

HOWLING WITH THE WOLVES OR FIGHTING THE CRISES? LARGE FRENCH FIRMS AS PLAYERS IN THE EUROPEAN CEMENT CARTELS DURING THE INTERWAR PERIOD

by

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Introduction

During the interwar period, most European producers began considering the advantages of building national and international agreements. Some, such as the English or German producers already owned strong national agreement organizations while others, as the French producers only had local and periodic price-fixing organizations¹. French cement cartel evolution in Europe during the interwar-period had almost never been studied before². Even so, the behavior of the French cement industry differs from other heavy industry sectors³. For example, unlike the steel industry⁴, the cement industry did not organize its national cartel during the 1920's. Its evolution is also unique compared to its European neighbors. The reasons for this particular situation are related to the oligopolistic structure of the cement market as well as economic cycles but also to the individual strategies implemented by the French cement companies. The economic crisis of the 1930's cause a disruption of the cement market. The goal of this paper will be to present how the cement cartel succeeded in fighting the crisis. It will also question the role of French cement producers in the European cartel, and

expose how French and European cartels allowed not only economic alliances but technical and commercial alliances as well.

In order to present this points, the first part of the paper will deal with a global introduction of the French cement industry during the interwar period and more specifically with its structure and the issue of competition within an oligopolistic market. The second part will be dedicated to the attempts and failures of cement producers agreements in the 1920's regarding the context of rebuilding. At this time, most of them were local and offensive agreements concluded to reinforce the oligopolistic structures of the market. Finally, the third and last part will explain how the financial crisis of 1929 and its economical repercussions acted as a trigger for the constitution of the French and European cement cartel, while also handling the success and limitations of that particular cooperation attempt.

1. The cement market: toward the constitution of an oligopoly

The cement market issues lead most producers to focus on regional market. Even if the commercial competition is most of the time local because of transportation costs, cement commercial expansion enables cement companies to grow and to fight each other to increase their national market shares⁵.

Cement market issues

In spite of a pre-existent binder market, a cement market gradually appeared during the XIXth century. In 1817, the French engineer Louis Vicat discovered the hydraulicity of the lime and works out the artificial cement that we call today cement. Cement is a blend of clay, limestone and coal with varying proportions depending on their characteristics. Cement and lime shared the binder market during the XIXth century before cement slowly substituted to lime. Cement industry is a heavy industry with a very simple production process. Four phases are necessary: extracting, calcinating, drying and shipping. There is a long period between two technological progressions. Indeed, between 1817 and the end of the 1880's, there were no major process or manufacturing innovation⁶.

First world war appeared as a trigger for the domination of artificial cement on the binder market. The war created a reconstruction impulse, and thanks to these new needs generated, artificial cement overcame lime at this time. Beforehand, some technical innovations were necessary for this commercial takeoff: the use of gas ovens and the

progressive substitution of straight kilns by rotary kilns, which are more productive and essential to a good cement quality. Rotary kilns generalization during the 1900^s contributed to unify French cement production by reducing the differences of quality and price between producers⁷. Indeed, before growing, there is no price stability for an industry, as for the cement industry during the second part of the nineteenth century. When it reaches a certain technical maturity, when the product's characteristics and the manufacturing methods are fixed, the average price evolution holds steady at a higher level. This price evolution leads cement companies to fix new competitive strategies⁸.

Thus, cement's characteristics and technical standards have hardly evolved even if there are different kind of quality or dosage depending on the kind of building it is used for and the place where it is used. We use to consider that cement is a single product. Manufacturing costs are hardly the same from on concurrent to another: 40% for fuel, 15% for raw materials, 15% for labor, 15% for maintenance and overhead costs and finally 15% for packing and depreciation⁹.

Producing cement is not expensive. However, it's a low value product. Therefore, one of the key issues consists in limiting storage and transportation costs to preserve a competitive end product cost on the market. For this particular reason, to set up a cement factory, downstream and upstream factors must be considered. Distances between quarry and kilns or fuel accessibility play a key role as an asset or a weakness in the concurrent's balance of power inside the market¹⁰.

Local market and spatial competition

Because of these issues, the cement market is a local market inside which a natural balance gradually settles between production and distribution capacities. This structure is suitable for "spatial competition" as defined by the economists Scotchmer and Thiss¹¹. In this model, each company is comparatively spatially separated from its competitors and has almost a monopoly in its distribution area. Assuming that during good economic conjunctions, we find hardly the same prices among competitors as mentioned above, a tacit consensus to respect "preferential market areas"¹² seems to prevail. This "preferential market areas" are divided between producers to maximize their profits. In this particular situation, which is roughly the cement industry situation up to the end of the 1870^s, notions of branch, market or total request were very vague or hardly existed. Interdependency between two producers did not exist, while that's a preliminary to any agreements between competitors.

This “preferential market areas” may be destabilized if the market go unsteady and leads a company to overproduction or if the profit share increase more slowly than the producer’s number. Each seller, observing the weakening of his own situation, would have to lead to a new dynamic competition different from the spatial one. This reversal appeared during the 1880^s, when the Great Depression (1873-1896) began to reach the cement industry. As it depends on construction cycles, cement industry experiences with a slight delay the general downturn on the French economy and then on the building and public works sector of the beginning 1870^s¹³. The resulting reduced demand, sometimes very changing within the market area, inflame competition between producers and reduce individual profits. So each company begin to plan the conquest of new markets to balance the losses inside their preferential market areas.¹⁴

When having strong expansion means, the largest companies try to eliminate their competitors or at least to reduce their market share by a mergers and acquisitions offensive policy. This policy leads to a market concentration process. For example, Lafarge began to purchase its closest competitors as *Les chaux et ciments du Teil, de Cruas et de Meysse* in Ardèche, then a little farther, *la Société des Portland Méridionaux* between 1887 and 1900. The benefit of the M&A process is to enables companies to increase their production capacities and opportunities without increasing total supply on the market and therefore the oversupply’s risks when economic growth slows down. Thus, an oligopolistic market was gradually set up in the late nineteenth century. This development was mainly based on the fact that, because of the first concentration, there were only few companies trying to sell most of their production in their close areas. This new situation did not introduce any disruption in the mentionned above spatial competition principles but it reinforced the interdependency between the companies on the market, which is necessary to any agreements.

As explained by Alain Jeunemaître et Hervé Dumez¹⁵, inside a oligopolistic market, the mimetic phenomenon becomes an element of the companies strategy. Inside industries involving advanced technology, the mimetic phenomenon generally leads to a virtuous cycle of positive externalities by a technology-lock lowering production costs and stimulating demand. Yet, in the cement industry, demand does not depend on costs and the technological potential is reduced. Then, the lasting effects of lowering costs remain very small and tend instead to emphasize the risks of overproduction or overcapacity in the event of an economic downturn. Because of this particular situation in the late 1890s, some local transitory agreements were signed¹⁶. At that time, in 1892, the minutes of the manufacturing council of Lafarge mentioned a price agreement previously found between some lime and cement

producers. In 1899, an agreement was signed between Lafarge and its competitor Poliet et Chausson, allowing Poliet to sell a part from its production of its Beffes's factory in the Lafarge's storehouse of Châlons¹⁷. A real regional agreement on lime and cement is also reached in 1906. The management board of Lafarge explained that it would be convenient to:

“ Limit the agreement to the close companies and stay apart from the Haut-Rhône firms, establishing price zones pushed to the extreme where everyone remains free to practice its price not to miss a client and maintain its tonnage, and take a solemn undertaking not to build new furnaces for one year after the agreement's break.”¹⁸

This agreement is the first step of a long-term conciliation and collaboration policy between competitors. If this agreement is primarily motivated by commercial reasons, the logic of this arrangement is very different from that of the cartel as build in the 1930s.

A balance seems to be maintained until World War I inside the cement industry. Still driven by the dynamism of a work in progress market, the cement oligopoly was gradually set and structured on the basis of free trade and also on some temporary local agreements. The First World War caused a disruption and led to new economic conditions that put into question the lasting peace of the cement oligopoly.

Cement oligopoly facing the First World War

The war seriously affected the French cement industry. Most cement plants were located in the devastated areas. Because of a drop in production, France had to import cement. Its world production share decreased of more than its half: from 4,8% in 1913 to 2,3% in 1920¹⁹. All cement firms were affected by a major problem: the manpower's lack. Lafarge was no exception to the rule. Its production of hydraulic binders dropped of three quarters. Most of its plants were too far from the front to receive a state priority for manpower. Despite the produced tonnage collapse during the First World War, new capitals were invested by corporations that produced cement in France or in the Colonies from 1913.²⁰

In the beginning 1920's, several French companies stood out on the cement market. *Les Établissements Poliet et Chausson*, *La Compagnie nouvelle des Ciments Portland du Boulonnais*²¹, *La société anonyme des ciments Vicat*, *la Société des Chaux et Ciments Lafarge et du Teil* et *la Société Anonyme des Ciments Romain Boyer* are at this time the most successful firms. The cement industry was the subject of growing investments. The firms that made the most important investments in the previous decade dominated the market. Cement

producers that emerged during the nineteenth century such as *Ciments Français*, *Lafarge*, or *Vicat* resisted with varying success to the war production halt. In the French northern area, the *Société nouvelle des ciments Portland du Boulonnais*, better known as the *Ciments Français* encountered a steady growth since its inception in 1861. Its sale exceeded 400 000 tons in 1913²². Because of their age and their strong foundation in the south of France, *Vicat* and *Lafarge* maintained their rank. However, for the new building materials company, *Les Etablissements Poliet et Chausson*, the First World War appeared as a springboard. The company, founded in 1901 in the Paris Basin made significant investments between 1913 and the end of the war. Its success is due to the increase of its mergers and acquisitions²³ and its huge factory building program during the war including the Gargenville cement factory build in 1917 with a 200 000 tons capacity²⁴. The war driven to a production slowdown. Thus, its end was marked by the reconstruction and led the cement market to a new development.

2. Reconstruction and first agreements

During the 1920's, the cement market was marked by a huge expansion and at the same time, by its first agreements. Beyond individual expansion strategies, a competitive dynamic appeared: to conquer new market. This dynamic led to offensive agreements. However, this agreements stayed temporary, they cannot be confused with cartel. So, on the eve of the crisis, the market was disrupted.

Enter into cartel? The French cement producer's hesitations

Reconstruction urgency and new demand arising from the war modified the cement industry organization. First of all, every cement producers had to face their insufficient productive capacities. This situation was due to the cement demand explosion. It was also the result of the M&A policy applied before the war. This growth strategy enabled indeed companies to increase their production capacity while minimizing the risks related to demand, but did not contribute to increase overall production capacity of the market, leading to an insufficient production, especially in the artificial cement sector. Consequently, time was not for agreements but for competition. Each company tried to increase its facilities as fast as possible in the best conditions and manufacturing costs. This process took place through four operations: the pursuit of mergers and acquisitions, equity investments in various subsidiaries, the establishment of new factories and the renovation of older units to reinforce their

productivity²⁵. Thus, the competition spirit in this oligopolistic market did not totally prevent from any collaboration. That's why French cement producers kept an eye on their European neighbors and questioned the opportunity to organize a cartel like them.

Great Britain and Germany give two examples of early national cartel constitution. In Great Britain a powerful production organization was established in 1900, the *Associated Portland Cement Company*. This financial independent group acted either by itself or through two companies: *the British Portland Cement Manufacturers Limited* and *the Cement Marketing Compagny*. The group controlled several smaller absorbed companies. He adopted as a trademark the Blue Circle²⁶. So, the Associated Portland Cement Compagny appeared as a holding reinforced over time trough M&A. The war enabled the creation of a new competitor: the *Portland Cement Selling and Distributive Compagny Limited*. This group of six firms, that maintained a very large financial autonomy, organized their sale. Their emblem were the Red Triangle. The local market's economic structure inspired this sale organization. The Red Triangle accepted orders from all England areas and delivered its products from the closest factory regarding the price transport destination. The two associations were engaged in a fierce competition during the reconstruction. They would reach an agreement until the 1927's economical crisis.

In Germany, the cement industry was organized in Konzerns. This powerful group of companies under a single management solved the working capital scarcity after the war and allowed more regular supplies and opportunities²⁷. The German cement industry was divided in two sections: a commercial and a scientific one. The *Deutscher Zement Bund*, headquartered in Berlin, organized the commercial groups to limit the sales by distributing government orders and supplies of raw materials²⁸. Trough its main organization and its associated groups, exportations were determined and fixed and prices were fixed in consultation with government officials. In addition, the cement portland companies, *Eisenportland*, *Concrete* and *Hochofen*, had their own scientific organization for research, product standardization and information.

The German economic strength and its Konzern's success in the regulation of the market competition stirred french manufacturers' jealousy. Actually, the German government did not only tolerate but protected and encouraged cartel in its industry where the French government showed its general commitment to liberalism and free competition. In Germany the prolonged absence of legislation paves the way for agreements. In France, the law were initially much more restrictive. Since the d'Allarde decree (March 2, 1791), was proclaimed the freedom of trade and industry. Under this principle, Article 419 of the Penal Code

punished coalitions between holders of a same product searching to sell it to a predetermined price.²⁹ This rule applied to agreements but also to any group, trust or holding company trying to make profit without leaving a natural and free competition playing³⁰. Nevertheless, the experience of war encouraged the opening of public debates around cartels during the 1920's that leads to the law of december 3,1926: while imposing more severe sanctions, this law established a distinction between "good" and "bad agreements" and encouraged the development of cartels.

The mobilization of the industry, the manpower distribution and the ranking of institutions charged by the state during this period were a first trigger to the unification process of the french market still relatively broke up then. This process involved the creation of unions or groups of regional interest. The state had almost no authority on them, however, this unions became privileged interlocutors or even influential groups to negotiate with the economy actors. In general, the French state remained relatively unconcerned by this agreements or arrangements between competitors as long as their effects seemed to be favourable to the market expansion and to a proper functioning of forces of supply and demand³¹.

This kind of union is adopted early by several industries, for example, the steel sector organize itself into the *Comité des Forges*³². For others, like the cement industry with more dispersed structures, this type of organization was not immediately obvious. While a National Association of Manufacturers of Artificial Portland Cement was originally created since 1891 and replaced at the beginning of the century by a Trade Union Federation of Chambers of Lime and Cement Manufacturers (*Fédération des Chambres Syndicales des Fabricants de Chaux et Ciments de France* or *FCSFCCF*), this union was at first more a place of reflexion to centralize technical information, even a place of representation than a head organization for every producers.³³ During the 1920's, its board of directors' officers are senior executives of the largest cement firms. Indeed, in 1927, the chairman is Antoine Bauchère, director and C.E.O. of the Ciments Français and its associated chairmen are Jean de Waubert the managing director of Lafarge and Leon Chausson, managing director of Poliet et Chausson. The 1920's FCSFCCF bulletins reported its board of directors discussions, official documents and technical, economical and social questions concerning the cement sector. At this time, the Federation had no role in the economic coordination of the cement sector. Indeed, the cement sector was not a cartelized sector.

The Federation acted more like a lobby. This group reclaimed from the government an increase in tariffs in the cement sector to fight against foreign competition and to make up the

franc devaluation since 1921. The groupe got finally successful when a new law of april 4, 1926 and a decree of August 14, 1926 allowed a double increase of 30% of the lime and cement tariffs. It led to an increase coefficient of 1.7 in a few months. Nevertheless, the Federation expressed the hesitations of cement producers on the reorganization of their industry in international cartel like most areas of heavy industry. In May 1927, the FCSFCCF publishes an interview with the director of trade agreements to the Ministry of Trade and French delegate to the upcoming economic conference in Geneva organized by the League of Nations³⁴, Daniel Serruys³⁵. He rejected the idea that the formation of international cartels would result in higher prices and urged the producers to organize into agreements. He said these agreements would allow a general tariffs harmonization. Because of excessive disparities between the states of the League of Nations, the Economic Conference of Geneva did not get tangible results immediately³⁶.

Offensive agreements and collaborations inside cement market.

The 1920s were a period of expansion and prosperity for the French and European cement industry³⁷. However, the market encountered few fits and starts. Indeed the first half of the decade was marked by free competition. The companies had enough space and flexibility to develop and expand without worrying about competitors. In 1926-1927 a first economic reversal occurred. The reconstruction's slowing resulted in a sort of mini-recession in the cement industry. The slower economic growth led to a demand's loss and the companies had to face a profits diminution that places most of them in a difficult financial situation. They had to fight against cash flow problems to find alternatives to finance their expansion program. Quickly, the recovery of 1928, closely linked to the currency reform of the franc Poincaré³⁸ reinforced their expansion will. Thus, closer links between companies were established. The point, far from being defensive, was instead clearly offensive. Closely related to the oligopolistic structure, these collaborations took two directions: either an agreement between two large firms to achieve a joint operation or to share a market to maximize profits where free competition would have prevented it or a tightening of subsidiaries and smaller competitors around one of the major leaders. For this time counters and agreements generally remained local, regional or bilateral.

If some bilateral agreements were signed during the 1920's they were only temporary. Above all, they were useful to serve the cement companies expansion strategies. These were offensive agreements. In 1928-1929, for example, Lafarge wanted to expand in the northern

France markets, settlement area of its rival, *Ciments Français*. Lafarge already bought some shares in the *Société des Ciments du Nord* in 1927³⁹. As *Ciments Français* wanted also to expand its market in the South, where Lafarge was established, they worked together to buy a 50/50 third of the capital of the *Société des chaux et ciments de Lavazières et Lexos*, which owned a plant near Albi⁴⁰. The two competitors wanted to make this joint operation the starting point of an alliance including at first an exchange of directors. In 1929, two directors of *Ciments Français*, M.M. Biffe and Bauchère were admitted to the *Lafarge* Board of Directors while Jean de Waubert from *Lafarge* joined the *Ciments Français* Board of Directors⁴¹.

Since 1928, the cement producers set confidential agreements inside cement counters to set quantum. The three major cement producers even set temporary agreements. For example, *Poliet et Chausson*, *Lafarge* and *Ciments Français* were committed to:

“ (...) not to look directly or indirectly at the Marcoing cement plant in any technical, commercial or financial way for a period expiring June 30, 1934”⁴²

This agreement enabled each oligopoly to share the market without upsetting its competitors that may be valuable allies in the future.

The creation of the *Financière des Ciments* is an original example of offensive agreement. Indeed, this group responded primarily to the logic of a narrowing of subsidiaries and smaller competitors around a major industry leader. But it also marked the first french attempt of international agreement in the cement sector. This company were a holding company created in 1928 by *Poliet et Chausson* and the *Consortium du Nord*⁴³. Its statutes describes three main objectives for this holding:

“ First of all, the constitution of a portfolio of first-rate, ensuring significant gains and returns that may constitute a regular source of income, secondly, the study, the acquisition of stakes and if necessary the squeeze out of cement or building materials firms to facilitate or serve the actual process of firms' concentration. Finally, to go beyond borders by searching and concluding international agreements to open new market in foreign countries to the french influence.”⁴⁴

The *Financière des Ciments* allowed *Poliet et Chausson* to absorb many average company to reinforce its oligopoly⁴⁵. It also enables an international agreement with two important foreign societies. They have the same holding structure as the *Financière des Ciments*: the first is a Belgian society, *Niel-on-Rupell*⁴⁶ and the other is a Swiss company, the *Financière des Ciments of Glaris*⁴⁷. Each company took a stake in the others and they exchanged their directors. Thus, the *Financière des Ciments* welcomed to its board of directors M. Martin Verbeeck for Belgium and M. Ernst Schmidheiny from Switzerland. These three firms

created also a technical office composed by one third of French, Belgian and Swiss engineers from the concerned companies. This international agreement, which results in a technical collaboration and a mutual stake, is an original one. It allows to pool capital and expertise between French, Belgian and Swiss producers.

However, this experience only concerned *Poliet et Chausson* and remained marginal. So, when the French cement market began to suffer from the crisis effects, producers had no coherent and unified response against the demand diminution.

One the eve of the crisis, a disorganized market

In the late 1920s, individual strategies of companies seemed to reach an unsurpassable limit. We could summarize the situation as follows: if at individual and micro-economic level it is more interesting and less risky for a company to increase its own production capacity by absorbing a competitor, at the macro-economic level a generalization of this type of strategy does not increase the overall capacity of the cement sector⁴⁸. The market finds himself saturated. This weakness is cruelly revealed by the 1927 recession.

The pacified oligopolistic market of the 1920s, theoretically ideal for macro level, could not continue in the long term in a free competition system where micro-economic concerns tended to take precedence over the common interests. Indeed, the agreement's paradox lies precisely in the fact that it is supposed to work for the firm's common good, while each company has a personal interest to go against the agreement's guidelines. After the recession of 1927, the cement producers did not have the same vision of the economic situation and did not adopt the same strategy. Some as *Poliet et Chausson* only see a temporary downturn and refused to give up their expansion strategy while others, like *Lafarge* are more cautious. This differences lead firms to compete without being able to find common ground. In 1928, *Poliet et Chausson* and *Lafarge* both decided to establish themselves in Morocco⁴⁹. This is the first *Poliet et Chausson* implantation in the colonies while *Lafarge*, already present in Algerian, extends its implantation in North Africa. *Poliet et Chausson Maroc* is a *Poliet et Chausson* subsidiary which is based on the construction of a plasterer and a cement plant with a capacity of 70 000 tons in Casablanca. This subsidiary entered in direct competition with the joint project of *Lafarge* and the *Chaux, ciments et Matériaux de Construction du Maroc* to build a cement plant with a capacity of 240 000 tons⁵⁰. The two firms capacities would exceed the absorption capacity of the Moroccan market. To find an

agreement, they will have to wait 1935 when each competitor, weakened by the crisis will have no choice but to ally with his opponent to survive⁵¹.

The common goals of the agreements of the 1920s were undermined by the cement producers' individual strategies. Sometimes, when one of them was no longer satisfied with this agreement, he decided to break it to take advantage of the obligations its competitors were subjected to. This principle is widely understood and practiced, as evidenced by the denunciation by Lafarge in 1932 of its agreement with *Ciments Français*⁵². By this time, the exchange of directors stopped. Indeed, *Lafarge* ambitions led it to absorb the *Société des Ciments du Calaisis* in northern France on its new allies land in 1929, but also to acquire a majority stake in the joint venture of the *Chaux et Ciments de Lavazières et Lexos*. During the discussions opened with *Ciments Français*, Lafarge managed to divert the agreement between the northern France producers and its counterparts about the Netherlands⁵³. As Lafarge did not sign the agreement, it threatens to sell cement from its factory of the *Société des Ciments du Calaisis* in the Netherlands, which would lead the north producers including *Ciments Français* to pay the fine provided for exceptions. This argument, presumably frequently used during negotiations, seemed to pay because Lafarge succeeded in acquiring majority stake in the *Société des chaux et ciments de Lavazières et Lexos* against the *Ciments Français* interests.

This failure brings out that an agreement could sometimes represent an obstacle for the firms' development in case of economic growth. As long as the French producers did believe in expansion perspectives, they found no interest in organizing production or price agreements at national scale and in the long term. Soon, the 1929 crisis deeply upset their strategy.

3. The 1929 crisis, a trigger for cartel. Successes and limitations.

The crisis impact on cement industry led cement producers to organize themselves in cartel for the first time during the 1930s. Nevertheless, the French cement cartel met a lot of obstacles on the eve of World War II.

The economic crisis and its impact on the global cement industry

In the early 1930s, when the global crisis reached the French economy, the cement industry was still an unorganized market. For the first time, the companies' difficulties went far beyond those felt at the time of the Great Depression. This was not a production crisis due to the French market economic cycles but a global crisis which trigger was closely related to financial factors after the collapse of the New York Stock Exchange⁵⁴.

Because of the delay characteristic of the building material market, the effect of the crisis, also seen in France since 1931, are just felt like a shadow in the early 1930's.⁵⁵ However, the overall slowdown in the building and public work sector⁵⁶ led a significant demand decrease in the years 1932-1933 and caused a recession in the cement industry. The huge expansion and modernization of the 1920s confronted the producers to an under-utilization of their production capacity and their bad results could no longer amortize them. This overproduction affected particularly the northern regions of France, subjected to the Belgian producers' competition. The consequence was a significant acceleration of the price's fall, which left a very little margin for profit, depreciation or even overhead costs for most companies. This situation got worse as the days go by. The treasury's decrease of a large number of companies and their increased competition in a disorganized market made their sale at any price more urgent and necessary. As often in a disorganized oligopolistic market, the first response to a crisis situation was the dumping temptation, a strategy that may be a good opportunity to eliminate its weakest competitors as soon as the depression is moderate, as in 1880s. In the early 1930s, every company had to face overproduction and fixed individual strategies designed in micro-economic terms to find a remedy to this situation. But, in opposition with the ideas of Adam Smith⁵⁷, the general interest was not always the sum of individual interests. Indeed, to be competitive and sell their surplus production, the firms artificially tended to lower their products price. This strategy paid little and was harmful in the long term because, in the cement sector, demand is inelastic to price⁵⁸ but also because the prices' fall affected finally the entire industry and induced a general profit diminution hanging back on the performance of each unit⁵⁹.

Because of their significant upgrades and their new plants, some large companies such as *Lafarge*, *Poliet et Chausson* and *Ciments Français*, managed to reduce their costs and to maintain a margin despite the prices' reduction. They did not fall immediately in the spiral of dumping and stayed competitive without being forced as some of their competitors to sell at loss. This strategy, requiring significant financial reserves, was possible at first, but the market degradation continued to affect the prices sale as evidenced by the halving of the price of a ton of artificial cement between 1932 and 1934⁶⁰. Facing this situation, large companies

began to encounter the same problems as its competitors. As there is no regulatory authority, they also planed dumping⁶¹. So, the first period of the 1930s depression led for a time to a fiercer competition. After seeing their struggle's failures, the producers decided to revive their past agreements, often, these agreements were closer than before because of the reduced number of competitors. In the 1930s, the cartel becomes the ultimate solution against crisis.

The cartel, an ultimate solution against crisis.

According to the president of the *Riverside Cement Company*, John Treanor:

“Our industry can not support in any way free competition, we must systematically restrain competition or fail”⁶²

That was indeed the French cement producers' conclusion at the end of 1933. Given the magnitude of the crisis in the sector, the agreement appeared as the only way to fight against the competition's danger of a disorganized market. The agreement is not a new phenomenon in the cement industry. Local counters and agreements were already established before but, for the first time, producers were considering a more solid agreement at national scale. This organization project go beyond simple producers agreements. Inspired by the *Comité des Forges*⁶³, for the steel industry, the firms wanted to develop a real cartel. It would be an institution regulating the activity and competition within the cement sector, promoting its development and defending its interests with the government. To carry out this project, the three leaders of the cement industry had to find a common ground, which had not been easy in the previous years.

Constituting such a large cartel is a laborious process. During the discussions, every firm tries to get a greater role in the agreement. This fact probably explains why, when the idea of a global cartel had already been debated since 1930 in the FCSFCCF⁶⁴ to fight against foreign competition and regulate the market, no action had been taken in 1932-1933, when the French cement market suffered the brunt of the crisis impact. The first step toward the establishment of a national cartel involves the reconstruction and the strengthening of the old regional counters, mostly developed in the 1920's and then felt into disuse. These counters were usually based on joint ventures. In the Southeast, a limited company, the Southeastern Association of artificial Cement called ASECA⁶⁵ was created in October 1932. In 1933, an agreement was also signed in the Southwest with the constitution of CIMSUDOUEST. Again, this group of French building materials companies is created to reach an agreement on sale in

the Southwest. However, the market concentration and the national importance taken by many companies quickly revealed the limits of a disparate set of regional agreements.

To be truly effective, the industry needs a central organization, capable of uniting various agreements. Taking CIMSUDOUEST as an example, other organizations were formed. This time, their goal was to serve at regional scale the national cement cartel set up in March 1934 for four years. This cartel brought together four regional groups from the East, Southeast, Southwest and Northwest of France and a group from Algeria in a federate Union with headquarters in Paris. This counters formed in Mai and July 1934 are the *Union des Groupements des fabricants de liants hydrauliques* (UG), the *Association Centre Nord-Ouest des ciments artificiels* (ACENO) and the *Association des Ciments Algériens* (CIMAL). They aimed mainly to the regulation of the most popular artificial products. Discussions are also undertaken in 1934 to find a similar agreement on the slag cement. In late February 1935, a slag cement counter is finally constituted. In a general way, the cartel constitution enabled a marked prices improvement as shown by the example of the Portland cement: its price per ton had fallen to 105 francs before the cartel creation and it recovered a price of 145 francs in April 1935 and even 180 francs in September 1935. This organization had no dissidents but the consumption fall increased during 1935 and made it more difficult for producers to respect their commitments.

After its first successes, the factories committed in the ASECA tried to extend their agreements to the natural lime and cement factories, but as explained by the leaders of Lafarge, the discussions promised to be long and difficult because of the outbreak and the nature of the manufacturers⁶⁶. Lafarge had a major role in the lime cartel constitution. The aim of Lafarge was to fight against the dumping strategy of its competitors, a vicious circle in which they refused to enter⁶⁷. The *Union Rhodanienne des Chaux* (URC) with headquarters in Lyon appeared in 1934. This new organization had to fix sales quota for its members according to their past sales and to establish mercurial prices for all members. The lime and cement producers of the Southeast, including Lafarge and Vicat, essentially composed this company. This time, this group purpose seemed to go beyond economic and financial interests⁶⁸. The URC had also commercial and scientific goals as shown by its studies on the natural lime and cement industry. But some dissent provoked a disruption on the market by the prices' fall and caused the URC dissolution in September 1934. This fact highlights the weakness of any agreement facing dissent. Thus, in October 1934, the URC is recreated on a more modest basis. Their members were waiting for the creation of a similar organization to that developed for artificial cements at national scale.

The cement cartel takes an international dimension in 1936. At this time, an international counter which aimed to bring together all cement producers is constituted in Malmö, Sweden, on the initiative of Belgian producers: the *Intercement*⁶⁹. This organization managed to quickly gather Scandinavian, French, German, Dutch, Belgian and Yugoslav exporters and to control the international cement trade. In 1938, the process of cartel concentration is strengthened and extended. Slag cement and portland counters are renewed and negotiations are underway regarding the achievement of an international conference for the cement exportation.

The obstacles to cartel

In the 1930s, the cartellisation of cement industries had to overcome a few obstacles. The economic crisis encouraged the foreign concurrency against which the national cartels seemed powerless. Besides, the multiplicity of agreements regarding the Portland cement, slag cement or lime wore the managers out in rough and unproductive negotiations. Also, the agreements got progressively to the conclusion that they could not work without a central organism in charge of the national production regulation, a pressure group and the state's support.

The foreign competitors kept away or at least within reasonable bounds during the first period of fierce competition began to be more aggressive since the signature of the first agreements. Taking advantage of the prices' modest increasing due to the constitution of the cartel, they flood the market by proposing the most competitive price. The FCFCCF, legal mouthpiece of the cartel interests, wants to obtain from the government a resetting-up of tariff protectionism and a quota for the foreign products especially those coming from Belgium and Luxembourg⁷⁰. Considering that the situation did not only concern the metropolitan market but also touched the colonial markets, the leaders firms like Lafarge or Poliet felt doubly threatened. This awareness of the cartel's helplessness and the incapacity of industries to fight alone against the crisis drove the cement industries behind the FCSFCCF to make pressure on the public authorities in order to restrain foreign production on the french territories. The process finally led to the decree of April 14th 1935 establishing a quota for the entries of foreign cements on the metropolitan and colonial market⁷¹.

The lime and cement cartel felt quickly the need to set up a more centralized organism of management that could be able to take quick decisions like some foreign competitors already did since many year as well as the british *Associated Portland Cement*, created in

1900. This function is assigned in November 1934 to the *Commission Financière des Comptoirs*⁷². The presidency of the central board unanimously went to Jean de Waubert de Genlis. During the first reunion in December 21th 1934, the emphasis was put on the crucial confidentiality bound to this commission essential purpose and composition⁷³. The purpose of this commission was to examine the different strategies that could help to streamline the cement market, for example caring up some firms' reorganization or buying production quantum back. There were two different ways to handle it: firstly, directly contacting the firms in difficulties to urge them to close one factory or to obtain a quantum cession or secondly, waiting and seeing what the others French or foreign firms, interested for financial reasons in the same kind of firms, were going to do, and if they reached a compromise then establish a contact and maybe a proposal. It seemed that this second strategy was not only the most followed but also and above all the one who gave the more pleasant results⁷⁴.

In 1936, because of the extent of union activities, the commission turned into a holding company. From 1937, the expenses had to be shared between the different unions on a prorata based on the true references of anterior buyback tonnages or on an estimate of the not yet product tonnages. This distribution planed between April 1st 1934 and March 31th 1938, was interesting because it highlighted the leader firms in every union. Within the ACENO for example, the biggest investors are by far *Poliet et Chausson* with 24 % of the capital, followed by other sensibly equivalent firms like *Ciments Français*, *Ciment Lafarge*, *Société Lambert et Frères*, *Ciments d'Origny* and the *Ciments La Loïsne*. The ASECA was clearly dominated by *Lafarge* which owns 34 % of the interests and which also shares at 22 % the interests of CIMSUDOUEST with its competitors *Poliet et Chausson* and *Ciments Français*. Finally, *Lafarge* and the *Société Villeneuse* shared the control on the CIMAL with each one 25 % of the investments.

This even though hypothetical distribution of the Holding society stocks, at least helped to reveal the amount of the investments and the control that each oligopoly member exercised on the different union and thus on the cartel. Even if, regarding the mother-companies, *Poliet* would remain the major shareholder of the holding with 18 % of the investments, against 13% for *Lafarge* and 12,7 % for the *Ciments Français*. On the other hand, considering the funded companies, *Lafarge* comes in the lead with an indirect control of more than 20 % of the capital. But the managers of *Lafarge* considered that this solution would not be able to guarantee proportional rights and incomes to the members of the union in accordance with their shares in every business. Instead, different share's class with distinct rights on the adopted business should be created, but this way of proceeding precisely appeared to be in

contradiction with the spirit supposed to motivate their accession. That's what finally encouraged the members of the commission to put in 1937 the *Société de gérance industrielle et commerciale* in charge of that mission⁷⁵.

Certainly, despite a few misdemeanors, the posterity of the *Commission Financière des Comptoirs*, which efficiency had been proved, exceeded the simple context of the crisis for which she was originally conceived as an answer. Far from disappearing, she gave on the contrary a perfect framework for the setting-up of interventionist economical principles during the occupation⁷⁶.

Conclusion

The prosperity of the 1920's reinforced the cement oligopoly. The offensive agreements reached by producers allowed them to continue a merger and acquisition policy and in that way to share the market. But the context of economic growth also encouraged individual expansion strategies. The producers perceived the construction of a national organization as a strain. Because of that situation, the crisis led them at first to fight each other and to tire out in a useless dumping policy. After they finally constituted regional unions, the cement producers went further by using the Trade Union Federation of Chambers of Lime and Cement Manufacturers (FCSFCCF) as a political pressure organism to the state and created a central control institution of regional unions. This institution, the *Commission Financière des Ciments*, must be considered as the starting point of an official national cartel. The economic recession of the 1930's so progressively led to the constitution of a national cartel in the cement industry. This cartel paved the way to the setting up of economic organisation committees under the Vichy regime by the work charter of October 4th 1941. This state's control established during the German occupation remained after the war as a price control institution. A real internationalisation of the cement industry happened after the war⁷⁷. Those who managed the most successfully their internationalization were mostly European firms like *Holderbank*, *Lafarge* or *Blue Circle*. We can explain these successes partly by the cartel organization experienced by the European cement industry before the war. The oligopolistic structure of the french cement industry came out reinforced by the economic growth of the after-war period in spite of the new European laws against cartels.

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- ³⁹ Crédit Lyonnais Archives, DEEF 38767/1, AGO du 12 avril 1933, rapport annuel
- ⁴⁰ Ibidem
- ⁴¹ Ibid.
- ⁴² Saint Gobain Archives SGDB 00113 34. Procès verbaux des Conseils d'administrations de l'entreprise Poliet et Chausson de 1901 à 1942
- ⁴³ *Le Consortium du Nord* is also a holding created by *Poliet et Chausson* during the 1920s.
- ⁴⁴ BNP Paribas Archives 1/DFOM-221/113 ET 0942(ET 2505) Assemblée générale ordinaire du 28 avril 1930 concernant l'exercice 1928-1929 de La Financière des Ciments.
- ⁴⁵ This is the case in 1930 for *Ciments d'Arleux*, *Ciments de Beaumont*, the *Société La Boulonnaise*, the *Établissements Douez Frères* and the *Cimenterie de la Grande Paroisse*.
- ⁴⁶ Niel-On-Rupell is a holding of CBR (Ciments et Briquetteries Réunies) which became Heidelberg Cement.
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- ⁵³ Ibidem
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- ⁵⁵ Berstein S., « Une crise tardive », *La France des années 30*, Armand Colin, 2003, p. 26
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- ⁵⁸ Dumez H., Jeunemaître A., *op. cit.*
- ⁵⁹ In the same way that Fordism has shown the existence of a "virtuous circle of growth", one can speak of a "vicious cycle of crisis," including overproduction: excess production → prices fall → benefits diminution → capital and labor inputs reduction → lower wages and investment, layoffs → demand capacity contraction → excess production etc.
- ⁶⁰ Reynaud J., *op.cit.*
- ⁶¹ Lafarge Archives, B4-2, Assemblée générales ordinaires du 28 avril 1934, Rapport annuel.
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