo, box 772, file 1.

The final wave of labor disputes began at Mexican Eagle in 1934. The company's union wanted a larger share of the returns from Poza Rica. President Abelardo Rodríguez mediated a settlement.[30] In the wake of the settlement, the various oil unions united into the Sindicato de Trabajadores Petroleros de la República Mexicana (STPRM), affiliated with the CROM.[31] A second set of strikes broke out against Mexican Petroleum in January 1935. According to American government observers, the company preferred to close its facilities "rather than compromise with the workers."[32] The Federal Labor Board (*Junta Federal de Conciliación y Arbitraje*) declared the strikes legal, but the Supreme Court reversed the decision.

The imposed labor peace did not last. On November 3, 1936, the STPRM demanded an $8.3 million wage hike, 18 paid holidays, 20 to 60 days paid vacation, health insurance, 25 days of severance pay for each year of service in the case of voluntary separation, and 90 days of severance in the case of involuntary separation. Moreover, the union demanded control over all hiring decisions, save for 110 positions across the entire *industry*.[33] The union demanded a response by November 17. (See Table 6.)

TABLE 6 AROUND HERE

The oil companies did not react well. "The union draft contains over 250 clauses, covers 165 pages of legal-size script of which almost 40 embrace the wage schedule and took several months to formulate, and yet the companies were to 'discuss' and 'approve' the document in the peremptory period of 10 days." Moreover, they refused to give up control over hiring and firing. "Owing to the present restricted number of supervisory positions, the industry is already suffering the consequences of lack of control and discipline."[34]

President Cárdenas intervened to contain the dispute. Talks dragged on until May 1937. Cárdenas once again intervened to head off a strike, by appointing a special commission. On August 14, 1937, the commission reported that the companies could afford a wage increase of $7.3 million. A wildcat strike immediately broke out at Poza Rica.[35] Cárdenas ordered it stopped.[36] A second wildcat hit Mexican Eagle in September. An exasperated Cárdenas accused the workers of helping "capitalist interests" by turning the country against the labor movement.[37] The strike ended when the company agreed to pay the workers 75% of lost wages and paid the union leadership $6,944.[38] Finally, on March 2, 1938, the Federal Labor Board announced that it would

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[30] J. Rennow to Luis Rodríguez, 12/15/34, AGN Fondo Lázaro Cárdenas, Box 432, File 1.

[31] "Extractos," 8/4/35-9/3/35, AGN Fondo Lázaro Cárdenas, Box 437.1/37.

[32] R. Henry Norweb to Secretary of State, 6/29/34, National Archives, Record Group 59, 812.45/212.

[33] "Proyecto aprobado en la primera Gran Convención Extraordinaria del Sindicato de Trabajadores Petroleros de la República Mexicana," AGN, Archivo Histórico de Hacienda, C1857-117.

[34] Brown, "Labor and State," p. 19.

[35] James Steward to Secretary of State, 8/17/37, National Archives, Record Group 59, 812.00 – Tamaulipas/307.

[36] Pierre de Boal to Secretary of State, 8/10/37, National Archives, Record Group 59, 812.45/495.

[37] Brown, "Labor and State," p. 26.

[38] Jack Neal to Secretary of State, 9/30/37, National Archives, Record Group 59, 812.00 – Tamaulipas/320.

grant the unions a $7.3 million wage hike and increased control over personnel decisions. The Supreme Court upheld the decision the next day.

Mexican Petroleum reacted by closing 23 wells, moving oil stored in the fields to the Tampico port (presumably for quick export), shutting down the Mata Redonda plant and sending a letter to every employee stating that it would be unable to comply with the Board's order.[39] The STPRM called for a national strike against the companies. The March 7 deadline fixed by the Federal Labor Board came and went. On March 14, the Labor Board warned that they needed a response from the company by the following day. On March 15, the companies reported that they could not comply. The Board responded by suspending all contracts.[40] With their pay contracts suspended, and a strike deadline looming, workers began to seize loading terminals and shut down pipelines. President Cárdenas faced the imminent collapse of Mexico's most important industry.[41]

On March 18, 1938, Cárdenas announced the nationalization. "Under such conditions, it is urgent that the public authorities take adequate measures to prevent grave domestic disturbances due to the paralysis of transportation and industry, which would make it impossible to satisfy collective needs and supply the consumer goods needed by our population centers."[42]

Could the companies have paid higher wages? Table 6 presents two estimates of the annual cost of the wage settlement: one from the Federal Labor Board and one from oil company accountants. According to company figures (taken from annual reports for Mexican Eagle, Mexican Petroleum, and Penn-Mex, and from figures compiled by the Mexican government from company accounts for the remainder) the oil companies earned $3.7 million in 1936. Eliminating depreciation and depletion expenditures implies a net cash flow of $7.0 million, less than the official estimate of the settlement.

TABLE 7 AROUND HERE

The Mexican government accused the companies of transfer pricing, and estimated their profits at $15.4 million. Mexican Eagle accounted for most of the difference between the companies' reported profits and the Mexican government's estimate. Mexican Eagle, however, was profitable by any measure. It could have paid the union demand out of its operating cash flow. The lowest estimate of the burden would have been 31% (using the government figures) and the highest 102% (using the company's). Even the low figure, however, would have been a substantial hit to the company's bottom line … and the high figure would have put the company into the red. For the other companies, the burden would have been higher.

TABLE 8 AROUND HERE

[39] Brown, "Labor and State," p. 24.
[40] Gordon, *Expropriation*, p. 117.
[41] Brown, "Labor and State," p. 27.
[42] Cárdenas, *Decreto*. Author's translation.

The companies had additional reasons to go to the mattresses over the union demands. Most importantly, they did not want to lose the ability to hire and fire at will. The unions would gain greater leverage to make future demands, and management's ability to cut costs would be greatly reduced (or even eliminated). Second, many of the companies had profitable assets in the West Indies, Venezuela, and the United States. They wanted to maintain a reputation of refusing to give in to demands from militant unions. Jersey Standard, in particular, was losing money on its Mexican properties, it had little to lose from taking a hard line. Finally, the companies did not expect the government to react with nationalization. Rather, they expected the government to place their properties into some sort of temporary receivership. President Cárdenas, however, decided against doing so because he feared the consequences of "interminable legal proceedings."[43]

In short, the oil companies made rational gambles. They gambled low-value assets against the probability that the unions or government would refuse to back down. For them, it was a good bet. First, the assets they gambled with were relatively low value. Second, the union demand was unaffordable.[44] Finally, they did not expect the government to react with nationalization.

The unions and government also behaved rationally. The primary union interest was not a wage increase. Rather, it was job security, the one thing that the companies were unwilling to grant. Union members rejected any attempt by the leadership to trade job security for higher wages.[45] Similarly, the government needed to maintain the stream of tax revenues generated by the oil industry. Once the unions took steps to shut down the industry, the government had to react. Nationalization was the easiest way to insure that the industry would remain productive … and score political points in the process.

Foreign Reaction

President Franklin Roosevelt had little sympathy for the oil companies. The Good Neighbor Policy eschewed intervention, and Roosevelt was ideologically sympathetic to labor and state control over natural resources.

The oil companies, however, had a number of tools at their disposal to involve the American administration regardless of its desires and ideological bent. First, they could mobilize public opinion. The U.S. ambassador to Mexico, Josephus Daniels, complained that the companies "started to build propaganda fires under the government to compel a return of the properties."[46] Jersey Standard, in particular, financed a large-scale campaign. The company distributed a wide array of free publications, from press releases to full-length books. Editorial cartoons distributed by Standard portrayed the expropriation as a direct assault on American interests, and

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[43] Gordon, *Expropriation*, p. 120.
[44] By early 1938, the companies basically capitulated, offering a $6.5 million wage hike as long as they could retain complete control over staffing. The unions realized that the implication of the settlement would be large-scale layoffs. Brown, "Labor and State," pp. 26-27.
[45] Brown, "Labor and State,", pp. 27-28.
[46] Daniels *Diplomat*, p. 231.

not just oil company property.[47] The *New York Times* reproduced Jersey Standard press releases almost verbatim. Perhaps unsurprisingly, the paper's editorial page also consistently called for "punitive" action against Mexico.[48] The companies also resorted to selective leaking, in order to tie the American government's hands. For example, when on March 28, 1938, Secretary of State Cordell Hull delivered a private note to the Mexican government requesting "fair, assured and effective compensation," the key phrase appeared in the next day's papers, where Hull's demand was described as "forceful."[49] Moreover, the companies' propaganda highlighted terrorist incidents and called for American tourists to stay away from Mexico.[50]

The propaganda campaign had limited success. In 1938, Mexico's tourism receipts dropped by a third.[51] On the other hand, the American public did not seem to take much notice of events in Mexico. In December 1938, Gallup asked the following question: "Which (1938) news story do you consider most interesting?" The answers included the invasion of Czechoslovakia (23%), Nazi persecution (12%); Republican gains in Congress (10%), Corrigan's flight (7%), the Fair Labor Standards Act (6%), the New England hurricane (5%), the recession (5%), the World Series (5%), the Japanese invasion of China (4%), and labor unrest (4%). The oil expropriation did not make the cut.[52] This is not to say that Mexico's action enjoyed public support inside the United States. It is to say that public outrage was insufficiently large on its own to force the Roosevelt Administration to take action.

Second, the oil companies could interfere with Mexico's oil exports. The boycott was largely coordinated by the companies. Only the government of the United Kingdom officially prohibited Mexican imports. (The U.K. could afford to do so because it enjoyed sufficient supplies from Iran and Venezuela. By 1938, Mexico provided only 2.1% of British oil imports, down from 10.1% in 1935.[53]

The limiting factor for British oil imports was the capacity of the tanker fleet.[54]) The U.S. State Department gave off ambivalent signals, and courts blocked private attempts to enforce the boycott. A federal district court dismissed a case accusing the Eastern States Petroleum Company of importing $1.7 million worth of Mexican oil rightfully belonging to Mexican Eagle. Belgian and Dutch courts decided similarly, based on the doctrine of sovereign immunity. In France, Mexican Eagle won a lower court decision, but an appellate court overturned it and forced *the company* to pay damages to French distributors who had been unable to take possession of their oil for ten months. (In fact, a state court in Alabama refused to prevent the Mexican

[47] Huesca, "Propaganda War," p. 3.
[48] Huesca, "Propaganda War," p. 15.
[49] Huesca, "Propaganda War," p. 21.
[50] Meyer, *Mexico*, p. 204.
[51] Meyer, *Mexico*, p. 204.
[52] Huesca, "Propaganda War," p. 23.
[53] McBeth, *British Oil Policy*, p. 127.
[54] Jayne, *Oil*, p. 165.

consul from taking possession of expropriated oil tankers.)[55] Once it became clear that neither the courts nor the executive branch would enforce the sanctions, American middlemen began to import Mexican oil (at prices 12-15% below posted ones) and helped arrange barter deals to sell oil to Germany and Italy.[56]

The fundamental problem with the boycott was not that it lacked government support — although that didn't help — it was that it was ultimately self-defeating. With domestic demand for fuel skyrocketing, Pemex generally succeeded in re-orienting itself around the domestic market. (See Figure 5.) Real revenues didn't reach their 1937 peak until 1947, but the industry survived the boycott. By 1940, atttempts to extend the boycott to the United States and Cuba had collapsed; by 1943 the U.S. exempted Mexican oil from import quotas. Export revenue, however, did not recover, as the nationalized industry had discovered the lucrative domestic market.[57]

FIGURE 5 AROUND HERE

Third, the oil companies designed a political strategy designed to drag the U.S. government into pressuring Mexico. Neither the U.S. ambassador in Mexico City nor the President of the United States were particularly sympathetic to their cause. The most hostile official was Interior Secretary Harold Ickes. "If bad feelings should result in Central and South America as a result of the oil situation that exists just now with Mexico, it would be more expensive for us that the cost of all the oil in Mexico."[58] Moreover, Ickes feared that sanctions could cause the Mexican government to collapse, which would be far worse for American interests than the expropriation of some declining oil fields.[59] Josephus Daniels, the U.S. ambassador to Mexico, matched Ickes's hostility towards the companies, and wanted to promote Mexican prosperity. Understandably, he doubted that sanctions would accomplish that.[60] They were joined in their concerns by Treasury Secretary Henry Morgenthau. Morgenthau worried that economic instability in Mexico might push the Mexican government into allying with the Axis or turn towards Communism.[61] With Undersecretary of State Sumner Welles vacillating and an unsympathetic President in charge, the oil companies faced a hard time assembling a political coalition.

Secretary of State Cordell Hull provided the companies with an in. He was not a huge fan of the oil industry, but he did want to get a reciprocal trade agreement from the Mexican government. He was angry about a Mexican decision to increase tariffs on American exports, and he was easily persuaded of "the need to punish Mexico economically to gain its respect for American

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[55] *Memoria de la Secretaria de Relaciones Exteriores, Septiember de 1938-Agosto de 1939, Tomo I*, pp. 83, 93-94, 114-19, 135-139, 148. Current law in the U.S. and Europe does allow foreign sovereigns to be sued in domestic courts, unless an arbitration proceeding is currently underway.
[56] Powell, *Mexican Petroleum*, p. 113.
[57] Powell, *Mexican Petroleum*, p. 116.
[58] Ickes, *Secret Diary*, p. 352.
[59] Ickes, *Secret Diary*, p. 521.
[60] Daniels to Roosevelt, 8/31/38, in the Josephus Daniels Papers #203, Southern Historical Collection, The Wilson Library, University of North Carolina at Chapel Hill.
[61] Jayne, *Oil*, p. 48.

business before closer economic ties with the country could be achieved."[62] Under intense lobbying pressure from the oil companies, he crafted a plan designed to unite a divided executive branch around sanctions.[63] On March 26, 1938, he sent a note to Mexico that denounced expropriation without compensation. Second, he convinced Morgenthau to suspend treasury purchases of Mexican silver. The suspension was quickly followed by a reduction of support price from 45¢ to 43¢ an ounce. This was a huge blow: in 1936, the Mexican government earned 24% of its total revenues from silver sales, twice what it earned from oil taxes.[64]

Why did Morgenthau agree to such draconian tactics? Simply put, he viewed the expropriation as a convenient excuse to suspend the Silver Purchase Act of 1934. (In this, he had Harry Dexter White's support.)[65] The Silver Purchase Act committed the Treasury to buying a fixed quantity of silver every year until silver stocks reached 25% of its total specie reserves or the silver price reached $1.29 an ounce. (In 1936, the U.S. began to purchase silver directly from the Mexican government.) Morgenthau was initially ambivalent about the act, because it allowed the Treasury to build up specie reserves that it could use to counteract Federal Reserve policy, but the concurrent Gold Stabilization Act of 1934 provided ample resources for his purposes.[66]

Morgenthau carefully designed the silver policy to make it appear as though his hand was being forced by events in Mexico. First, the State Department announced the suspension, not Treasury. (State, unfortunately, undercut Morgenthau by pinning the decision to suspend silver purchases on him in a letter to President Cárdenas.) Second, Morgenthau well knew that suspending silver purchases would do little to harm Mexico, since it could still sell its silver on the open market at the U.S.-supported price. He also knew, however, that other countries would immediately start dumping their silver stockpiles in the world market once the policy was announced, fearing that the U.S. would try to punish Mexico by lowering its price support for the metal. Of course, if enough countries did that, the U.S. would *have* to lower the silver price or see taxpayers' money flow away to foreign central banks.

Spain complied with Morgenthau's prediction when its ambassador to the U.S. offered to sell 56 million ounces. Morgenthau called that "the last straw" and lowered the silver price.[67] Moreover, the price change dovetailed with President Roosevelt's legislative strategy. At the time of the Mexican expropriation, the Fair Labor Standards Act was bottled up in a House committee.

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[62] Jayne, *Oil*, p. 44.
[63] Huesca, "Propaganda War," p. 24.
[64] Nominal Mexican government income from silver sales of $30.5 million from Jayne, *Oil*, p. 48. Total government income calculated from figures in Uhthoff, "Fiscalidad y Petróleo," Table 5.
[65] Conversation with Taylor and Lochhead, 3/28/38, Morgenthau Diary #117, *Presidential Diaries of Henry Morgenthau, Jr. 1938-1945*, Lamont Library, Harvard University.
[66] Morgenthau's most famous statement about the power the Gold Stabilization Act gave him went as follows: "The way the Federal Reserve Board is set up now they can suggest but have very little power to enforce their will…The Treasury's+ power has been the Stabilization Fund plus the many other funds that I have at my disposal and this power has kept the open market committee in line and afraid of me." Blum, *Diaries*, p. 352.
[67] Conversation with Taylor and Lochhead, 3/28/38, Morgenthau Diary #117, *Presidential Diaries of Henry Morgenthau, Jr. 1938-1945*, Lamont Library, Harvard University.

Once released and passed on the House floor, it would then need to face a conference committee. FDR could hold out a promise to re-institute price supports for *domestic* silver as a credible way to keep recalcitrant Nevadan legislators inside the New Deal coalition.[68] Morgenthau was hesitant to explicitly commit FDR to the strategy, so he sent a letter to the President while he was on vacation in Warm Springs, New York, stating simply that Morgenthau would interpret a lack of communication from Roosevelt as consent.[69]

Hull's strategy kept the pressure on both the American government (to punish Mexico) and the Mexican government (to compensate the companies). Hull had served in Congress with Samuel McReynolds (D-TN), the chairman of the House Foreign Affairs Committee, and both had been judges back in Tennessee.[70] In January 1939, the same month that the oil companies first laid out their negotiating positions, McReynolds introduced a bill calling for an end to silver purchases which subsidized Mexico's economy.[71] Other congressmen, notably Martin Kennedy (D-NY) and Hamilton Fish (R-NY) also introduced anti-Mexico resolutions. Hull insured that the bills would not pass, since they would interfere with the negotiations between the Mexican government and the companies, but they served as a useful cudgel.[72]

Final Settlement

Hull got Mexico to the table; what he failed to anticipate was that the oil companies did not want compensation for their properties. After all, they knew that their Mexican properties were worth little. Rather, they wanted to set a precedent that would discourage other countries from attempting to alter oil concessions. This was not an abstract fear. Spain nationalized Jersey Standard's properties in 1927. (The U.S. companies received full compensation in 1928.)[73] In 1931, Uruguay established a state-owned oil refining and retailing company that drove down the private share of the market from 100% in 1931 to 50.2% by 1937.[74] In 1932, the Chilean government threatened expropriation, the advent of which was headed off only by a well-timed military coup.[75] In March 1937, the Bolivian government nationalized Jersey Standard's concessions. Further adding to the companies' fears, the U.S. State Department believed that the Argentine government was behind the move.[76] In 1939, the Chilean government under President Pedro Aguirre again proposed nationalization, but the Chilean congress demurred.[77] None of

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[68] Morgenthau believed that Senator Key Pittman, the author of the Silver Purchase Act of 1934, cared only about the domestic industry. Conversation with Taylor and Lochhead, 3/28/38, Morgenthau Diary #117, *Presidential Diaries of Henry Morgenthau, Jr. 1938-1945*, Lamont Library, Harvard University.

[69] Jayne, *Oil*, p. 49.

[70] Jayne, *Oil*, p 109.

[71] Samuel McReynolds, *Senate Resolution 72*, 76th Congress, 1st Session, February 1, 1939.

[72] Frank Kluckhohn, "House Rules Out Inquiry on Mexico," *New York Times*, February 8, 1939.

[73] The Spanish government nationalized mainly refining and distribution assets, since Spain and its small African territories produced little crude. Bucheli, "Energy Politics," p. 357.

[74] Philip, *Oil and Politics*, p. 192.

[75] Philip, *Oil and Politics*, p. 185.

[76] Philip, *Oil and Politics*, p. p. 197.

[77] Bucheli, "Energy Politics," p. 371.

these investments had been particularly profitable, but the companies felt they needed to draw a line in the sand before nationalization threatened something lucrative.

The result was a long and drawn-out bit of kabuki. The companies demanded a long-term contract to operate the expropriated properties, after which they would turn them over to the Mexican government. They also insisted on compensation for lost revenues and wanted the agreement enshrined in a treaty with the United States.[78] Needless to say, the Mexican government did not find this acceptable.[79] President Cárdenas proposed compensation for the properties as they were valued in 1938. Alternatively, he suggested the formation of several Mexican oil consortia, in which the oil companies would have a financial interest equal to their interest in the expropriated properties, but over which the government would maintain control by appointing a majority of the directors.[80] (The initial draft of Cárdenas's second proposal seemed to offer the companies double compensation: payment for property *and* a financial stake in the new companies.) The Mexicans also wanted as short a contract as possible, because they feared that new technologies would reduce oil consumption in the future.[81]

President Roosevelt briefly attempted to break the logjam by suggesting that the oil companies accept Cárdenas' proposal on a temporary basis with boards split between the companies and the government, but both sides demurred.[82] The U.S. then tried to pressure the companies into using the General Treaty of Inter-American Arbitration to settle their claims, which would have the advantage of excluding British companies. (By 1943, Washington's opinion over the wisdom of excluding Britain would change; by 1945 it would be reversed.) The companies refused.[83] In 1940, Sinclair Oil broke with the other companies. It accepted an offer of $8 million in compensation and 20 million barrels sold at a 25¢ per barrel discount off market prices.[84] Negotiations with the other American companies continued to drag.

By the middle of 1941, the Roosevelt Administration ran out of patience and effectively imposed a settlement.[85] Under an agreement made with Mexico on November 19, 1941, the two governments appointed a two-person committee consisting of Morris Cook and Manuel Zevada, both trained engineers. The two spent five months researching, and presented their outline of a final settlement on April 17, 1942. The Mexican government immediately credited $9 million to the

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[78] "Memorandum of the Oil Companies," 4/3/39, FO (Foreign Office) 371 22774 [A3723/4/26], Public Record Office, London.
[79] Raymond Daniell, "No Retreat on Oil, Cardenas Pledges; Mexico Inferentially Rules Out a Treaty-Guaranteed Deal With Americans," *New York Times*, February 28, 1939.
[80] Castillo to Welles, 3/21/39 and 7/5/39, National Archives, Record Group 59, 812.6363/5636.
[81] Daniels to Secretary of State, 3/11/39, National Archives, Record Group 59, 812.6363/5569.
[82] Memorandum of a conversation between Welles and Castillo, 8/10/39, National Archives, Record Group 59, 812.6363/6014 and Roosevelt to Cárdenas, 8/31/39, in the Josephus Daniels Papers #203, Southern Historical Collection, The Wilson Library, University of North Carolina at Chapel Hill. See also Jayne, *Oil*, pp. 111-112.
[83] Hackworth to Farish, 2/6/40, Farish to Secretary of State, 2/6/1940, and Farish to Secretary of State 2/13/1940, National Archives, Record Group 59, 812.6363/6502 1/2 and 6504 1/2.
[84] Jayne, *Oil,* p. 116.
[85] Jayne, *Oil,* p. 153.

United States. The two governments approved the payment schedule for the rest of the compensation, including interest, in September 1943. The lion's share of the settlement was paid by 1947; Mexico made additional small interest payments through 1953.[86] Ultimately, the compensation payments made by the Mexican government exceeded the agreed upon amount by almost $6 million in nominal terms. (See Tables 9 and 10.)

TABLES 9 AND 10 AROUND HERE

Did the American companies receive fair compensation for their properties? It is possible to compute the price Jersey Standard paid to acquire Mexican Petroleum in 1932.[87] Jersey Standard purchased the Pan-American Foreign Corporation with a series of payments totaling $47.9 million in cash and 1,778,973 in Jersey Standard shares. Pan-American owned 97% of Mexican Petroleum, which was traded separately on the New York Stock Exchange. At market value, Mexican Petroleum made up 21% of Pan-American.[88] Jersey Standard's shares were valued at $26.13 at the time of the deal: both the cash and shares were delivered in four annual payments. The discounted 1932 value of the deal (using the interest rate on corporate debt) came to 21% × 97.3% × 96% × ($44.3m in cash + $43.0 million in shares) = $17.5 million.[89] Adjusted for inflation, that figure become $17.9 million in 1938 dollars, and adding in the value of the outstanding shares bought at par in 1935 raises the total price that Jersey Standard paid for its Mexican assets to $19.2 million. (See Table 11.) By that standard, the Mexican government fairly compensated Jersey Standard. (It should be noted that Jersey Standard succeeded in retaining control of most of Mexican Petroleum's liquid assets (which were held in U.S. banks) and the company's tanker fleet.)

TABLE 11 AROUND HERE

It is unlikely that Jersey Standard's Mexican assets rose in value between 1932 and 1938. First, Mexican Petroleum paid no dividends after 1932, including the 1936-38 period during which it was delisted but organized as a separate subsidiary of Jersey Standard. Second, the subsidiary consistently lost money in accounting terms, save a brief moment in the black in 1935. It is possible that Jersey Standard used transfer pricing to extract value, but that begs the question of why the company would transfer income from a jurisdiction with no corporate income taxes to one with a 19% rate on all corporate income above $25,000.[90] Third, the fields controlled by the

[86] Petróleos de México, "Rendición."

[87] Jersey Standard first entered the Mexican market when it purchased the Transcontinental Petroleum Company for $2.5 million in 1917. Transcontinental production declined preciptitously after 1923. It fell from 21.4m barrels in 1923 to 1.7m in 1930. Transcontinental then basically exited the Mexican market, closing its Tampico refinery and transferring its remaining production and transportation facilities to Mexican Petroleum. Ironically, Jersey Standard would buy back the assets that remained when it bought Mexican Petroleum in 1932. See Brown, *Oil and Revolution*, pp. 152, 160-161, and Brown, "Foreign Oil Companies," p. 372.

[88] *Wall Street Journal*, "N. J. Standard '32 Net 1c a Share," May 19, 1933.

[89] The interest rate on long-term corporate bonds was 5.1%. Officer, "Interest Rate."

[90] In 1938, U.S. corporate tax brackets ran as follows: $0-$5,000, 12.5%; $5,001-$15,000, 14%; $15,001-$25,000, 16%, and 19% for all income over $25,000. See Taylor, "Tax Brackets," p. 287.

American companies (most of which were owned by Mexican Petroleum) continued to decline after 1938, *unlike the Poza Rica fields seized from Mexican Eagle*. (See Figure 6.)

FIGURE 6 AROUND HERE

Did the Mexican government compensate Mexican Eagle fairly? There are reasons to believe that it might not have. First, the British government, unlike the American one, had fewer levers to use against Mexico beyond the oil boycott. Moreover, once London stopped buying Mexican oil, it feared that ending the boycott would anger its allies in Venezuela and Iran. The Venezuelan ambassador to Caracas reported that the government there would be "most disturbed if they had any reason to believe that [the U.K.] might resume oil buying in Mexico to the detriment of Venezuela."[91] London feared that an angry Venezuela might be tempted to try "squeezing us over the condition on which we purchase their oil."[92] Britain was sufficiently concerned enough about Iran that it agreed to make extra royalty payments of $6.6 million in 1939 and $17.7 million in 1940 and 1941, in order to compensate Iran for a decision to maximize tanker use by restricting its exports to markets west of Suez.[93] In short, once Britain accidently benefitted Venezuela and Iran by shutting Mexican oil out of its market, it could not make any moves towards compromise without risking its relations with those governments. Foreign Secretary Anthony Eden was not happy with the situation — "I do not like giving the Shah and Venezuela a veto on our relations with anybody" — but it mattered little as long as Mexico showed little sign of compromise.[94]

Second, Mexican Eagle's oilfields, unlike the American-owned ones, were most emphatically not in decline at the time of nationalization. They might be expected to produce significant income in the future. Mexico might not be willing to pay the fair market price for such potentially valuable properties.

Third, in 1938, the U.S. government had few reasons to care about protecting British investors in Mexico — in fact, rather the opposite. The U.S. weakened Britain's position by explicitly requesting that Britain re-establish relations with Mexico in 1941. Eden decided not to ask for anything from the Americans in return. The reason was that Eden wanted to secure future American cooperation against Hitler and. The U.S., he believed, would be more amenable if Whitehall refrained from bargaining over Mexico.[95] The U.K. reopened relations with Mexico on October 21, 1941. Charles Bateman, the new British minister to Mexico City, privately wrote that Eden had made a grave mistake, since it would now be impossible (he believed) for the Mexican government to make a better offer to a British company than it had made to American ones.[96]

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[91] Gainer to Foreign Office, 1/17/41, FO (Foreign Office) 371 26061 [A364/47/26], Public Record Office, London.
[92] Scott, Minute, 5/12/41, FO (Foreign Office) 371 26062 [A3341/47/26], Public Record Office, London.
[93] Jayne, *Oil*, p, 167.
[94] Eden, Minute, 1/15/41, FO (Foreign Office) 371 26061 [A218/47/26], Public Record Office, London..
[95] Jayne, *Oil*, p. 174.
[96] Bateman to Foreign Office, 1/23/43, FO (Foreign Office) 371 33980 [A930/113/26], Public Record Office, London.

Bateman turned out to be wrong — with American support, Mexican Eagle secured compensation from Mexico far in excess of the market value of its assets. In fact, the company secured a better deal than its American counterparts. Paradoxically, the decline in Britain's position during World War 2 *strengthened* the country's bargaining position against Mexico. In 1938, the U.S. had no desire to help the business interests of a potential rival. Nor did the U.S. have any strategic reason to help London out of fear of Germany, because Iran and Venezuela were fully capable of satisfying the country's fuel needs. Britain's only ability to punish Mexico came from its oil boycott … a relatively ineffective tool against an industry that sold ever more production at home.

By 1946, on the other hand, the U.K. had been transformed from a potential U.S. rival to an important junior partner. Moreover, it was a junior partner in desperate need of foreign exchange, however provided. Under the new circumstances, Washington reacted differently to British requests for help. The U.S. now had leverage over Mexico, because that country needed U.S. capital to finance the modernization of the national oil industry and expand production. In 1943, Mexico negotiated a $10 million loan (48.5 million) from the U.S. Export-Import Bank for the construction of a new refinery at Azcapotzalco and production facilities at Poza Rica. In 1946, it began negotiations over new credits, worth potentially $150 million. When London asked Washington to refrain from extending any loans to Pemex pending a settlement, the U.S. tacitly agreed.[97] The U.S. then signaled Antonio Bermúdez, who would later become the general director of Pemex (the Mexican national oil company), that a rapid settlement of outstanding British claims was the only way to receive the credit the company needed.[98]

Talks between Mexico and the U.K. began in January 1947. The British representative, Professor Vincent Illing, opened with a demand of $257 million. The Mexican representative, Antonio Bermúdez, countered with an offer of $42.9 million. The two sides settled for $81.5 million. Payments began in 1948, and totaled $132.8 million through 1962. Mexican accounts portrayed the settlement as a great nationalist triumph. Historians have generally agreed with that assessment. For example, Lorenzo Meyer wrote, "The way in which El Águila was compensated meant, among other things, that Mexico did not pay the full value of the oil deposits claimed as its own by the company. In fact, by compensating only a third of total property value … the last vestiges of the Calles-Morrow agreement were destroyed and the original spirit of Paragraph 4 of Article 27 of the 1917 Constitution at last came into effect."[99]

Sadly for the nationalist view, the available data indicate that the British (with American help) ran away with the store. The 1938 NPV of the payments came to $82.6 million. The postwar inflation in the U.S., however, drove the NPV of the deal down to $43.6 million in 1938. Mexican Eagle's market capitalization in 1936, right before the outbreak of labor unrest, was only $12.2

[97] Meyer, "Great Britain," p. 164.
[98] Bermúdez, *National Petroleum Industry*, p. 177.
[99] Meyer, "Great Britain," p. 169.

million. The book value of the company's assets in 1937 came to only $16.5 million. Considering that the settlement came to almost five times the latter amount, it would be hard to argue that the company was *undercompensated* for its properties. (See Table 11.)

Winners and losers in Mexico

If the oil industry was in decline in 1938, and U.S. pressure forced the Mexican government to fairly compensate the companies, then the oil nationalization should not have produced windfall rents for the Mexican government. At first glance, the evidence does not appear to be consistent with the above hypothesis: Mexican government revenue from oil increased significantly after the nationalization. (See Figure 7.) Most of that increase, however, came from higher revenues from the excise tax on gasoline, which the government hiked from 8 centavos to 9 centavos in 1940, and then again to 10 centavos in 1946.[100] In the first eight years after nationalization, only in 1941 did real government revenues from the oil industry (other than excise taxes) exceed pre-nationalization payments. (In 1940, Pemex's poor financial situation forced the government to grant the company a subsidy of 60 million.[101]) The nationalized industry only began to produce more for the government than had the old companies after loans from the U.S. Export-Income Bank allowed Pemex to expand production from the Poza Rica fields. (See Figure 6.) One might argue that rising excise tax revenues were a result of the British boycott of Mexican oil (see Figure 5), but that would be an odd benefit to attribute to the expropriation.

FIGURE 7 AROUND HERE

Did the oil workers gain from the expropriation? The government rejected union demands to directly manage the industry.[102] (Worker control was not unprecedented in Mexico: the unions managed the national railroads.) Wages rose slightly, and the work week fell from 44 hours to 40, but management refused to fully implement the December 1937 labor award. In January 1940, the unions asked that it be fully implemented. Vicente Cortés Herrera, Pemex's the general manager, replied by accusing the workers of lax discipline and "removing" company equipment. President Cárdenas had to personally intervene. He called on workers to allow management to suspend the labor award "until such time as the industry could pay off the indemnification and modernize its equipment."[103] After a strike scare, a labor ruling on November 28, 1940, allowed management to fire workers hired after the nationalization and reduce the wages of workers earning over 700 per month.[104] Nominal wages rapidly, but continuing inflation eroded the gains. By 1944, real compensation was little different than it had been in 1937. (See Table 12.) The largest sustained gains for labor arrived in the form of a rapid expansion of the company's workforce, although the new jobs lacked job security.

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[100] Powell, *Mexican Petroleum*, p. 165.
[101] Powell, *Mexican Petroleum*, p. 130.
[102] Powell, *Mexican Petroleum*, pp. 128-29.
[103] Powell, *Mexican Petroleum*, pp. 130-32.
[104] Powell, *Mexican Petroleum*, p. 139.

TABLE 12 AROUND HERE

Conclusion

The Mexican oil expropriation of 1938 is often viewed as the harbinger of two defining characteristics of the modern age. First, the end of empire. The United States chose not to employ all elements of its national power in defense of its economic interests. Rather, it respected the rights of a fellow sovereign nation to control its own economic policies. What could have been decided by force or sanctions was instead worked out through negotiations inside the ambit of international law. Second, resource nationalism. Mexico took over not only the rights to its subsoil resources; it established the first of the great national oil companies that would come to dominate the world's energy scene. Moreover, the country seized control of a large-scale source of rents that it could use to develop the country … and in turn ushered in an era of weakened property rights across what would become known as the Third World. Before 1938, foreign investors in natural resources believed that their rights would be respected, and they would be compensated for any government takings; after, all bargains were obsolescing ones.

Like most stereotypes, there is a core of truth to the above characterization. The Roosevelt Administration was hesitant to intervene against Mexico. The Mexican government did establish the first of the great national oil companies. But beyond that, the actual historical record diverges substantially from the accepted view. The U.S. government ultimately intervened to defend the property rights of American (and allied) companies. The Mexican government, in turn, compensated the companies for their properties at more than their market value. The nationalization itself was the product of an out-of-control labor dispute, rather than a grand plan, and the companies were not particularly profitable. Neither the Mexican government nor the oil workers benefitted particularly much from the nationalization.

The expropriation of 1938 took place in a context rather different from today's, but not for the reasons that historians believe. Rather, the key difference between the environment of the 1930s and today is that in the 1930s, domestic courts still refused to use their authority against foreign governments. Today, that is no longer the case. Modern versions of 1938 play out differently not for reasons of ideology or relative power, but for an accumulation of small deliberate changes that have judicialized such disputes. 1938 was not the harbinger of a new age; rather, it was one of the latter gasps of an old one.

REFERENCES:

Bermúdez, Antonio. *The Mexican National Petroleum Industry*. Palo Alto: Institute of Hispanic American and Luso-Brazilian Studies, Stanford University, 1963.

Blum, John. *From the Morgenthau Diaries: Years of Crisis, 1928-1938*. Boston: Houghton Mifflin, 1959.

Brown, Jonathan. *Oil and Revolution*. Berkeley: University of California Press, 1993.

Brown, Jonathan. "Ciclos de sindicalización en las compañías extranjeras," Working Paper, University of Texas, 2004.
Brown, Jonathan. "Labor and State in the Mexican Oil Expropriation." Texas Papers on Mexico 90-10, Austin, TX, 1990.
Brown, Jonathan. "Why Foreign Oil Companies Shifted Their Production from Mexico to Venezuela during the 1920s." *American Historical Review* 90, no. 2 (1985): 362-85.
Bucheli, Marcelo. "Multinational Corporations, Business Groups, and Economic Nationalism: Standard Oil (New Jersey), Royal Dutch-Shell, and Energy Politics in Chile 1913–2005." *Enterprise and Society* 11, no. 2 (2010): 350-399.
Cabrera Acevedo, Lucio. *La Suprema Corte de Justicia durante el gobierno del general Lázaro Cárdenas, 1935-1940* México: Suprema Corte de la Nación, 1999.
Cárdenas, Lázaro. *Decreto de Expropiación Petrolera, del Presidente de 18 Marzo 1938*. México: Gobierno de México, 1938.
Daniels, Josephus. *Shirt-Sleeve Diplomat*. Chapel Hill: University of North Carolina Press, 1947.
De la Fuente Piñuera, Alberto. "El desplazamiento de México como productor de petróleo en los años viente." B.A. thesis, Instituto Tecnológico Autónomo de México, 2001.
Díaz Dufoo, Carlos. *La cuestión del petróleo*. México: Eusebio Gómez de la Puente Editores, 1922.
Engineering and Mining Journal, October 11, 1919.
Gómez Robledo, Antonio. *The Bucareli Agreements and International Law*. México, Universidad Nacional Autónoma de México, 1940.
Gordon, Wendell. *The Expropriation of Foreign-Owned Property in* Mexico. Washington, D.C.: American Council on Public Affairs, 1941.
Haber, Stephen, Noel Maurer and Armando Razo. "When the Law Does Not Matter: The Rise and Decline of the Mexican Oil Industry." This Journal 63, no. 1 (2003): 1-32.
Hall, Linda. *Oil, Banks, and Politics*. Austin: University of Texas Press, 1995.
Huesca, Robert. "The Mexican Oil Expropriation and the Ensuing Propaganda War," Texas Papers on Latin America No. 88-04, Austin, TX, 1988.
Ickes, Harold. *The Secret Diary of Harold Ickes, Vol. 2*. New York: Simon & Shuster, 1954.
Jayne, Catherine. *Oil, War, and Anglo-American Relations*. Westport, CT: Greenwood Press, 2001.
Marchand, Rene. *L'effort democratique du Mexique*. Paris: Fustier, 1938.
McBeth, Brian. *British Oil Policy, 1919-1939*. London: Frank Cass, 1985.
McBeth, Brian. "Venezuela's Nascent Oil Industry and the 1932 US Tariff on Crude Oil Imports, 1927–1935," *Revista de Historia Económica* 27, no. 3 (2009): 427-462.
México. *Informes que rinde al H. Congreso de la Union el C Presidente constitucional de los Estados Unidos Mexicanos durante el periodo de 1921 a 1924.* México: Gobierno de México, 1924.
México. *Mexico's Oil: A Compilation of Official Documents in the Conflict of Economic Order in the Petroleum Industry, with an Introduction Summarizing its Causes and Consequences*. México: Gobierno de México, 1940.
México, Secretaria de Industria, Comercio y Trabajo. *La industria, el comercio y el trabajo en Mexico durante la gestión administrativa del señor Gral. Plutarco Elías Calles, Tomo I*. México: Gobierno de México, 1928.
México, Secretaria de Relaciones Exteriores. *Memoria de la Secretaria de Relaciones Exteriores, Septiember de 1938-Agosto de 1939, Tomo I*. México: Gobierno de México, 1939.

Meyer, Lorenzo. "The Expropriation and Great Britain." In *The Mexican Petroleum Industry in the 20th Century*, edited by Jonathan Brown and Alan Knight, 154-172. Austin: University of Texas Press, 1992.

Meyer, Lorenzo. *Mexico and the United States in the Oil Controversy, 1917-42*. Austin: University of Texas Press, 1977.

Moody's Manual of Investments, various years.

New York Times, various issues.

Officer, Lawrence. "What Was the Interest Rate Then?" MeasuringWorth, 2008. URL: http://www.measuringworth.org/interestrates/.

Petróleos de México. *Rendición de la deuda petrolera en pesos M.N.* México: Petróleos de México, 1970.

Philip, George. *Oil and Politics in Latin America: Nationalist Movements and State Companies*. Cambridge, U.K.: Cambridge University Press, 1982.

Powell, Jack. *The Mexican Petroleum Industry, 1938-1950*. Berkeley: University of California Press, 1956.

Rippy, Merrill. *Oil and the Mexican Revolution*. Leiden: E.J. Brill, 1972.

Standard Oil of New Jersey. *Present status of the Mexican oil "expropriations."* New York: Standard Oil Company, 1940.

Sterret, Joseph and Joseph Davis. *The Fiscal and Economic Condition of Mexico*. New York: International Committee of Bankers on Mexico, 1928.

Taylor, Jack "Corporation Income Tax Brackets and Rates,1909-2002." Working Paper, Internal Revenue Service, 2002.

Time Magazine, various issues.

Times of London, various.

Uhthoff, Luz María. "Fiscalidad y Petróleo, 1912-1938." Working Paper, Universidad Autónoma Metropolitana-Iztapalapa, 2004.

U.S. Census Bureau, *Statistical Abstract of the United States*, Washington, D.C.: Government Printing Office, 1938.

U.S. Department of Commerce. *Foreign Commerce and Navigation of the United States*, various years.

U.S. Department of State. "Compensation for Petroleum Properties Expropriated in Mexico," *The Department of State Bulletin*, Vol 6, April 18, 1942.

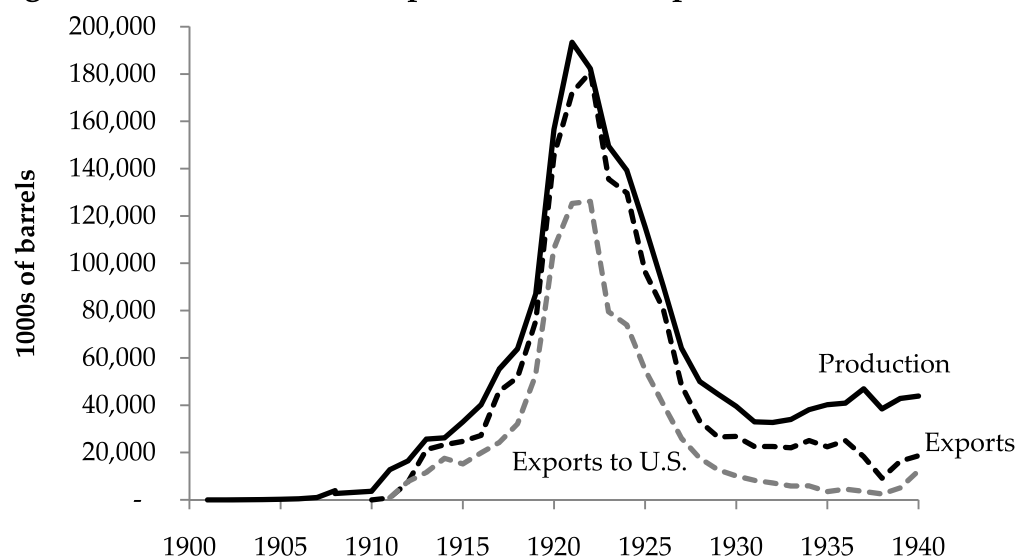
U.S. House of Representatives. "Production Costs of Crude Petroleum and of Refined Petroleum Products." *House Document* no. 195, 72nd Congress, 1st Session. Washington, D.C.: Government Printing Office, 1932.

U.S. Tariff Commission, *Mining and manufacturing industries in Mexico*. Washington, D.C.: Government Printing Office, 1946.

Wall Street Journal, various issues.

Wood, Bryce. *The Making of the Good Neighbor Policy.* New York: W. W. Norton , 1961.

Figure 1: Mexican crude oil production and exports, 1901-40



Source: Haber, Maurer, and Razo, "Mexican Industry."

Table 1: Exploratory wells, 1901-36

	Total drilled	Productive new wells	% of new wells productive	Average daily capacity, all wells (1000 bbl)	Average daily capacity, new wells (1000 bbl)
1901-16	279	174	62%	3.7	643
1917	79	43	54%	6.3	271
1918	43	28	65%	19.8	553
1919	41	31	76%	15.0	465
1920	97	62	64%	24.8	1,538
1921	317	203	64%	16.7	3,662
1922	265	158	60%	9.1	1,441
1923	467	259	55%	3.4	885
1924	699	296	42%	3.4	1,001
1925	801	298	37%	3.0	1,009
1926	808	318	39%	3.7	1,170
1927	570	204	36%	1.9	384
1928	237	96	41%	3.6	110
1929	114	32	28%	3.7	114
1930	133	71	53%	na	61
1931	87	57	66%	na	53
1932	50	31	62%	na	21
1933	222	57	26%	na	47
1934	157	35	22%	na	34
1935	144	37	26%	na	28
1936	84	29	35%	na	31

Source: Haber, Maurer, and Razo, "Mexican Industry."

Table 2: Index of real value of total assets, by company, 1911-37 (1922 = 100)

	El Águila	Mexican Petroleum	Mexican Seaboard	Mexico-Pánuco	Penn-Mex
1911	89	106			
1912					
1913	188	119			
1914	214	133			
1915	203	140			
1916	162	123			
1917	119	103			
1918	96	105			
1919	91	89			80
1920	80	85			78
1921	100	100	100	100	100
1922	172	118	128	107	106
1923	183	124	130	100	102
1924	166	116	143	101	105
1925	145	123	176	154	
1926	128	146	155	174	
1927	109	118	138	285	
1928	96	112	124	282	
1929	92	92	131	361	
1930	98	85	132	475	115
1931	106	90	109	318	117
1932	119	82	123		5
1933	141	77	127		5
1934	168	67	123		5
1935	188	65	123		5
1936	172		124		5
1937	147		113		5
1938			85		

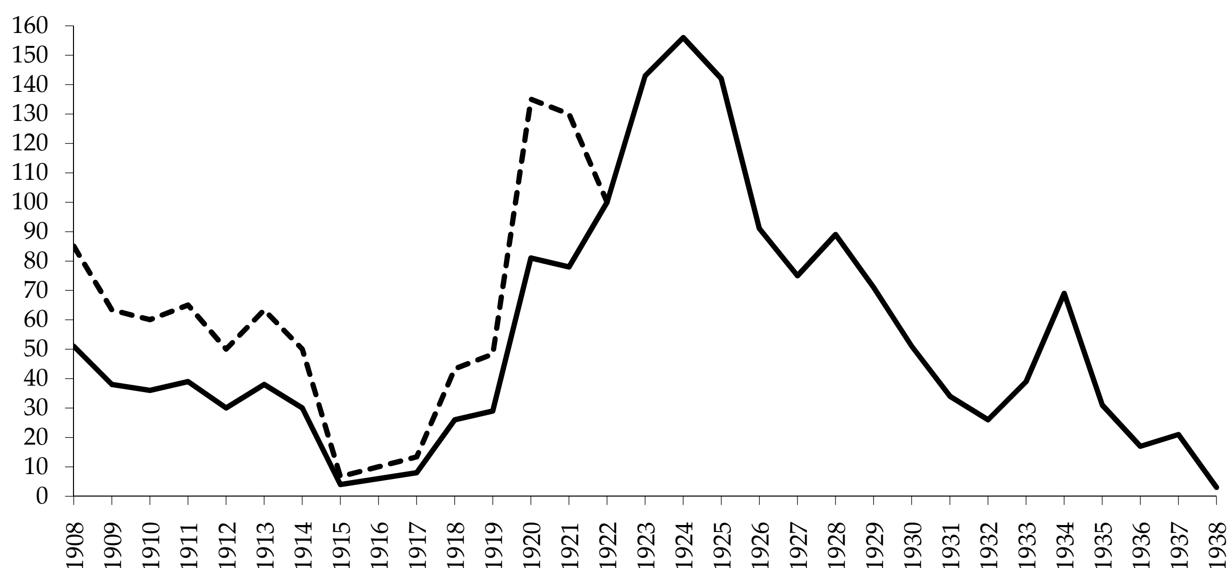
Source: Estimated from balance sheets in *Moody's Manual of Investments*, various years.

Table 3: Nominal and real value of investment in the Mexican oil industry, 1912-36

	Nominal (m)	2009 dollars (m)
1912	$ 175	$ 2,958
1922	$ 512	$ 5,432
1924	$ 540	$ 5,619
1928	$ 422	$ 4,343
1931	$ 313	$ 3,722
1933	$ 272	$ 3,780
1936	$ 126	$ 1,615

Source: 1912 from Díaz Dufoo, *La cuestión*, p. 102. 1922 is an estimate produced by Foreign Minister Alberto Pani and cited in Standard Oil of New Jersey, *Present status*, p. 4. 1924 from *Informes que rinde al H. Congreso de la Union el C Presidente constitucional de los Estados Unidos Mexicanos durante el periodo de 1921 a 1924*, p. 83. 1928 from Secretaria de Industria, Comercio y Trabajo, *La industria*, pp. 435-56. 1931 from Mexican Oil Output," *Wall Street Journal*, p. 2, Oct 26, 1932. 1933 from Gomez Robledo, *Bucareli*, p. 97. 1936 estimates of capital investment ($96 million, nominal) from U.S. Tariff Commission, *Mexico*, p. 51, and land values (108 million pesos, nominal) from "Mexican Oil Output," *Wall Street Journal*, p. 2, Oct 26, 1932, and Marchand, *L'effort democratique*, p. 72. All figures adjusted to 2009 levels using the U.S. GDP deflator.

Figure 2: Real value of petroleum machinery exports to Mexico, 1921 = 100



Note: Prior to 1922, the U.S. Department of Commerce did not disaggregate petroleum machines from mining machines. The dashed line assumes that all oil and mining imports before 1921 consisted of petroleum equipment or pipes. The solid line assumes that the ratio of oil equipment expenditures to oil and mining equipment expenditures in 1908-21 was the same as it was in 1922 and 1923; roughly 60 percent of total mining and petroleum spending. A figure of 60% is consistent with an observation about the ratio in the month of August 1919, in which oil equipment accounted for 67 percent of the total. *Engineering and Mining Journal*, October 11, 1919, p. 623.

Source: U.S. Department of Commerce, *Foreign commerce and navigation of the United States*, various.

Table 4: Real share price index, adjusted for splits, 1921 = 100

	Mexican Eagle	Mexican Petroleum	Penn-Mex	Mexican Seaboard	Standard Oil of N.J.	Sinclair Consolidated	Texas Company
1912		87			82		86
1913		54			71		99
1914	59	66			79		104
1915	42	132	525		106	217	180
1916	37	358	408		79	301	146
1917	43	213	297		69	117	62
1918	47	105	266		70	145	73
1919	80	126	271		71	138	86
1920	103	82	133		55	63	60
1921	100	100	100	100	100	100	100
1922	70	250	85	47	89	101	92
1923	34		224	42	38	119	84
1924	32	159	115	43	20	77	87
1925	37	188	89	41	22	73	82
1926	36		92	23	21	84	114
1927	31	214	177	189	23	195	136
1928	30	267	164	15	30	96	136
1929		205		5	36	64	113
1930	11	146	99	3	27	32	66
1931	10	98	68	2	18	19	28

	Mexican Eagle	Mexican Petroleum	Penn-Mex	Mexican Seaboard	Standard Oil of N.J.	Sinclair Consolidated	Texas Company
1932	10	72	43	7	22	19	38
1933	19	79	20	11	34	37	66
1934	12	72	8	9	30	26	54
1935	7	89	11	13	35	31	75
1936	7		9	16	46	51	137
1937			7	7	29	26	94
1938			1	8	35	27	119

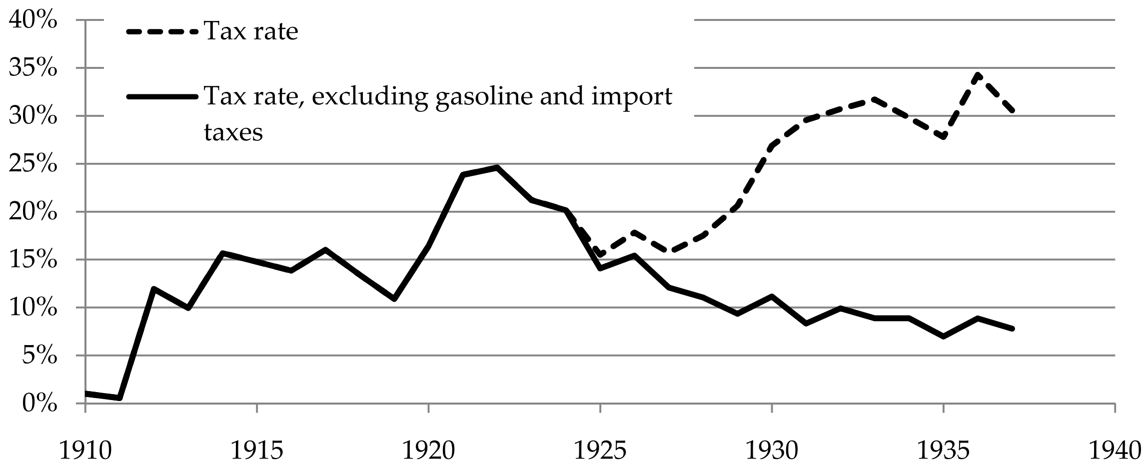
Source: 1924 and 1925 Mexican Petroleum from *Moody's*. It is the annual average. 1921 Mexican Seaboard from Moody's. Mexican Eagle data from De la Fuente, "El desplazamiento," p. 98, *Moody's*, and the *Times of London*. Mexican Eagle share prices were converted to dollars at the market exchange rate and deflated using the U.S. producer price index. 1915-35 Penn-Mex from the *Wall Street Journal*, and *Moody's* thereafter. Other data is from the *Wall Street Journal* and Wharton Research Data Services, http://wrds-web.wharton.upenn.edu.

Table 5: Return on assets, Mexican oil companies, 1921-37

	Weighted average	Mexican Eagle	Mexican Petro-leum	Sinclair-Pierce	Califor-nia Stan-dard	Imperio	Mexican Seaboard	Stanford	Penn-Mex	Agwi	Consol-idated
1921	11%	9%	12%				34%		2%		
1922	15%	8%	22%				53%		-7%		
1923	6%	2%	9%				5%		6%		
1924	3%	2%	3%				33%		5%		
1925	11%	2%	16%				22%				
1926	12%	2%	18%				16%				
1927	6%	2%	8%				4%				
1928	5%	0%	8%				0%				
1929	7%	7%	7%				2%				
1930	4%	5%	3%				7%		4%		
1931	0%	-1%	0%				10%		0%		
1932	-4%	2%	-9%				7%		0%		
1933	-2%	5%	-7%				10%				
1934	3%	7%	-2%	3%	3%	16%	8%	1%	5%	29%	4%
1935	4%	7%	0%	1%	6%	25%	7%	13%	2%	18%	2%
1936	3%	8%	-1%	-5%	0%	18%	7%	11%	1%	22%	-3%
1937	5%	9%	-1%				8%				

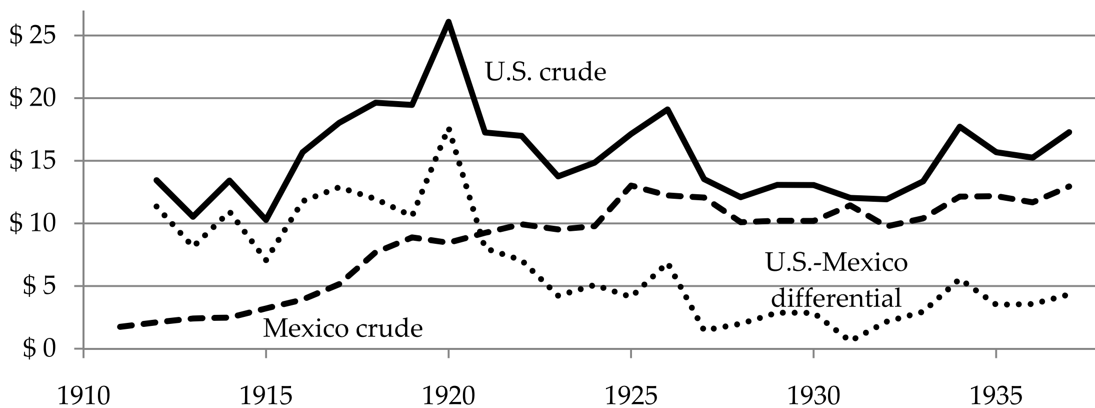
Source: Annual reports of Mexican Eagle, Pan-American Foreign, Standard Oil of New Jersey, and Mexican Petroleum; *Moody's* for Mexican Seaboard and Penn-Mex; México, *Mexico's Oil* for the other companies and Mexican Petroleum in 1934-36. Author's estimate for 1937 using production and price data from Standard Oil of New Jersey.

Figure 3: Taxes and royalties as % of the gross value of crude production, Mexico, 1910-37



Source: Haber, Maurer, and Razo, "Mexican Industry," p. 10; Uhthoff, "Fiscalidad;" and Gordon, *Expropriation*, p, 80.

Figure 4: Real crude oil prices per barrel, 1911-40, 2009 dollars



Source: Mexican data from Haber, Maurer, and Razo, "Mexican Industry," p. 10. US data, 1911-12, *Statistical Abstract of the United States*, 1937, p. 311, imported oil only. 1913-29, Haber, Maurer,and Razo, "Mexican Industry," p. 10. 1930-37, New York spot price from México, *Mexico's Oil*, pp. 74-75 and 132. The U.S. price is for light crude, which made up 80.4% of Mexican crude production in 1936.

Table 6: Union demands, dollars

	Government estimate	Company estimate
Wage increases	$ 2,265,492	$ 3,438,506
Overtime	$ 333,431	$ 993,148
Holidays	$ 92,496	$ 311,434
Vacations	$ 334,139	$ 428,145
Savings funds	$ 636,077	$ 902,370
Medical service	$ 277,778	$ 463,512
Housing benefits	$ 901,217	$ 1,115,105
Other	$ 2,474,024	$ 3,097,312
TOTAL	$ 7,314,654	$ 10,749,533

Source: Gordon, *Expropriation*, p. 112.

Table 7: Oil company profits, million dollars, 1936

	Profits		Cash flow	
	Gov't estimate	Company estimate	Gov't estimate	Company estimate
Aguila	$11.9	$ 3.9	$13.2	$ 5.2
Mexican Petroleum	$ 1.9	($ 0.8)	$ 2.7	($ 0.0)
Pierce-Sinclair	$ 0.6	($0.2)	$ 1.1	$ 0.3
California Standard	$ 0.1	($0.0)	$ 0.5	$ 0.4
Agwi	$ 0.2	$ 0.1	$ 0.2	$ 0.1
Penn-Mex	$ 0.0	$ 0.1	$ 0.0	$ 0.1
Stanford	$ 0.1	$ 0.1	$ 0.2	$ 0.2
Richmond	$ 0.0	$ 0.0	$ 0.0	$ 0.0
Imperial	$ 0.1	$ 0.1	$ 0.1	$ 0.1
Cia de Gas y Combustible	$ 0.3	$ 0.3	$ 0.3	$ 0.3
Sabalo	$ 0.1	$ 0.1	$ 0.1	$ 0.1

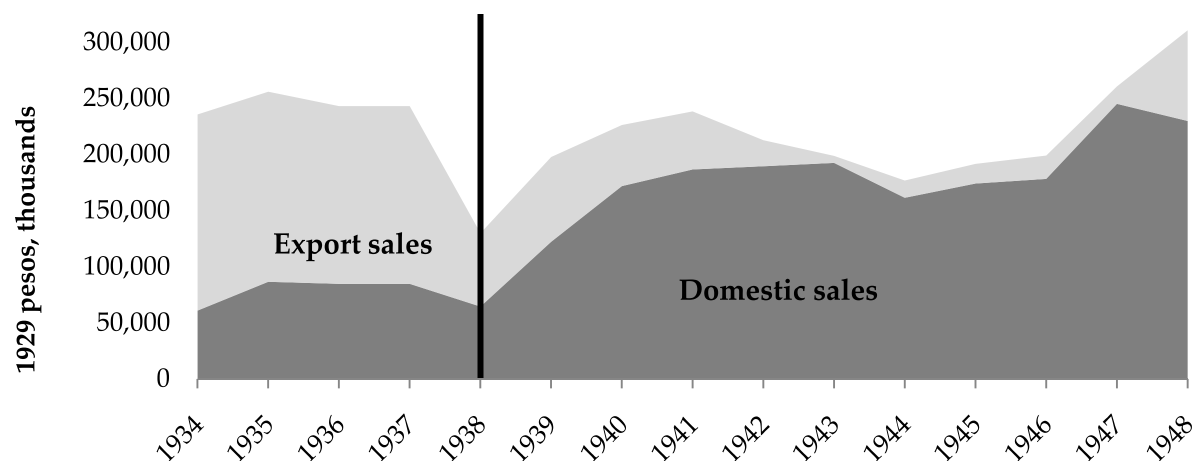
Source: México, *Mexico's Oil*, pp. 293-95, 317-19, 331-33, 347-49, 365-67, 381-84, 390-92, and 433; *Moody's Manual of Investments*, various.

Table 8: The burden of the labor settlement

	Percent of cash flow	Percent of profits
Low	39%	47%
Middle	57%	70%
High	153%	288%

Source: Tables 6 and 7.

FIGURE 5: Domestic and export sales of Mexican petroleum products, 1934-49



Source: Export sales from from Powell, *Mexican Petroleum*, p. 118. Domestic sales, 1934-36, from México, *Mexico's Oil*, pp. 293-95, 317-19, 331-33, 347-49, 365-67, 381-84, 390-92, and 433. Domestic sales, 1938-48, from Powell, *Mexican Petroleum*, Appendix Table 17.

Table 9: 1942 Settlement

	Nominal compensation, according to the 1941 agreement	1938 NPV,adjusting for inflation and including additional payments
Standard Oil of NJ	$ 18,391,641	$19,371,222
Standard Oil of CA (Socal)	$ 3,589,158	$3,780,325
Conoco	$ 630,151	$663,714
Sabalo	$ 897,671	$945,483
Seaboard	$ 487,370	$513,328
	$ 23,995,991	$ 25,274,072

Note: Compensation was valued by converting all payments into 1938 dollars using the U.S. GDP deflator and discounting them back to 1938 using the 3.2% rate at which the U.S. government lent to Mexico in 1943. (This rate was approximately equal to 3.1% rate on 10-year corporate bonds in the United States.) The second column assumes that the additional payments were divided up among the receiving corporations in proportion to their share of the original deal.

Source: U.S. Department of State, "Compensation," p. 351, and Table 10.

Table 10: Compensation payments by the Mexican government, nominal dollars

	Payments to U.S. companies	Payments to U.S. companies, ex-Sinclair	Payments to El Aguila
1940	$ 2,750,000		
1941	$ 3,293,827		
1942	$ 12,600,000	$ 9,000,000	
1943	$ 3,796,391	$ 3,796,391	
1944	$ 4,085,327	$ 4,085,327	
1945	$ 4,085,327	$ 4,085,327	
1946	$ 4,085,327	$ 4,085,327	
1947	$ 4,085,327	$ 4,085,327	
1948	$ 0	$ 0	$ 9,536,990
1949	$ 174,765	$ 174,765	$ 9,383,531
1950	$ 210,361	$ 210,361	$ 8,689,258
1951	$ 216,361	$ 216,361	$ 8,689,258
1952	$ 222,361	$ 222,361	$ 8,689,258
1953	$ 228,361	$ 228,361	$ 8,689,258
1954			$ 9,578,106
1955			$ 8,689,258
1956			$ 8,689,258
1957			$ 8,689,258
1958			$ 8,689,258
1959			$ 8,689,258
1960			$ 8,689,258
1961			$ 8,689,258
1962			$ 8,689,258
TOTAL	$ 39,833,736	$ 30,189,909	$ 132,769,721

Source: Petróleos de México, "Rendicion." Payments converted to dollars at the prevailing market exchange rate.

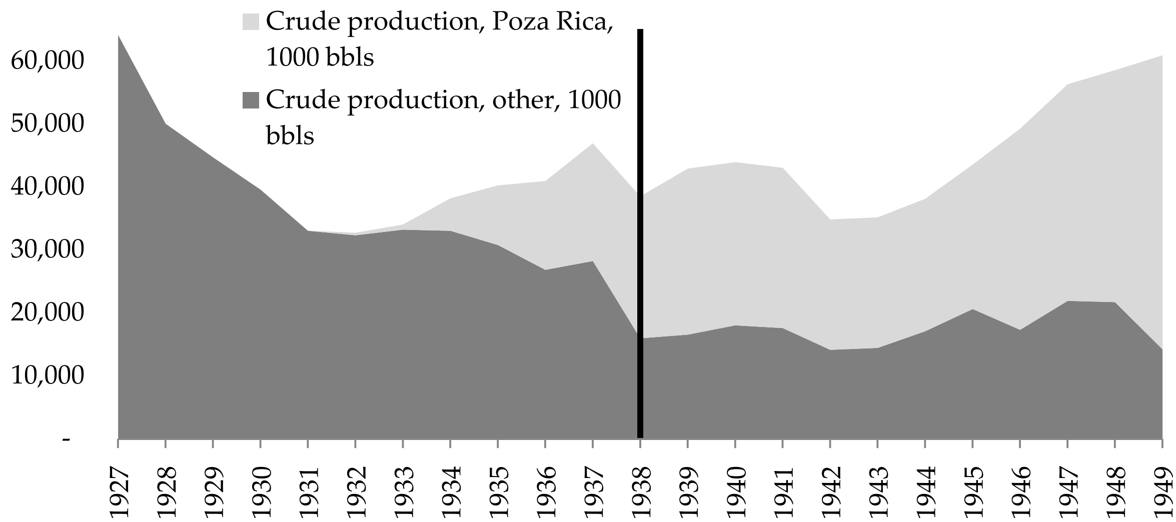
Table 11: Market value and compensation for the two largest oil companies, 1938 net present value adjusted for inflation

	Market value	Compensation
Mexican Petroleum	$ 19,188,049	$ 19,371,222
Mexican Eagle	$ 12,233,340	$ 43,552,824

Note: Compensation was valued by converting all payments into 1938 dollars using the U.S. GDP deflator and discounting them back to 1938 using the 3.2% rate at which the U.S. government lent to Mexico in 1943. (This rate was approximately equal to 3.1% rate on 10-year corporate bonds in the United States.)

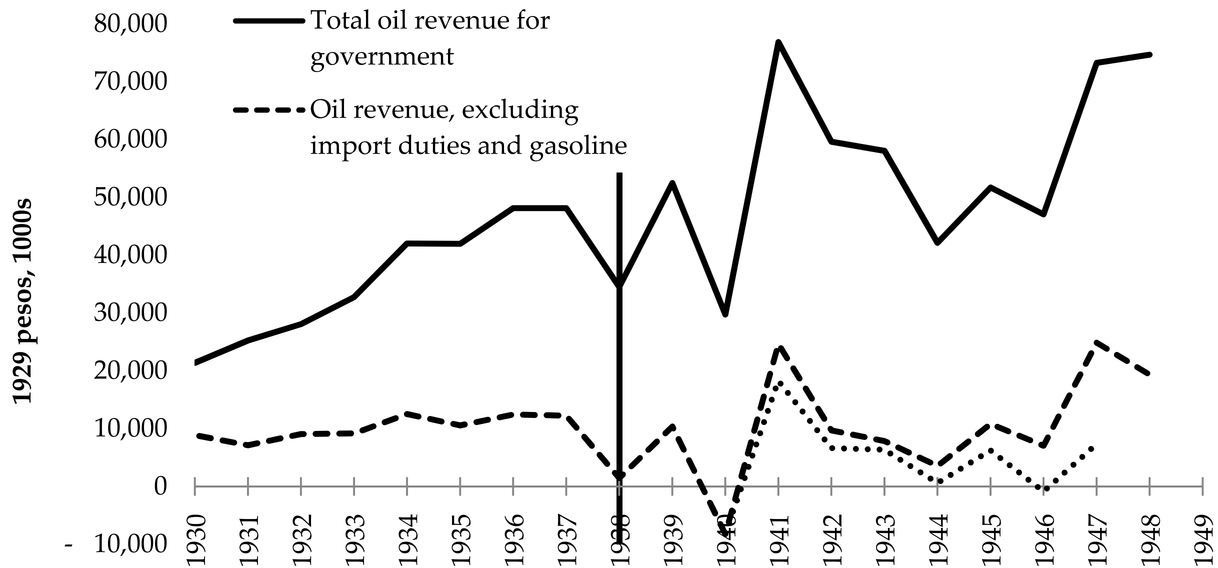
Source: See text and Table 8.

Figure 6: Mexican production, by field, 1927-49



Source: Powell, *Mexican Petroleum*, p. 56.

Figure 7: Government revenues from the oil industry, 1930-48



Source: Bermúdez, *National Petroleum Industry*, p. 258; Powell, *Mexican Petroleum*, p. 165 and Appendix Table 23; and Uhthoff, "Fiscalidad."

Table 12: Labor compensation in the Mexican oil industry, 1937-46

	Payroll	Average annual labor cost	Real annual labor cost, 1929 pesos	Real labor cost, adjusted for work hours
1937	15,929	3,500	3,067	3,067
1938	17,600	3,902	3,273	3,601
1939	23,073	4,237	3,458	3,804
1940	21,940	4,556	3,701	4,071
1941	19,762	4,855	3,716	3,941
1942	20,571	5,033	3,484	3,695
1943	21,235	5,111	2,949	3,128
1944	22,867	6,461	2,907	3,084
1945	25,646	7,279	3,030	3,213
1946	25,981	8,430	2,955	3,134

Source: J. Richard Powell, *The Mexican Petroleum Industry* (UC Press, Berkeley: 1956), p. 130, 153, 214-15, Appendix Table 18.