

## **VALUE CREATION EMERGENCE: A CASE STUDY**

*M. Beatriz Mota Aragón*

*Luis A. Luján Salazar*

In a basic book of finance we can find that “The purpose of the firm is to create value... The firm must generate more cash flow than it uses. The value is reflected in the framework of the simple balance-sheet model of the firm.” But how this numbers end up in the balance, are those numbers the final the best descriptor of the firm performance; the bottom question is how a firm can create value. In this work, different concepts of value are presented. This work argues that value emerges from the interaction of resources, and then the concept of emergence is presented that lead to a research question. Based on the experience of Cemex the results are shown and discussed. In this work is argued that once the “right” formula is developed, economizing is the best strategy.

### **VALUE CREATION IS A MAXIM IN FINANCE, BUT HOW THE VALUE IS GENERATED?**

Adam Smith was one of the earliest classical theorists in the study of value. He explained that the value of any commodity equals the quantity of labor which enables him to purchase said commodity (Smith, 1776). His theory of utility was focused in total utility instead of marginal utility. In the actualization of the theory of value, William Jevons (1835-1882) and Carl Meneger (1840-1921) claimed that “value depends entirely on utility.” Meneger explained that the value of a

diamond is greater than that of the water because of its marginal utility, not because of its total utility. Later David Ricardo (1772-1823) saw an absolute value that was the function of the quantity of labor required. Ricardo explained that by “[p]ossessing utility, commodities derive their exchangeable value from two sources: from their scarcity, and from the quantity of labor required to obtain them” (Ricardo, 1817: 18). One of the later upgrades on the theory of value came from Alfred Marshall (1824-1924) and Leon Walras (1834-1910). They found that there is a demand and supply that determine the value. Walras saw a *complex interrelated* world where, “*In general equilibrium everything depends upon everything else*” (cited in Fogarty, 2002; his italics).

In RBV there are several conceptions of value. One is Barney’s (1986a) definition of value as being related to the value of the assets. An economic value was reviewed as having no relationship with its contingent value, due to its relationship with other resources. That is why the only way to obtain valuable resources is when they are acquired at under price, that is, “to anticipate and exploit competitive imperfection in the strategic factor markets” -this could be the use of private information- “value created is a function of private information about resources available to purchase in the market.” (Barney, 1986a:1232). As Barney (1986) express; “Firms seeking to obtain above normal returns from implementing product market strategies must have consistently more accurate expectations about the future value of those strategies when acquiring the resources necessary to implement them” (p. 1239). In this way, value can be endogenous in RBV (Makadok, 2001). According to Barney (2001) the only way to obtain a competitive advantage is when “[i]f only one competing firm possesses a particular valuable resource” (p. 45).

In the actualization of the theory we can find the stream of Transaction Cost Theory and one of the most representative authors: Professor Williamson. Williamson (1991) discussed about the role of strategizing and economizing. On one hand he argues that the role of strategizing is based on a power perspective, while economizing is based on an efficiency perspective, and “[i]n the long run, the best strategy is to organize and operate efficiently” (p.75). Williamson (1991) claims that both view can be important, but economizing has not received enough attention, “although the need to get priorities straight is unarguably important, first-order economizing- effective adaptation and the elimination of waste-has been neglected” (Williamson, 1991:77).

### ***Summing up, and research question***

Value creation has been the corner stone in finance, although its importance, little is explained of how this value can be created, developed, captured or about its emergence. At the end the numbers in the balance-sheet should come from the actions of the firm. This work argues that what it matter are the actions and what the firm does, and we might have a better view of the outcome of the firm, then the research question is:

*If we look the actions of the firm, we might have a better predictor of the firm' performance, than if we take just the numbers in the balance-sheet.*

## **METHOD**

### ***Design***

In this chapter the method is presented. A reason to choose case study methodology is the lack of prior theorization, then an inductive approach is appropriate for developing theory (Eisenhardt, 1989a). This work enhances and redefines some important aspects in a single holistic view. In this inductive research, we will review the construction validity, reliability and the internal and external validity of the proposed methodology.

### ***Case Study Methodology***

The underlying logic of the present work is grounded theory building. It is select grounded theory building. Grounded theory building can offer a unique opportunity to create a novel and more accurate insight into the phenomenon under study. (Glaser and Strauss, 1967). Originally grounded theory was introduced by Glaser and Strauss in their book *The Discovery of Grounded Theory* published in 1967. In their book Glaser and Strauss present a grounded rationality, where theory emerges from the interplay of data collection during the research project. According with Strauss and Corbin, (1994) grounded theory “is a *general methodology* for developing theory that is grounded in data systematically gathered and analyzed. Theory evolves during actual research, and it does this through continuous interplay between analysis and data collection” (p. 273, their italics). Following the work

of Strauss and Corbin (1994) the relationship of theory to reality and truth is based on a pragmatist position, where the theory “is not the formulation of some discovered aspect of a preexisting reality ‘out there’” (p. 279). Theory is defined as a “consistent relationship proposed among concepts and sets of concepts” (Strauss and Corbin, 1994:278). Theory as interpretation of the reality is fallible and temporally limited (Strauss and Corbin, 1994).

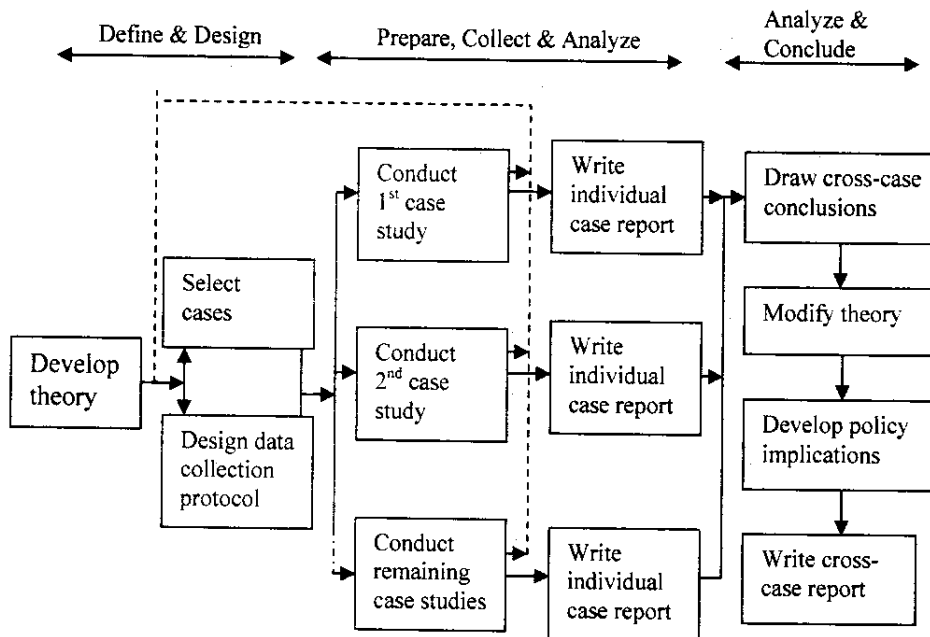
Case study methodology can fit the opportunities to develop grounded actual theory: “the distinguishing characteristic of the case study is that it attempts to examine: (a) a contemporary phenomenon in its real-life context, especially when (b) *the boundaries between the phenomenon and context are not clearly evident.*” (Yin, 1981:59, my italics). Since one of the most important features in this work is to open the boundaries of the firm and relate internal and external resources case study methodology specially fulfill this feature. Another advantage of using case study methodology is the possibility to employ more than one unit of analysis “the same case study may involve more than one unit of analysis” (Yin, 2003:42). In general, qualitative design such a case study design is holistic “[i]t looks at the larger picture, the whole picture and begins with a search for understanding of the whole.” Janesick (1994:212). But for this work one of the most important characteristics of qualitative is the possibility to “looks at relationships within a system” Janesick (1994:212). Another important characteristics are face-to-face, is focused in understanding and not necessarily to make predictions, research can be in situ, the employ of a model to explain, it requires ongoing analyses of the data. Due to its lack of structure, qualitative research can be mixed with other kinds of studies, one of the most relevant examples is case study methodology (Gummesson, 1991).

### ***Research Design***

One of the most important applications of case study is “to *explain* the presumed causal links in real-life interventions that are too complex for a survey or experimental strategies” (Yin, 2003:15, his italics). In this method, cases are treated as a series of independent experiments. In an extended line, “what the case study does represent is a research strategy, to be likened to an experiment, a history, or a simulation” (Yin, 1981:59). This is an explanatory research. How and why questions “are more explanatory and likely to lead to the use of case studies, histories, and experiments as the preferred research strategies” (Yin, 1981:59).

There are some differences between a case study method and other alternatives. Experiments can be one. The main critic, from the point of view of case study is that experiments “deliberately divorces a phenomenon from its context” (Yin, 2003:13). And in relation of the method used by histories; “histories are the preferred strategy when there is virtually no access or control. . . Histories can, of course, be done about contemporary events. In this situation, the strategy begins to overlap with that of the case study” (Yin, 2003:7).

Case study offers the advantage, in contrast with the traditional historian, which is direct observation and interviews can be part of the repertory. In this work, we focus on both contemporaneous events as well as past events; such as firms or projects that do not exist any more. According to Yin (2003) the case study design must have five components: the research question(s), its propositions (if any), its unit(s) of analysis, a determination of how the data are linked to the propositions and criteria to interpret the findings.



**Figure 1 Case Study Method**

Source: Yin, 2003:50

The case study methodology has been applied in this work. The selection and justification of cases is presented as well as the data collection protocol. According with the case study protocol cases report were developed and presented next. Based on the emergent insights of the cross-case analysis will be reported and their implications.

### ***Selecting Cases***

Cases are selected for theoretical reasons instead of statistical reasons (Glaser and Strauss, 1967). According with Yin (2003) there are several rationalities to choose one case, the rationale that fits this work is a *unique case*. A unique case it is a case that is “so rare that any single case is worth documenting and analyzing” (Yin, 2003: 40). In this work Cemex S.A. de C.V. (Cemex) is selected. Cemex (Cementos Mexicanos SA de CV) was founded in 1906 as Cementos Hidalgo, Formally Cemex was the result of a merge between Cementos Hidalgo and Cementos Monterres. Cemex is the third largest cement company in the world; at the end of 1999 they produced 65.4 millions tons. Cemex’s headquarter is in Monterrey NL Mexico, and it has operations in North, Central and South America, Europe, the Caribbean, Asia and Africa.

### ***Data Collection***

In this case, information on the background of the firm and its environment will be gathered and then processed and analyzed. Environmental information and facts will be utilized. It can be possible that more than one process of the emergence of the value may appear, I will explore which was the relationship among those resources, and how that relationship was a source of emergence of the actions of the firm.

It is possible that during the process of making sense of the information, contradictory findings may appear. As a grounded theory, it is quite common for researchers to find that after running the analysis that more detailed questions need to be asked. In order to solve this situation, a second, or even a third round of gathering data and analysis will be conducted in order to answer the emergent questions.

### ***Data Analysis***

An important feature of the data analysis in a grounded research, it is that there is a constant going back and forward in data analysis and data collection. It is an iterative process where an emergent frame is compared systematically with the data found in each case (Eisenhardt, 1989a). Glaser and Strauss (1967) ask for a joint data collection and analysis, in this work data collection and data analysis are merged in a continuum. This joint process allows moving in a spiral from data collection to data analysis. In this process, an emergent theory is founded and redefined as the model is finalized. In this sense, the value drivers from an initial data influence the subsequent data collection and data analysis.

According with Huberman and Miles (1994) data analysis contains three subprocesses. Those subprocesses are: data reduction, data display and conclusion drawing/verification. All these processes are linked, and they take place “before data collection, during study design and planning; during data collection... and after data collection” (Huberman and Miles, 1994:429).

Emergence of variables and relationships and display. Within-case analysis grips two basic questions: “*what* is going on and how things are proceeding call for a reasonable accounting of the phenomena observed.” (Huberman and Miles, 1994: 432, their italics). Display aids to obtain a valid analysis. The ‘full’ data set can be at hand when it is displayed, in statistics is well employed the display of the data in order to asses what further analysis, comparison among data sets, and highlights the conclusions. Analysis of the data is sequential and interactive, where there is a constant interplay between display and analysis of the text, from develop an explanation, integration, discover relations to find pattern summarized in a conclusion (Huberman and Miles, 1994). In this process of analysis, the information is categorized in themes where several parts of the information are related to a theoretical proposition. In this iterative process of analysis and collection, emergent variables will start to appear.

There is a point were the iteration process stops, and that is where a theoretical saturation is reached. Theoretical saturation is reached when the incremental learning is minimal (Glaser and Strauss, 1967). Since there is not clear cut point, where theoretical saturation is achieved, practical considerations (resources constrains) such as time and money dictate when the case collection and analysis ends (Eisenhardt, 1989a). Another case of saturation is when the “researcher is viewed as part of the setting.” (Morse, 1994:231). Conclusions

drawing and verification “involve the researcher in interpretation: drawing meaning from displayed data” (Huberman and Miles, 1994:429). There are some techniques that allow the emergence of conclusions such as comparison – contrast, emergence of patterns and themes, clustering, metaphors and triangulation for confirmation. (Miles and Huberman, 1994). To avoid possible bias in this study and in order to improve the quality of the construct, I will use multiple sources of evidence.

## CASE REPORT AND ANALYSIS

Two stages and two parts are reported. In the first part, Cemex had to increase its capacity to have the possibility to access at the capital market, and doing so, be prepared to expand its know how to international ventures. Not only Cemex had to be big enough, but also to have the right configuration embedded in its configuration that was a necessary condition to acquire foreign firm. Once that operation takes place, Cemex improve their operation, meaning that Cemex used economizing as the right strategy.

### *Cemex*

*Cemex First Part.* In the first part of the history of Cemex, it is possible to distinguish three phases. The first phase ended in 1965 when Monterrey market was consolidated as well as its solid financial structure. The second phase entails an expansion in the region. In 1966, it was inaugurated a factory in Torreón Coahuila (north-east of Mexico) and other in 1967 in Ciudad Valles, San Luis Potosi (both about 200 miles from Monterrey). In this year, Cemex acquired Cementos Maya in Mérida. This was first incursion in the South of Mexico. The third phase started in the 70's decade, and it was to expand its presence nationwide and the 80's was the consolidation of Cemex in its market.

1985 was a year of change in the upper echelons of the company. Lorenzo Zambrano took over as a CEO and with him other executives. Among the main changes was to disinvest of non cement assets. In 1985, following Boston Consulting Group, Cemex decided to sell not related business, such as mining, petrochemical and tourism industries. This year, Lorenzo Zambrano asked their top executives to build the best cement company in the world. In this year, they



were exporting 12 million of tons of cement to the U.S. and Zambrano expressed that if Canada was the number one exporter of cement to the US, Mexico should be at least the second. Derived of their investments, Cemex had a modern and efficient equipment. 70% of the kilns was less than 10 years old, 90% of the kilns had a pre-heater and 30% of the total had also a pre-calcinatory. At this time the debt-assets ratio was about ten to one.

In order to expand Cemex exportation some guidelines were set. It was imperative to develop a distribution network to create an international brand and to improve quality policies as well as to set a competitive pricing coupled with the development of port sea. In 1986, two new firms were established in the U.S.: Southwestern Sunbelt Cement with subsidiaries in California, Arizona and Nuevo Mexico. The other firm was Texas Sunbelt Cement. These new firms were funded with a local partnership of 50%. Those firms bought clinker from Mexico and the firm was in charge of the milling and distribution. Because of this effort, in 1986, Cemex increased their exportations in 51% to reach 854 thousand tons. In 1987 the increase was even higher to reach 2.8 million tons, 1.4 from Cemex and the other 1.4 from Anahuac group. With the acquisition of Cementos Tolteca exportations grew to 3.6 million of tons, 88% of Mexico cement exportation and 22% of Cemex sales.

*Cementos Anáhuac acquisition.* Cementos Anáhuac had a 13% of the Mexican market share in 1987 and two plants one in Barrientos (Edo. of Mexico) and another in Tamuin in San Luis Potosi. Those plants had the first and second generation of kilns. One main feature was that Cementos Anáhuac had operations in the seaport in El Prieto, Veracruz and in West Palm Beach in Florida U.S. This operation included a small fleet of ships. Since 1981 this firm had been exporting to the U.S. Between 1983 to 1989 Cementos Anáhuac exported between 65% to 90% of their production, this level of exportation constituted 32% of the Mexico total cement exportation. However, Cementos Anáhuac had been losing money while Barrientos Plant got caught in the expansion of Mexico City and there was little room for improvements. On the other hand, the Tamuin plant had good results, but their level of debt-assets was high as it was about of one to three.

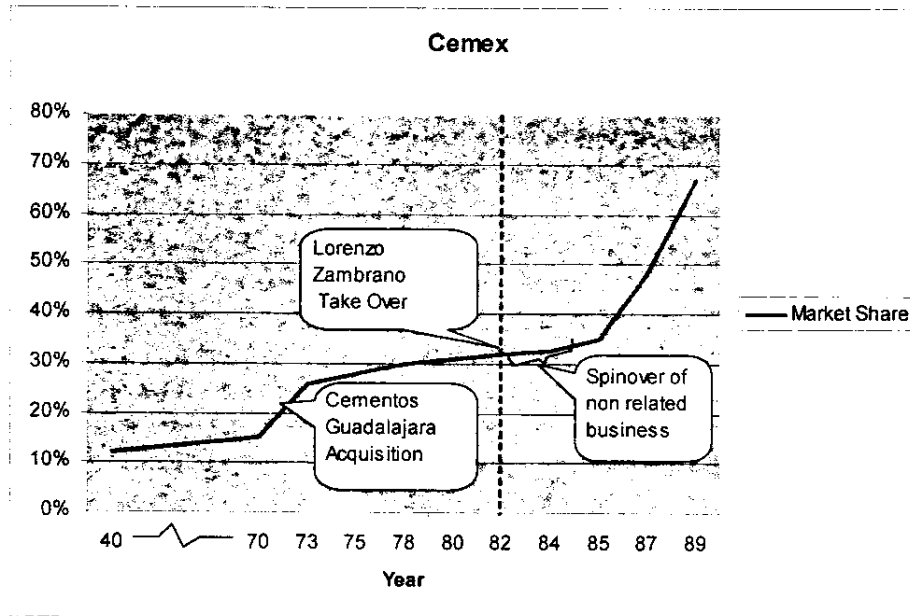
In 1987, Cemex acquired Cementos Anáhuac and gained access to Mexico's central market and at the same time bolstered their exporting capabilities. The acquisition of Cementos Anáhuac was carried out by Cementos Maya, subsidiary of Cemex, with a long term credit for \$155 million dollars. In Europe, the acquisition of cement companies was paid about 80 to 130 dollars per ton., in

the case of the acquisition Cementos Anáhuac \$35 dollar was paid. With this acquisition Cemex had increased its capacity to 15.2 million of tons. That is, 48% of their domestic market<sup>1</sup> and exported 3.1 million of tons, 69% of the Mexico cement exportation and 27% of Cemex sales.

At the end of 1988, Cemex started to enhance its presence in the U.S. through acquisitions in the sunbelt, the most growing area in the U.S., that at the same time most of these cities border with Mexico. Eighteen centers of distribution were added to U.S. Cemex's assets in California, Arizona, Nuevo Mexico, Texas, Minnesota, Kentucky and Florida. In Texas among the new acquisitions was the Gulf Coast Portland Cement Co. that included a port facilities and milling of 1 million of tons. Another facility that was integrated was Houston Shell and Concrete with twenty-two plants and a transportation firm: Aggregate Transportation. In 1990, in order to have an access in the Pacific, Cemex acquired Pacific Coast Cement Corp. in Los Angeles, CA. That would be just the beginning, with the acquisition of Cementos Tolteca, Cemex would enhance and make stronger its position in the U.S. market.

*Cementos Tolteca acquisition.* Zambrano's strategy main directive was to be a larger player in order to compete with international players. In 1989, Cemex acquired their biggest competitor in the national market: Cementos Tolteca. With an investment of \$663 million U.S. dollars and with a combined capacity of 70% of the total Mexican production, (see next figure). Cemex became one of the ten largest cement companies in the world. The main international competitors were Holderbank, Lafarge, Blue Circle, Heildelberger and Ciments Francais. Cementos Tolteca had a capacity of 6.7 millions of tons. In the 70's Cementos Tolteca had a major presence in the Mexico's cement market. They were the leaders, and one of the oldest brands. Its parent company Blue Circle considered Cementos Tolteca one of their most valuable assets. During 1982, Cementos Tolteca saw plumb their sales to the half, and worked with red numbers during

<sup>1</sup> At the same time Cemex invested in their Ciudad Juarez plant, its capacity grew more than 1 million of tons. Other Cemex plants showed signs of obsolescence, such as Marmol in Sinaloa and Atoyac plant in Puebla. Mixcoac plant in Mexico city had old technology and was closed in 1983. Seven plants remain Atotonilco, Zapotilic, Tula, El Fuerte and Cementos Portland Nacional in Hermosillo, all of them were furnished with modern technology. Cemex was looking beyond the boundaries of Mexico. In 1988, Cemex developed alliances with Lehigh-White, Heidelberg Zement of Germany and Aalborg Cement of Dinamarca with this alliance Cemex become the number one distributor and producer of white cement.



**Figure 2.** *Cemex increase in their domestic market share.*  
Source: Lujan Salazar (2006).

1983. In 1984 had a profit of 8% and in 1988 showed an increase to 13% in profit while Cemex had levels of 21% to 30% respectively. The main reason of sale was not the level of profit, but the need of fresh resources for Blue Circle. In 1986, Blue Circle began a severe restructuring that ended up with several disinvestments across the entire world including Brazil, Australia, New Zealand, and in Mexico Cementos Tolteca.

With the acquisition of Cementos Tolteca, Cemex grew a 44%. They had to pay \$95 dollars per ton, a higher price that the acquisition of Cementos Anáhuac. Among the reasons that justified such a premium was the network of concrete factories: Carsa, Preconcreto and Concretos Guadalajara with a production of 2.8 million of tons. This acquisition worked as an entry barrier for foreigner cement producers. Cemex increased their presence in the Pacific with the inclusion of a maritime installation. At that time, Cemex had maritime installations in both sides of Mexico, which was an advantage when it is considered that sea transport is one of the cheapest ways of transportation. Even more, Cementos Anáhuac had

some assets abroad, that included some plants in California and Arizona in the US. The combined border production was 21.9 million of tons, the utilized capacity was 16.3 millions of which 4.2 million of tons were exported.

This acquisition was one of the largest ever seen in Mexico. Cemex had to deploy a variety of sources to gather the needed financial resources for the acquisition. Part of the needed capita came from the disinvestment of Cemex's non-related assets; another part came from short term debt, and loans from foreign banks. After obtaining its register from the U.S. Securities and Exchange Commission (SEC), Cemex emitted 615 millions in public stock. In 1989, Cemex<sup>2</sup> had its first emission in FRNs for 150 million, the first of a Mexican company<sup>2</sup>.

In that year Cemex faced another sue for dumping in the U.S. A committee of producer of cement Portland from Arizona, New Mexico, Texas and Florida and two unions filed the demand. A ton of cement in Arizona or California was sold in US\$58, Cemex had the same price. The International Trade Commission (ITC) deducted the cost of transportation (US\$15) and declared that a ton of cement must be sold in US\$43 while in Mexico the price was US\$46. ITC determined a dumping margin of 57%, and as a penalty a duty of 58.38% was imposed.

Cemex asked for a reduction rate through a U.S. Court of International Trade. Cemex had to restructure its pricing and had a reduction of 31%. As a result of those penalties, Cemex stopped selling cement in Florida and attended the demand of higher priced markets such as California and Arizona. From 4 million tons that Cemex was exporting in 1989, next year their exportations plumbed to a less than 100 thousand tons. In 1991 Cemex's exportation ended up in 1.5 million tons, which was far too low in comparison with 1989 levels. Mexico traditionally, in the 80's, concentrated its exportation to the U.S.; as well as Cemex. At this time, there were two main reasons-drivers that guided Cemex strategy: First, the problem to export to just one country and second the consolidation of the cement world in a few firms. Under this scenario, Cemex decided to become a global player.

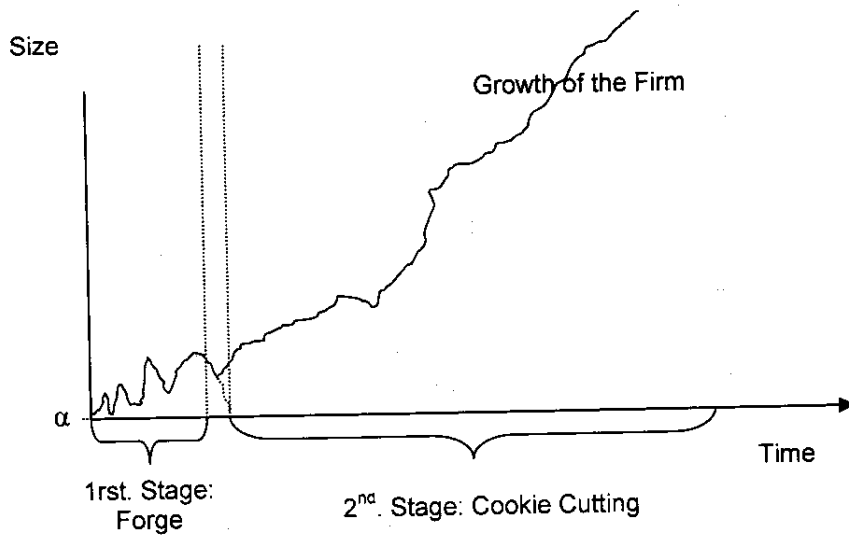
<sup>2</sup> Cementos Tolteca as well as Cementos Guadalajara were financially independent of Cemex. Cemex had a major participation in the stock of those firms, that last until 1995 were those firm were incorporated into the Cemex holder. From 1986 to 1990 had invested about \$2 thousand million dollars, and more investment was directed to the construction of new plants in Zacatecas, Mazatlan and Puerto Vallarta, Grupo Copsa was acquired. Several modernization resources were directed to upgrade the Yaqui, Monterrey, and Ensenada plans.

In the first stage, it looks that Cemex configuration should include the assets of their competitors. Cemex started slowly upgrading its technology as well as increasing its presence in the national market. It is possible that the first valuable configuration had emerged in the 70's, before Cemex had no major presence in Mexico: Cemex had 15.1% of the cement Mexican market share. The biggest player was Cementos Tolteca, a subsidiary of Blue Circle from England with four plants in the center and in the pacific with 25.8% of the market share. Next in importance was Cementos Anahuac, with two plants in the center and in the Gulf of Mexico with 15.7% of the market share. Following was Cemex and then Cooperativa Cruz Azul, with two plants in the center and the southeast and with 11.2% of the market share. Grupo Guadalajara had three plants in the Bajio and in the Pacific region with 10.2% of the market share. The north of the Pacific area was served by San Luis Mining Co. with three plants and 4.1% of the market share.

When in 1973 Cemex acquired Cementos Guadalajara, it increased its size and the market share close to the leader, Cementos Tolteca. Because of their size, Cemex had to access to the financial markets, but what was most important was that Cemex, because of past acquisitions, had the potential of keeping and acquiring more firms, even firms that in the whole were more than five times greater than Cemex.

Cemex could be seen as a mix of the stages. Their configuration is to some extent based on acquisition. In fact, that was their first variation, to get bigger. Under this scenario, a firm needs just to be a little bigger than the acquired firm, like a fish that eats a smaller fish, it could end up been the big player in a few rounds. Initial variations can have greater repercussions as time pass. After a detour to invest in non-related cement industry assets and their liquidation, Cemex acquired Cementos Anáhuac with a 13 % of the market share. They had to use financing, but they excelled their finance leverage when they acquired Cementos Tolteca. This gave them the first place in the Mexico cement industry with a 70 % of the market share.

Cemex was not a small firm when they decided to focus their business in the cement industry. Then it is possible to think that even a non-small firm can have changes, but it is possible that the Cemex change were more about cutting than changes in their organization, in their structure or in the way to conduct their business. Cemex did not change their cement business neither the non-related business, they sold them.



**Figure 3.** *Basic Patter: Chaotic and Cookie Cutting Stages*  
 Source: Lujan Salazar (2006)

Acquisitions brought their own emergent set of characteristics that could not be raised with a stand alone firm. Growing was important for Cemex, in this process Cemex gained control over their market, as well as scale economies to develop their own technology and knowledge that together could offer new options that themselves could not achieve, such as creation of technology, protection of their market (Southdown acquisition), and access to even higher and better conditions in financing. A business with a large cash flows due its privileged position in the home market were the key ingredients for the expansion of Cemex and prepared for acquire firms abroad.

Even though that most of the configuration could be imitable, there should exist some part of the configuration that is not possible to acquire or imitate some of them external stocks (latter is discussed some of these constraints in external stock and flows characteristics). Under those constraints followers may fail to recognize the importance of variations and adaptations that could forge and adequate configuration. For example, in Mexico, if a new firm that try to imitate Cemex, they might even have a better technology and even better processes, but Cemex still could control the 70% of the market, with all the implicit implications,

needles to say more research is required at this point, for future discussion on the forge stage see Lujan Salazar (2006).

### *Cemex, 2<sup>nd</sup>. Stage*

In 1991, Cemex's<sup>3</sup> equipment were aging, in a new program a *thousand million of US dollar was designated to upgrade Cemex's technology, and increase Cemex capacity to 8.8 million of tons*. Two new plans were scheduled for construction and an expansion in Huichapan plant. From 1992 to 1993 Atotonilco plant was expanded in 500 thousand tons, in Huichapan the increase was 2 million of tons. Tepeaca reached 3.2 million of tons and in Guadalajara 400 thousand tons along the opening of 19 new concrete plants. In 1993 Cemex acquired the historic Cementos Hidalgo that was expropriated to Cemex about six decades before. This plant had a capacity of 500 thousand tons and it was incorporated as Cementos del Noreste.

At the beginning of the decade Cemex placed a US\$425 million debt issue. It was the largest unsecured corporate financing in Latin America, since the Mexico's crisis in 1982. Cemex had a growth projection. In 1992 Cemex placed an offer of US\$125 millions in ADRs. The architect of this financial operation was CFO Gustavo Caballero. In this year Cemex acquired La Valenciana and Sansón<sup>4</sup> (La Auxiliar de la Construcción) in Spain. Cemex paid US\$1.25 billion dollars, for a 54% of La Valenciana. This price was 70% below the peak reached in 1990. However the cost per ton reached 160 US dollars. With this acquisition, Cemex had a 35 million tons capacity. Lorenzo Zambrano convinced the board in a six-hour weekend meeting. *The Cemex's criteria for acquisition were to*

<sup>3</sup> It is important to note that each acquisition or the development of Cemex and Southwest in each region entails a greater number in details that per se might justify a dissertation in each case. This work is focused on how value emerges from the interaction of resources, although some details could be interesting, they might obscure the main findings and objective of this work.

<sup>4</sup> Both firms were linked but they never could consolidate their operations. During the 80's under a Holding but the intent failed because of the high expectations of their stockholders. In the 90's another intent was made, this time ended up with a separation of two autonomous groups that managed isolated operations. This independence was in turn source of duplications and inefficiencies.

*focus on emergent markets or with high potential, firms that were undermanaged*, according with those criteria Spanish acquisition made sense.

In order to acquire Sansón is another story. Sansón had Banesto as a corporate parent. Banesto did not sell directly the share to Cemex. Banesto sold US\$600 million majority stake to Unifund. Unifund is a Middle Eastern investor in the cement industry. Once the deal with La Valenciana was closed, Cemex asked for a bridge loan to J.P. Morgan for US\$600 millions. With this loan Cemex acquired the Unifund' options. Cemex paid the loan trough divesting non cement assets from La Valenciana. Unifund gained the 15% of the new merged firm. Both firms La Valenciana and Sansón were merged in Cementos La Valenciana. The new consolidated firm La Valenciana was composed with 11 cement plants, 130 ready-mix facilities, and had distribution coverage over 70% of the Spanish territory and had 29% of the Spanish market.

Another kind of challenge was to integrate culturally both firms. This was the Cemex first international experience, that later would be used in other international acquisitions. It is possible that Cemex had failed to provide a clear communication with the capital market. Wall Street reacted negatively for this acquisition. Cemex ADRs lost 25% of their value within a month. Owners of ADRs thought that they had titles from a cement firm in a blooming Mexican construction market. Suddenly they found themselves in a depressed Spanish economy with poor equipped firms. Moody's investor service placed the Cemex senior debt rating in Ba-2 designation (a medium-high level risk rating) while the main competitor had A ratings. The reduction of ADRs value represent a setback, not only for the dilution of wealth per se, but because ADRs were used for acquisitions and employee compensations. Backed on J.P. Morgan, Cemex issued an equity buyback option rights (EBORs)<sup>5</sup>. In these options, Cemex offered to buy back stock at any time at a fixed price for five years. Between the time that the acquisition took place and the time that EBORs were emitted, Cemex stock had recovered more than half of their initial loss.

With the Spanish acquisition, Cemex grew their capacity to 44 millions of tons per year. With this operation Cemex became the 4<sup>th</sup> global player. To become a global player, (a relevant player) had advantages; the access to the European

<sup>5</sup> A firm can buy back part of their stock when a fair value is believed below. Unfortunately for Cemex Mexican law complicated this kind of operations and it was worst because Cemex did not have resources for a Buy Back operation.



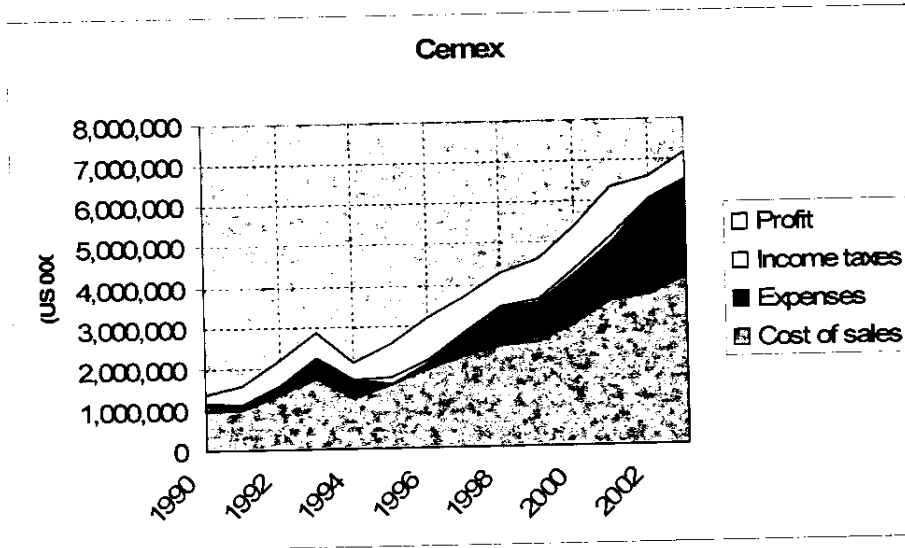
Market, but more important is the access to the Eurobond Market, which is the same market that their global competitors have access. Holderbank Financiere Glaris of Switzerland, Lafarge Coppée SA of France and Italcement from Italy.

1993 was a good year for Cemex, when sales increased by 29% to reach US\$2.2 billion while the net income jumped to 24% and to US\$548 millions. On 20 December 1994, the Mexican peso was devaluated in a 20%. Event though that Lorenzo Zambrano had foreseen a crisis, he never thought that it would be that hard. Mexican sales dropped a 29%, and Cemex shares plummeted from US\$9.40 in November 1993 to US\$3.33 in February 1994. At this time, Cemex had US\$3.2 billions of debt obligations.

In 1994, Cemex acquired 61% of Vencemos, the Venezuela's largest cement company. In addition to the leadership position in a high-growth market, Vencemos' operations in Venezuela's northern coast are ideally positioned for low-cost exports. Corporación Venezolana de Cementos (Vencemos), belong to the Grupo Mendoza<sup>6</sup> at that time. Grupo Mendoza was the main stockholder. With the change of government some serious issues were detected in the Mendoza's bank. In order to add capital, Grupo Mendoza had to ask for loans backed on Vencemos stock. Cemex had the opportunity of acquiring it within a week, otherwise the stock could be sold to the creditors. Lafarge had been negotiating with creditors in order to get the stock.

In 1994 Vencemos was one of the most important firms in Venezuela. They sold US\$350 millions, 75% of sales were concentrated in cement, and their assets were for US\$720 millions. Vencemos is one of the three most traded stock in their home market with an estimated value of US\$600 millions. 1994 was also a busy year for Cemex they acquired several assets in the U.S., C. L. Pharris, in the south of California, and the first completely owned factory of cement the Balcones plant in New Braunfels, Texas with a capacity of 900 thousand tons per year. This plant was one of the finest plants in the U.S. in the 80's. Cemex had become a fully producer in the U.S., under the name of Sunbelt Corp. Cemex grouped its

<sup>6</sup> Grupo Mendoza had participation in the industrial sector as well as in the financial sector. In the Industrial sector they produce paper in Venepal, paint in Corporacion Grupo Quimico, cement in Vencemos, food for aviculture in Protinal and metal-mechanical in Metalmen. In the financial sector they had Banco La Guaira. Vencemos was divided in several departments: Cement Vencemos in the plants Pertigalete, Lara, Mara, Guayana and J/V Societe des Ciments. Vencemos also had departments dedicated to produce concrete, trading, transport, mining, gypsum, ceramic and mechanical maintenance.

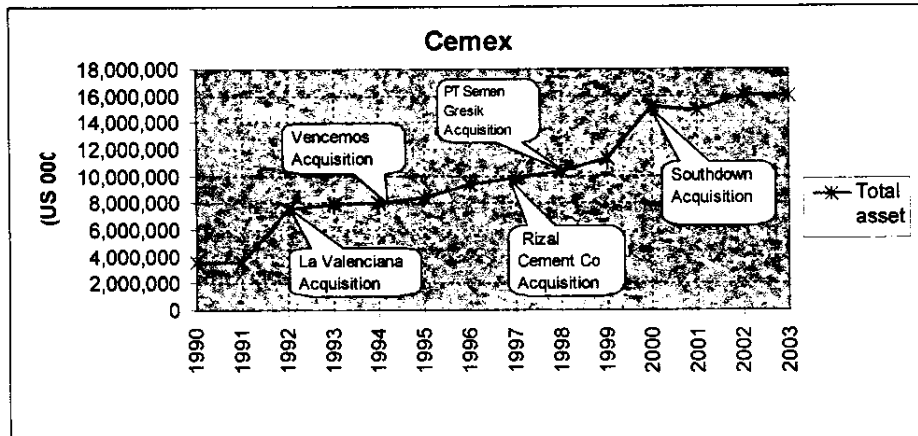


**Figure 4. Cemex's Growth**  
Source: Lujan Salazar (2006)

facilities, production of cement and concrete and its distribution. In Central America, Cemex<sup>7</sup> entered Panama with the acquisition of Cemento Bayano, and acquired Cementos Nacionales in the Dominican Republic.

In 1996, Cemex acquired a majority participation in Colombia's Cementos Diamante and Samper, becoming the world's third-largest cement company. In 1997, Cemex entered the Asian market. Cemex acquired a 30% stake in the Philippines' Rizal Cement Co. and in 1998 Cemex expanded its Southeast Asian operations acquiring PT Semen Gresik the largest cement producer, in Indonesia. And in 2000 Southdown in the U.S.

<sup>7</sup> In 1995 Cemex finished one of the most efficient plants in the world, Tepeaca plant with a capacity of 6.6 million of tons had only 220 employees, averaging 14.5 thousand tons per employee, four times higher than the average plant in Cemex. At the end of 1995, Cemex was producing 30.6 million of tons and taking 68% of the Mexican market.



**Figure 5. Cemex's Acquisitions**  
 Source: Lujan Salazar (2006)

## DISCUSSION

In the case of the cement industry, demand is affected by the cycles of the construction industry. Since there are no direct substitutes for cement, the increase or decrease in price hardly has an impact on their sales (inelastic demand). In the 1990's there was growth in the cement demand in emergent economies such as Asia and Latin America, in contrast there was reduction in Europe, Japan and the U.S. (Herve and Jeunemaitre, 2000).

Price and cost of transportation shape the industry's characteristics. One characteristic is their localized area (Herve and Jeunemaitre, 2000). In 1970, Mexico City itself consumed and produced around 40% of the total Mexican production, while a 15% was consumed in the center west and the rest was disseminated throughout the national territory. A rule of thumb, in the 70's was that most of the cost that could be sacrificed for transportation should not exceed more than 20% of their price. At this time, there were some consolidated groups in Mexico, Cementos Mexicanos in the northeast; Cementos Guadalajara in The Bajio (central – east); Grupo Anahuac, center-Mexican gulf; San Luis Mining Company, pacific; and Cruz Azul Cement, center-south.

An indicator on the level of competence is determined by the number of firm that compete in a Market (Bain, 1968). When an industry has the possibility of concentrate its production in a few firms. The most probable is that those firms might obtain market power (duopoly). Due to the cycles of this industry, it is unlikely that a firm tried to reduce their prices. The problem in reducing price is that the industry could get trapped in a sum zero game, that because the demand for cement is inelastic. If they lose their profit, their industry could collapse (Krugman, 1979). This condition prevails in Mexico where two firms control 90 percent of the market share. The reduction in price is not the best strategy. That's why this industry is focused on improving the production process, the distribution channels, and optimizing the cost of production and management in order to be more competitive.

One area that has been improving during the last decade is logistics. This way, firms can reduce costs and do a better job in their distribution channels. Due to the cycles of this industry, it is almost impossible to create a plant that could be tuned with the unpredictable demand. The construction of a new facility is time consuming, and there is not a certainty that there will be a constant demand. That's why it is important to import or export according with to global demand. One of the advantages in trading cement is that it is almost a commodity; the specification for this product is almost the same in the entire world (Herve and Jeunemaitre, 2000). These characteristics can explain why Cemex acquired firms abroad instead of the creation of their own. Nevertheless thanks to the knowledge acquired trough those acquisitions, Cemex has been able to improve their performance.

After the acquisition of Cementos Guadalajara in 1973, Cemex stopped their acquisitions and the possibility to gain market share, although its size would help in latter acquisitions. With the inclusion of Lorenzo Zambrano as the new CEO of Cemex new personal and new systems were introduced. Even before that Cemex attended international markets in Mexico in 1994 because of the Mexican crisis, Cemex with better procedures let them reduce their labor in about 2,000. With a larger portion of the Mexican market and the new configuration of the firm, they are ready to start new acquisitions abroad.

La Valenciana offered unique opportunities in growth and cost saving. One of the major possibilities of cost saving came from the possibility to Finance Cemex's debt from its subsidiary in Spain. That was another relevant and emergent aspect of the acquisition of La Valenciana, Cemex could reach the Eurobonds

market, and search for financing conditions like their major competitor had. In fact, Cemex concentrated their financial operations in Spain.

After the acquisition of La Valenciana, a process of restructuring happened. Management positions in the corporative were reduced from 19 to 1. From 1993 to 1994, cost cutting and sales growth doubled the net profits and ran from US\$37.7 to US\$95.5 million. In the same period operating margins from La Valenciana grew from 7% to 12% to 19% in 1994 to an astonishing 48% in 1995. No wonder why it was declared to be the most admired firm for its quality management in 1997 by *Actualidad Económica* (Cemex, 1997).

When an acquisition takes place, a special team is sent to make a diagnostic and provide guidance. This is a post-merger integration team (PMI). As result of this predisposition to learn, it was possible to have access to the coal fuel technology. Some Spanish operations had been using coal as a fuel. In Mexico Cemex had been trying to develop this technology without success. Now they have it, and soon this technology was implemented in Mexico, and later in other locations.

Cemex have implemented cooperation and competition. Cemex has presence in several regions. If for some reason they cannot fulfill with the quantities of product demanded they can ask one of their competitors for help to complete their requirements and in return Cemex can give back the product in other location in the world. Cemex had excelled in some specialized knowledge, and is willing to put it in the market.

## **2<sup>ND</sup>. STAGE: COOKIE CUTTING: RETENTION AND CONSOLIDATION**

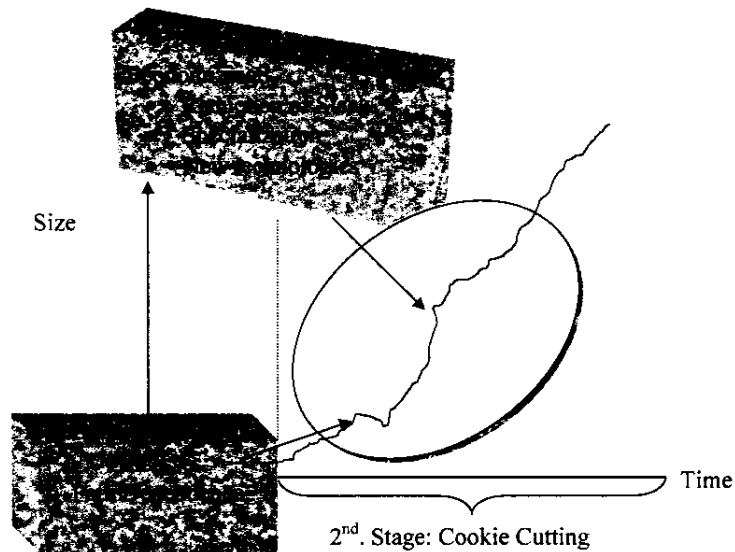
### ***Cookie Cutting***

In 1975, when Southwest was ready to expand their service to five cities, Muse Lamar had a conversation with Mr. Sam Barshop, founder of La Quinta Inn, about how the expansion of a firm should be:

“La Quinta and its problems of always being short of capital. He told me that to furnish his inns he had gone to the Furniture Mart in Dallas and found that Mexican-style furniture was the least expensive. To match the furnishings, his inns had to have a Mexican-sounding name, and he came up with La Quinta, just because it sounded cute, not because it meant ‘the fifth.’ Barshop then developed a strategy that he called ‘*cookie cutting*,’ a

name that I thought was most fitting. He said that once he got the right formula for growth and expansion, each new venture was as simple as cutting out cookies from rolled dough, and he could see from our experience at Harlingen that we obviously had the right formula. We agreed that further expansion of our service with ever-growing profits should be a piece of cake- or cookie- as long as we stuck to our formula” (Muse, 2002:144, my italics)

According to the cases report, it looks that as soon as the firm got bigger and time passed adoptions tended to decrease. Adaptations were reduced, like the red-warm-iron that turns into grew-low-forgeable steel. In 1993 after twenty years of service, Southwest Airlines acquired Morris Air. With the acquisition, their founders David Neeleman<sup>8</sup> and June Morris took positions in the Southwest upper echelons. As soon as Neeleman got in the Southwest staff, he tried to make changes as he did at Morris Air, “Usually [we] could butter the way to get through our tiny organization. It just wasn’t possible at Southwest. They were really *quite fixed* in their ways.” (Wynbrandt, 2004:65).



**Figure 6. Zoom In the 2nd. Stage**  
Source: Lujan Salazar (2006)

<sup>8</sup> David Neeleman five years after leave Southwest started a new airline: JetBlue.

Porter (1996) claims something different. He claims that “operational effectiveness is not strategy” (p. 61). At the same time that express that operational effectiveness and strategy are important for a superior firm’s performance, but they work in different ways. On one hand Porter (1996) and Williamson (1991) agree that both positions are valuable, but on the other hand each one take a different positions when describe the most relevant strategy for the firm. According to the findings; in the first stage, Porter’s (1996) position prevails. It looks that strategizing has more impact in the first stage, where the configuration is emerging. But in the 2<sup>nd</sup> Stage, cookie cutting has more to do with economizing than strategizing, giving the reason to Williamson (1991). Although in some aspects it looks that strategizing is important, in the second stage, it is out surpassed for economizing, and as time passes, it is even more. In order to strength these implications more replication had to be done.

Cemex reports in 1997 and 1998 are plenty of cost cutting, improving and fine tuning;

In Mexico Cemex had improvements in: “the logistical area, redesign of marketing/sales practices and information systems, increased focus on service to distributors and end-users, centralization of purchasing through regional offices, as well as efficiency improvements across our operations. Upon completion, the program expected annual saving should amount to US\$85 million.” (Cemex, 1997:12).

Technology was also implemented at the Torreón plant that would improve their consumption of energy as well as to minimize emissions. Audits to the safety were conducted in several plants worldwide that would help to reduce accidents and associates costs. Another front to increase productivity was through a higher level of education. In 1996, using their satellite system, Cemex started a program for blue-collar that intended that every worker finished their high-school. Other benefits were generated in Venezuela Pertigalete plant two kilns increased their production from 3,500 to 3,700 metric tons due their “preceding years’ cost rationalization and optimization programs” (Cemex, 1997:18). With the acquisition of Rizal Cement Inc. in 1997, Cemex had negotiated a contract for consultancy. Cemex would provide technical assistance and as a return for collecting a fee. That was one of the early stages of what CxCemex would become in the year 2000. As expansion Cemex started to commercialization its knowledge and the possibility to leverage the configuration:

“[T]he return for Cemex will be very high because we know how to increase the margins of the companies that we will manage and that is very valuable to companies like Riza. Being part of the Cemex system gives them purchasing power, logistic savings and many other ways in which to generate value for the individual companies” (Cemex: Growth stock in a cyclical industry Institutional Investor, 1997:46).

When the initial configuration is ready, it does not mean that such configuration of resources will not suffer any change. It means that most of the interrelations are set, but still they can suffer or adapt minor innovations. One characteristic of these changes is that there is a possibility to adapt them in other scenarios. Coal as a fuel system could be employed in several locations. As the Cemex directives claim one of the main reason to acquire a firm is because it is under-managed, then it is the possible to cut the slack from duplicated functions to access the Cemex's system.

## CONCLUSION

After one formula, one way to do deliver value, the best strategy is economizing. The evidence suggests that firms are responsive in its first stage to its internal and external resources. But in the second stage, it looks that the firm freeze its interaction and the configuration of the firm's resources become more and more defined. That is the answer to the question *If we look the actions of the firm, we might have a better predictor of the firm's performance, than if we take just the numbers in the balance-sheet*. According to the evidence, it looks like that the answer to the research question is *affirmative*. Firms might have not the plenty potential, it could be possible that other -firm that take over- could improve the balance of the mismanaged firm. By improving the performance, the acquired firm could improve their performance, and by extension its cash flow and the result on the balance.

Different stages of the firm might have different degree of integration and interaction among the resources. It is also a matter of degree. It is possible to think that in the first stage, where the initial configuration emerges as interaction of resources, as time passes it become more and more stable. As time has passed, it is possible to look at the configuration and to have an explanation, an ex-post



explanation of how the value emerged. It could be possible that the reasons why such configuration had emerged is hidden in the forge (former) stage of the firm. In other words the actual cash flow could be the representation of the actual configuration of resources, but that does not mean that it is the optimal configuration.

Possibly one major drawback of a configuration of resources is that “the cookie” is a mean, that is an average that was good enough to survive and expand, but it is also that it might limit its applications as time and conditions change, fortunately for the cement industry, cement for centuries has been the same.

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