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Analysis of Manufacturing Strategies and Profits: Industrial Development in Argentina, 1904-1930

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In this paper, I examine three manufacturing strategies to procure large rents. The three most common strategies among fifty-nine manufacturing companies across ten sectors were short-term policies undertaken to best survive recessions or satisfy immediate needs. In the early twentieth century, merchant financiers invested in manufacturing because they expected generous returns. They invested widely across sectors to reduce their risk of failure. Manufacturers developed strategies to protect their investments, but ultimately they wanted to control their respective sectors to secure high income.

In the early twentieth century, Argentina was one of the wealthiest frontier economies in the world. Argentina's economy expanded rapidly during the late nineteenth and early twentieth centuries due to the growing wealth from export of agricultural and pastoral products. Expanding incomes and consumer markets led to increased imports of manufactured goods in the late nineteenth century. As domestic production became profitable, Argentine merchants importing these goods began investing in local manufacturing. These new manufacturers started producing finished consumer goods that were previously imported by importing nearly all the manufacturing technology and raw materials. Argentine industrialization began with the importation of tried and tested manufacturing methods.

Previous studies of Argentine industrialization often have been broad in scope. Researchers relied on aggregate statistics, census data, and secondary works to explain the successes and weaknesses of Argentine industrialization.[1] These scholars discussed how Argentine manufacturing

[1] Some of these writers included: Alejandro Bunge, Roberto Cortes Conde, Ezequiel Gallo, Adolfo Dorfman, Ricardo Ortíz, Guido Di Tella, Manuel Zymelman, Aldo Ferrer, and Carlos Díaz-Alejandro. The writings of Alejandro Bunge and the group that coalesced around his *Revista de Economía Argentina* (established in 1918); Roberto Cortes Conde and Ezequiel Gallo, *La formación de la Argentina moderna* (Buenos Aires, 1973); Guido Di Tella and Manuel

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grew at a greater pace than the agriculture sector during the first half of the twentieth century. However, despite its growth, manufacturing failed to develop into an efficient and competitive sector. I examine industrial underdevelopment through the microanalyses of fifty-nine manufacturing companies' monthly reports, financial statements, and annual directors' reports from 1904 to 1930. These companies include ten manufacturing activities: burlap sack, cement, matches, tobacco, glass, breweries, paper, soap and glycerin, metallurgy, and textiles.[2]

Three strategies were most commonly used by Argentine manufacturers to protect companies from failure and to procure high profits. These strategies were short-term policies undertaken to best survive recessions or satisfy immediate needs that kept most companies from investing in long-term projects, which is essential for sustained industrial development.[3] The first strategy was to use annual income to build large reserve funds. Reserves were utilized to cover or pad losses and pay dividends during downturns, most often by holding money to "smooth" often-unpredictable fluctuations to give the illusion of upward growth. Many times, companies appeared to be doing well during downturns, but were tapping into reserves. When reserves diminished, these companies were particularly vulnerable to downturns and bankruptcy. The second strategy was manufacturers using personal connections to borrow capital from banks for immediate financing needs. They used this capital to pull companies out of crisis and to finance mergers during downturns. These mergers decreased the pool of potential competitors and increased the size of a few firms. Lastly, manufacturers developed rent-seeking strategies to restrict imports of manufactured products. Rent-seeking companies undertake activities that are directly unproductive.[4] Many companies under study yielded high returns; however, these profits were not a direct result of increased goods and services. Instead, industrial committees and lobby groups like the Unión Industrial Argentina represented manufacturers' interests to seek greater income through tariff-seeking

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Zymelman, *Los ciclos económicos argentinos* (Buenos Aires, 1973); Adolfo Dorfman, *Cincuenta años de industrialización en la Argentina, 1930-1980: Desarollo y perspectivas* (Buenos Aires, 1983); Ricardo Ortíz, *Historia económica de la Argentina* (Buenos Aires, 1974); Carlos Díaz-Alejandro, *Essays on the Economic History of Argentina* (New Haven, 1970); Aldo Ferrer, *La economía Argentina* (Buenos Aires, 1963).

[2] Metallurgy included two sub-categories: the first for medium- to large-scale foundries and the second for the handicraft producers in machine and blacksmith shops. Textiles comprised two categories: cotton and wool textiles, and canvas shoes and textiles.

[3] Helen Shapiro and Lance Taylor, "The State and Industrial Strategy," Kenneth P. Jameson and Charles K. Wilber, eds., *The Political Economy of Development and Underdevelopment*, 6th ed. (New York, 1996): 327-54.

[4] Jagdish N. Bhagwati, "Directly Unproductive, Profit-Seeking (DUP) Activities" *The Journal of Political Economy* 90 (Oct. 1982): 909.

lobbying. Generally, tariff-seeking has political legitimacy, but is directly unproductive from an economic viewpoint because it impedes market competition and efficiency.[5] Tariffs and import quotas limit the entry of imported consumer goods and reduce competition to local manufacturing. By the 1930s, manufacturers considered the Argentine government's role in industrial promotion a vital one.

Manufacturers' financial and rent-seeking strategies had both short- and long-term consequences for the development of Argentinean industry. Only a few manufacturers successfully increased their firms' size (equity and physical capital) and benefited most from restricted imports of consumer goods. They became oligopolies in their respective manufacturing sectors. Manufacturing failed to develop into a productive sector during the early twentieth century. Instead, industry was highly concentrated and underdeveloped as only a few large-scale firms possessed substantial market control.

Data and Methods

The principal source of my findings is a newly created data set gathered from 795 balance sheets and income statements belonging to fifty-nine manufacturing firms across ten manufacturing sectors between 1904 and 1930. Financial statements are particularly valuable because of the extensive information they include. I collected data on physical and working capital, short- and long-term debt, owner's equity, sales, costs, retained earnings, profit, and loss. I also used qualitative primary sources to support findings from the financial statements. These qualitative data came from companies' historical accounts, annual stockholder's meeting minutes, and annual directorial reports from 1890 to 1930.[6]

Boletín oficial de la bolsa de comercio de Buenos Aires began publishing balance sheets and income statements in 1905.[7] *Boletín oficial de la república Argentina* published balance sheets and income statements beginning in 1910. The "Memorias del directorio" or annual

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[5] Ibid.

[6] Some of these sources were available in the published finance journals of the time. These serial journals were *Boletín oficial de la república Argentina*, 1910-1931, *Monitor de sociedades anónimas* 1904-1931, *Anuario Pillado* 1898-1900, *Anuario Kraft* 1895-1930, and the *Boletín oficial de la Bolsa de Comercio de Buenos Aires* 1899-1930. These journals were located at the archive of Biblioteca Tornquist and at the Biblioteca Nacional in Buenos Aires, Argentina.

[7] The number of annual balances in my possession varies from 3 to 27 years per company. The variation is in part due to some companies going bankrupt after only a few years in business. I have fewer than 5 years of financial statements for three companies. These three companies are the cement manufacturer Cemento Argentina, the match firm Unión Fósforos Cooperativa, and the metallurgy company Unión Herradores. I included these companies because one of my goals was to compare the performance of both failed and successful companies.

directorial reports were mostly located in the stock exchange journal, *Boletín oficial de la bolsa de comercio de Buenos Aires* beginning in the 1910s. I also found individual publications of the "Memorias" as well as companies' histories and records in numerous non-serial publications beginning in 1898 at the Biblioteca Tornquist in Buenos Aires. These annual director's reports provided information on firms' annual activities and performance, end-of-the-year profits, sales, expected earnings, and how Argentina's macro economy affected their companies. The *Monitor de sociedades anónimas* included synopses of the annual stockholder's meeting minutes beginning in 1904. These synopses provided the results of directorial elections and discussed the distribution of profits. This information made it possible to follow how directors distributed their companies' profits.

I employed two cost-accounting methods to calculate companies' profits. The first estimate is return on stockholder's equity (ROE), which is net income divided by stockholder's equity. Argentine manufacturers reported net income as the sum of all gross income minus reported costs of operation, raw material costs, and money held for reserves. Gross income includes all money that came in from sales, holdover income held from previous years, interests from other investments, and money from rents and interests. Owner's equity is the sum of paid-in capital and reserves. Both equity and reserves are located on the liabilities side of the balance sheet. In ROE, I subtract both companies' reported costs from gross income and holdover income held from previous years. I do this to avoid double-counting because profits from previous years already include holdover income, and to focus on companies' current earnings for better assessment of current annual performance.

The second calculation is return on physical capital (ROK), which is net income divided by physical capital. ROK is the economic return on the physical capital invested in the firm. Physical capital is located on the assets side of the balance sheet. It is the sum of the depreciated value of all fixed properties such as buildings, factories, machinery and installations, accessories, furniture, vehicles, raw materials, work animals, and tools. It also includes the current value of land, cash, and foreign currency on hand, and all other negotiable currency. These are included on the assets side of the balance sheet.

Working capital such as inventories and accounts receivable is excluded from the calculations of ROK. Argentine manufacturing companies typically had large amounts of working capital that varied widely each year. Including working capital would inflate the assets side and undermine profit ratios. Moreover, working capital was an unstable value. For instance, companies sold their working capital at discount or

wrote it off as a loss or debt whenever the values of inventories or account receivables became too large.[8]

In these two calculations, I adjusted the "costs" side of the income statement because many manufacturers withheld income to place in reserves and labeled this as a cost. The companies' goal was to deflate current profits and shift them to a later period when the need for them was greater. Profits held for reserves were not truly a cost in the sense that the company needed the money to cover expenses in a current financial year. They did not use the money for current needs, but for contingent liabilities, future depreciation costs, future projects, and possible bad debts. By removing retained earnings from the costs side and placing them back to the income side where they truly belong, this adjustment should permit more accurate profit ratios.

I calculated the two profit ratios in the following way:

$$\text{ROE} = \frac{(\text{Gross Income} - \text{Current Costs}) - \text{Holdover Income}}{\text{Paid in Capital} + \text{Reserves}}$$

$$\text{ROK} = \frac{(\text{Gross Income} - \text{Current Costs}) - \text{Holdover Income}}{\text{Physical Capital}}$$

I also calculated leverage, which is a coefficient estimating debt divided by equity.[9] I estimated debt-to-equity ratios to determine if companies under study are taking on debt or relying on annual income for their companies' operations. I also wanted to know when debt is being accrued. Generally, if a company takes on debt, it does so to improve and expand its capital stock or organization. Highly leveraged companies or those that carry substantial debt and little equity may indicate poor money management, making the company a risky investment if and when there is an economic downturn, because the company could fail and investors lose their investment. However, no long-term debt could indicate that the company is highly profitable and using only net earnings to finance its growth and development.[10] If the company is not especially profitable, it implies that managers do not finance through debt nor have profits to invest in new technologies and organization. The latter situation is an undesirable investment.

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[8] If written off as debt, it was reported on the liabilities side of the accounting balance sheet. If written off as loss, it was reported on costs side of the income statement.

[9] Equity is calculated as the sum of paid-in capital and reserves. Debts are current liabilities or short-term debt like accounts payable, notes payable, salaries, income, and taxes payable, and long-term liabilities like bonds, mortgages, and bank loans.

[10] Technically, all firms have at least short-term debt such as accounts payable, wages payable, etc.

Normally, only long-term debt is used in estimating the debt-to-equity ratio. I included both short- and long-term debts because long-term debt (contract for more than one year) was not a common form of debt among Argentine manufacturers between 1890 and 1930. Even manufacturing bonds, which are normally a long-term debt, were a short-term investment that matured within one year. Generally, manufacturing companies with collateral could take on short-term loans from banks, which expected repayment within 6 months. If entrepreneurs had a close relationship with the bank, it was possible to extend repayment or renew a short-term loan. Thus, an official short-term debt could become, in practice, a long-term loan, but only under special circumstances.

I calculated debt-to-equity ratios as follows:

$$\text{Debt-to-equity ratio} = \frac{\text{Short-term debt + Long-term debt}}{\text{Paid-in Capital + Reserves}}$$

The final ratio calculated is firms' liquidity, which is liquid assets divided by deposits. Typically, banks perform this ratio to test if an investment is a credit risk. I used it to test if companies possessed high levels of liquidity to potentially protect their firms from bankruptcy. I measured reserves as liquid assets because the firms under study used them this way. I used paid-in capital as deposits because once deposited and paid for by investors it cannot be quickly liquidated under normal circumstances.

I estimated the ratio as:

$$\text{Liquidity Ratio} = \frac{\text{Cash (Assets side) + Reserves (Liabilities side)}}{\text{Paid-in Capital}}$$

Using companies' financial statements, these four calculations estimate the levels of profits, debt, and liquidity to assess how firms operated and performed between 1904 and 1930. Generally, the quantitative data (balance sheets) supported the qualitative data (company and directors' reports). However, in directors' reports, manufacturers can at times be self-serving as well as manipulate or exaggerate their companies' financial situations. Moreover, the qualitative data omit details that the balance sheets provided. Therefore, these two types of data can provide complementary information.

Profits: Cycles, Size, and Reinvestment

All fifty-nine manufacturing firms under study had volatile returns and suffered to some extent from the sharp variations in the Argentine economy between 1890 and 1930. Both market fluctuations and the level of tariff duties on imported consumer goods affected the size and volatility of manufacturing profits. Companies' profits could be very high during

economic upturns, but there could be substantial and consecutive losses during recessions.

During upturns, domestic companies enjoyed higher returns due to increased domestic consumption. Large-scale manufacturers using capital-intensive production methods enjoyed higher rents than small-scale artisan shops. Large-scale firms imported advanced technologies from abroad, which permitted them lower per-unit costs. Handicraft shops were labor-intensive and had high per-unit costs. Generally, Argentine consumers preferred to buy the large companies' goods because prices were slightly less expensive. In 1899 for example, the journal *Boletín Industrial* attributed the Alpargatas firm, Fábrica Argentina de Alpargatas' rapid capture of 30 percent of the Alpargatas market to its lower prices.[11] Fábrica Argentina de Alpargatas' prices were slightly below its small-scale competitors, which attracted consumers. In 1899, the company yielded 16 percent return on equity.[12]

Periods of recession tempered economic upturns. Between 1889 and 1930, Argentina's economy suffered six critical downturns: 1889-90, 1907-08, 1914-17, 1919-20, 1924-26, and 1930.[13] These down cycles were characterized as periods of uncertainty when it was unknown if, when, and to what degree the economic situation would recover or get worse. During prolonged recessions (such as from 1914 to 1917), the government might increase tariffs temporarily on imports of manufactured goods. Congress also voted to keep most tariffs at a moderate level. Members likely wanted to support the foreign trade sector and increase domestic consumption through the sale of cheaper and higher quality imports of consumer goods. Any competition from imports, however, was enough to create crisis among most Argentine manufacturers. Small-scale and inefficient firms depended heavily on high tariffs to operate in the domestic market. Most companies liquidated or severely curtailed their operations when tariffs dropped.

The largest manufacturing firms were best able to survive recessions. In the late 1920s, large-scale firms with capital-intensive machinery had the capacity to expand output and decrease per-unit costs. They competed with imports and successfully increased sales volume. In 1929 for example, the owners of Fábrica Argentina de Alpargatas reported

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[11] *Boletín Industrial* (Buenos Aires, 1900). *Alpargatas* are canvas shoes with rubber bottoms.

[12] Equity in only this case referred to paid-in capital. Ricardo Pillado, *Anuario Pillado de la deuda pública y sociedades anónimas establecidas en las repúblicas Argentina y del Uruguay para 1899-1900* (Buenos Aires, 1900), 345.

[13] Critical periods in the economy were determined from annual directorial reports. Also, Cortés Conde, *La economía Argentina en el largo plazo* and David Rock, *Argentina: From Colonization to Alfonsín* (Berkeley, Calif., 1987).

how they had increased sales volume by 30 percent.[14] Their goal was to maintain previous years' profit levels. However, in 1929 their profits were declining because prices were significantly lower due to increased competition from imports.[15] Prices for manufactured goods dropped further when foreign manufacturers with large inventories (attracted by reduced tariffs) sold products en masse and well below cost.[16] Also in 1929, metallurgy company Ferrum complained that lower market prices were due to the "dumping of cheap" imported metallurgical goods.[17] This forced Ferrum to sell their goods at the same prices or lower than imported products to attract consumers.[18]

How large were manufacturing profits? Despite relatively low income during downturns, Tables 1 and 2 demonstrate that manufacturing profits were large. All industrial sectors under study except textiles and paper enjoyed double-digit rates from 1904 to 1930. Similarly, other Argentine industries like the manufacturers of butter, cookies, shoes, alcohol distilling, and refrigeration enjoyed double-digit rates.[19] Although not every manufacturing firm under study enjoyed double-digit profits per annum, companies generally had returns that were higher than yields to government and domestic bank bonds. Government bonds yielded on average between 4.5 and 6 percent from 1900 to 1930.[20] Most domestic bank bonds yielded between 2 and 8.5 percent from 1914 to 1929.[21] Manufacturing dividends to stockholders were also higher than those offered by domestic banks. Manufacturers paid between 6 and 40 percent dividends (ordinary) between 1921 and 1923.[22] In contrast, banks paid between 6 and 10 percent dividends (ordinary) during the same period.[23]

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[14] "Fábrica Argentina de Alpargatas," Memoria del directorio, *Boletín oficial de la bolsa de comercio de Buenos Aires* (1929) [hereafter, *BOBCBA*].

[15] "Fábrica Argentina de Alpargatas" Memoria del directorio *BOBCBA* (7 April 1930), 919.

[16] Dumping is the practice of selling goods from abroad below cost or at a price below that charge in domestic market to eliminate surplus.

[17] "Ferrum" Memoria del directorio, *BOBCBA* (20 Jan. 1930), 174.

[18] "Ferrum" Memoria del directorio, *BOBCBA* (20 Jan. 1930), 174-5.

[19] T. R. Ainscough, "Growing Money in Argentina: A Concise Guide to Capital Investment for All Classes," *River of the River Plate* 65 (8 June 1928): 26-27, 29.

[20] "International stock dividends," *The Economist*, 1900-1930; *BOBCBA*

[21] Banks under study and their bond yields were Banco El Hogar Argentino (2%), Banco de Galicia y Buenos Aires (12%), and Banco Popular Argentino (6%), Banco Comercial del Tandil (5%), Banco de la Provincia de Buenos Aires (3.5%), and Banco de Italia y Río de la Plata (2.5%). "Informaciones" *Monitor de sociedades anónimas* 21 (March 1916), 126-127; "Informaciones" *Monitor de sociedades anónimas* 22 (July 1916): 39, "Informaciones" *Monitor de sociedades anónimas* 23 (February 1917): 71 [hereafter *MSA].* For years 1918-1929, see *BOBCBA* and *Boletín oficial de la República Argentina* [hereafter *BORA*].

[22] Based on a cross-section of companies under study between 1921-23. These were Compañía General de Fósforos, Cristalerías Rigolleau, Fosforera Argentina,

TABLE 1
Average Annual Rates of Return by Industrial Sector
Return on Physical Capital and Stockholder's Equity, 1904-1930
Ten Activities, Fifty-Nine Firms

		Adjusted Values*	
Sector	N	Return on Physical Capital	Return on Stockholder's Equity
Brewery	7	15.2	13.9
Burlap Sack	4	49.0	10.0
Cement	2	1.6	11.4
Glass	3	15.8	13.0
Match	3	18.0	13.1
Metallurgy	10	23.3	16.8
Paper	6	2.4	3.8
Soap	1	9.2	9.2
Wool and Cotton Textiles	15	1.0	1.6
Tobacco	8	43.4[a]	10.2

Source: Y. Pineda, Financial statements data set (March 2003). Data gathered from 795 companies' balance sheets and income statements, 1904 to 1930, *MSA*, *BOBCBA*, BORA.

[a]Generally, tobacco firms had low accumulation of physical capital. Rates of return on physical capital were generally high.

*See Section 'Data and Methods'

Manufacturing profits were large in part because the fifty-nine companies under study had oligopoly control. They had few competitors that could produce goods on an equal scale. We cannot analyze high

Compañía General de Envases, Cristalerías Papini, El Eje, Ferrum, Cervecería Río Segundo, Cervecería Palermo, Introductora, Piccardo, Elaboración General del Plomo, and Campomar y Soulas. Some companies offered large dividends of up to 40 percent. Monthly data reported in "Cronica de asambleas" *MSA* (1921-1923).

[23] I based this information from bank data that reported paying dividends. These banks were Banco Escolar Argentina, Banco el Hogar Propio, Banco Popular Argentino, Banco de Italía y Río de la Plata, Nuevo Banco Italiano, Banco de Galicia y Buenos Aires. Monthly data reported in "Cronica de asambleas" *MSA* (1921-1923).

TABLE 2
Average Annual Returns of Fifty-Nine Argentine Firms, 1904-1930
(Percent)

Company Name	Industry	Years[1]	Yield on Capital Stock	Yield on Stock-holders' Equity
Argentina Quilmes	Brewery	1909 - 1915/1924 -1930	18.8	29.1
Argentina San Carlos	Brewery	1914-30	11.0	9.9
Buenos Aires	Brewery	1906-30	14.1	10.4
Del Norte	Brewery	1913-30	4.2	3.1
Palermo	Brewery	1904-30	14.1	10.8
Río Segundo	Brewery	1906-30	12.1	10.7
Schlau	Brewery	1909-30	32.4	23.0
		Average	15.2	13.9
Bolsalona	Burlap Sack	1921-30	11.1	8.6
Del Sel	Burlap Sack	1921-30	-5.4	-5.2
Primitiva	Burlap Sack	1905-30	80.1	19.2
Salinas	Burlap Sack	1910-30	110.3	17.5
		Average	49.0	10.0
Argentina Cemento Pórtland	Cement	1916-30	17.4	23.8
Cemento Argentina	Cement	1910-11	-14.3	-1.0
		Average	1.6	11.4
Argentina de Tejidos	Cotton/Wool Textiles	1921-24	-26.7	-11.8
Argentina de Tejidos de Punto	Cotton/Wool Textiles	1926-30	14.6	4.6
Baibiene y Antonini	Cotton/Wool Textiles	1923-30	-3.7	-0.9
Campomar y Soulas	Cotton/Wool Textiles	1922-30	25.7	16.2
Cía Nacional de Tejidos y Sombreros	Cotton/Wool Textiles	1904-10	7.2	3.8
Cotonificio Dell'Acqua	Cotton/Wool Textiles	1914-20	8.6	9.4
Dasso-Crotto, Hilandera Argentina de Sisal	Cotton/Wool Textiles	1923-29	-27.7	-26.2
Fábrica Argentina de Alpargatas	Cotton/Wool Textiles	1908-30	21.7	17.3
Hilandera Argentina	Cotton/Wool Textiles	1919-25	5.5	8.1
Hilanderías Argentina de Algodón	Cotton/Wool Textiles	1906-12	-25.2	-15.0
Manufactura Algodonera Argentina	Cotton/Wool Textiles	1925-29	6.4	5.7
Masllorens	Cotton/Wool Textiles	1924-30	13.8	10.6
Sedalana	Cotton/Wool Textiles	1925-30	20.3	11.7
Textil Argentina	Cotton/Wool Textiles	1919-27	-17.3	-4.7
Textil SudAmericana	Cotton/Wool Textiles	1911-21	-8.1	-4.1
		Average	1.0	1.6

Company Name	Industry	Years[1]	Yield on Capital Stock	Yield on Stock-holders' Equity
Papini	Glass	1913-30	11.7	11.6
Rigolleau	Glass	1907-30	4.4	6.3
Compañía General de Envases	Glass and boxes	1910-30	31.3	21.2
		Average	15.8	13.0
Compañía General de Fósforos	Match	1904-30	35.7	18.4
Fosforera Argentina	Match	1909-30	13.8	10.2
Union Fósforos	Match	1909-10	4.5	10.6
		Average	18.0	13.1
Acero-Platense	Metallurgy	1905-11	7.8	8.6
Anglo-Argentine Iron and Steel Co.	Metallurgy	1925-30	33.7	42.6
Cantábrica	Metallurgy	1905-30	33.5	14.4
El Eje	Metallurgy	1905-30	45.9	17.5
Elaboración General del Plomo	Metallurgy	1909-30	14.4	15.7
Ferrum	Metallurgy	1911-30	38.0	23.7
LaMetal/Thyssen-LaMetal	Metallurgy	1922-30	36.4	21.6
Talleres Metalúrgicos/ TAMET	Metallurgy	1909-30	6.3	5.8
Unión Fundición y Talleres	Metallurgy	1907-30	11.8	13.1
Unión Herradores	Metallurgy	1910-13	5.0	5.3
		Average	23.3	16.8
Americana	Paper	1906-08	4.8	7.5
Argentina	Paper	1906-24	11.2	11.4
Buenos Aires, Fábrica de Papel	Paper	1906-09	22.0	16.1
Casati	Paper	1911-25	5.8	6.0
Fenix	Paper	1915-24	2.6	3.9
Papelera Argentina	Paper	1925-30	12.2	10.3
		Average	2.4	3.8
Cia de Productos Conen	Soap	1910-30	9.2	9.2
Argentine Tobacco Company	Tobacco/Cigarette	1912-18	28.4	4.6
Ariza	Tobacco/Cigarette	1915- 17	2.2	2.5
Defensa	Tobacco/Cigarette	1921-30	91.3	7.8
General de Tabacos	Tobacco/Cigarette	1909-11	19.0	21.1
Introductora de Buenos Aires (Cigars)	Tobacco/Cigars	1904-30	87.8	14.9
Nacional de Tabacos	Tobacco/Cigarette	1913-30	9.2	0.7
Piccardo	Tobacco/Cigarette	1914-30	66.1	14.5
Tabacalera Argentina	Tobacco/Cigarette	1914-30	[a]	15.5
		Average	43.4	10.2

Source: Yovanna Pineda, Financial statements data set (March 2003).
Data gathered from 795 companies' balance sheets and income statements, 1906 to 1930, *MSA*, *BOBCBA*, *BORA*.

[1]Years for which balance sheets and income statements were available.

[a]Company reported zero value for physical capital.

profits in Argentina as reflecting a Schumpeterian cycle of dynamic competition.[24] Argentine managers had considerable interest in obtaining the highest returns possible. The top managers had substantial control of their firms: they were the owners, sat on the firms' directorial boards, and were major stockholders in the enterprises they managed. They had the most to gain from consistent and healthy dividend payments.

Although oligopoly control played a role in procuring excessive profits, there were three other reasons why companies reaped double-digit profit rates. First, the results from yield on capital stock (ROK) could be misleading due to the reporting practices of depreciation at that time. Generally, Tables 1 and 2 demonstrate that return on capital stock is usually higher than return on owner's equity. Companies depreciated their physical capital on a less than regular basis. The depreciation value is the initial value of the item less the portion representing services of the asset already utilized. In several cases, firms depreciated all at once in a single year. This would make profits appear lower in previous years then suddenly larger in the year that the firm depreciated. In 1923, the Argentina Inspección General de Justicia set minimum accounting standards for depreciation.[25] These depreciation codes required that companies depreciate regularly. Nonetheless, after 1923, many firms continued to depreciate in a less than consistent manner. Tobacco firms in particular reported an extremely low value for physical capital. In some cases, companies allowed their physical capital to depreciate to zero value. These manufacturers failed to invest in new physical assets, holding onto old machinery and aging equipment. In these instances, the rate of return on capital stock appeared extremely large because physical capital could be valued at one peso.

Protective tariffs were the second reason for high profits. Generally, the intent of tariffs is to raise prices temporarily to protect infant industries from the onslaught of imported manufactured goods. These imported goods are often more efficiently produced and of higher quality. They are also potentially less expensive to consumers, even with

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[24] In this cycle, high profits are part of a process of innovations that create monopolies, which in turn provide incentives for imitators to step forward, and thereby drive these profits back to zero. Dennis C. Mueller and John Cubbin, eds., *The Dynamics of Company Profits: An International Comparison* (Cambridge, U.K., 1990), 3.

[25] The minimum depreciation cost of furniture, fixtures, work animals, and vehicles was 10% annually over the initial value, and 10% annually over acquisitions made during the financial year. The minimum depreciation cost of machines was 5% annually over the initial value. Installations, tools, and materials were to depreciate at a rate of 20% per annum over the initial value, or in five segments so that within five years, the value of these will be zero. "Interpretación del formulario de balances para las sociedades anónimas," *Guía de socieadades anónimas, 1928-1929* (1929).

tariffs. Argentine manufacturing was generally inefficient. Therefore, tariff rates were set high to force domestic consumers to buy locally produced goods. The most politically influential group, Unión Industrial Argentina (UIA), lobbied to increase tariffs on imported consumer goods.[26] By 1904, most imports of consumer goods had an *ad valorem* duty of 25 percent. On certain articles, the duty was higher than 50 percent. This was the case for articles such as burlap sacks, nails, bolts, and matches. UIA frequently requested higher tariffs protecting local manufacturers. They argued that if consumer goods could be produced locally, then imports should not be permitted to compete with nascent local industries.[27]

Protection increased domestic prices and, in turn, companies enjoyed higher returns. For example, the soap company, Compañía de Productos Conen, which recorded a 6 percent loss in 1912, delivered a 35 percent return on equity in 1915.[28] The company attributed this dramatic increase to the reduction in imported candles due to increased tariff protection.[29] Other industries also enjoyed high returns. The duty for imported nails and bolts was 50 percent; in 1905, the tariff for wax matches was 60 percent.[30] The burlap sack industry enjoyed some of the largest returns when the Argentine Congress passed a 40 percent duty on imported burlap sacks and regulated annual sack production, keeping sack prices artificially high.[31] In 1913, two burlap sack companies, Salinas and Primitive, enjoyed 37 and 41 percent returns on owner's equity, respectively.[32] These companies reaped triple-digit profits from 1918 to 1919 when a brief economic boom coincided with tariff protection.[33] In 1918, Primitiva paid a 100 percent dividend to its ordinary shareholders.[34] Between 1890 and 1925, Primitiva paid 637 percent in dividends, averaging 18.2 percent per annum.[35]

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[26] Peter H. Smith, *Argentina and the Failure of Democracy* (Madison, Wisc., 1971).
[27] Unión Industrial Argentina, *La Unión Industrial Argentina ante el Honorable Senado de la Nación* (Buenos Aires, 1920), 14.
[28] Profit rates from ratios compiled for Compañía de Productos Conen.
[29] "Compañía de Productos Conen," Stockholder's Meeting, *MSA*, 21 (27 April 1916), 195. The company reported high profits in 1916, 1918, and 1921. It attributed its success to protective tariffs.
[30] "Tarifas de Aduana, fosforos," (1905); *The Economist* (1905) reported tariffs for wax matches were as high as 350%!
[31] James Scobie, *Revolution on the Pampas: A Social History of Argentine Wheat, 1860-1910* (Austin, Texas, 1964), 96.
[32] Primitiva and Salinas, Balance sheets and income statements, *BOBCBA* (1913).
[33] Primitiva, Balance sheets and income statements, *BOBCBA* (1918-1919).
[34] Ibid.
[35] T. R. Ainscough, "Growing Money in Argentina: A Concise Guide to Capital Investment for All Classes," *Review of the River Plate* 66 (15 June 1928), 19.

Finally, income appeared high due to directors' manipulation of account reporting. For periods of 1 to 3 years, directors could adjust accounting values on the balance sheet to hide losses and high levels of debt. In the 1918-1919 accounting sheet, for example, owners of the match company, Compañía General de Fósforos changed the method of reporting the value of its land from historical cost to current cost.[36] This change increased the assets side of the balance sheet by nearly 11 million Argentine pesos between 1918 and 1919.[37] Compañía General de Fósforos changed its reporting methods to balance the two sides of the accounting balance sheet. In 1918, the company increased its debt, accruing larger reserves, revealed on the liabilities side of the balance sheet, and increased the assets side correspondingly. As they paid off the debt, the owners began depreciating physical capital on the assets side at a faster rate. In the early 1920s, profits appeared much larger due to this accounting manipulation. Between 1904 and 1930, by ROK estimates Compañía General de Fósforos' average returns were 35.7 percent; the ROE estimate of average returns for the period is 18.4 percent. This second estimation helped to balance some of Compañía General's less than consistent accounting and depreciation practices.

The paper and cotton textiles industries were the exception to double-digit returns. These two industries made, on average, between 1.6 and 3.8 percent return on stockholder's equity from 1904 to 1930. Low profits were the result of inefficient performance, low demand for the local product, and relatively insufficient tariff protection. Like most Argentine industries, these two had very high costs because they imported nearly all machinery and raw materials from abroad. Even with a 25 percent *ad valorem* duty, imported paper and cotton textiles were preferred and in demand.

In the cotton textiles industry, profits were lower than expected due to both low demand for domestic cloth and insufficient inputs of imported cotton. Although cotton was harvested in the northern Argentine provinces as early as 1903, it was in short supply and of low quality due to its short and coarse fibers. Domestic cotton potentially damaged imported machinery because the technology required the imported cotton with longer and softer fiber strands. For the most part, Argentine textile manufacturers could not effectively compete with relatively inexpensive, good quality imported cotton textiles. British manufacturers, in particular, produced higher quality cotton cloths and more cheaply than

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[36] This change appears as a note on the accounting sheet. The historical cost is the initial value of which the fixed assets were valued when first purchased. This value may not be indicative of the amount for which the asset could be sold or of its ultimate worth to the party owning or using it. Current cost is a replacement cost or the amount needed to obtain the same asset or its equivalent.

[37] "Compañía General de Fósforos," Balance sheets and income statements, 1918-1919.

Argentine producers.[38] Tariffs remained relatively low for imports of manufactured cotton textiles. The Argentine government likely sought to maintain good trading relations with European importers. These imported cotton textiles were also needed to fill growing Argentine demand.

Cotton textile firms had the shortest operating histories. Generally, the textiles industry had numerous entrants, but only a few in the wool textiles and canvas industries had long-term operating histories between 1900 and 1930.[39] In theory, there were fewer cost barriers to entry in textile manufacturing because entrants could import spindles and looms on a small-scale or buy used machinery from abroad.[40] However, there were few to no small-scale entrants. Before 1912, the main factories were two large-scale cotton textiles firms, Hilanderías Argentinas de Algodón and Compañía Nacional de Tejidos y Sompreros. These two companies began operating in 1904 and 1906, but both had failed by 1912. Directors of these companies blamed their failure on the short supply of inputs and the import of competing cotton textiles.[41]

In 1911, the textile company Compañía Textil SudAmericana attempted to circumvent the problem of input shortages and fulfill market demand for textiles. It invented its own patented production methods to produce cloth and substitute the import of cotton textiles.[42] The company manufactured its own looms, spindles, and other machinery to produce cloth and yarn (see Image 1). The owners wanted to use local fibers and linseed grown in Buenos Aires province to produce the cloth.[43] By 1914, the Argentine Congress heralded this effort to substitute the import of cotton yarn and textiles.[44] It debated subsidizing the company's efforts. It also encouraged other companies to use locally grown raw materials to make cloth.[45] Textil SudAmericana, however, failed to develop a product that was both inexpensive and of high quality. Although the company's cloth was of fair quality, the new material was coarse and expensive to produce. Textil SudAmericana lost money for most of its eleven years in

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[38] Lars G. Sandberg, "Movements in the Quality of British Cotton Textile Exports, 1815-1913," *Journal of Economic History*, 28, no. 1, (March 1968): 1-27.

[39] This work examined the operation of fourteen textile companies for which information was available from 1900 to 1930.

[40] Stephen Haber, *Industry and Underdevelopment: The Industrialization of Mexico, 1890-1940* (Stanford, Calif., 1989); *Anuario Argentina* (Buenos Aires, 1941).

[41] Hilanderías Argeninas de Algodón MSA; Cia Nacional de Tejidos y Sombreros MSA.

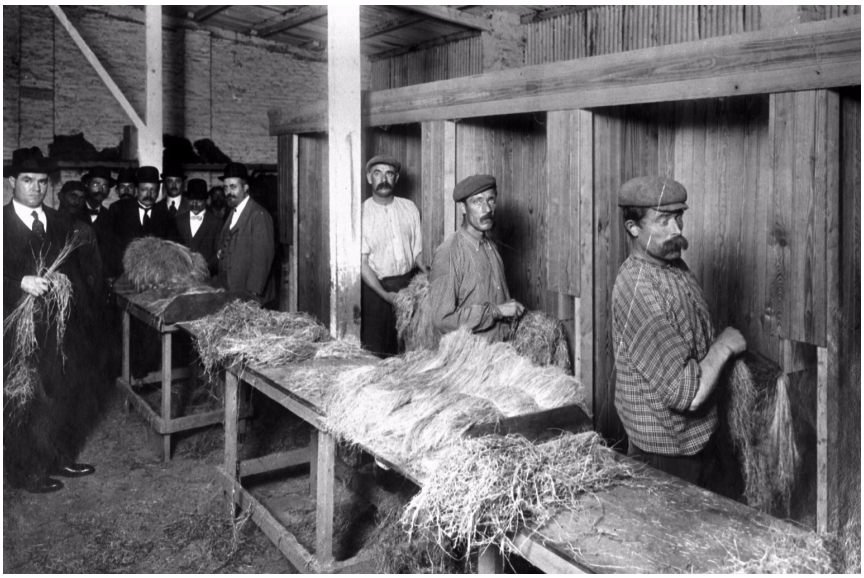
[42] This smaller-scale, short-lived textiles company should not be confused with the giant international corporation, Textil SudAmericana, S.A.

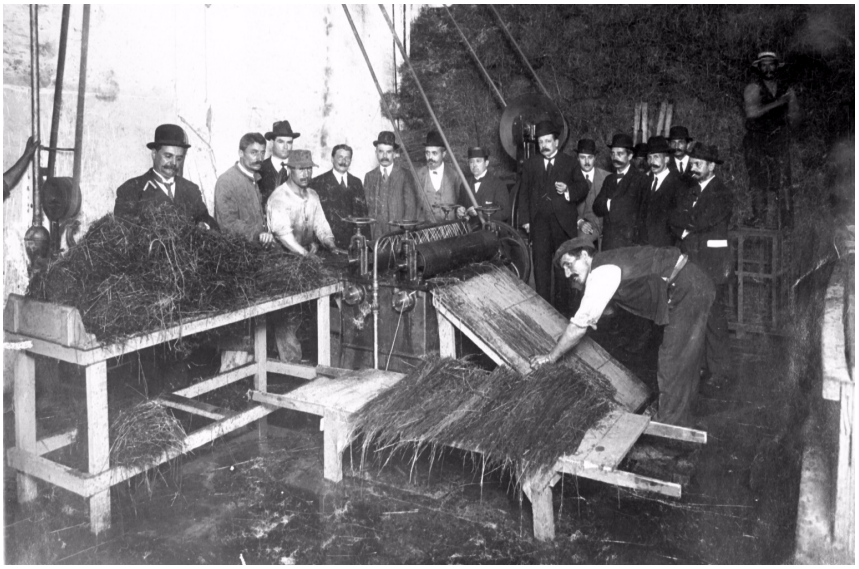
[43] "Compañía Textil Sudamericana, *MSA* (1911).

[44] Argentina, Honorable Diputados de la Nación, *Diario de sesiones de la Cámara de Diputados de la Nación* (Buenos Aires, 1914).

[45] Ibid.

business and filed for bankruptcy in 1921.[46] Even with moderate tariff protection and some subsidized cost, the company's prices were still too high and its product quality too low to effectively compete with imported cotton cloth and yarn from Europe.





Textil Sudamericana, 1911. Source: Archivo General de la Nación Argentina, Buenos Aires.

[46] "Compañía Textil Sudamericana," Balance sheet and income statements, *Boletín oficial de la República Argentina* (1911-1921); "Compañía Textil Sudamericana," *MSA* (1922).

The paper industry's low profits were due to inefficient use of machinery and poor quality. Most firms failed to operate their capital-intensive machinery to full capacity, and therefore experienced higher per unit costs. As early as 1898, Argentina Fábrica de Papel was the only large-scale paper manufacturer and could have had nearly 100 percent of the local newsprint market, although its product was likely inferior to imported newsprint paper. However, it produced well under its capacity and newsprint continued to be imported from abroad.[47] In 1898, it produced 1,000 kilograms of newsprint per day, only 2 percent of its 50,000 kilograms per day capacity.[48]

Where did the large profits made by most industries under study go? They did not immediately or directly invest profits back into the companies. Examining the distribution of net profits using companies' income statements and dividend reports, I found that they placed net income in reserves and paid shareholders' dividends.[49] Successful owners paid dividends annually and the percentage paid per share could be in the double-digits. For example, during a good year in 1919, the burlap sack company, Salinas Hermanos paid a 70 percent dividend to its ordinary shareholders. If profits were particularly high, in addition to dividends, the directors paid special bonuses to shareholders and themselves. The shareholders who benefited most from high dividends were the owners who were also the directors, top managers, and even the founders in some cases.

Owners also placed substantial amounts of net income into reserves. High reserves served as cash that could save companies from bankruptcy during recessions. Three factors aiding companies' long-term business success were the size of profits during prosperous periods, amounts from those profits devoted to reserves, and owners' capabilities to draw on accumulated reserves during downturns. Economic downturns resulted in a large number of bankruptcies of small-to-medium-scale retail and manufacturing companies.[50] Companies failed for numerous reasons,

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[47] Export trade statistics of products shipped to Argentina. United States, Foreign Commerce and Navigation of the United States (Washington D.C., 1890-1930) and Great Britain, Annual statement of the overseas trade of the United Kingdom (London, 1900-1930).

[48] *Finanzas, comercio e industria en la República Argentina de 1898* (Buenos Aires, 1898), 126.

[49] Balance sheets and income statements are available in *BORA*, 1910-1930 and *BOBCBA*, 1905-1930. Annual and provisional dividends were printed in *BOBCBA*, 1913-1930.

[50] *MSA* reported general bankruptcy figures. The finance journals, *Cronista Comercial* and *Avisador mercantíl* reported company names and amounts lost in bankruptcy. Both of these sources could be located at the Biblioteca Tornquist.under "Indice Estadístico de las convocatorias, quiebras, concursos,

but they largely went bankrupt due to capital shortages. In published bankruptcy reports, owners attributed their bankruptcies to their inability to raise capital and to general shortages of equity capital during downturns.[51] Owners used reserves to cover basic operating and maintenance costs as well as to pay debts; some claimed that their costs were so high that they could not build reserves to protect their firms.

Owners anticipated economic downturns and tried having large amounts of cash in reserves. Table 3 shows the average rate of liquidity of each of the fifty-nine Argentine firms between 1904 and 1930. The Argentine commercial code required that cash in reserves account for 10 percent of shareholder's equity. However, successful manufacturers held reserves that accounted for up to 70 percent of owner's equity.[52] Accumulated annual earnings in reserves were used for numerous purposes: to invest in public bonds, finance expansion or improvement projects, remunerate the directors, shareholders, and employees, and allowances.[53] Valuation reserves or allowances were used to cover basic costs such as depreciation, bad debtors, to reduce accounts receivable, and other provisions created by charges to the profit and loss statement.[54]

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civiles y arreglos desde el primero de enero al 30 de Septiembre," 1920-1940 in the *Cronista Comercial.*

[51] Declarations known as "retirement of status" were published bankruptcy statements that gave the company the opportunity to declare the events and processes leading to the bankruptcy.

[52] The Argentine Commercial Code declared that a reserve fund shall be formed by at least 2% of realized net profits each year until such fund amounted to a minimum of 10% of the capital stock of the company. However, Argentine companies had reserves in amounts well above the basic requirements. Argentina Ministerio de Justicia, *Argentine Commercial Code of 1889* (1889), Article 369.

[53] A general outline for distribution of profits was: 5% to a reserve fund, 10% to contingent liability fund, 10% to the directorial board, 2% to the auditors, and the remainder distributed to shareholders. However, these percentages depended on a firm's bylaws. Ministerio de Justicia, Inspección General de Justicia, *Nueva fórmula obligatoria para balances de sociedades anónimas, nacionales y extranjeras. Decreto aprobatorio del Ministerio de Justicia e Instrucción Pública. Edición especial del Monitor de sociedades anónimas y patentes de invención* (Buenos Aires, 1925).

[54] Annual retained earnings might also be placed in what was known as a hidden reserve fund, represented by understatements of annual income. Hidden reserves were stated in the accountant's notes at the end of the balance sheet, or listed as costs instead of income in the income statement.

TABLE 3
Average Liquidity and Debt-to-Equity of Fifty-Nine Argentine Firms, 1904-1930
(Percent)

Company Name	Industry	Years	Liquidity	Debt-Equity
Argentina Quilmes	Brewery	1909 - 1915/1924-30	64.5	152.5
Argentina San Carlos[1]	Brewery	1914-30	30.3	57.8
Buenos Aires	Brewery	1906-30	26.6	51.7
Del Norte	Brewery	1913-1930	15.5	67.7
Palermo	Brewery	1904-30	70.3	59.0
Río Segundo	Brewery	1906-30	25.3	21.2
Schlau[1]	Brewery	1909-30	102.8	161.0
		Average	47.9	81.6
Bolsalona	Burlap Sack	1921-30	40.9	64.0
Del Sel	Burlap Sack	1921-30	31.2	98.4
Primitiva[2]	Burlap Sack	1905-30	50.9	24.5
Salinas[2]	Burlap Sack	1910-30	23.5	28.5
		Average	36.6	53.9
Argentina Cemento Pórtland	Cement	1916-30	15.5	102.1
Cemento Argentina[2]	Cement	1910-11	3.4	29.2
		Average	9.5	65.7
Argentina de Tejidos[2]	Cotton/Wool Textiles	1921-24	1.3	5.5
Argentina de Tejidos de Punto[2]	Cotton/Wool Textiles	1926-30	6.2	58.2
Baibiene y Antonini	Cotton/Wool Textiles	1923-30	22.8	49.0
Campomar y Soulas[1]	Cotton/Wool Textiles	1922-30	26.9	60.8
Cía Nacional de Tejidos y Sombreros[2]	Cotton/Wool Textiles	1904-10	71.4	45.0
Cotonificio Dell'Acqua[1]	Cotton/Wool Textiles	1914-20	17.6	203.4
Dasso-Crotto, Hilandera Argentina de Sisal	Cotton/Wool Textiles	1923-29	1.6	117.6
Fábrica Argentina de Alpargatas	Cotton/Wool Textiles	1908-30	54.2	49.8
Hilandera Argentina[1]	Cotton/Wool Textiles	1919-25	19.8	67.7
Hilanderías Argentina de Algodón[2]	Cotton/Wool Textiles	1906-12	2.5	19.0
Manufactura Algodonera Argentina[1]	Cotton/Wool Textiles	1925-29	13.6	75.0
Masllorens	Cotton/Wool Textiles	1924-30	8.8	22.7
Sedalana	Cotton/Wool Textiles	1925-30	7.3	62.0
Textil Argentina[2]	Cotton/Wool Textiles	1919-27	0.9	19.6
Textil SudAmericana[2]	Cotton/Wool Textiles	1911-21	1.6	27.9
		Average	17.1	58.9
Papini	Glass	1913-30	70.3	30.2
Rigolleau	Glass	1907-30	23.1	74.3

Company Name	Industry	Years	Liquidity	Debt-Equity
Compañía General de Envases[1]	Glass and boxes	1910-30	55.2	47.8
		Average	49.5	50.8
Compañía General de Fósforos[1]	Match	1904-30	50.6	12.4
Fosforera Argentina	Match	1909-30	40.5	17.3
Union Fósforos[2]	Match	1909-10	14.4	136.3
		Average	35.2	55.3
Acero-Platense[2]	Metallurgy	1905-11	2.2	62.0
Anglo-Argentine Iron and Steel Company[1]	Metallurgy	1925-30	416.5	415.8
Cantábrica	Metallurgy	1905-30	26.9	16.0
El Eje	Metallurgy	1905-30	78.0	8.9
Elaboración General del Plomo[1]	Metallurgy-Lead	1909-30	18.2	66.1
Ferrum[1]	Metallurgy	1911-30	41.9	22.9
LaMetal/Thyssen-LaMetal[1]	Metallurgy	1922-30	37.4	422.9
Talleres Metalúrgicos/ TAMET[1]	Metallurgy	1909-30	16.7	77.6
Unión Fundición y Talleres	Metallurgy	1907-30	45.4	36.1
Unión Herradores[2]	Metallurgy	1910-13	68.3	138.8
		Average	75.2	126.7
Americana[2]	Paper	1906-08	32.2	137.2
Argentina[1]	Paper	1906-24	22.2	22.2
Buenos Aires, Fábrica de Papel[2]	Paper	1906-09	2.2	23.6
Casati[1]	Paper	1911-25	16.6	33.5
Fenix[1]	Paper	1915-24	6.3	81.1
Papelera Argentina[1]	Paper	1925-30	14.9	13.0
		Average	15.7	51.8
Cia de Productos Conen	Soap	1910-30	111.1	140.1
Argentine Tobacco ompany[2]	Tobacco/Cigarette	1912-18	9.1	12.8
Ariza[1]	Tobacco/Cigarette	1915-17	27.5	159.2
Defensa[1]	Tobacco/Cigarette	1921-30	8.8	100.8
General de Tabacos[1]	Tobacco/Cigarette	1909-11	9.8	149.9
Introductora de Buenos Aires (Cigars)	Tobacco/Cigars	1904-30	29.3	84.0
Nacional de Tabacos	Tobacco/Cigarette	1913-30	31.2	45.6
Piccardo	Tobacco/Cigarette	1914-30	22.3	29.1
Tabacalera Argentina	Tobacco/Cigarette	1914-30	20.2	149.6
		Average	19.8	91.4

Source: Y. Pineda, Financial statements data set (March 2003).
Data gathered from 795 companies' balance sheets and income statements, 1906 to 1930, *MSA*, *BOBCBA*, *BORA*.

[1]Merged with or acquired by another firm. [2]Declared bankruptcy by 1935.

Most companies under study considered building reserves a priority, in anticipation of downturns. New firms like the cotton textiles company, Hilanderías Argentinas de Algodón, placed all of the firm's first annual earnings into reserves.[55] It was also common for new companies to pay lower dividends in order to place more net income into reserves. In 1910 for example, directors of the match company, Fosforera Argentina, could have paid an 18 percent dividend to their ordinary shareholders, but instead they paid a 12 percent dividend and retained the remaining 6 percent in reserves.[56] Owners considered these reserves important for their company's survival. Directors also voted to cancel projects and divert income to reserves. For example, in the 1920s, the metallurgy company, Cantábrica, created a fund to finance improvements to factory organization. By late 1929 however, they decided to divert this fund to build a "cushion" in anticipation of a future downturn.[57] Similarly, in 1929, the directors of the lead company, Elaboración General del Plomo placed all that year's earned income in a reserve and discontinued all plans for an expansion project, using the expansion fund to increase the size of their reserves.[58]

Why did companies need large reserves? Reserves were a form of self-financing. They were necessary because finance capital for manufacturing was limited, and difficult to obtain for three reasons. First, Argentine credit markets were not as well established as Europe's long-term lending institutions. Argentinean manufacturers made large and long-term loan agreements with banks where they had personal connections, or they borrowed from wealthy directors. Second, manufacturers did not typically use the Buenos Aires stock market to raise capital, because the stock exchange listed only the largest companies.[59] Lastly, general investors from the business community did not randomly invest in a manufacturing company. Investors had some relationship with the owners or directors of the companies they helped to finance; they were privy to internal company operations. Major shareholders and directors of

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[55] In *Manuel Chueco versus Hilanderías Argentinas de Algodón*, 1906, *MSA* 7 (1909), 126-129, Chueco sued the company for his share of 2% of annual profits for serving as auditor for one year. He claimed that because the all profits were designated to reserve funds, he received no compensation for his services.

[56] "Fosforera Argentina," *MSA* (1910).

[57] "Cantábrica," Memoria del directorio, *BOBCBA* (1929).

[58] "Elaboración General del Plomo," Memoria del directorio, *BOBCBA* (Buenos Aires, 3 Nov. 1930), 354-356.

[59] Leonard Nakamura and Carlos E. J. M. Zarazaga, "Banking and Finance in Argentina in the Period 1900-35," CLAE Working paper no. 0501, June 2001; viewed 30 March 2003. URL: **http://www.dallasfed.org/htm/latin/claeworks. html.**

a manufacturing company typically had long-standing business relationships and, in some cases, close social ties.[60]

Owners used reserves to continue paying dividends and to conceal or pad low profits during downturns when all forms of finance were limited, hoping to maintain the appearance of stable performance to general investors. In the late nineteenth and early twentieth centuries, investors had safer investment opportunities, such as government or bank bonds, which provided stable returns. Manufacturers had to pay dividends to keep investors' confidence. It was common for successful firms to maintain large and numerous reserve funds—hidden or reported in the balance sheet—to protect themselves during bad business cycles. Compañía General de Fósforos for example, used reserves to smooth out turbulent cycles from1918 to 1919, 1921 to 1922, and between 1926 and 1929.[61] Compañía General de Fósforos' profits appeared steady between 1918 and 1929. However, if reserves and profits were low in any particular year, companies like the Elaboración General de Plomo, still made efforts to maintain investors' confidence. For example, they paid a small cash dividend, but also issued new company shares to investors as a form of remuneration.[62]

Small-scale manufacturing companies had difficulties collecting income to create large reserves. They suffered when critical periods extended 2 or more years because reserves ran out. For example, in 1924 the glass company, Cristalerías Papini, placed all profit income into reserves and stopped paying dividends.[63] As this crisis continued into 1925, Papini closed two branch factories in Avellaneda and Rosario to curtail operations and reduce costs.[64] They placed the income from the sale of these two properties into reserves.[65] However, despite Papini's efforts, in 1929 it used its reserves to cover the loss of $183,070 Argentine paper pesos.[66] In only one year, the company depleted its entire reserve income.[67] Thereafter, Papini was particularly vulnerable to downturns. Moreover, by not paying dividends, Papini shook investors' confidence.

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[60] Abridged list of members in the Jockey Club available in Jorge Newton, *Historia del Jockey Club de Buenos Aires* (Buenos Aires, 1994).

[61] Profit was reported $2,220,000 m/n for years 1918 and 1919, $3,150,000 m/n for 1921 to 1922, and $3,058,823.53 m/n for 1926 to 1929. Balance sheets and income statements, 1918 to 1929, Compañía General de Fósforos, *BOBCBA*.

[62] "Elaboración General de Plomo," Aviso de pago de dividendos, *BOBCBA*.

[63] "Cristalerías Papini," Memoria del Directorio, *BOBCBA* (8 June 1925), 1082.

[64] "Cristalerías Papini," Memoria del directorio , *BOBCBA* (15 April 1929), 854-855.

[65] "Cristalerías Papini," Stockholder's meeting, *MSA* (1925), 183.

[66] "Cristalerías Papini," Memoria del directorio, *BOBCBA* (1930) and Financial statement (1929).

[67] "Cristalerías Papini," Memoria del directorio, *BOBCBA* (1930); Balance sheet and income statement.

Investors began withdrawing their support, further exacerbating the company's equity problems.[68]

Directors used reserves, the most basic way to gather capital, to protect their companies from capital shortages. Reserves were a short-term, firm-level solution to the lack of established credit markets. However, reserves could easily run out during downturns and were not an ideal solution for companies' long-term stability. Access to finance capital was a prerequisite to manufacturing success. All firms under study that operated for more than 10 years had close links to finance capital through personal or directorial links.

Financial Strategies

Nearly all firms under study borrowed capital to pull their companies out of financial crisis or to finance a merger. Directors borrowed capital because as the major stockholders, they had the most to lose financially from a company's failure, and they risked losing their own business reputations. The Argentine business community was relatively small. Business savvy and reputation were essential to longevity in business across sectors.

Owners borrowed finance capital and used their wealthy shareholders' capital to save their companies from financial failure. For example, in 1922 the glass company, Cristalerías Rigolleau was suffering from capital shortages and high debt. The directors used their financial connections to rescue the company from potential financial failure.[69] The owners had one of their wealthy directors, Carlos Tornquist, use his finance company to renegotiate new mortgage terms and issue company bonds. Similarly, in 1921 Talleres Metalúrgicos was in crisis when it used all of its reserves to cover that year's loss of over 570,000 Argentine paper issues. Then it used paid-in equity capital to pay off large debts. Thereafter, the directors planned to strengthen their company's financial position to prevent another crisis by increasing equity capital. They issued new ordinary and preferred shares to raise equity. Generally, high levels of paid-in equity capital reduced companies' risk. Because general investors would likely not buy shares from a company in crisis, the directors requested their wealthy shareholders and directors buy these new equity shares.[70] It is likely that lack of capital was the reason the owners also began offering preferred shares with guaranteed fixed interest

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[68] "Cristalerías Papini," Memoria del directorio, *BOBCBA* (1930); Balance sheet and income statement (1929).

[69] "Renovación de obligación hipotecaria otorgada por la sociedad anónima, Cristalerías Rigolleau y la Fideicomisaria Sociedad anónima 'Financiera, Comercial, e Industrial, Ernesto Tornquist y Cia, Ltda," *BOBCBA* (15 May 1922), 807-816.

[70] "Cristalerías Rigolleau," *MSA*.

rates.[71] In this manner, the firm quickly increased equity capital from 2.9 million paper pesos in 1920 to 6.6 million paper pesos by the end of 1921.[72] Directors of the tobacco firm Piccardo also increased their firm's paid-in capital to strengthen their financial position, raising their equity capital from 7.5 million in 1914 to 45.5 million by 1920 by offering preferred shares with guaranteed interest rates between 5 and 7.5 percent and requesting that wealthy shareholders buy them.[73]

Manufacturers also funded mergers by borrowing finance capital. Companies merged both vertically and horizontally to reduce competition and diversify product lines. In most cases, directors diversified product lines to reduce the risk of failure, not solely to enter new markets. Mergers increase firms' market power and the ability to restrain output and increase prices. These mergers permitted firms to rapidly consolidate physical assets, equity, and investors' capital. The owners' goal was to maintain or increase profits by capturing larger market shares. Successful companies turned to limiting all competition by acquisitions that increased their firms' size and decreased the number of potential large-scale competitors. By the 1920s, mergers were quite common. For instance, between 1923 and 1926, owners of the metallurgy company, Talleres Metalúrgicos, negotiated the merger of five of the largest metallurgy firms in Argentina.[74]

Similarly, beginning in 1910, manufacturers of the paper company, Argentina Fábrica de papel, acquired the assets of the two dissolved companies, Buenos Aires and Americana, to increase their physical capital.[75] In 1924, the same manufacturers led the merger of three large-scale paper corporations, Argentina Fábrica de Papel, Fenix, and Bernal to create one giant paper corporation, Papelera Argentina.[76] They purchased the Bernal factory simply to shut off its production.[77] Papelera Argentina's Director's reports demonstrate that they considered this merger as the surest path to increased profitability. In 1927, the owners of Papelera Argentina reported the purchase of the paper corporation Casati and

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[71] "Cristalerías Rigolleau," *BOBCBA*.

[72] "Talleres Metalúrgicos, Special stockholder's meeting report and revised company bylaws," *MSA* (1921-1922).

[73] Piccardo tabacos, Balance sheets and income statements, *BORA* and *BOBCBA*.

[74] The five firms were Alberto de Bary y Cía, Zimmerman, Noe, y Cía, Eugenio C. Noe y Cía, Mercantíl y Rural (1923), and the Anglo-Argentine Iron and Steel Company. *Revista Tamet* (Buenos Aires: Biblioteca Tornquist, April-May 1944).

[75] Buenos Aires, Fábrica de papel, Bankruptcy report, MSA (1908).

[76] Americo E. Rava, "Historia y estado actual de la industria del papel en la Argentina," *Los Ingenieros Argentinos en la industria nacional* (Buenos Aires, 1914): 123-138.

[77] Fernando Rocchi, "Building a Nation, Building a Market: Industrial Growth and the Domestic Economy in Turn-of-the-Century Argentina" (Ph.D. Diss., University of California Santa Barbara, 1997).

expected larger future returns.[78] Papelera's directorial reports of this transaction discussed how they paid $262,976.63 national pesos to purchase Casati in 1926, and they would realize long-term benefits through increased market power and larger profits.[79] In the late 1920s, Papelera Argentina continued to acquire other paper companies to increase market shares.[80] In addition to consolidating physical capital, manufacturers of Papelera Argentina were pleased to merge with other wealthy financiers. For example, Hilario H. Leng, who sold Fenix and Casati, requested shares and a directorial position in Papelera Argentina.[81] Papelera also negotiated with the wealthy merchant-financier family, the Devotos. In 1926, Papelera purchased the paper company, Bernal, from the Devoto group. In lieu of cash payment, the Devoto group opted for 82,027 shares (series B) in Papelera Argentina.[82]

There were also vertical mergers wherein companies managed all stages of production. Ideally, vertical mergers eliminated intermediaries and therefore lowered costs, which the company could potentially pass on to consumers in the form of lower prices. However, in Argentina, companies that merged vertically kept prices high and owners benefited from larger profits and dividends. Vertical mergers increased directors' control in the production processes and diversified product lines to reduce risk of failure. In 1903, for example, the glass company Compañía General de Envases led a merger of three companies that produced glassware, glass bottles, and cardboard boxes for glass packaging.[83] Similarly, by 1910, the Compañía General de Fósforos acquired chemical, printing, and paper factories to manufacture the phosphoric acid, paper, and printing for its matches. Both companies enjoyed very healthy returns between 1904 and 1930. If demand for their matches and glassware decreased during down cycles, these two firms could rely on selling cardboard boxes, paper, and printing services.

Mergers were very costly and increased the acquiring companies' debt levels. Table 3 shows that companies involved in merger transactions had higher debt-to-equity ratios than firms that did not manage mergers. In some cases, this relatively high ratio was due to an acquired company over-extending themselves before the merger. When companies failed, owners simply liquidated and sold their companies' assets to recover some of their losses. In most cases, manufacturers took on debt to merge or

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[78] "Papelera Argentina," Memoria del directorio, *BOBCBA* (31 Oct.1927), 1005.
[79] Ibid.
[80] In 1929, Papelera Argentina also acquired the paper company, La Anaino. "Papelera Argentina," Memoria del directorio, *BOBCBA*, (11 Nov. 1929), 1371.
[81]"Papelera Argentina," Bylaws, *BOBCBA* (1924).
[82] "Compañía General de Fósforos," Memoria del directorio, *BOBCBA* (4 July 1927), 49.
[83] "Compañía General de Envases," Memoria del directorio, *MSA* (1903), 238-239.

acquire failed companies because they expected larger returns in the near future. Owners wanted to limit domestic competition. In most cases, they successfully increased their firms' size and decreased the number of large-scale competitors.

Manufacturers' Rent-seeking Strategies

Between 1904 and 1930, industries underwent cycles of high profits and falling rates. These were partly macroeconomic cycles; however, they were also due to large-scale companies' overproduction. In most cases, Argentine manufacturers overestimated demand and imported machinery capable of producing well above demand. It was common for companies under study to have large inventories due to excess productive capacity. Argentine manufacturers failed to develop technology specific to local needs. Instead, technical change consisted of keeping machinery idle to control excess output. In Argentina, an inefficient industrial sector emerged due in part to importing inappropriate technology. Dominant firms imported the latest technology from abroad, but this technology was inappropriate for Argentina's small domestic markets. These capital-intensive machines were designed to produce for tens of millions consumers.[84] By 1930, Argentina's population was approximately 11 million.[85]

Manufacturers were concerned with excess productive capacity because profits declined. For example, in 1924, Cristalerías Rigolleau purchased new ovens from the United States with the capacity to produce 20 tons daily of clear and white glass.[86] This new machinery was in addition to their highly productive old machines.[87] In 1925 Cristalerías Rigolleau's profits declined from 6.6 percent return on capital stock in 1924 and to 1.7 percent by 1925.[88] Directors attributed profit decline to the over-production of glass that resulted in large inventories and reduced prices. By 1926, the directors had shut down their two largest ovens to

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[84] Haber, *Industry and Underdevelopment*.

[85] There was no official count of the Argentine population between the censuses of 1914 and 1935. Several organization and authors estimated the population size based on city censuses, population density, and immigration statistics. Alejandro Bunge discussed population size and growth in *Población total de la Argentina: razón de su crecimiento* (Buenos Aires, 1917). See also "Argentina's Population" *Review of the River Plate* 67 (5 July 1929): 51.

[86] "Cristalerías Rigolleau," Stockholder's meeting, *MSA* (1924), 26-27.

[87] Between 1908 and 1911, Cristalerías Rigolleau had machinery and ovens with the capacity to produce annually 50,000 tons of glass bottles, and 8,000 tons of glassware containers according to "Historia de Rigolleau," unpublished document available at Biblioteca Tornquist.

[88] Cristalerías Rigolleau, Balance sheets and income statement, 1924-1926, *BOBCBA*.

reduce inventories, which had more than doubled in size and value since the previous fiscal year.[89]

Bank ties, mergers, and large reserves could potentially save a company from bankruptcy, but these were not guarantees. Most owners invested substantial amounts of capital and used personal connections to set up manufacturing in Argentina. They wanted exclusive rights to domestic markets. Between 1890 and 1930, manufacturers requested government assurances of a friendly domestic market in the form of protective tariffs and import quotas to ensure high returns. Manufacturers argued that they needed large returns to support the high costs of setting up infant industries in an agricultural economy.[90]

As early as 1910, manufacturers helped to set up industrial committees through the Chamber of the Buenos Aires stock exchange (Chamber), Ministry of Hacienda, Ministry of Justice, and strengthened the political role of the Unión Industrial Argentina (UIA). Not all of these committees were pro-protectionist. In 1911, the Chamber's committee on commerce and industry argued for little State intervention in industrial promotion because it reduced efficiency and competition.[91] They also discussed the problems of suddenly increasing protective tariffs to help nascent industries. High tariffs resulted in raised domestic prices for basic consumer goods. These higher prices primarily affected the purchasing power of the poor and working classes. [92] The committee also discussed that the object of industrialization should be increasing national productivity.[93]

Big industrialists supported high protective tariffs on imports of consumer goods as well as reduced corporate taxes and the establishment of import quotas. They wanted "free trade," or little-to-no tariffs on the imports of machinery, petroleum, and raw materials, which they needed to produce consumer goods. Essentially, manufacturers sought an easy manufacturing experience based on imported materials and machinery while importation of the article blocked from entry.[94]

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[89] Cristalerías Rigolleau, Stockholder's meeting, *MSA* 42 (1926), 56.

[90] Unión Industrial Argentina, *Texto del memorial con que la Unión Industrial Argenitnarespondió a la consulta que le formulara la Comisión de Presupuesto y Hacienda de la H. Cámara de Diputados sobre el actual estado económico del país* (Buenos Aires, 1922), 5-7.

[91] "Congreso Nacional del Comercio, Consideraciones sobre la industria nacional," *BOBCBA* 341 (23 Oct. 1911): 535-537.

[92] "Congreso Nacional del Comercio, Consideraciones sobre la industria nacional," 533.

[93] "Congreso Nacional del Comercio, Consideraciones sobre la industria nacional," 534.

[94] Idea discussed for import-substitution industries in Latin America. Albert O. Hirschman, "The Political Economy of Import-Substituting Industrialization in Latin America," *Quarterly Journal of Economics* 82 (Feb. 1968): 11

The UIA largely represented a politically influential class of manufacturers.[95] Between 1914 and 1922, they lobbied for the Argentine government to promote industry, arguing that industry needed protective tariffs to stimulate industrial growth and encourage new entrants through increases in domestic prices.[96] The competition from imports, they stated, hurt Argentina's infant industries and reduced the size of domestic industry.[97] Ultimately, increased tariffs would not only strengthen domestic industry, but also reduce the apparent high levels of industrial concentration.[98]

The higher tariffs and import quotas on specific articles certainly increased domestic prices, but these measures failed to decrease the high levels of industrial concentration. Instead, industrial concentration remained the same or even increased in a few cases. For the most part, high protective tariffs and the *aforo* strengthened large-scale producers' positions.[99] Industrial promotion measures helped large companies with access to capital obtain near-exclusive rights to the domestic market. Protected from any competition from imports, these companies enjoyed handsome profits. Beginning in 1919, the Argentine Socialist party campaigned to create national anti-trust laws, criticizing high tariffs because poor and working-class consumers paid higher prices for basic consumer goods while industrialists enjoyed oligopoly rents.[100] In 1923, Argentina's Congress passed the first anti-monopoly and anti-trust law.[101] However, there were no anti-monopoly convictions of the dominant firms under study before 1930 because it was difficult to prove such allegations.

By the late 1920s, the Argentine government noted that industry was still concentrated despite government efforts.[102] The Argentine Congress debated new methods to push industrial growth and reduce concentration.[103] They considered easing legal requirements for incorporation and capitalization to increase the number of industrial

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[95] "Protectionism in Argentina: The Folly of Underestimating the Strength of the Protectionist Movement," *Review of the River Plate* 66 (3 Feb.1928), 17.

[96] Argentina Ministerio de Hacienda, Tercer Censo Nacional: Censo de las Industrias, 1914, Volume 7 (Buenos Aires, 1917), 16; Luis Pascarella, Los derechos aduaneros a los tejidos de algodón (Petición de los Fabricantes a la H. Cámara de Diputados, 1918).

[97] Unión Industrial Argentina (1922), 5.

[98] Guillermo Padilla, *La Unión Industrial Argentina ante el Honorable Senado de la Nación* (Buenos Aires, 1920): 1-20 and Unión Industrial Argentina (1922), 6.

[99] In Argentina, the a*foro* was a special duty applied to all tradable goods.

[100] Jorge Schvarzer, *Empresarios del pasado: la Unión Industrial Argentina* (Buenos Aires, 1991), 51.

[101] Argentine Law number 11,210, 28 Aug. 1923.

[102] Argentina, *Diario de sesiones de la Cámara de Diputados* (Buenos Aires, 1929-1932).

[103] Ibid.

firms. In 1932, they passed the Limited Liability Partnership Law.[104] The purpose of the limited liability partnership was to increase the number of firms and potentially decrease industrial concentration.[105] The Limited Liability Partnership Law was intended for no more than twenty partners to invest in commercial and manufacturing activity.[106] This law resulted in an increase in small-scale manufacturing firms, but the size regulations prevented these companies from effectively competing with large-scale corporations. The measure failed to reduce concentration or to significantly push the growth and development of Argentine industrialization.

Conclusion

In the early twentieth century, merchant financiers invested in manufacturing because they expected generous returns. They invested widely across sectors to reduce their risk of failure. Manufacturers developed strategies to protect their investments, but ultimately they wanted to control their respective sectors to secure high profits. The three characteristics of the successful firms under study were that they grew larger by way of mergers and acquisitions, increased their equity capital through the sale of bonds and preferred shares, and enjoyed high rents from import restrictions. A few large-scale firms with capital-intensive technology had the greatest longevity. This handful of firms enjoyed oligopoly control in their respective sectors.

How did manufacturers' strategies affect the structure and development of Argentine manufacturing? These strategies retarded industrial development because only a few entrants could afford the machinery, capital, and political links to strengthen their companies' positions. Even new firms with similar machine capacity could not compete in markets that were already glutted with goods produced by established large-scale firms so few new firms posed threats to the established large-scale companies.

Increased tariffs provided incentives for small-scale firms to enter industry through higher domestic prices. These new small-scale entrants however, were less efficient and depended on tariffs to operate. Large-scale firms benefited from the many inefficient small-scale firms in Argentina. Prices were high enough that even if large companies sold products slightly below small shops, they could still earn high profits. Most small-scale enterprises had substantially higher per-unit costs that they needed higher income to cover.

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[104] "Sociedades de responsabilidad limitada," Ley número 11,645 (8 Oct. 1932).
[105] *Diario de sesiones de la Cámara de Diputados*, (1929-1932).
[106] "Sociedades de responsabilidad limitada," Ley número 11,645 (8 Oct. 1932), Artículo 9.

The initial industrial promotion policies that began during Argentina's first phase of modern industrialization snowballed into excessive tariffs, subsidies, quotas, and other restrictions between 1930 and 1989. These policies blocked a healthy form of internal competition and were detrimental to efficient production. Several of the large-scale dominant firms under study enjoyed their status as late as 1989. In 1990, President Carlos Menem began privatization policies and substantially lowered tariffs to allow the entry of imported consumer goods. Competition from these new imports led to bankruptcy for many small and large-scale companies that were highly inefficient and excessively dependent on tariff protection.