

The Guggenheims and the Coming of the Great Depression in Chile, 1923-1934

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The history of Guggenheim's nitrate enterprise in Chile from 1925 to 1932 provides a lesson about the transformation of Guggenheim's investments in Chile, as well as about the main problems that arose after the restructuring of the Guggenheim family business. Guggenheim's venture in Chilean nitrate production from the mid 1920s through its failure in 1934 constituted at first Guggenheim's most prominent foreign investment, subsequently the family's largest business failure as well as a staggering foreign collapse during the Great Depression. Guggenheim's disaster was closely intertwined with the Chilean government's foreign bonds default in 1931. Both these failures, the Guggenheim nitrate business, as well as the Chilean government default, worsened the depression in Chile and produced an independent economic downturn. The combined crashes likewise form a part of Chile's modernization crisis from 1931 onwards. Which were the main factors that determined the negative outcome of Guggenheim's Chilean venture? A closer look at the history Guggenheim's Chilean nitrate investment suggests that Chilean government intervention in Guggenheim's venture, combined with the government's mismanagement of Chile's finances, constituted the chief dynamic factor for the decline of Guggenheim's Chilean business. This argument is underscored by the history of COSACH, the *Compania de Salitre de Chile*, the Chilean nitrate trust founded in early 1931, where Guggenheim's Chilean enterprises held the largest stake.

The Guggenheim family business consisted of two main enterprises, the Guggenheim Brothers holding company, which oversaw the operation of Guggenheim's foreign investments, and American Smelting and Refining Co., the giant mining company [1, pp. 130-2; 13, pp. 422-4]. American Smelting and Refining formed the centerpiece of Guggenheim's mining venture that prospered in the years to 1914 as well as during the war. After the war's end, Dan Guggenheim, the leading businessman and driving entrepreneur among Meyer Guggenheim's sons, opted to profit from the postwar raw materials slump by acquiring copper, diamond, and gold mines in the U.S. and abroad. Guggenheim's Chilean venture began under these auspices and became the most prominent of Guggenheim's foreign investments. Others came to direct it, since Dan Guggenheim retired at the conclusion of the war [13, pp. 408-18].

Dan Guggenheim's withdrawal from active business started a transformation process for the family enterprise: Within the following four years the remaining

family members opted for a radical change in the scope of Guggenheim's foreign investments. when a stockholders' meeting of the latter company voted accordingly, following charges of undue profit taking against the Guggenheims. A second major upheaval followed shortly thereafter: During World War I the holding company had heavily invested into the Chilean Chuquicamata copper mine. Faced with falling prices for raw materials after the end of the war and a growing inflation in Chile that threatened to diminish operating profits, the family decided in 1923 to sell two million of Chile Copper's 3.8 million shares to Anaconda Copper Mining Company. The decision to sell Chuquicamata came narrowly, and the resulting sharp dissent within the family moved two of the four then active Guggenheim brothers to resign. The remaining brothers Murry and Sol Guggenheim became the chief directors of the company's future business strategy, assisted by E. A. Cappelen Smith and John K. McGowan, two chief longtime employees. Edmond, Murry's son, and Harry, Dan's son resigned, the latter having been the leading spirit of the Chilean nitrate venture after Dan's retirement.

This shift among Guggenheim's directors opened the way for the new Chilean venture: Cappelen Smith, the chief metallurgist of the company already during the war, had started to develop a new process for the extraction of nitrate from Chilean nitrate ore. By 1922 he had perfected his process, which forthwith was called the Guggenheim process and which promised to cut the costs of nitrate production by 40 %. Cappelen Smith's position as a partner in Guggenheim Brothers allowed him in 1923-24 to persuade Murry and Sol Guggenheim, the remaining active Guggenheim family members, to invest \$ 17 million into Chilean nitrate extraction. Murry and Sol Guggenheim remained rather ignorant about the prospects of the international fertilizer trade, yet decided to trust their chief engineer's technical expertise. Cappelen Smith after all had been responsible for the technical management of Chuquicamata and thus stood as an excellent foreign mining engineer with a firsthand knowledge of local conditions in Chile. Guggenheim Brothers acquired the Anglo-Chilean Nitrate and Railway Company and in addition to that further nitrate deposits in Chile. In 1924 the new holdings were transformed into the recently organized Anglo-Chilean Consolidated Nitrate Company, and the British shareholders of the former Anglo-Chilean received £ 4 for every £ 1 share in the former company [13, pp. 410-8; 7, 1931, p. 2887]

Guggenheim Brothers' decision to bet on the international nitrate trade by investing in Chile had elements of a risky speculative bid. Already in the first years after the war, and certainly by the time when the Guggenheims and Cappelen Smith embarked on their venture, the Chilean nitrate sector was facing a crisis. Explosives and fertilizer were the two main products derived from nitrate. With the end of the war, demand for explosives had ended. Meanwhile Germany and other countries had started to produce synthetic fertilizer, which from 1925 onwards competed with the Chilean product [15, pp. 217-432]. The development of German synthetic nitrate production suggested strongly that Chilean nitrate trade had only a short breathing space of a few years before European mass production would conquer traditional markets for Chilean nitrates. Likewise, the proposed development of Muscle Shoals in the United States as a large scale nitrate producing site pointed to the fact that time was running out for Chilean nitrates [10, 149-75]. Still, Guggenheim's Chilean nitrate venture began in 1922-1923 when German hyperinflation hampered Germany's foreign trade. Given Cappelen Smith's refined technical know-how, the superior quality of Chilean nitrate as compared to synthetic

nitrate, as well as the financial resources of the family enterprise, Guggenheims, for the time being, entered as the strongest party into the adventurous world of the postwar international nitrate trade. Up to 1925 Chile also enjoyed the comparative, yet doubtful advantage of inflation, which rendered its exports cheaper, but this world of easy sales came to an end with the currency reform in 1924/25 [4].

Index of synthetic nitrate production in Germany, 1913=100

1913	1925	1926	1927	1928	1929	1930	1931	1932
100	3720	4335	4800	5300	5640	5410	4460	4340

Source: [6, p. 362].

Cappelen Smith tried to build Anglo-Chilean's new Guggenheim nitrate plant rather quickly, in order to establish Chilean nitrate, extracted by his new process, in foreign markets by force of its low price and higher quality. Guggenheim's chief engineer and partner likewise sought the adoption of the Guggenheim process by all Chilean nitrate producers. Consolidation of the Chilean industry in a trust, long before proposed by Harry Guggenheim, was the desired result of this strategy. Both steps meant operating in a completely new territory and playing against time. Others had decided against this risky bid: J. P. Morgan & Co., having first assisted in financing Guggenheim's Brothers new investments during 1922 and 1923, opted in 1924 in view of declining nitrate prices to withdraw from Guggenheim's Chilean nitrate venture [13, pp. 415-7].

Thus the Guggenheims and Cappelen Smith had to start modernizing Anglo-Chilean Nitrate on their own, and they were facing considerable odds. In 1925-26, a slump in Chilean nitrate exports, resulting from an international price war, illustrated the unstable character of the international nitrate trade and delayed the opening of the new plant. As a result Anglo-Chilean's modernized Maria-Elena plant only started to operate in late 1926 [8]. Chilean ambivalence to Cappelen Smith's new labor-saving process and particularly to the new plant constituted another major factor in the delay. The Guggenheim process, as people came to call it, after all attained its increased efficiency by drying the mineral soil centrifugally in concrete tanks. This technology cut labor costs by 40 % and threatened substantial layoffs during a period when serious labor unrest occurred in Chile as a result of the unstable economic situation after World War I [10, pp. 158-9].

The liquidity of American financial markets and rising demand for Chilean nitrate helped the launching of Guggenheim's new Chilean plant. Anglo-Chilean Consolidated Nitrate increased the capacity of the Maria-Elena plant with the help of the Guggenheim process from 260,000 tons in 1926 to 500,000 tons in 1927 [11, 1931, pp. 2889-90]. The period from 1926 to 1929 brought a revival of the Salitre business. Yet, owing to increased international competition, prices declined. Sinking operating profits of Anglo-Chilean prevented further expansion of the Guggenheim process while rising international demand increased Chilean nitrate sales. Yet this limited phase of prosperity came to an end when in the first half of 1930 the accelerating worldwide agricultural depression led nitrate sales to decline sharply.

Chilean nitrate prices, 1922-1931, Dollars per 1000 kilograms

1922	1923	1924	1925	1926	1927	1928	1929	1930	1931
48.9	49.7	49.6	48.0	47.4	41.3	40.9	38.1	32.1	24.8

Source: [21, p. 386]

International price index for nitrate, 1926-27 = 100

1926/27	1928/29	1929/30	1930/31	1931/32	1932/33
102	91	74	60	37	40

Source: [15, p. 233]

Chilean nitrate production and exports, in thousands of tons

Year	1925	1926	1927	1928	1929	1930	1931
Production	2,520	2,017	1,614	3,164	3,236	2,446	1,126
Exports	2,514	1,658	2,375	2,799	2,893	1,761	1,455

Source: [17]

Given the prospect of declining nitrate sales, Guggenheims faced the dilemma of having to reduce or to restructure their Chilean investments. In 1929 Guggenheim Brothers opted to reaffirm their aggressive strategy in Chilean nitrates by adding Chile's largest nitrate enterprise to their holdings. Guggenheims acquired Lautaro Nitrate Company, Ltd., which controlled nitrate deposits of approximately 30,000,000 metric tons and constituted Chile's largest nitrate enterprise. Owing to a large volume of sales in 1928-29, Lautaro's net operating profit in 1929 largely exceeded that of previous years, yet already in 1928 the company produced more than it could sell. Lautaro's plants used the traditional Shanks process of nitrate extraction by manual labor. In a desperate bid Guggenheim Brothers opted with their acquisition of Lautaro to install a new Guggenheim plant on the company's property. Cappelen Smith became president of the new Lautaro Company. In sum, to modernize Lautaro's production with the more efficient Guggenheim plant promised Guggenheim Brothers a controlling position in the Chilean nitrate business at a time when the nitrate boom had definitely ended.

Lautaro Nitrate Company's net operating profits (British £) and percentage of sales relative to production (metric tons)

	1927	1928*	1929
Profits	679,816	437,166	839,709
Sales/production	153 %	73 %	67 %

*first half of 1928

Source: [11, 1931, pp. 2890-91]

Following the acquisition of Lautaro Guggenheim Brothers took the lead in the consolidation of Chilean nitrate production. At the start of the sales contraction, horizontal organization seemed a timely move. Chilean producers by 1929 had entered into a price agreement that had been partially sponsored by the government. Even Herbert Hoover, the U.S. Secretary of Commerce and soon to become President, though always mindful of foreign combinations to deny American farmers a fair price for fertilizer, during a visit to Chile in 1929 recommended an agreement between Chilean producers and the Guggenheim plants. In early 1930 the Guggenheim interests and the remaining British nitrate producers began to propose the formation of a Chilean nitrate trust. Subsequently Cappelen Smith established in negotiations with the Chilean government the latter's stake in the conglomerate. By the summer of 1930 the trust's organizational scheme had been completed so far that it could start to operate. After further deliberations COSACH was finally incorporated in early 1931 [10, pp. 169-71].

By that time the trust encountered the double challenge of a declining market in international nitrate sales and of a defaulting government in Chile. In the beginning of 1931 Chile's government had to deal with a budget deficit that had grown to unmanageable proportions. In 1927 Carlos Ibáñez del Campo had come to power as a reformist, yet authoritarian military politician. The new president controlled the labor movement by means of violent army attacks on labor demonstrations and simultaneously opted to quell the country's social problems by instituting a public works program, for which the estimated costs for the years 1928 through 1933 amounted to \$ 180 million or 1.5 billion new pesos. These additional expenses as well as the refinancing loans to cover the current deficit were to be financed by American and British loans. The currency reform in 1925 had opened the British and chiefly American credit market for Chile. Between 1926 and 1929 Chilean government bond issues amounting to \$ 142 million had been floated in the United States [3, pp. 76-124; 3; 3a]. These loans, partly contracted as refinancing measures, proved insufficient to cover the newly incurred deficit: The public works program in 1928 and 1929 generated a net increase in Chile's public debt of 1069 million new pesos or \$ 128 million [18].

By early 1931 the Chilean government had run out of liquid funds to cover current outlays. During the fall of 1930 the hazardous character of Ibáñez's overspending had become obvious, as nitrate sales and resulting revenues declined. The resignation of finance minister Julio Philippi in late 1930 made the Chilean public for the first time aware that a government default was impending. The Chilean government heretofore had presented balanced budgets to the public for

political cosmetic purposes, while it refinanced its growing deficit with loans that after 1930 it could no longer repay with nitrate revenues [4, 18].

Nitrate taxes constituted one of the chief sources of revenue for the Chilean government, and thus any prospect of a serious decline in Chile's nitrate trade rendered Chile's financial situation untenable. Accordingly, when in early 1930 the British and Guggenheim nitrate producers proposed to establish a consolidated nitrate cartel, the Ibáñez administration agreed wholeheartedly to participate. The quid pro quo consisted of a quasi waiving of nitrate export cash payments. Taxes were now to be paid in bonds of the new trust, supplemented by a subsidy for the government. The administration in turn conveyed to COSACH the right to exploit government owned nitrate lands.

Even though the basic organizational outline of COSACH was finalized by June 1930, it took another nine months until COSACH was incorporated in March 1931. The interplay of political and economic factors clearly determined the restructuring of Chile's nitrate industry. Growing opposition to Ibáñez in the Chilean congress blocked a speedy passage of enabling legislature. Critical press comments accused the government of trying to relieve the Guggenheims from its debts at the cost of the Chilean nation [10, pp.171-2]. The charges of the political opposition against COSACH referred to the large debt of Anglo-Chilean, which in June 1930 amounted to \$ 21.5 million. Yet Anglo-Chilean's arrears were partly balanced by nitrates on hand, and figured relatively small in comparison to the government's unfunded debt of \$ 36.1 million in 1930/31 [11, 1931, p. 2889; 11, 1933, p. 1948; 22, p. 38]. The rising criticisms against COSACH's modernization of the Chilean nitrate industry illustrated the changing political climate in Chile: Once the end of Ibáñez's deficit-based welfare capitalism came in sight, foreign business interests and their Chilean interlocutors became the most prominent objects for antimodern and anti-foreign reactions that resulted from Chile's economic downturn [10].

By April 1931 COSACH consolidated 95 % of Chile's nitrate producers. COSACH issued B shares in payment or partial payment for acquiring the adhering companies of which 71 % belonged to *Compania Salitrera Anglo-Chilena* and *Lautaro Nitrate Co., Ltd.*, the two Guggenheim-owned companies. Thus Guggenheim Brothers de facto had sold its Guggenheim process in exchange for COSACH shares [13, pp. 452-63]. In order to oversee the further restructuring of Chile's nitrate sector, Cappelen Smith became COSACH's first president. Besides accepting bond payments for nitrate tax payments, the government transferred nitrate properties that were to deliver up to 150 million metric tons nitrate. The adhering companies' nitrate lands held up to 103 million tons of nitrate. The government owned 50 % of the authorized capital stock of the company that amounted to Series A stocks of \$ 182 million and Series B stock of \$ 176 million. In addition, the administration was also to receive \$ 40 million of authorized sinking fund bonds in satisfaction for payments to it due for calendar years 1932 and 1933. \$ 17 million were to be transferred to the government's account already in early 1931. In sum, the transaction between the Guggenheim interests, other Chilean producers, and the Chilean government amounted to a direct loan of COSACH to the government. COSACH issued \$ 50 million bonds in order to finance its undertaking. The government in turn merely pledged the use of its undeveloped nitrate lands at a time when Chile's nitrate production and exports had started a dramatic decline [11, 1931, pp. 2887-9]. Already in July 1930 Emiliano Figueroa, the head of Chile's central bank, had pointed out COSACH's role as

lender of the last resort to the Chilean government: "We have to thank the Americans who have taken a hand in the matter and have come to our assistance when the rope was about our necks" [10, p. 171].

Given the close mutual involvement between COSACH and the government, the sequence of events leading to the Chilean government's default in July 1931 proved to be critical for COSACH's development. Owing to its needs of loans and cash at the start, the new cartel had to sell its existing nitrate stocks on hand in order to be able to make the due payments to the government. Likewise, the cartel had to attract more loans, which it needed desperately in order to further modernize the remaining nitrate plants that operated under the traditional Shanks system [13, pp. 452-63]. COSACH's cash balance in late 1930 consisted of \$ 3 million with not much more to come from COSACH's operations, as the net combined operating revenues of the two participating Guggenheim enterprises in the more profitable business year 1929/30 had generated only \$ 4.35 million [11, 1931, pp. 2889-91].

In face of COSACH's thin cash reserves any external shock could hamper its further development. Chile's impending cash crisis from February 1931 onwards affected COSACH decisively. The government at that point had only cash reserves of \$ 4.8 million on hand. COSACH, waiting for its incorporation by Congress, now saw itself forced to prepay its taxes and government dues already in the first half of 1931 [8]. Barely a few weeks after its incorporation COSACH thus found itself largely deprived of cash reserves. Likewise, the trust could not sell its bonds to a skeptical British and American public: By the end of 1932 the proposed international loan of \$ 50 million issued to launch COSACH had generated only \$42.8 million. In the spring of 1931 Guggenheim Brothers had to advance \$ 25 million for COSACH. Subsequently Guggenheims bought \$ 10 million of COSACH's bonds. In fact, the chief mission of the holding company turned to function as COSACH's banker and to guarantee the remaining bond issues [11, 1932, p. 1951; 13, pp. 453-62; 12, 22 March 1932, 29:3]. Despite Guggenheim's effort on its behalf, COSACH's lack of cash and loans severely hampered the aggressive sales policy that had been one of the main economic reasons for the trust's formation. The decline in sales accelerated in 1931 when an international nitrate price war started that drove prices and COSACH's potential profits further down [15, pp. 237-8].

After the Chilean government defaulted on its interest payments for foreign bond issues in July 1931 and Ibáñez had fled the country, the succeeding Montero administration instituted a rigid exchange control in order to protect the gold reserve of the country. As a result, a vivid black market currency trade developed, while COSACH had to conduct its currency transactions by the official exchange rate. By September 1932 80 % of the Chilean Currency Commission's exchange profits came from COSACH [4]. As a result, COSACH and other export businesses limited their trades to a minimum. The trust reduced the number of its employees from 18,945 in June 1931 to 10,569 in June 1932 [11, 1933, p. 1949]. In view of the failure of COSACH's mission, Capellen Smith resigned at the end of 1931.

Chile's and Germany's Percentage Share in World Nitrate Exports

	1928	1929	1931	1932	1933
Chile	52	49	40	10	18
Germany	30	28	26	28	22

Source: [15, p. 232]

Chile's nitrate slump formed part of a broad decline in agricultural and raw materials sales. The international price war, induced by the worldwide depression, lasted until 1932 and drove prices and production down. Rising tariff barriers and agricultural protectionism contributed to the nitrate crisis. The grave decline of Chilean nitrate sales in 1932 is illustrated by the fact that American imports of sodium nitrate, chiefly supplied by Chile, declined between 1931 and 1932 from \$ 21 million to \$ 1.4 million [20, p. 512]. Simultaneously, Chile's position as a world supplier of nitrates shrunk dramatically. Given these constraints, the financial and monetary policies of the Chilean government do not figure as the exclusive reasons for COSACH's demise. Yet Chile's confiscatory intervention into the trust's affairs clearly destroyed COSACH's remaining chances to compete in the given harsh international setting. Although Medley G. B. Whelpley, the successor of Cappelen Smith proved apt in refinancing gambles, Anglo-Chilean on April 29, 1932 defaulted on its 7 % debenture bonds [12, 30 April 1932, 25:3]. By the fall of 1932 COSACH had practically failed on all aspects of its mission. COSACH's consolidated income account of June 1932 showed a net loss of \$ 13.38 million. Anglo-Chilena at that time had a deficit of \$ 1.7 million, while Lautaro, in view of the costs of opening another Guggenheim-process plant, presented a net loss of \$ 5.87 million. To summarize briefly, our examination of the interplay of political and economic factors affecting Guggenheim's investments in Chilean nitrate suggests that the Chilean default and the rigid imposition of currency controls furthered COSACH's decline.

Starting in the spring of 1932, political turbulence threatened COSACH's further operation until its final demise in 1934. In early June 1932 a socialist junta took power, which promised to dissolve the trust and to open nitrate plants that operated under the Shanks process [23, pp. 432-3]. After the end of the 100-day socialist revolution, Chile's military prepared a supervised election. During the protracted campaign in the fall of 1932 the government and several candidates issued critical statements asking for COSACH's dissolution. The campaign against COSACH during the election of 1932 stepped up the anti-foreign and antimodern rhetoric that had developed since the late 1920s [12, 14 October 1932, 13:4; 16 October 1932, 25:2; 29 October 1932, 25:5]. COSACH thus faced the political consequences of the worldwide nitrate sales slump and Chile's modernization crisis. Finding itself unable to meet the projected sales quotas that had been part of the 1931 agreement, the trust had to bear the brunt of the public criticism against Ibáñez, who had fled the country in 1931. After the election, the populist president Arturo Alessandri advocated steps to reduce COSACH's debts, and shortly thereafter rumors about the dissolution of COSACH by decree surfaced.

With the advent of Alessandri, the government took the lead in liquidating COSACH. This step formed an important element in Alessandri's populist strategy

of forced industrial growth, protectionism, and mass employment [2; 14]. The president thus responded to the anti-foreign and antimodern outbreaks against COSACH and other foreign-controlled companies. The winding up of COSACH allowed him to draw political capital from the prevailing anticapitalist sentiments during the depression. In November 1932 Lautaro shut down its recently opened Guggenheim process plant Pedro de Valdiva, then the world's largest nitrate plant. Despite the closing, Lautaro opted to retain its Chilean workers [11, 1934, p. 3192; 12, 4 November 1932, 36:4]. The closing of Pedro de Valdiva stands as the most visible testimony of the Guggenheim's failed attempt to modernize the Chilean economy. Hindsight, however, suggests that the shutting down of Pedro de Valdiva opened the door for a makeshift settlement of COSACH's remaining affairs: By the end of 1932 mutual plans were ready to dissolve COSACH by decree within the next two years. In March 1933 the Chilean government cancelled its export tax, the government's collateral for COSACH's bond guarantee, despite strong American protests. This step meant a virtual Chilean default on COSACH bonds [12, 18 March 1933, 26:20]. Whelpley managed nevertheless during 1934 to separate Anglo-Chilean and Lautaro from COSACH, thus retaining Guggenheim's Chilean investments, though at considerable loss [12, 25 January 1934, 8:3]. For the following years both companies remained in deficit. In 1937 Lautaro and Anglo-Chilean affiliated themselves with the new Chilean nitrate trust that was established in 1934 and accepted sales quotas. By that time the Chilean nitrate industry emerged from the doldrums, thanks to the quickening worldwide demand and the formation of a worldwide sales cartel that was formed in September 1935. Anglo-Chilean and Lautaro remained the largest nitrate corporations in Chile, although their production after 1933 did not reach the level it had attained after 1926. The positive development of Chile's nitrate sales after 1934 underscores that COSACH's demise was not inevitable but came as a result of Chile's financial mismanagement from 1928 onwards and Chile's populist supply-side economics after 1932.

Nitrate production of Lautaro, 1927-1936, in metric tons (1000s)

1927	1928	1929	1930	1931	1932	1933	1934	1935	1936
317	387.9	811.2	640.2	367.6	623.3	187.4	125.4	421.5	483.6

*First six months of 1928

Source: [11, 1938, pp. 3036-38]

Index of mining production in Chile, 1927-1929=100

1929	1930	1931	1932	1933	1934	1935	1936	1937
117	83	57	31	38	62	71	72	100

Source: [23, p. 162]

Guggenheims had put themselves into a precarious position when they opted for an unnecessary high, yet potentially rewarding stake in Chile's unstable nitrate sector. This entrepreneurial miscalculation was strongly influenced by the declining financial prospects of Guggenheim's family business after the war, which led them to embark on a risky investment policy. Despite superior technical know-how, a deteriorating world market for nitrate subsequently worsened Guggenheim's prospects. Chilean politics contributed the main dynamic factors for the dismal outcome of Guggenheim's Chilean venture. What is the historical lesson? Investments in Latin America that aim at a quick profit, while neglecting to study local political conditions carefully then, as now, seem a perilous business.

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