



**Mexican Firms Investing
in China
2000–2011**

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Research on “translatinas” has only just begun and results have been limited thus far (CEPAL 2012). Initial reports show that while these Latin American firms have invested primarily in their home region, a growing number have begun to invest more heavily in the rest of the world. However, an overall evaluation of their activities and performance in new markets and detailed discussion about their products, processes and future expectations is lacking.

This analytic note addresses that gap by examining a group of Mexican firms with direct investments in China. The analysis includes (a) a general description of each firm (its products, processes, main locations, age, size, employment, and so forth), (b) the firm’s global short- and medium-term strategies and the importance of China to them, and (c) an overview of the firm’s expansion to and activities in China (including reasons for entry, the initial entry mode, the main products and processes, investment amounts, employment rolls, sales, and other salient characteristics).

The note is organized into seven sections: (a) an overview of Mexican investments in China, (b) investments by Bimbo, (c) investments by Gruma, (d) investments by Nemak, (e) investments by Softtek, (f) a brief report on other relevant Mexican firms investing in China (Worcester, Televisa, CEMEX, Omnilife, Interceramic and Kuo) and (g) conclusions. The amount and quality of publicly available information for the latter group of firms is considerably more limited than for the earlier individually profiled firms.

To prepare this note, each firm, the Mexican Embassy in China and the Chinese Embassy in Mexico, and more than 15 specialized entities in both countries (such as business organizations, government promotion agencies, and other bodies) were consulted. An exhaustive review of the literature, newspaper accounts and Internet data sources was also performed. Several interviews were conducted on a background basis for context and verification, with the understanding that I would quote already publicly available information where possible.

The general quality of publicly available information, however, is weak. Several of the firms—some of which I have been in contact with for more than a decade—asked me not to use any of the privileged information I had been granted because it was confidential. This points to the need for better public data collection. Neither country at present collects structured or systematic information on this topic (no single official source in Mexico, for example, registers statistics on Mexican investments in other countries; Chinese sources are also very weak and controversial, as will become evident below).

Nonetheless, preliminary results from the research for this note are intriguing and invite a deeper and wider effort to enrich the analysis with firm-level interviews (including both Mexican enterprises investing in China and Chinese enterprises investing in Mexico).

1. General Trends of Mexican Investment in China before 2012

Statistical information on aggregated foreign direct investment (FDI) by Mexico in China is scarce and generally of poor quality, while displaying substantial differences among the sources. China’s Ministry of Commerce (Mofcom) typically cites only the major 10 or 15 sources of annual FDI by country, and until 2010, no Latin American

country was listed (Mofcom 2012). Other Chinese official sources (CCPIT 2010) tally Mexican investments of \$66 million from a small group of firms (Bimbo, Gruma, Softtek, Grupo Alfa, Maseca, Vitro, Seminis, Tamsa, Xignux and El Fogoncito) prior to 2008. Another Chinese official source (Chen 2009) accounted for \$319 million from 116 firms prior to 2008, representing less than 0.01 percent of China’s inward FDI. The National Bureau of Statistics (NBS 2011) is the only Chinese official source that provides aggregated FDI information by country through 2010 (Table 1).

Table 1 highlights that Mexican investment in China has been minimal—totaling only 0.009 percent of 1996–2010 FDI—with minimal fluctuation during the period.¹

Table 1. Mexican Foreign Direct Investment in China, 1996–2010

Year(s)	Total FDI (\$millions)	Mexican FDI (\$millions)	Mexico’s Share (percentage)
1996	42,135	0	0.001
1997	52,387	0	0.000
1998	45,463	2	0.004
1999	40,319	0	0.001
2000	40,715	1	0.002
2001	46,878	2	0.004
2002	52,743	7	0.014
2003	53,505	6	0.010
2004	60,630	21	0.035
2005	60,325	7	0.012
2006	63,021	12	0.020
2007	74,768	6	0.008
2008	92,395	4	0.004
2009	90,033	1	0.001
2010	105,732	15	0.014
1996–2010	921,047	85	0.009

Source: Author’s calculations, based on NBS (2011)

Mexico lacks any official source to corroborate or amplify these statistics, although its embassy in China reports that four Mexican firms had invested a total of \$138 million as of 2008 (Embajada de México 2012). Data from Mexican business chambers related to China is even more limited.²

To sharpen the perspective further, consider that “translatinas” in Latin America and the Caribbean (LAC) annually averaged more than \$20 billion in FDI in 2005–11 according

¹ For a full and in-depth analysis of China’s inward and outward FDI, see: Bittencourt and Dussel Peters (2012).

² Another interesting data source, Thomson Reuters (Dussel Peters 2012b), lists only three Mexican investments in China as of 2011, namely Bimbo (Panrico), Nemak (Teksid) and Softtek (I.T. United). These three cases will be discussed in detail later in the note.

to CEPAL (2012).³ For Mexico three mergers and acquisitions (M&A) by Telmex, PEMEX and CEMEX accounted for almost \$3.5 billion in 2011 (CEPAL 2012). Thus Mexico's investment in China is comparatively minimal and represents less than 1 percent of its total accumulated FDI.⁴ If one calculates total Mexican investments in China using data from UNCTAD (2012), Mexico's percentage of total FDI should be even lower; based on Chinese sources (NBS 2011), Mexico is not among the 50 largest investors in China in 2010.

Three final topics are important to understanding Mexico's FDI to China:

- In 2008 Mexico and China signed an Agreement on Reciprocal Promotion and Protection of Investments (APPRI) that protects capital flows from both countries. This bilateral agreement is particularly relevant for productive investments and allows for (a) national treatment of foreign capital, (b) Most Favored Nation treatment and (c) Minimal Level Treatment, that is, fair and equitable treatment.
- Given the substantial role of China's public sector in facilitating inward FDI and in undertaking overseas foreign direct investment (OFDI)—83 percent and 87 percent of China's total and Latin American OFDI respectively during 2000–2011 came from public sector firms (Dussel Peters 2012b)—the relationship between the Mexican and Chinese governments has been unsatisfactory and yielded “few results” (Jiménez Macías 2012: 25), characterized by a “silent remoteness” (Valdez Mingramm 2012) and weak bilateral institutions (Yang 2012). This limited intergovernmental and political relationship—in noted contrast with the relationship between China and other Latin American states—affects both countries' bilateral investment flows.⁵
- Thus the bilateral economic relationship between Mexico and China has been mainly limited to trade. China has been Mexico's second-largest trading partner since 2003, generating a massive trade imbalance—in 2011 the import-to-export ratio was nine to one in favor of China. Trends in bilateral investments have been far below expectations.

³ According to Basave Kunhardt and Gutiérrez-Haces (2011), the top 20 Mexican nonfinancial multinationals alone accounted for a total of more than \$123 billion through 2010; Cemex, Bimbo, Gruma, Televisa and Interceramic accounted for \$36.5 billion, \$5.1 billion, \$1.8 billion, \$383 million and \$96 million, respectively. UNCTAD's (2011) calculations on Mexico's total OFDI, however, total \$61 billion, about half the amount calculated by Basave Kunhardt and Gutiérrez-Haces.

⁴ This percentage is highly overstated and is calculated by the amount of total Mexican investments in China (see Table 2) and the foreign assets of Mexico's top 20 nonfinancial multinationals until 2010 (\$123.3 billion based on Basave Kunhardt and Gutiérrez-Haces, 2011). That is, a group of transactions for 2011–12 and for firms below the top 20 are not included in this coefficient.

⁵ The cancellation in Mexico of such important social and economic events as the Chinese New Year's Parade in 2009 and 2010, as well as the China-Mexico Expo in 2009, 2010 and 2011, reflect the lack of active interest by both Chinese and Mexican authorities.

2. Case Study: Grupo Industrial Bimbo S.A. de C.V.⁶

2.1. General information, main products and processes

Bimbo was founded in 1945 in Mexico City and is the world's third largest bakery company and one of the largest food companies in Latin America, accounting for more than 5,000 products and 150 brands worldwide (such as Bimbo, Oroweat, Arnold, Marinela, Barcel, Sara Lee, Entenmann's, Ricolino, Tía Rosa, Pullman, Rainbo, Thomas' and Nutrella). Bimbo operates in 19 countries—including the United States, Brazil, Colombia, Spain, Portugal and China—owns 156 plants (42 in Mexico, 7 in Spain and Portugal, 75 in the United States, 30 in Central and South America and 2 in China) and more than 1,000 distribution centers. The generational change in the firm when Daniel Servitje took charge in 1993 is probably key to understanding Bimbo's rapid and assertive internationalization.⁷

Bimbo specializes in the production, distribution and commercialization of bakery goods (which account for 89 percent of the company's packaged food sales), but is increasingly involved in sweet and savory snacks, confections, snack bars and breads. In 2010, net sales accounted for \$9.3 billion, and the company employed 106,545 workers; these figures grew at an annual average rate of 16 percent and 5.6 percent, respectively, during 2005–10. As a result, in 2010 Bimbo was Mexico's 10th largest firm, trailing only Pemex, América Móvil, Walmart, Cemex, General Motors, Ford and a few others (Expansión 2011).

In the first nine months of 2011, Mexico accounted for 48.1 percent of net sales, the United States 35.3 percent, and Latin America 12.8 percent. Mexico's share has fallen sharply in the past decade as a result of significant international acquisitions and investments, and is expected to continue to fall, plateauing at a future level of around 35 percent.

2.2. Global strategy and the role of investing in China

Bimbo's massive expansion of investments that began in 1996 has generally involved acquisitions of smaller local brands—from the initial purchase of Pacific Bakeries in San Diego to several dozen other acquisitions by 2011. Along the way it acquired Sara Lee in the United States for \$959 million, Frago in Argentina, and the Bimbo brand in Spain and Portugal (which had been the property of Sara Lee since 2001).⁸ By 2010, Grupo Bimbo had become the world's third-largest bakery company with a 2.3 percent global share, surpassed only by Kraft Foods (3.0 percent) and Kellogg (3.1 percent) according to Euromonitor International (2012a).

Several considerations are relevant for understanding Bimbo's global strategy, particularly the role played by their products and processes in China.

⁶ The principal sources for information on Bimbo were the firm's annual reports, Euromonitor International (2012a), Expansión (2011) and Grupo Bimbo (2009).

⁷ Santa Cruz and Tobón (2011) discusses the role of family management changes in Bimbo since the 1990s. Before 1993 only \$10 million of Bimbo's sales were outside Mexico, while in the first nine months of 2011, Mexico accounted for less than half of the firm's net sales.

⁸ The most relevant acquisition during this period was the purchase for \$2.5 billion in 2008 of George Weston Bakeries and Stroehmann Bakeries, the U.S. subsidiaries of Canadian-owned George Weston Ltd.

- Bimbo is expected to increase and deepen its leading role in Mexico's bakery market (presently a 17 percent share, 13 percentage points higher than second-place Pepsico), while U.S. sales will be critical in coming years, particularly in the bread market for Hispanics and other population groups through the recent acquisition of Thomas'.
- Since success in the bakery goods industry requires relatively fresh products, the direct distribution network is critical. Bimbo's network today includes around 50,000 routes, 1,600 distribution centers and more than 2,000,000 points of sale.
- Bimbo invests heavily in innovation, owning six innovation and nutrition institutes in the Americas. There is a constant flow of new products, particularly in whole-grain and health foods with lower contents of sodium and saturated fat.
- Bimbo enjoys significant economies of scale for production and distribution inputs, while each plant maintains significant autonomy to tailor resource use, production processes and other factors to meet local and regional customs and tastes (Grupo Bimbo 2011).
- As a result of global trends, major retailers such as Wal-Mart will compete with Bimbo in key markets such as Latin America and China.
- The core product of Bimbo—bakery goods, which generated 89 percent of Bimbo's packaged food sales in 2010—will probably increase since it is the basis for most of the new international acquisitions (in the United States, Brazil, Venezuela and China, among others). Snack-oriented products (sweet and savory snacks, which accounted for 5 percent of the firm's packaged food sales values in 2010) and confectionary and convenience products will also increase their shares in the next decade (Euromonitor International 2012a).

Since 2000 Bimbo has invested heavily in the emerging countries of Latin America (Brazil, Costa Rica, Colombia, Argentina, among others) and in China as part of a diversification strategy that calculates these markets will grow faster than relatively saturated markets such as the United States and the European Union.

2.3. Characteristics of the firm's entrance in China and of its products and processes

As a result of its increasing globalization since the mid-1990s, Bimbo started investing heavily in emerging countries and in the United States. From Bimbo's perspective, China was of particular interest as a customer for its core products because (a) the country's rising income levels and urbanization would stimulate consumer demand, including for bakery goods, (b) since such comestibles, particularly those made from wheat, have not been commonly available, there was a potential for rapid takeoff in demand, (c) the size of the population and domestic market, and (d) the availability of incentives from Chinese authorities for FDI (Grupo Bimbo 2009).

After considerable research and deliberation,⁹ Bimbo decided in 2006 to buy Panrico Beijing Food Processing Center, a subsidiary of Spanish Panrico, for \$13.4 million, in addition to assuming a net debt of \$1.9 million. With this acquisition Bimbo bought a

⁹ As part of this process Bimbo hired Chinese immigrants in Mexico to sample hundreds of its products and recommend new products for Chinese consumers, an effort defined as "knowledge in-depth of consumers" (Siegel 2007). Results persuaded Bimbo to concentrate on five main products for China, including bread, croissants, sweets and chocolates. Interestingly, "tortillas" were not included in this first batch.

firm that already employed 800 workers and had more than 10 years of experience operating in China. Panrico had a plant outside of Beijing and a distribution network around that city and Tianjin, offering service to a population of around 40 million through 186 bus and bicycle routes and 4,000 sales points. Sales in 2005 totaled \$11.5 million and, the company amassed 55 percent and 35 percent market shares in bread and sweet bread, respectively.

After buying Panrico, Bimbo made investments to improve productivity at the plant in Beijing, particularly for bread with black beans and with meat. Both products had great potential, but changes in the production process and other innovations were necessary, as well as a widening of the distribution network.

Bimbo also underwent a substantial learning process to accommodate Chinese tastes, despite the company's prior research. It began by introducing the rather sweet bakery products that had earned positive responses in Latin America and the United States. Feedback, however, showed that Chinese consumers had a different palate: products had to be less sweet and more salty. Bimbo decided to continue producing Panrico's existing product line.¹⁰

Bimbo has continued deepening its activities in China. In 2009 it bought the local brand Baiwanzhuangyuan. In 2010 it added Jin Hong Wei for around \$63 million (Grupo Bimbo 2012), a firm specializing in packaged bread, pastries, cookies, sweet bread and ready-to-eat food, and Million Land, a producer of cakes.

Bimbo is an example of a major Latin American firm entering and learning to compete in Chinese markets where tastes differed from those in Latin America and the United States, which were the bedrock of the firm's previous success. Today Bimbo—or Bin Bao (宾堡) as it is known in China—employs more than 1,400 workers in the region around Beijing and Tianjin, nearly doubling its work force since 2006. It distributes products to more than 26 cities, compared with the four it serviced when it began.¹¹ Bimbo in China is also the headquarters for wider operations in Asia. Both production plants in Beijing, in the district of Tongzhou, manufacture around 110 products, mainly under the Bimbo brand, but also under Jinhongwei and Million Land. Between 2006 and 2010 sales were expected to quadruple (Grupo Bimbo 2009); in 2010 it generated some \$35 million in retail sales. As a result Bimbo has increased its presence in China significantly, becoming the 10th most important firm in the highly fragmented baked goods market, capturing a share of 0.29 percent by 2010.

Relying on its local organization and employees, Bimbo has learned to understand consumption and taste patterns in China that are very different from its prior international experience, while also introducing new products such as sandwiches and hamburgers, adding new tastes, forms and textures to the traditional bakery and bread products. Increasingly the company is focusing on the demand for healthy food and launching new whole-grain bakery products. Despite the promising early start, Bimbo's China venture is still comparatively small, accounting for a mere 0.4 percent of Bimbo's total foreign assets (based on Basave Kunhardt and Gutiérrez-Haces 2011 and Table 2).

¹⁰ A prominent example of this learning curve came from the very sweet bakery item called *gansito*, probably Bimbo's most traditional and successful product in Mexico. Introduced in China, it had a very short life before exiting.

¹¹ In addition to Beijing and Tianjing, also Taiyuan, and Shanghai.

The Chinese bakery products market is expected to grow during 2011–16 by 7 percent annually, a much higher rate than is projected in the more mature markets of the United States and the European Union. Bimbo will thus expand its activities in China, and move beyond its initial geographical base in the Beijing area.

3. Case Study: Grupo Maseca S.A. de C.V.¹²

3.1. General information, main products and processes

Grupo Maseca (Gruma) is a private firm founded in 1949 and headquartered in Nuevo León, Mexico. Since its beginnings Gruma has focused on the corn-flour-dough-tortilla value-added chain, capitalizing on the importance of tortillas as a cultural and agricultural food staple of Mesoamerica for centuries. Today the per capita consumption of tortillas in Mexico is around 80 kilograms, and Gruma provides over half of the tortillas consumed worldwide. It is ubiquitous in Mexico, the southern United States and Central America. With 99 plants around the world and a presence in almost 100 countries, Gruma is a global leader in the food sector and the primary player in tortilla production and distribution.¹³

In 2010 Gruma was the 42nd largest industrial group in Mexico (Expansión 2011), with sales of \$3.7 billion and 19,825 workers. The average annual growth rate of sales and employment during 2005–10 was 11.7 percent and 4.5 percent, respectively.

Gruma has diversified its product line beyond the traditional corn-flour-dough-tortilla production chain and is entering other markets such as bread, preserved/canned foods, sweet and savory snacks, wheat flour, palm hearts, rice, pasta and, recently, health food products (Euromonitor International 2012b). In countries where tortillas are not widespread, such as Australia and the United States, it has been able to switch to new products and uses (“product adaptation”) such as flat breads and wraps.¹⁴

In addition to food, Gruma also sells capital goods—the equipment to produce tortillas—*tortilladoras*—through one of its subsidiaries Tecnomáiz, which allows the production of more than 1,200 tortillas per minute, in addition to new products mentioned above.

Gruma’s core brands are Grupo Industrial Maseca (GIMSA) and Molinera de México (Molinera), which produce corn and wheat flour in Mexico, respectively. However, it has created a group of local and regional brands geared to local and regional tastes and consumption patterns. Maseca, Mission Foods, Guerrero, Selecta, Masa Rica, Juana, Robin Hood, Rositas, Tosy, Pride Valley Foods, The Flat Bread, Pana, La Comadre and Tortirricas are among the many brands in the Gruma conglomerate.

¹² The principal sources of information about Gruma included direct communication with the firm, González Barrera (2006), and newspapers and magazines in English and Spanish.

¹³ It is important to highlight that the owner of Gruma, Roberto González Barrera, was also the owner of Banorte, one of the few Mexican banks.

¹⁴ With the acquisition of Mission Foods (including branches in Shanghai, Malaysia and elsewhere) and Pride Valley Foods in the United Kingdom, Gruma entered a new range of flatbread products such as pita bread and naan, the latter of which originated in India, and incorporated different tastes such as cilantro, garlic, tomato and onion.

3.2. Global strategy and the role of investing in China

Gruma was probably one of the first Latin American transnational corporations and was among the first Mexican firms to begin massive investments outside Mexico. It started investing in Costa Rica in the 1970s, the United States in 1976, Honduras in 1987, and El Salvador and Guatemala in 1993. It installed plants in Venezuela and Europe in the late 1990s. Construction of its first plant in the United Kingdom in 1999 and the acquisition and development of the Mission brand in the United States in 2008 underlined the firm's globalization. Gruma also began to focus eastward in the 2000s, opening new plants in Asia (in Shanghai in 2006 and Malaysia in 2007) and, through Mission, in Australia in 2009. In 2010 it launched Mission Flatbreads, signaling a new strategy for a flatbread product line. Its most recent acquisitions were of Ukraine's leading manufacturer of corn products and Russia's leading manufacturer of corn chips (Soltne) for \$7 million. Today Gruma is one of Mexico's leading "multilatinas." In 2010 it had foreign assets of \$1.8 billion (Basave Kunhardt and Gutiérrez-Haces 2011), and two-thirds of its total revenue came from non-Mexican operations.

Given the firm's 30-year growth pattern of international investments, Asia and China were logical next steps. As Gruma's owner explains (González Barrera 2006), the dynamism and rising consumption levels in China, as well as the complexity and opportunities of this market required setting up a plant there rather than simply trying to meet demand by exporting from other countries as the firm had been doing—particularly with tortillas and various chips—for several years from its U.S. plants. Gruma's strategy for expansion was clear from the outset: the first stage would concentrate on supplying the continental Chinese market, which would be followed by gradually increasing coverage to other Asian countries with tortilla and snack products once supplied from the United States.

3.3. Characteristics of the firm's entrance in China and of its products and processes

Based on detailed investigations and research of the Chinese market—and taking into account rising income levels and fast-food-chain demand—Gruma in 2006 decided to open a new plant in Feng Xian, close to Shanghai. The Shanghai region had several advantages. It contains one of the largest population concentrations, with one of the highest income levels, in China; it is an important port for exports; and research showed that foreign food and wraps enjoyed a high degree of acceptance among local consumers. The initial \$100 million investment under the Mission Food Shanghai brand created annual production capacity of 15,000 tons of wheat tortillas, 7,000 tons of corn tortillas and 6,000 tons of chips, representing around 4 percent of Gruma's global sales.

The Shanghai plant supplies mainly restaurants (especially fast-food chains such as McDonald's, Pizza Hut and Kentucky Fried Chicken, among others), hotels, supermarkets and convenience stores, using an external distribution chain for Japan, South Korea, Singapore, Hong Kong, Thailand, the Philippines and Taiwan. The product line includes wheat and corn tortillas, ingredients for pizzas, and pre-cut unfried and fried corn chips. Mission Foods Shanghai's original workforce of 60 employees has grown to 232, including salesmen in various regions of China.

Investments in three new plants in Chongqing, Shenzhen and Dalian are part of Gruma's strategy to conquer new and fast growing markets in China; investments in the new facilities have accounted for around \$100 million since 2008. To increase sales

Mission Foods is using innovative marketing to introduce its products directly to Chinese consumers through new menus, cookbooks, and services (see <http://www.missionfoods.com>), emphasizing healthy and nutritious meals based on corn and wheat tortillas and wraps. Added capacity from these new plants will boost annual production from 15,000 to 30,000 tons in China.

Going forward, Gruma's strategy is to establish plants in other major Chinese cities and to adapt the product line to meet evolving demand for different kinds of corn and wheat tortillas, chips, wraps, breads and flat breads responsive to local tastes. While Gruma's total investments in China—around \$200 million so far—account for 11 percent of the firm's total foreign assets (based on Basave Kunhardt and Gutiérrez-Haces 2011), existing trends indicate that this share will increase, especially since the market for packaged foods in China is still developing.

4. Case Study: Nematik¹⁵

4.1. General information, main products and processes

Nematik is a Mexico-based aluminium metal casting supplier that specializes in the production of cylinder heads, engine blocks and transmission parts, mainly for the automobile value-added chain. Founded in 1979, the firm is part of Grupo Alfa, one of the biggest Mexican industrial conglomerates, with headquarters in Monterrey, Nuevo León, Mexico. Nematik operates 35 plants in the United States and 14 other countries in Asia, Europe and Latin America. Initially, Nematik was a joint-venture between Grupo Alfa and Ford, producing cylinder heads (1981) and engine blocks (1999).

The products offered by Nematik are essential for the original equipment manufacturers (OEMs) in the automobile production chain. The cylinder head conveys air and gasoline to the combustion chamber; the engine block transforms the energy created in the combustion chamber into mechanical power; and the respective transmission components and bedplates are also integral to all vehicles manufactured today. Nematik is a world leader in aluminum components, and a leader in providing sophisticated technology for design and casting processes. The company plays a critical role in the transportation sector by substituting lighter metals such as aluminum for iron and other heavy metals, a key for reducing weight and increasing gas mileage.

According to its sales in 2010, Nematik is Mexico's 51st most important firm, with sales of \$2.9 billion¹⁶ and a workforce of 18,067 employees. Sales and employment have grown annually by 21.3 percent and 26.4 percent, respectively, during 2005–10 (Expansión 2011). In 2011, 55.2 percent of total employment was in Mexico, 25 percent in Europe and 6.4 percent in the United States, and only 2.7 percent in Asia.

In 2011 cylinder heads (53 percent) and engine blocks (36 percent) accounted for 89 percent of Nematik's sales.

¹⁵ The principal sources of the report of Nematik were newspapers and magazines in English and Spanish, as well as annual reports from Nematik and Grupo Alfa.

¹⁶ In 2011, Nematik's revenue reached \$3.6 billion

4.2. Global strategy and the role of investing in China

Given the firm's closeness with the OEMs in the automobile sector—as a result of both technological adaptations and the weight of produced parts—Nemak started investing in foreign plants in Brazil (1976), Germany (1992), Argentina (1998), the United States (1999), the Czech Republic (2003), India (2012), and China. As a result, by 2010 Grupo Alfa had become the sixth most important nonfinancial Mexican multinational, with foreign assets of \$2.8 billion (Basave Kunhardt and Gutiérrez-Haces 2011).

Several factors led NemaK to China. All of the firm's major customers—including Ford (23 percent of 2011 sales), General Motors (18 percent), Chrysler (9 percent), Hyundai (5 percent) and BMW (6 percent)—have facilities there that require NemaK's products (NemaK 2012). Indeed, China has become the largest global producer and consumer of automobiles post-2008 (Dussel Peters 2012c). NemaK began exporting cylinder heads to China in 1995, but the dynamism of the Chinese domestic market eventually required a plant close to the OEMs. A final reason for NemaK—and Grupo Alfa—to invest in China was to take advantage of the country's relatively cheap production costs and superior productivity (Ramírez and Castañeda 2007).

China is also important for NemaK's strategy to diversify and lower its dependence on the U.S. market and the "Big Three": Ford, GM and Chrysler accounted for 100 percent of NemaK's revenue in 2004; by 2010 the percentage had declined to 51 percent.

4.3. Characteristics of the firm's entrance in China and of its products and processes

Grupo Alfa announced in 2006 that it was investing \$1.2 billion globally during 2006–2008, with NemaK's expansion in China playing a critical role in the process. In 2007 NemaK acquired Teksid Aluminium from Fiat for \$485 million, and the Nanjing Teksid plant was acquired for \$18.1 million.¹⁷ NemaK Nanjing started operations in 2008, dedicated to the manufacture of cylinder heads, engine blocks and bedplates.¹⁸ With over 400 employees in 2011, the plant can produce complex aluminum parts using High Pressure Die Casting (HPDC) and Gravity Semi-Permanent Mold (GSPM) technologies. The most recent investment is NemaK Chongqing, which began construction in June 2012 and is expected to be operational by year's end 2013, producing engine blocks with HPDC technologies for established OEMs in the region.

Expectations for NemaK are very positive. First, it has closed several major agreements with OEMs, including a \$100 million Ford contract for 2013, the biggest NemaK has landed in China thus far. Second, the new Chongqing plant will start operations in the second half of 2013 with a production capacity of 2.8 million engine blocks per year. Increasing demand from OEMs and the growing automobile market in China enhance these expectations in the short and medium run. NemaK's investment in China (see Table 2) represented 2.2 percent of Alfa's total foreign assets in 2010.

¹⁷ There are widespread differences in public estimates of the amount of the investment, with no authoritative clarification by NemaK itself. The amount here was calculated based on various relevant items listed in NemaK's official statement when acquiring Nanjing Teksid.

¹⁸ A contract with General Motors to supply aluminium cylinders to GM's subsidiary in China was an important incentive—and pressure—for this investment.

5. Case Study: Softtek¹⁹

5.1. General information, main products and processes

Softtek was founded in 1982 and is the largest private information technology (IT) service provider in Latin America. Treviño (2012) calls it “the only non-Indian company that can compete globally with Indian companies.” Softtek is not only a global supplier of IT services and infrastructure, but also of applications, software and business process outsourcing (BPO). Softtek has 30 offices in North America, Latin America, Europe and Asia and nine global delivery centers in Mexico, China, Brazil, Argentina and Spain. The headquarters of Softtek are in Monterrey, Nuevo León.

Softtek services can be divided into four categories: (a) applications (from application development and software testing to application security), (b) IT support (including end-user support services), (c) business process outsourcing (procurement), and (d) SAP and business intelligence software licensing. Close to 40 percent of Softtek’s business comes from financial and insurance services, 20 percent from software and high-tech, and 15 percent from energy, oil and gas (López 2011).

Softtek’s main customers are corporations, including many multinationals that require 24-hour, 7-days-a-week services. Its clients include 17 of the global Fortune 50 (Treviño 2010), including GE, Virgin Mobile, Novell and Metlife Mexico.

Softtek is the main Latin American IT firm in the region and is ranked 277th among Mexican firms by sales. Sales in 2010 totaled \$300 million and the workforce numbered 5,840 employees. Average annual growth rates of sales and employment for 2005–10 were 18.9 percent and 10.3 percent, respectively (Expansión 2011).

5.2. Global strategy and the role of investing in China

Key to understanding the Softtek experience and product portfolio is the concept of “nearshore outsourcing” to compete in the U.S. market.²⁰ Under this strategy, competitive advantages are gained from the outsourcing location being close to its primary market in terms of geography, time zone, culture and business practices, as well as from cost advantages. It is based on this “philosophy” that an overall international strategy is absolutely necessary (Treviño 2010), that is, in order to have the best level of communication you need to be close to your customers.

¹⁹ The principal sources for this section on Softtek were newspapers and magazines in English and Spanish.

²⁰ “We coined the term [near-shoring] 15 years ago. It was our flagship for entrance into the U.S. market. We had been successful as an IT services consulting organization in Latin America. We had made a couple of attempts to enter the U.S. before, but we lacked a true differentiator back then. We saw an opportunity because of the increase in demand in the mid- and late 1990s for offshoring. But we knew that, coming from Mexico mainly, the unit cost was higher than in India. So there was a disadvantage, to some extent, if you purely saw the unit cost. We knew we needed to play to our strengths, which had always been [in our] process-driven engineering approach. So we developed models with the help of our clients on [the] total cost of engagement. From Day One, we were competitive in fixed-price projects [and] managed services projects, where it really doesn’t matter if you are going to be using 10, 20 or 100 people to deliver the service” (López 2011).

Since the mid-2000s Softtek has pursued an aggressive acquisition strategy to be in different continents and time zones simultaneously.

5.3. Characteristics of the firm's entrance in China and of its products and processes

A key step in Softtek's strategy of "nearshore outsourcing" was the acquisition in 2007 of I.T. United—a Chinese information technology firm, founded in 1998, with 200 employees based in Beijing, Shanghai, Xiamen and Xian. Then in July 2009 Softtek announced a new Global Delivery Center (GDC) in the city of Wuxi, in Jiangsu Province. Now two of nine Softtek GDCs are in China.

The Wuxi GDC is equipped to serve the needs of its global clients and hosts 200 workstations, with 50 staff member associates.

Softtek's strategy in the short and medium term is to consolidate its most recent acquisitions, particularly in China, and to deepen the cooperation among the nine GDCs. The main strategy, however, is to greatly expand in the United States. "Mexico and Brazil have better but important growth potential. China is an early bid, mainly to have an offshore component that we need, but also for the emerging Chinese domestic market. Softtek's expansion for now will be in our existing markets mainly in the U.S.; we are not looking for new countries" (Treviño 2010).

No information was available on the cost of the acquisition of I.T. United and the investment in the Wuxi GDC.

6. Other Mexican Firms Investing in China

A group of other Mexican firms have invested in China in the last decade. Included below are capsule profiles that briefly highlight some of their salient characteristics with the information that was publicly available.²¹

- **Válvulas Worcester de México** is a 100 percent Mexican firm, founded in 1963. In 2011 it generated 240 jobs in Mexico. Worcester's core products are manufactured valves for general use (such as water, oil, or gas) and assorted ball valves with grafoil and other kinds of seals for use in various manufacturing sectors. The valves are produced from different kinds of materials (mainly stainless steel and carbon). In the early 2000s Worcester started a joint venture with China's Anhui Yingliu to lower production costs after struggling to compete with Chinese imports in the late 1990s. Unlike many other manufacturers however, Worcester did not become a "dealer/importer of Chinese goods," but rather associated with a Chinese firm that was already selling materials in Mexico used for producing valves. In China Worcester fashions steel to supply its plants in Mexico and export to the rest of the world. Worcester is also associated with RVW Neway in Mexico to produce valves for sale in the local market. No public information is available on Worcester's investment in China.

²¹ In most cases it was extremely difficult to find detailed information on the activities of these firms in China.

- **Grupo Televisa** was founded in 1930 by Emilio Azcárraga Vidaurreta and is one of Latin America's largest telecommunication and TV companies. In 2010 it was Mexico's 32nd largest firm, with sales of \$4.6 billion, 24,739 employees, and \$383 million in foreign assets (Basave Kunhardt and Gutiérrez-Haces 2011). The core products of Televisa are the production and transmission of TV programming domestically and internationally, the production and distribution of publications, Internet operations, games and other TV-related activities. It is the leading TV firm in the Hispanic-speaking world. Televisa started selling *telenovelas* to China in the 1990s, where they were broadcast after being translated into Mandarin. The most successful of these was *Los ricos también lloran*. In December 2003, in collaboration with the Mexican Consulate in Shanghai, Fundación Televisa translated the program *El alma de México* into Mandarin, co-produced with Consejo Nacional para la Cultura y las Artes. In 2007 Televisa began to include Central Chinese TV in its pay-per-view channel. Later, the Mexican *telenovela* *Betty la fea* was dubbed into Chinese-Mandarin in partnership with Hunan TV and China Nesound, achieving enormous success in China. Another *telenovela* offered recently in collaboration with Shanghai Media Group—*Tontas no van al cielo* (also known as *Innocents are the best*)—is facing some adaptation problems for the Chinese audience.²² Unilever Products and Bimbo were important sponsors for several of the Televisa offerings. Finally, Televisa and China International Television Corporation just signed an agreement to increase their presences in each other's countries.
- **CEMEX México S.A. de C.V.** is a Mexican firm founded in 1906. It is a global building materials company that provides construction materials in more than 50 countries. CEMEX has been extremely active in the past few decades, accumulating \$2.9 billion in foreign assets by 2010, second only to América Móvil among Mexican translatinas. According to its official releases, CEMEX operates six ready-mix concrete plants in China, in the northern cities of Tianjin and Qingdao. Determining the size of operations is problematic however since CEMEX annual reports aggregate all firm information in the Far East under the Asia region rather than by country. This includes operations in Bangladesh, China, Malaysia, the Philippines, and Thailand. For all relevant variables—cement production, plants, ready-mix plants, and so forth—Asia plays a minor role in overall firm operations. The Philippines remains the most important country within the region (with China still playing a small role). Lack of sufficient detail made it impossible to assess precisely CEMEX activities in China in terms of investments and production.
- **Grupo Omnilife** is a Mexican firm based in Jalisco. Founded in 1991, today it comprises 19 companies, employing around four million persons as “agents” who distribute Omnilife products in 22 countries. Its 2010 sales of \$1.4 billion make Omnilife the 96th most important company established in Mexico. Its 2009 full-time workforce totaled 3,500 employees. The company specializes in the development, manufacture and sale of nutritional supplements. The firm is owned by Jorge Vergara, who is also well known in Mexico as the owner of a popular football team in Guadalajara (in 2007 he added Chivas Hefei, a small football team in China). In 2008 the company announced plans to establish an

²² The problem, apparently, was that the telenovela contained a character who was gay, a topic rarely discussed in public or on TV in China.

Omnilife plant in China by 2013. According to newspaper sources the initial investment of \$20 million would increase to \$50 million at a later stage.

- **Interceramic (Internacional de Cerámica S.A.B. de C.V.)** was founded in 1979. Today it is the largest tile manufacturer in North America, with a production capacity of 450 million square feet per year generated by nine facilities in four manufacturing complexes (three in Chihuahua, Mexico, and one in Garland, Texas). Headquartered in Chihuahua, Interceramic in 2010 was the 222nd largest Mexican-established firm, with sales of \$443 million, 4,065 employees, and \$96 million of accumulated foreign assets. In addition to ceramic tile, Interceramic is a leading manufacturer of bathroom fixtures, setting materials, and natural stones, marketing its products through 240 franchise stores in Mexico and 14 stores in the U.S. South and Southwest (mainly in Georgia, Texas, Oklahoma and New Mexico), as well as 65 independent distributors for the rest of the United States and Canada and distribution centers in Panama and Guatemala. In 2010 Interceramic signed a memorandum of understanding for a joint venture to distribute ceramic tile in China with Kito.²³ The new brand ICC (Interceramic China) will benefit from the marriage of Interceramic's international experience in high-quality products and differentiated distribution channels with Kito's experience of the Chinese market. ICC will produce high-end design ceramic tile for marketing through exclusive local distributors. It has opened an exhibition room in Foshan, China. The amount of the investment and the details of the joint venture have not been made public.
- **Grupo Kuo** (formerly known as DESC) is a chemical, automotive and food conglomerate founded in 1973. It produces and exports chemicals such as synthetic rubbers, polystyrene and carbon black. Grupo Kuo is headquartered in Mexico City and has a workforce of 13,000 employees and sales of around \$1.5 billion, exporting to 70 countries. In 2010 Kuo Automotriz was the 272nd largest firm established in Mexico, with sales of \$396 million and a workforce of 2,150 employees. Dynasol—part of Grupo Kuo—announced in 2010 a \$60 million dollar investment in the 50-50 joint venture—INSA GPRO Synthetic Rubber—formed with Shanxi Northern Xingán Chemical Industry Co. Ltd. (SNXCI) to set up a synthetic rubber plant in Liaoning Province in Northeast China with a production capacity of 100,000 tons per year. This joint venture will make Dynasol a global producer of synthetic rubber, using raw materials provided by another subsidiary of SNXCI. The new plant will use Kuo's expertise and technology and be similar to the Dynasol plant in Altamira, Tamaulipas, Mexico. Plant operations will begin in 2013.

Table 2. Mexican Firms' Foreign Direct Investment in China, 2006–12

Mexican Firm Name	Chinese Name	Sector	Operation Type	Investment (in \$million)	Chinese Site	Investment Date
Bimbo	Bimbo Beijing Food Co. Ltd.	Food & beverages	Acquisition of Panrico Beijing plant in Beijing	13.4	Beijing	2006

²³ Interceramic had previous business transactions in China with several firms, including Kito. Kito, founded in 2006, is one of the biggest manufacturers of ceramic tiles in China.

Gruma	Mission Foods (Shanghai) Co. Ltd.	Food & beverages	Production plant in Shanghai	100	Shanghai	2006
El Fogoncito	El Fogoncito	Food & beverages	2 Mexican restaurants	n.d.	Beijing	2007
Nemak	Nemak Nanjing	Auto parts	Aluminum auto parts plant	18.1	Nanjing-Shanghai	2007
Softtek	VP Global Nearshore Services; Softtek China	Information technology	Purchase of center for IT development and services from I.T. United	n.d.	Shanghai	2007
Televisa	Televisa	Communications media	Office of representation; development of TV programs w/ Chinese firms	n.d.	Shanghai	2007
Aeroméxico	Aeromexico Airlines	Transport	Representative office	n.d.	Shanghai	2008
Bimbo	Bimbo Beijing Food Co. Ltd.	Food & beverages	Bought Baiwanzhuangyuan brand	n.d.	Beijing	2009
Katcon	Katcon	Manufacturing	Plant in Shanghai	n.d.	Shanghai	2009
Bimbo	Bimbo Beijing Food Co. Ltd.	Food & beverages	Bought JinHong Wei	5	Beijing	2010
Bimbo	Bimbo Beijing Food Co. Ltd.	Food & beverages	Bought Mission Land brand	n.d.	Beijing	2010
Interceramic	Interceramic	Manufacturing	Office of representation for import/export of ceramics	n.d.	Guongzhou	2010
Grupo Kuo	INSA GPRO Synthetic Rubbers	Manufacturing	Joint venture w/ Shanxi Northern Xing for synthetic rubber plant	30	Liaoning Province	2010
Nemak	Nemak Chongqing	Auto parts	Aluminum auto part plants	42	Chongqing	2012
Omnilife	Omnilife de México	Nutrition supplements	Plant in Hefei	20	Hefei	2008–12
Gruma	Gruma	Food & beverages	Plants in Chongqing, Shenzhen & maybe Dalian	100	Chongqing, Shenzhen & maybe Dalian	2010–12
Total				328.5		

Source: Author's calculations based on combined sources used in this technical note.

7. Conclusions

Using Dunning's functional typology that defines FDI in terms of searching for raw materials and energy, entry into domestic markets, a production site and export platform, and as a source of technology, most of Mexico's investments in China fall into a few categories. First, large quasi-monopolies or dominant players in Mexico's domestic market with identifiable global branding—such as Bimbo, Grupo Modelo (with its Corona brand), Gruma and Cemex—are tapping China's domestic market. Second, a smaller group of Mexican firms—including Nematik, Softtek and Worcester, among others—is mainly using their investments to obtain a production site for efficiency and as an export platform to other countries, while also sometimes tapping a source of new knowledge and new technologies. Third, practically all Mexican FDI to China was initiated as some kind of joint venture or involved acquisition of an existing plant that allowed the Mexican firm to increase its investment and/or operate other plants more effectively. That is, with the exception of Gruma, all Mexican firms required some kind of initial learning process with a Chinese firm to compete in the new marketplace. Fifth, several of the Mexican firms, including Gruma and Nematik, already had been exporting to China for several years and had decided either directly or through customer feedback that investment in China was necessary going forward. Sixth, in all cases there was need for product adaptation, with the exception of firms such as Nematik whose products and processes are homogenized globally to meet universal standards. In the case of other products—whether bread or tortillas or TV characters—Mexican firms have had to make substantial efforts to integrate Chinese culture, tastes, customs and expectations. This required patience, time and financial resources to adapt Mexican products—even some that had previous success internationally—to the Chinese market. Seventh, in general, Mexican firms that have invested in China—from Bimbo to Gruma, Omnilife, Interceramic, CEMEX, Televisa and Kuo—are searching for access to the growing China market, particularly to the upper-end middle and higher-class segments prospering from rapid urbanization. Mexico's firms, thus, target these segments with differentiated and high-quality products that are unknown in China and elicit demand from customers willing and able to pay higher prices. Eighth, in none of the cases was the Mexican public sector—particularly the federal but also state and local government—cited for playing a role in promoting Mexican FDI to other countries, and China specifically.²⁴

It is also important to note that a small but growing group of large Mexican firms—including Aeroméxico, Canels, Grupo Villacero, Grupo Modelo, Grupo Industrial Zaga, Qinn México, Grupo Idesa, Seminis, Femsa, Truper y Urrea and Televisa, among others—were able to establish important trade relations with Chinese counterparts since the mid-2000s. An increasing number of Mexicans—most of them youth in scholarship programs from Mexican and Chinese institutions at the undergraduate and graduate level—are working in China in foreign and in Chinese firms, which will have an impact on the bilateral economic relationship in the future.

In conclusion, Mexican investments to China have been extremely concentrated in a small group of big firms, all with intra-firm research capability and the resources to attain the required know-how for investing in China. Present Mexican investments

²⁴ Starting in 2012, institutions such as ProMéxico are for the first time enhancing the internationalization of Mexican firms. The impact of these initiatives will be felt in coming years.

employ fewer than 10,000 workers in China, although the figure will increase substantially in the next decade as efforts to tap China's domestic market take hold. Providing resources for exporting and making global firms more efficient will also have an impact, but to a far lesser degree. Finally, almost no Mexican firm has thus far invested in China to gain access to higher technology.

These tendencies will have to be analyzed more deeply in the future, not only to better understand Mexican translatinas and their investments, but also to understand the bilateral relationship between Mexico and China. If the trends and realities are lagging behind initial expectations, one reason is because the two countries' federal and central governments have not made a sufficient effort to understand and facilitate the process.

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