11

South Korea: Enterprising groups and entrepreneurial government

ALICE H. AMSDEN

INDUSTRIALIZATION THROUGH LEARNING

At the heart of South Korea's industrial transformation has been the family-controlled, diversified big business group, or *chaebol*. The enterprise system that is centered around the chaebol, which I call state entrepreneurial capitalism, has differed from the established classifications of modern enterprise systems, such as the personal capitalism of Britain, the competitive managerial capitalism of the United States, or the cooperative managerial capitalism of Germany.[1] Korea's enterprise system most closely resembles that of Japan's prewar *zaibatsu*, and both enterprise systems are part of a more general "late"-industrializing paradigm.[2] But Korea's enterprise system differs from that of Japan insofar as the chaebol were denied their own banking affiliates by a state-owned banking system. This accorded the government through its credit allocation far more power over the process of industrialization and the policies of big business than was characteristic even of Japan.

With Japan's "demonstration effect" – which showed that it was possible for a backward country to industrialize – the Korean government staked its own survival on economic growth rather than cronyism, and used its power to promote systematic capital accumulation through savings

[1] Alfred D. Chandler, Jr., *Scale and Scope: The Dynamics of Industrial Capitalism* (Cambridge, MA: Harvard University Press, 1990).

[2] For Japan see Hidemasa Morikawa, *Zaibatsu: The Rise and Fall of Family Enterprise Groups in Japan* (Tokyo: University of Tokyo Press, 1992); for a discussion of the late-industrializing paradigm, see Takashi Hikino and Alice H. Amsden, "Staying Behind, Stumbling Back, Sneaking Up, Soaring Ahead: Late Industrialization in Historical Perspective," in William J. Baumol, Richard R. Nelson, and Edward N. Wolff, *Convergence of Productivity: Cross-Country Studies and Historical Evidence* (New York: Oxford University Press, 1994).

and investment. It not only supported big business but also disciplined it by exacting performance standards in exchange for various subsidies, such as preferential credit and protection from foreign imports and investments. Political loyalty was a necessary but not sufficient condition for receiving lucrative incentives. If a targeted firm proved itself to be a poor performer, it ceased being subsidized – as evidenced by the high turnover among Korea's top-ten companies between 1965 and 1985.[3] In turn, Korean companies grew big enough to insist on a workable standard of honesty and efficiency on the government's part. A system of "countervailing power" arose, comparable with that described in the United States by Galbraith,[4] with two crucial differences: labor was missing from the equation, and the powerhouse in Korea in the period 1962–1989 was decisively government.

Korea's GNP in this period grew annually at a breakneck average rate of over 8 percent (Table 11.1 presents some basic macroeconomic data), transforming this populous yet resource-poor former colony of Japan into an emerging East Asian industrial power. Growth was triggered by a military government committed to economic development. In mid-1965 the government lifted restrictions on imports for export processing but strengthened protection for domestic industries and subsidies for exports, thereby precipitating an export boom in light manufactures. In the 1970s the government launched an ambitious investment plan for heavy industry. By the 1980s exports of "mid-technology" products such as steel, ships, and then automobiles and consumer electronics became Korea's leading sector.

Despite world record rates of economic growth the chaebol still managed to increase their share of GNP, which is the rough measure of their power that has most excited public ire. By 1988 the revenues of the top-ten business groups equaled about 60 percent of GNP, up from 15 percent in 1974. The revenues of the top four groups alone more than quadrupled in relation to GNP, from 10 percent to 46 percent over the same time period (see Table 11.2).[5]

[3] For instance, only three of the ten largest chaebol in 1965 remained among the top-ten companies in 1975. See Linsu Kim, "South Korea," in Richard R. Nelson (ed.), *National Innovation Systems* (New York: Oxford University Press, 1993).

[4] John K. Galbraith, *American Capitalism* (New York: Houghton Mifflin, 1952).

[5] The concentration of the chaebol is less dramatic when their share of value-added or even shipments is examined, although even some estimates of sales show less extreme concentration than the data in Table 11.2. See, for example, Kyu-Uk Lee, S. Urata, and I Choi, "Recent Developments in Industrial Organizational Issues in Korea" mimeograph copy (Washington, DC: Korea Development Institute and World Bank, 1986). Discrepancies appear to arise due to different definitions of "company," which sometimes refers to a

Table 11.1. *Macroeconomic indicators, 1962–1994*

	1969	1979	1989	1994[a]	Average annual change, % 1962/1969	1970/1979	1980/1989	1990/1994[a]
Per capita GNP (US$)	210	1,644	4,968	8,824[b]	—	—	—	—
Real GNP (bil. US$)	6.6	61.4	209	297	8.9	8.9	8.3	7.5
Exports (bil. US$)	0.7	14.7	61.4	93.7	41.7	38.1	15.9	9.2
Imports (bil. US$)	1.6	19.1	56.8	96.8	27.5	29.6	13.0	10.8
Gross domestic investment[c] (% of GNP)	27.9	35.9	34.7	36.2	—	—	—	—
Gross saving[d] (% of GNP)	21.4	28.4	36.3	35.3	—	—	—	—
Inflation (CPI, %)	—	—	—	—	11.5	15.2	8.4	7.3

[a] 1994 data are preliminary.
[b] Per capita income reached $10,000 in 1995.
[c] 11.8% in 1962.
[d] 11.0% in 1962.
Source: Bank of Korea, *Economic Statistics Yearbook* (Seoul: Bank of Korea, various years).

Table 11.2. *The top-ten business groups' share of GNP, 1974–1988 (combined sales)*

Groups	1974	1978	1984	1988[a]
1	4.9	6.9	12.0	15.2
4	10.3	20.7	44.3	45.9
10	15.1	30.2	67.4	60.9

Notes: Share of GNP Figures = (Aggregate revenues of the largest one, four, and ten business groups/GNP) × 100 for each year. Data for sales are more reliable than data for value-added, but overstate the position of leading enterprises. Sales data indicate position of leading enterprises, including their consumption from suppliers.
[a] Not strictly comparable with previous years due to different source.
Sources: 1974, 1978, and 1984: Seok Ki Kim, "Business Concentration and Government Policy: A Study of the Phenomenon of Business Groups in Korea, 1945–1985," Ph.D. Dissertation, Harvard Business School, 1987; 1988: Compiled from Bankers Trust Securities Research and Korea Investors Service, Inc. *Zaebols in Korea* (Seoul: 1989).

South Korea has achieved world-record growth rates without any of its leading, large family-controlled enterprise groups enjoying the competitive advantage of pioneering technology, the hallmark of the First and Second Industrial Revolutions. Even European countries that fell behind their neighbors economically could usually exploit some original artisan technology in world markets to help them earn invaluable foreign exchange (examples are French porcelains, Czech crystal glass, Italian designs, and Spanish sherry). South Korea's industrialization has been a pure case of learning, or borrowing technology that has already been commercialized by firms from other countries. The absence of an asset in the form of original technology, modern or indigenous, is the meaning I attach to industrializing "late."[6]

By this definition Japan was the first successful late industrializer, but Japan's industrialization was facilitated by the significant market power

business group and sometimes to a business affiliate only. The data in Table 11.2 for 1974, 1978, and 1984 refer to groups and were compiled from raw sales data by Seok Ki Kim, "Business Concentration and Government Policy: A Study of the Phenomenon of Business Groups in Korea, 1945–1985," Ph. D. Dissertation, Harvard Business School, 1987.

[6] Alice H. Amsden, *Asia's Next Giant: South Korea and Late Industrialization* (Oxford: Oxford University Press, 1989). See also Alice H. Amsden, *The Rise of the Rest: Late Industrialization outside the North Atlantic Region* (in preparation).

it derived from being a colonizer. Neither Korea nor Taiwan, its principal colonies, enjoyed comparable power. In addition, Korea and Taiwan had the nontrivial task of having to compete against Japan itself. Korea, with a population of over 40 million people, twice that of Taiwan's, is possibly the first major ex-colony of a great power to reach a high level of industrial transformation and per capita income ($10,000 by the end of 1995), with neither proprietary technology nor colonial leverage over product markets and raw materials.

Two general properties of late industrialization have been the interventionist state as well as the diversified business group. Without proprietary technologies to capitalize upon, and with the risks inherent in specializing in a narrow product range whose technology is exogenously controlled, leading enterprises throughout Latin America, Asia, the Middle East, and South Africa have tended to diversify widely into technologically unrelated "mid-tech" industries.[7] The diversification pattern of the chaebol is a good example of this, and is depicted in Table 11.3. Obviously the degree of diversification and its unrelatedness diminish the smaller the business group, but considering that the top-twenty business groups in Korea have diversified widely, and together control over 300 subsidiaries, unrelated diversification in Korea is marked.

While diversified business groups tend to be ubiquitous in late-industrializing countries, they are proportionately greater and larger in Korea than elsewhere.[8] The size and resource concentration of Korea's top business groups are partly due to politics (discussed later) and partly to Korea's growth pattern, which has taken the form of a great spurt

[7] Amsden, *Asia's Next Giant*, and Hikino and Amsden, "Staying Behind." There are general reasons behind the rise of diversified business groups, as well as country-specific reasons which influence their absolute size, the industries in which they operate, and other particularistic characteristics. Business groups in Taiwan, for example, tend to be smaller than in Korea due to government credit allocation and industrial licensing policies (see the representative case of the Aurora Group in Bing-Eng Wu, "The Aurora Group," in N. T. Wang (ed.), *Taiwan's Enterprises in Global Perspective* (Armonk, NY: M. E. Sharpe 1992), pp. 309–25. Writing about Japan, Hidemasa Morikawa notes: "The main sources of the enormous wealth of the larger *zaibatsu* families lay in profits accumulated from government patronage [as in Korea] and mining. . . . The *zaibatsu* were thus a product of the owner families' money and their salaried managers' desire to diversify" (*Zaibatsu*, p. xxiii). Cultural and other societal influences on Korean business history in general were also undoubtedly influential, but limited space precludes giving them their rightful due. For a cultural interpretation of Korean big business, see Roger L. Janelli with Dawnhee Yim, *Making Capitalism: The Social and Cultural Construction of a South Korean Conglomerate* (Stanford, CA: Stanford University Press, 1993).

[8] Alice H. Amsden and Takashi Hikino, "Project Execution Capability, Organizational Know-how, and Conglomerate Corporate Growth in Late-Industrialization," *Industrial and Corporate Change*, 3, 1 (March 1994), pp. 111–147.

Table 11.3. *The chaebol's diversification pattern, 1984*

Business group	Single	Dominant	Related	Unrelated	
	(Percent of Size Group, %)				
10 largest (213)[a]	0	10	10	80	= 100%
11–20 largest (123)[a]	0	20	30	50	= 100%
21–50 largest (206)[a]	0	30	47	23	= 100%
51–108 largest (246)[a]	21	36	33	0	= 100%
Total (788)	11	31	34	24	= 100%

[a] Total number of subsidiaries for size category.
Source: Young Ki Lee, "Conglomeration and Business Concentration in Korea," in Jene K. Kwon (ed.), *Korean Economic Development* (New York: Greenwood Press, 1990).

rather than a gradual expansion. Korea's manufacturing base at the end of the Korean War (1950–1953) was negligible compared with that of Brazil, Mexico, Argentina, and India, and Korea had to make a big push in order to catch up.[9] Hothouse growth tends to decrease the chances for firms of different size and structure to germinate, since competition for scarce resources is more intense than under evolutionary conditions. Furthermore, the prevalence of private big business groups in Korea stems from the paucity of foreign and state enterprises, a reflection of national policy. The only major state-owned manufacturing firm in Korea is the Pohang Iron and Steel Company (POSCO), and apart from industries oriented toward labor-intensive exports and some high-tech joint ventures, there is no mid-tech sector dominated by foreign firms. The output share of domestic private big business in Korea is thus extraordinarily high partly because the alternatives are missing. Gereffi found that, out of a country's ten largest companies in 1987, state and foreign companies accounted for nine in Brazil, eight in Mexico, four in Taiwan (all four state enterprises), and only one in Korea (POSCO).[10] Korea, therefore,

[9] The ratio of manufacturing to agricultural net product in 1955 was only 0.20 for Korea compared with 1.32 for Argentina, 0.72 for Brazil, 1.00 for Mexico, and 0.30 for India (which was low due to India's vast agricultural sector rather than the underdevelopment of its industry).
See Alfred Maizels, *Industrial Growth and World Trade* (Cambridge: Cambridge University Press, 1963).

[10] Gary Gereffi, "Big Business and the State: East Asia and Latin America Compared," *Asian Perspective*, 14, 1 (Spring–Summer 1990), pp. 5–29.

provides an excellent laboratory to study big, private, indigenous business in late industrialization (although from a short historical perspective).

This chapter addresses three questions. First, why was it the chaebol, rather than another type of business organization, that developed Korea's forces of production? This question is formulated to emphasize the importance of entrepreneurship, which is necessary for the forces of production to be thoroughly transformed. Korea's big business groups have been as objectionable politically and socially as the robber barons of the United States or the zaibatsu of Japan. They may also have been inefficient in their formative years in not scrupulously maximizing output per unit of input at the margin.[11] But beyond any doubt they have been enterprising learners – absorbing foreign technology, diversifying production, and pumping out exports.

Given that the chaebol have dominated the Korean economy, and given that the Korean economy has diversified and grown exceptionally fast, the chaebol's effectiveness as industrializers is taken for granted. The second question addressed, therefore, is, What accounts for the chaebol's competitive success?

The third question relates to the role of the state. If, as defined by Schumpeter, entrepreneurship involves the conception of new economic opportunities and the coordination of the resources necessary to exploit

[11] Theoretically, one would *not* expect to find high estimates of total factor productivity growth for late-industrializing countries because such countries grew by borrowing new technology rather than by innovating their own new products and processes. Therefore, improvements in their productivity should be incorporated in capital stock and labor inputs, in which new technology is embodied, rather than in a shift in a production function, which is what the residual in econometric estimates of total factor productivity allegedly captures. Assuming perfect capital and product markets, total factor productivity growth for technology borrowers should be zero plus a small margin for what could be called "mini-innovation," or whatever firm-level learning is necessary to make borrowed technology work. The empirical evidence for total factor productivity for South Korea and other late-industrializing countries tends to be contradictory and based on unreliable data for capital. For high estimates of total factor productivity growth in South Korea, see World Bank, *The East Asian Miracle: Economic Growth and Public Policy* (Washington, DC: World Bank, 1993). For low estimates, see Jene K. Kwon and Kyhyang Yuhn, "*Analysis of Factor Substitution and Productivity Growth in Korean Manufacturing*, 1961–1981," in Jene K. Kwon (ed.), *Korean Economic Development* (New York: Greenwood Press, 1990), pp. 145–66; and Jene K. Kwon, "The East Asian Challenge to Neoclassical Orthodoxy," *World Development*, 22, 4 (April 1994), pp. 635–44. An inkling that data on total factor productivity are unreliable may be found in the results of Alwyn Young, as cited by Paul Krugman, "Myth of East Asia's Miracle," *Foreign Affairs* (November–December 1994), pp. 62–78. Young's data measure total factor productivity growth for 1970–1985 for sixty-six countries. Counterintuitively, Egypt, Pakistan, Botswana, Congo, and Malta rank at the top while Switzerland ranks at the bottom. See Alwyn Young, "Lessons from the East Asian NICS: A contraction view," *European Economic Review*, 38 (1994), 964–973.

them, then the state has been Korea's greatest entrepreneur. Without original technologies to underscore competitiveness and shape the economy's direction of change, the state's role in all late-industrializing countries has been far more active than even Alexander Gerschenkron entertained.[12] Because big business–focused growth and proactive state intervention have gone-hand in hand in Korea, and because both business and government have been entrepreneurial, and both have relied heavily on hierarchies of managers to execute their plans, I have called Korea's enterprise system state entrepreneurial capitalism (which is not to be confused with Franco Amatori's characterization in Chapter 8 of Italy's enterprise system as political managerial capitalism).

Both state entrepreneurial capitalism and the chaebol's excesses have elicited prolific and passionate criticism from numerous Korean scholars, particularly those educated in the United States.[13] If, however, one infers from the fact of Korea's rapid growth that big business has done a respectable job in developing the productive forces, then, given the government's ubiquity in the economy, one must also concede that the government has done a respectable job. One cannot argue simply on the basis of theory that Korea might have grown even faster with smaller firms and less government intervention because there is no evidence for this, not even from a country roughly comparable with Korea. While the excesses of big business and the state cannot be denied, what is important is to draw inferences from the fact that Korea was one of the world's poorest countries in the early 1960s but one of the richest late-industrializing countries by the early 1990s. A critical question addressed in this chapter, therefore, is, To what does the state owe its effectiveness?

SPECIALISTS VERSUS GENERALISTS

On the eve of Korea's big spurt in the mid-1960s two types of business organizations existed side by side. Each had the potential to develop the

[12] Alexander Gerschenkron, *Economic Backwardness in Historical Perspective* (Cambridge, MA: Harvard University Press, 1962).

[13] For two typical criticisms see Young Ki Lee, "Conglomeration and Business Concentration in Korea," and E. Han Kim, "Financing Korean Corporations: Evidence and Theory," both in Kwon, *Korean Economic Development*, pp. 325–58. Korea has many more American-trained economists (at the Ph.D. level) than Japan, with three-times Korea's population: between 1970 and 1990 American-trained Korean economists numbered 801 whereas American-trained Japanese economists numbered only 305. See Alice H. Amsden, "The Specter of Anglo-Saxonization is Haunting South Korea," in Lee-Jay Cho and Yoon Hyung Kim (eds.), *Korea's Political Economy: An Institutional Perspective* (Boulder, CO: Westview Press, 1994), pp. 87–126.

productive forces, which then meant investing in infrastructure (ports and highways) and simple import-substitution industries, such as sugar refining, fertilizers, and cement. The capital intensity of these investments necessitated rather large-scale undertakings, but the two types of business organizations already in existence in Korea were both relatively large (in terms of employment and capital assets). One type of business was specialized, dedicated to cotton spinning and weaving, the major manufacturing activity since the colonial period. Another type – the progenitor of the chaebol – involved entrepreneurs who had entered a particular business line as a consequence of acquiring Japanese confiscated properties or American-aid related "loans" and foreign exchange, both of which were highly politicized and irregular processes (and a later cause of popular resentment against the big business groups). These entrepreneurs were quick to make money in whatever industry the opportunity arose. Hence, they may be described as generalists.

It is a mystery why, despite its early prominence, Korea's cotton-spinning and weaving industry never became the crucible for diversification into other industries. With possibly one exception (the Sunkyong group), no major chaebol arose with cotton spinning and weaving as its core activity.[14] Political favoritism alone provides no clue because many textile magnates themselves arose by acquiring confiscated Japanese property, and the textile industry in the 1950s and 1960s also received a large share of official government subsidies. The textile industry was by no means slighted politically.

An important part of the answer concerning industrial leadership has to do with the fact, discussed later, that unlike the generalists, textile companies never invested in the "organizational capabilities" that Alfred Chandler has pointed out are necessary for expansion, and without which diversification and management of capital-intensive investment projects cannot occur.[15]

In theory, diversification into capital-intensive industries could have been undertaken by entirely new firms. Given, however, Korea's hothouse growth trajectory, and the problem – without any organizational foundations – of putting together the large investments necessary for early import substitution projects, that pattern was decidedly not the one Korea followed. As pioneering study on Korean business observed, "A high

[14] As discussed later, a few chaebol did have as their original activity woolen textiles or synthetic fibers.

[15] Chandler, *Scale and Scope*, and Chapter 3 in this book.

percent of the expansion of industrial output has come from existing rather than new firms. . . . What has to be explained is not how new entrepreneurs were found but how old firms grew."[16]

The cotton textile industry

After the Korean War textile manufacturing engaged the largest and most modern companies in the country.[17] According to an industrial census taken in 1967, a total of only 150 manufacturing establishments employed more than 500 workers, and 29 percent of these were in the textiles sector, which represented a larger percentage than the textile sector's share in manufacturing value-added, 14 percent, or share in exports, 21 percent.[18] Textiles not only remained Korea's single most important export through the 1980s but also an industry with a significant share of all large firms. Table 11.4 compares data on the distribution of approximately 200 of the largest manufacturing firms in Korea, Japan, Germany, and the United States. In 1983 the textile industry (defined broadly to include the manufacture of synthetic fibers) still accounted for as much as 13 percent of big Korean enterprise, compared with only 5.5 in Japan, 2.0 in Germany, and 1.7 in the United States.

Firm size per se, therefore, is not the critical variable in predicting which type of firm will successfully diversify. Instead, what matters is whether firms invest in the professional management and other organizational capabilities that are necessary to grow. In this respect the textile industry was backward. Table 11.5 presents a breakdown for 1983 of managerial resources by industry, where the ratio of administrative employees to operatives serves as a surrogate for managerial resources. As can be seen from the table, the textile industry had the third lowest ratio of administrators to operatives among twenty industries.

[16] Leroy P. Jones and Il Sakong, *Government, Business, and Entrepreneurship in Economic Development: The Korean Case* (Cambridge, MA: Harvard University Press for the Council on East Asian Studies, Harvard University, 1980), pp. xxxii, 179.

[17] One study states: "In the pre-liberation period, when most of the modern industries were transplanted from Japan, the textile industry utilized the most contemporary production and management methods. In the 1950s, the textile industry was instrumental in the recovery and modernization of production facilities." See Yung Bong Kim, "The Growth and Structural Change of Textile Industry," in Chong Kee Park (ed.), *Macroeconomic and Industrial Development in Korea, Essays on the Korean Economy*, vol. 3 (Seoul, Korea: Development Institute, 1980), p. 190.

[18] Economic Planning Board, *Report on Mining and Manufacturing Survey* (Seoul: Government of Korea, 1968).

Table 11.4. *Percent distribution of 200 largest manufacturing firms in Korea, Japan, Germany, and United States, by industry*[a]

Industry, standard industrial classification	Percent Distribution			
	Korea[b] (1983)	Japan (1973)	Germany[c] (1973)	United States[d] (1973)
20. Food	14.5	9.0	6.0	12.1
21. Tobacco	4.1	0.0	3.0	1.7
22. Textiles	12.8	5.5	2.0	1.7
23. Apparel	1.7	0.0	0.0	0.0
24. Lumber	0.6	0.5	0.0	2.2
25. Furniture	0.0	0.0	0.0	0.0
26. Paper	1.7	5.0	1.0	5.0
27. Printing	0.6	1.0	3.0	0.5
28. Chemicals	16.3	17.0	15.1	14.9
29. Petroleum	2.9	6.5	4.0	12.1
30. Rubber	4.1	2.5	1.5	2.8
31. Leather	0.6	0.0	0.5	0.0
32. Stone, clay, glass	4.1	7.0	7.5	3.9
33. Primary metal	11.6	13.5	9.5	10.5
34. Fabricated metal	1.2	2.5	7.0	2.8
35. General machinery	2.9	8.0	14.6	9.4
36. Electrical machinery	10.5	9.0	10.5	7.2
37. Transport equipment	9.8	10.0	7.1	10.5
38. Instruments	0.0	2.5	1.0	2.2
39. Miscellaneous	0.0	0.5	0.5	10.5
Total	100.0	100.0	100.0	100.0

[a] Ranked by sales.
[b] 172 firms, which include units of business groups.
[c] 199 firms.
[d] 181 firms.
Sources: Korea: Compiled from Economic Planning Board, *Report on Industrial Census*, vol. 1, 1983 (Seoul: 1985); Japan, Germany, and the United States: Adapted from Alfred D. Chandler, Jr., *Scale and Scope: The Dynamics of Industrial Capitalism* (Cambridge, MA: Harvard University Press, 1990).

Table 11.5. *Managerial resources by industry, 1983*

Industry, standard industrial classification	Administrative employees/ 100 operatives[a]	Family workers/ 100 administrative employees[a]
Food	30.0	11.0[b]
Tobacco	17.0	0.0[c]
Textiles[d]	9.3	16.8[e]
Apparel[d]	8.7	20.4
Lumber	14.2	32.1
Furniture	12.2	37.5
Paper	20.8	12.0
Printing	34.0	14.5
Chemicals	44.0	3.7
Petroleum	46.1	2.6
Rubber	7.3	6.2
Leather	12.1	18.8
Stone, clay, glass	18.5	13.6
Primary metal	23.0	4.4
Fabricated metal	19.3	14.3
Machinery	22.6	12.2
Electrical machinery	17.7	4.5
Transport equipment	31.1	2.9
Instruments	15.6	9.3
Miscellaneous	10.9	17.9

[a] Figures for administrative and family workers refer to males only to avoid inflating the administrative and family categories with female clerical workers. See discussion in text.
[b] Average of food and beverages.
[c] A government monopoly exists in the tobacco industry.
[d] Adjusted for the fact that many female administrative employees in these industries are front-line supervisors. Adjustment takes the form of inflating the number of male administrators in these industries by the ratio of males to total administrators in the all-manufacturing average.
[e] Excludes shoes.
Source: Compiled from Economic Planning Board *Report on Industrial Census*, vol. 1, 1983 (Seoul: 1985).

The industries with the lowest ratios of administrative employees to operatives in Table 11.4 are relatively labor-intensive. Because they generally expand by means of "capital widening," they have less need for organizational resources than capital-intensive industries. That is, they usually expand by replicating the existing ratio of capital to labor, an example being expansion in the apparel industry by means of another seamstress and sewing machine. By contrast, in capital-intensive industries subject to "capital deepening," expansion usually takes the form of an increase in the amount of capital employed per labor unit.[19] Generally deepening requires greater technological capability and more scientific knowledge because technical parameters do not change linearly. Greater capabilities are required in capital-deepening industries with respect to buying nonstandardized technology that tends to be science-based, starting-up more specialized pieces of equipment, maintaining such equipment, and troubleshooting. The switchover from a labor-intensive to a capital-intensive operation also changes the whole way a firm must be managed, with capacity utilization and age of equipment becoming more strategic. Therefore, capital-intensive industries tend to require more organizational resources than labor-intensive ones.[20]

The "flagship" industry (initial activity) of most chaebol in Korea has been capital-intensive, including such industries as sugar refining, soap, construction, steel, and metallurgy. Where "textiles" represented a group's starting point, as in the Hyosung, Kohap, and Kolon groups, they usually involved the manufacture of synthetic fiber, not the spinning and weaving of cotton. The former embodies a chemical process which uses more capital and administrative employees per worker than the latter. The Samsung and Hanil chaebol invested in woolen textiles in their early growth phase, but even woolen textiles demand more managerial resources than cotton textiles insofar as their quality requirements are higher. That some chaebol diversified on the basis of synthetic textiles or even worsteds, but not cotton spinning and weaving, therefore, is an example that supports the overall point about the importance for diversification of a strong administrative base. Despite the fact that cotton textiles were Korea's leading sector in the 1960s, none of the top-ten chaebol that consolidated their power originated as cotton textile producers.

[19] Ralph G. Hawtrey, *Capital and Employment* (London: Longmans, 1937).
[20] Amsden, *Asia's Next Giant*.

Developing versus deriving organizational capabilities

Immediately after seizing power in 1961 President Park Chung Hee accused leading enterprises in a wide range of industries of engaging in more corruption than typical during the corrupt enough foreign-aid era of the 1950s. The cited industries included textiles, paper, coal mining, fertilizers, flour, alcohol, glass, pottery, livestock, real estate, construction, warehousing, and trade.[21] Other than textiles these are the capital-intensive industries in which the chaebol sunk their roots. Nevertheless, the list's nonmanufacturing activities – real estate, construction, trade – do not require much in the way of organizational capabilities. Yet three chaebol (Samsung, Hyundai, and Daewoo) out of "The Big Four" had their origins in such service industries (the fourth, Lucky-Goldstar – now the LG group – got its start in chemicals and electronics assembly). A foundation in construction (Hyundai) or import–export trade (Samsung) provided the leading chaebol with a commercial bridge to other activities. Samsung, for example, made its fortune importing sugar (a state-granted monopoly when foreign exchange was very scarce), which then helped it vertically integrate backward to found its first manufacturing operation, a sugar refinery. A service base, however, does not necessarily provide an organizational and/or technological bridge to manufacturing.

The nonmanufacturing origins of the two leading chaebol suggest that organization-building is not strictly determined by industry of origin.[22] It is possible to become a good manufacturer and build organizational capabilities from a nontechnically related base. Today's most successful chaebol made the necessary investments proactively, whereas the conservative textile firms did not.

[21] See his autobiography *The Country, the Revolution, and I*, trans. by L. Sinder (Seoul: no publisher, 1963).
[22] The textile industry, under other conditions and in the presence of different alternatives has, in fact, been the springboard for diversification. For example, a leading Korean-owned company founded in 1919 was the Kyongsong Spinning and Weaving Company (now Kyongbang Ltd.). It actively supported national causes, diversified into publishing by establishing what is now Korea's largest daily, the Dong-a Ilbo, and was one of the first companies to go public. See Carter J. Eckert, *Offspring of Empire: The Koch'ang Kims and the Colonial Origins of Korean Capitalism, 1876–1945* (Seattle: University of Washington Press, 1991). Thus, in a period in Korean history when few large-scale enterprises existed other than textile companies, the latter did demonstrate expansionary leadership. Moreover, the textile industry has been in the forefront of expansion in other countries, such as the Alpargata group in Argentina and the Romero and Brescia groups in Peru, although the latter are not diversified very much out of textiles. See Eduardo Enrique Vasquez Huaman, "State and Business Groups in Peru: 1968–1989," Master's thesis, St. Anne's College, Oxford University, 1991.

In the case of Hyundai Construction, it petitioned the government in the mid-1960s to own its own cement-making facility. Despite the vertical linkage with construction, cement-making never became one of Hyundai's major activities, and the mill it established was uncharacteristically small. Instead, Hyundai treated its cement investment as a pilot operation or learning experience, with respect to how to construct an industrial plant and how to manage one. Insofar as the cement plant was Hyundai's first venture into the field of manufacturing (as opposed to construction), Hyundai unpackaged its technology transfer. It bought technology from one cement plant process specialist (Allis Chalmers) and technical consulting services for general engineering advice and know-how from another (George Fuller). Hyundai's success at technology assimilation is suggested by the fact that in each sequential expansion of its cement plant it bought fewer technical functions from outside.[23] Instead, it built its own technical staff in-house step by step. Some of the staff which had acquired generic knowledge were then used to undertake intragroup diversification into new areas. Diversification itself became an economy of scope for Hyundai, which soon excelled at mobilizing a task force to buy foreign technology, erect a plant, and start operating it. Experience in diversifying allowed Hyundai to move into new industries rapidly and at relatively low cost.

As for building the capabilities necessary to manage new *manufacturing* affiliates on a day-to-day basis, Hyundai used its cement plant as a laboratory to train its construction managers before assigning them to new affiliates in other manufacturing industries. Trainees gained experience in inventory management, quality and process control, capacity planning, and so forth, thus spreading basic middle and lower managerial skills throughout the Hyundai organization. The first president of Hyundai Motors, for example, was a former president of Hyundai Cement.[24]

In the case of the Samsung group, it was one of the first chaebol to build a groupwide training system soon after establishing its first manufacturing affiliate in 1953. All new managers were recruited and trained at the group level. They were then dispatched, at the company's discretion, to affiliates. Interaffiliate communication was facilitated by the closeness of graduates of the same training class. Samsung began to attract the top

[23] The successful assimilation of imported technology is apparent in the manufacturing affiliates of other chaebol as well. For the case of the Samsung group's Chonju Paper Company affiliate, see Alice H. Amsden, "The Rise of Salaried Management," in Kwon, *Korean Economic Development*, pp. 359–370.

[24] See Amsden, *Asia's Next Giant*.

university graduates for its middle management posts, and professional management diffused to all parts of the company.

THE THREE-PRONGED INVESTMENT

According to Chandler, for big business to succeed in the age of industrial capitalism it must make a three-pronged investment.[25] It must invest in plants large enough to realize economies of scale. Once these plants are established it must invest in the distribution networks necessary to secure inputs and dispose of outputs. Finally, it must invest in management, both at the top of the organization and in the middle rung of each operating unit. The Korean big business groups generally did all three. The plants they invested in were large possibly to a fault, but most business groups also emphasized human resource development of middle and lower managers at the plant level, which was the appropriate level to stress given that it was at this level that foreign technology had to be infused, adapted, and improved to become a competitive weapon.

Large-scale plants

Big business in Korea invested a lot generally. Both aggregate domestic savings and gross capital formation shot up over time, the latter rising as a share of GNP in roughly twenty-five years from 0.12 in 1962 to 0.36 in 1989 (see Table 11.1).

In particular, Korea invested a lot in machinery and equipment. Professor Morikawa compares Japan's investments in real equipment favorably with those of the United States and West Germany for the period 1967–1987.[26] If we add Korea to Mr. Morikawa's comparison (see Table 11.6), then Korea outshines Japan, exceeding its coefficient for almost all years beginning in the mid-1970s (assuming we are measuring the same phenomenon). Of course, Japan's investments may have been higher earlier in its own development, but Korea's investments in capital stock in the early stage of its industrial transformation are impressive in absolute terms.

Finally, without question Korean big businesses invested enough to realize plant-level economies of scale. Indeed, critics of the chaebol argue that they overdid it. In "Texasian" fashion, Korea boasts the world's

[25] Chandler, *Scale and Scope*.

[26] Hidemasa Morikawa, "Increasing Organizational Capabilities of Japanese Industrial Enterprises – Focusing on the Postwar Period," mimeograph copy, Keio University, 1992. See also Chapter 10, this volume.

Table 11.6. *Investments in machinery and equipment, Korea, Japan, United States, Germany, 1967–1987 (% of GNP)*

Year	Korea	Japan	United States	West Germany
1967	5.3	6.8[a]	4.0	4.7
1969	5.7	8.5[a]	3.8	5.9
1971	6.5	7.4	3.4	5.6
1973	8.1	6.8	3.5	4.3
1975	7.8	5.5	3.6	3.6
1977	10.8	4.7	3.6	3.7
1979	13.5	4.7	3.9	3.8
1981	10.2	5.5	4.2	3.8
1983	9.6	5.4	3.6	3.5
1985	9.7	6.6	4.4	3.7
1987	11.8	6.0	3.9	—

[a] Different source from data beginning 1971.

Sources: Japan, United States, and West Germany: Bank of Japan as cited in Morikawa, Chapter 10 in this volume; Korea: compiled from Economic Planning Board, *Major Statistics of Korean Economy* (Seoul: various dates).

largest shipyard, the world's largest cement plant, the Third World's largest steel mill, and so forth.[27]

Whatever the political motivation of the Korean government in targeting the same, small subset of business groups to undertake major new investment projects, its choice also had a sensible, practical logic: the smaller the number, the easier the monitoring. Moreover, business groups selected to undertake major capital investments tended to have experience in successfully establishing and/or running large-scale operations in other industries. Thus, in selecting a business group in 1971 to diversify into what soon became the world's largest shipyard, the government was more impressed with experience in large-scale project management than with industry-specific experience in small-craft shipbuilding. The government bypassed seven small shipyards as potential project executors and instead chose Hyundai Construction for the task. In addition to Hyundai Construction's experience in large-scale project execution at home and in Vietnam, the civil engineering of the construction business and the naval engineering of shipbuilding shared key technological elements in common.

[27] Information in the next three paragraphs is from Amsden, *Asia's Next Giant*.

In the case of the world's largest cement mill, it began small, as part of a Korean cement company in the 1970s that went bankrupt during the severe price competition that followed the 1973 energy crisis. The mill was then sold by the government (the country's banker) to the Ssangyong group, founded by a party elder and crony of Park Chung Hee, with experience only in a small soap factory and textile plant (which, in an uncharacteristic move for a chaebol, was sold to finance entry into cement making). Without much experience in large-scale projects, Ssangyong enlarged its newly acquired plant step by step, relying first on a semi-computerized process-monitoring system before moving to an automatic one, and gradually building up a first-class total quality control system.

In the case of the state-owned Pohang Iron and Steel Company (POSCO), it was ranked in 1986 as the world's sixth-largest steel producer, with an annual output of 11.3 million tons.[28] One of the alleged reasons for its public ownership related to scale. The World Bank and other official lenders in 1967 wanted Korea to invest in a smaller mill (by a tenfold order of magnitude) than what the Korean government wanted. To raise the finance for a larger operation the government tapped official financial channels in Japan (including war reparations). A former military man became chairman of POSCO, and with technical assistance from Shin Nippon Seitetsu (Nippon Steel), Japan's own former state-owned steel producer, built POSCO in stages into what by the late 1980s had become Korea's most profitable enterprise.

Trade and distribution channels

A stunning fact about Korean big business is not just its rapid growth and diversification but also its export orientation. On average the Korean economy exports as much as 35 percent of its GNP (Japan in the 1960s and 1970s exported only around 10 to 20 percent), and the chaebol have been among the economy's leading exporters.[29] Given the importance of

[28] United Nations Industrial Development Organization, *Industry and Development Global Report 1988/89* (Vienna, 1988).

[29] According to a survey of 3,000 selected enterprises by the Bank of Korea, Korea's "Big Four" chaebol in 1994 (Hyundai, Samsung, LG, and Daewoo) accounted for 57 percent of exports, as mentioned in "A Survey of South Korea," *The Economist*, June 3, 1995, p. 12. By way of indirect evidence one can examine the exports of general trading companies – nine in total, all owned by leading chaebol. The GTCs' share of total exports was 13.3 percent in their founding year, 1975, then rose to 48 percent in 1983, and then declined to about 38 percent in 1989 (which was still much higher than the 10 percent share of Japanese GTCs in Japan's total exports). Sung-Hwan Jo, "Promotion Measures

exporting, the sales and distribution function with respect to overseas trade has been key.

The demands for investments in overseas marketing have varied by industry, and in the early postwar phase of industrial development Korean manufacturers of labor-intensive exports could generally rely for their distribution on either foreign buyers (who frequently bought made-to-order products on an "OEM" basis),[30] or foreign traders (especially Japanese general trading companies). Nevertheless, by the 1990s many Korean enterprises (unlike their smaller Taiwanese counterparts) began to eschew OEM contracts and to develop (or at least try to develop) their own designs and brand names.

The marketing function possibly represented a proportionately smaller investment for Korean big business than for American or European big business in an earlier era because the Koreans could piggyback in overseas markets on the well-established distribution networks of American and European companies operating in the same business lines. In the case of automobiles, for example, once dealerships in the United States no longer became exclusive (owing to antitrust considerations), and once they agreed to distribute Hyundai's cars, the investments required for Hyundai to enter the U.S. market dramatically diminished.

The overseas marketing function of Korean big business evolved in the context of group structure and government assistance. First, it was handled in times of crisis by reliance on the total capabilities of the business group in question, with the help of the government. Both were used by Hyundai Heavy Industries (HHI), for example, the Hyundai group's shipbuilding affiliate, during a sharp economic downturn in the days when ships still represented a highly differentiated export product for Korea. In such a depressed market, and only months after HHI began operations (with its completions still behind schedule), several ship buyers refused delivery. HHI responded by vertically integrating forward and founding the

for General Trading Companies (1975)," in Lee-Jae Cho and Yoon-Hyung Kim (eds.), *Economic Development in the Republic of Korea: A Policy Perspective* (Honolulu: East–West Center, University of Hawaii, 1991), and Kwang-Suk Kim, "Trade and Industrialization Policies in Korea: An Overview," mimeograph copy, Kyung Hee University, Seoul, 1991, pp. 511–526.

[30] OEM is the abbreviation for original equipment manufacturer. For an account of the importance of foreign buyers in Korea's early labor-intensive export success, see Larry Westphal, Kim Linsu and Carl J. Dahlman, "Reflections on the Republic of Korea's Acquisition of Technological Capability," in N. Rosenberg and C. Frischtak (eds.), *International Technology Transfer: Concepts, Measures, and Comparisons* (New York: Praeger, 1985), pp. 167–221.

Hyundai Merchant Marine Company. This sister company then absorbed HHI's undelivered vessels. The government, as owner (at the time) of one of Korea's major refineries, cooperated by decreeing that all crude oil deliveries to Korea be carried in Korean-owned ships.[31]

Second, the government encouraged the chaebol's formation of general trading companies (GTCs). Such companies received special fiscal incentives and subsidized credit beginning in 1975 as part of a national drive to reduce dependence on Japanese *sogo-shosha*.[32] By the mid-1980s every major chaebol had its own GTC (there were a total of nine), although a decade later they still did not offer the diversified services their Japanese counterparts offered; their trading activities were mostly restricted to serving their own group's needs, with more than two-thirds of their revenue coming from export business.

Differences in domestic distribution patterns in Korea and Japan reflect historical differences in the timing of the emergence of general trading companies. Japanese zaibatsu established GTCs before they themselves grew large whereas the Korean chaebol grew large before they established GTCs, which were principally planned and initiated by the government to promote exports. GTCs in Korea thus accounted for a much smaller share of domestic trade than did their Japanese counterparts (the sogo-shosha were estimated to account for about one-third of Japan's total domestic wholesale trade).

Numerous small retail stores, particularly those offering modern industrial products, have been organized and controlled by large manufacturers through various trade restraints such as exclusive dealerships and resale price maintenance. In 1991, for instance, Samsung, LG, and Daewoo, owners of the three major electronics firms, sold their products through their own exclusive distribution networks of around 4,000 stores, each with less than four employees on average.[33] The only stores in which consumers can make comparison shopping are department stores, which are often owned by chaebol. In the case of automobiles, Hyundai sold its cars domestically through two channels. One was owned and operated by Hyundai Motors (similar to the pattern followed by Daewoo Motors), and the other was owned by a Hyundai unit that specialized in selling

[31] Amsden, *Asia's Next Giant*.

[32] Dong-Sung Cho, *The General Trading Company: Concept and Strategy* (Lexington, MA: Lexington Books, 1987).

[33] Jie-Ae Sohn, "Feeling the Heat: Korean Distributors Fear Competition," *Business Korea*, 9, 3 (September 1991), pp. 18–22.

service warrantees. Neither Daewoo nor Hyundai used its GTC to sell cars at home.

Thus, by the early 1990s the "retailing revolution" had not arrived in Korea in the form of the emergence of large-scale discount outlets. Nevertheless, foreign (particularly Japanese and American) manufacturers and retailers began to try to alter the retailing industry by pressuring the Korean government to liberalize retail markets and by slowly establishing large-scale stores.

Plant-level human resources

Until the late 1980s the chaebol never diversified into any industry in which the supply of foreign technology was unavailable, but technology acquisition was only the first step along the road to gaining global competitiveness. Because technology is tacit, implicit, and never fully codified, as pointed out by Nelson,[34] it invariably has to be adapted and modified in order to work. This requires engineering competence and a shop-floor focus, because the requisite capabilities of workers and managers to make borrowed technology work can be developed only on the shop floor.

One reason why the chaebol (and zaibatsu) were successful in developing the forces of production is that they built organizations conducive to technology assimilation and, ultimately, to the generation of the incremental improvements in productivity and quality that became their competitive weapon. First, the professional middle managers they hired tended to have technical backgrounds. This is evident from Table 11.7, which shows the growth in managerial resources in Korea between 1960 and 1980. Whereas the number of general managers rose over this period by a factor of 2:2, the number of engineers skyrocketed by a factor of 10:2. Moreover, management generally kept in close contact with the ranks. As expected, larger enterprises have a much greater number of departments and sections than do smaller enterprises. Their management is more extensive. Nevertheless, they have only marginally more managerial layers. In fact, enterprises with 200 to 300 workers have been found to have more levels of hierarchy than enterprises with over 5,000.[35] These findings

[34] Richard R. Nelson, "Innovation and Economic Development: Theoretical Retrospect and Prospect," in Jorge M. Katz (ed.), *Technology Generation in Latin American Manufacturing Industries* (London: Macmillan, 1987), pp. 78–93.

[35] Seoul National University, College of Business Administration, *Current Situation and Tasks to Be Done by Korean Firms* (Seoul: College of Business Administration, Seoul National University, 1985) [in Korean].

Table 11.7. *Growth in managerial resources in the manufacturing sector, 1960–1980*

Employment category	1960	1980	Increase (1980/1960)
Engineers	4,425	44,999	10.2
Managers	31,350	69,585	2.2
Service, clerical, sales	36,015	474,600	13.2
Production	404,735	2,206,851	5.4
Total	479,975	2,797,030	5.8
Administrative/production[a]	0.13	0.10	
Administrative and clerical/production	0.18	0.27	

Note: Manufacturing sector includes transportation and communication workers.

[a] Administrative includes engineers, managers, sales, and service workers (clerical workers excluded).

Source: Adapted from Alice H. Amsden, *Asia's Next Giant: South Korea and Late Industrialization* (New York: Oxford University Press), p. 171.

suggest the relative compactness of management in big Korean firms, which facilitated their shop-floor orientation.

In the case of POSCO, its best managers were initially assigned to line rather than staff jobs. Even shift supervisors were experienced engineers with college degrees. Additionally, POSCO emphasized on-the-job operations training for all its technical managers. Newly recruited engineers with university backgrounds were required to work on all three shifts in order to become familiar with every operation. The staff of the quality control department had to work in the plant for three months.[36]

FAMILY OWNERSHIP AND TOP MANAGEMENT

Partly because the chaebol are still quite young and remain family owned and managed, Korea's enterprise system resembles the personal capitalism of Great Britain. Among the top 50 chaebol in existence in 1984 only

[36] Amsden, *Asia's Next Giant*.

Table 11.8. *Family management of the chaebol, 1984 (background of chairpersons of top fifty chaebol)*

	Group ranking by sales					
	1–10	11–20	21–30	31–40	41–50	Total
Founders	5	4	4	6	8	27
Founder's kin	5	5	6	3	2	21
Professional managers	0	1[a]	0	1[b]	0	2
Total	10	10	10	10	10	50

[a] Kia Group: the group experienced severe financial trouble in the early 1980s, which, under pressure from the Korean government, resulted in the entire removal of the founding family from its ownership and management. The group was reorganized by professional management and became associated with Ford and Mazda.

[b] Samyang Group: The group's CEO was Kim Sang Hong, a long-time right-hand man of the founder. Because three sons of the founder were active in the management of the group, Kim's tenure was regarded as a transitional situation.

Sources: Minho Kuk, "The Governmental Role in the Making of *Chaebol* in the Industrial Development of South Korea," *Asian Perspective*, 12, 1 (Spring–Summer 1988); and *Business Korea*, various issues.

5 had been established before World War II.[37] Among 149 listed industrial corporations, 75 percent had less than 30 years experience in 1983.[38] The top managers of only two groups (KIA and Samyang) were professionals unrelated directly to the founding family (see Table 11.8).[39] Nevertheless, unlike the case of British personal capitalism, Korean big businesses have been characterized by significant managerial hierarchies with capable salaried managers. By the 1980s all the major chaebol had a functionally departmentalized planning and coordination office (*kijosil* or *hoejangsil*) whose size was substantially larger and more balanced than its counterparts

[37] Minho Kuk, "The Governmental Role in the Making of *Chaebol* in the Industrial Development of South Korea," *Asian Perspective*, 12, 1 (Spring–Summer 1988).

[38] Ungki Lim, "Ownership and Control Structure of Korean Firms: With Application of Agency Cost Theory," in Dong-Ki Kim and Linsu Kim (eds.), *Management behind Industrialization: Readings in Korean Business* (Seoul: University Press, 1989), pp. 110–132.

[39] KIA's main activity is manufacturing vans and more recently, motor vehicles (in collaboration with Ford). The Samyang group was established in 1924 as part of the same founding family that formed Kyongsong Spinning. It consists of three major business arms: food, textiles (silk and polyester), and chemicals.

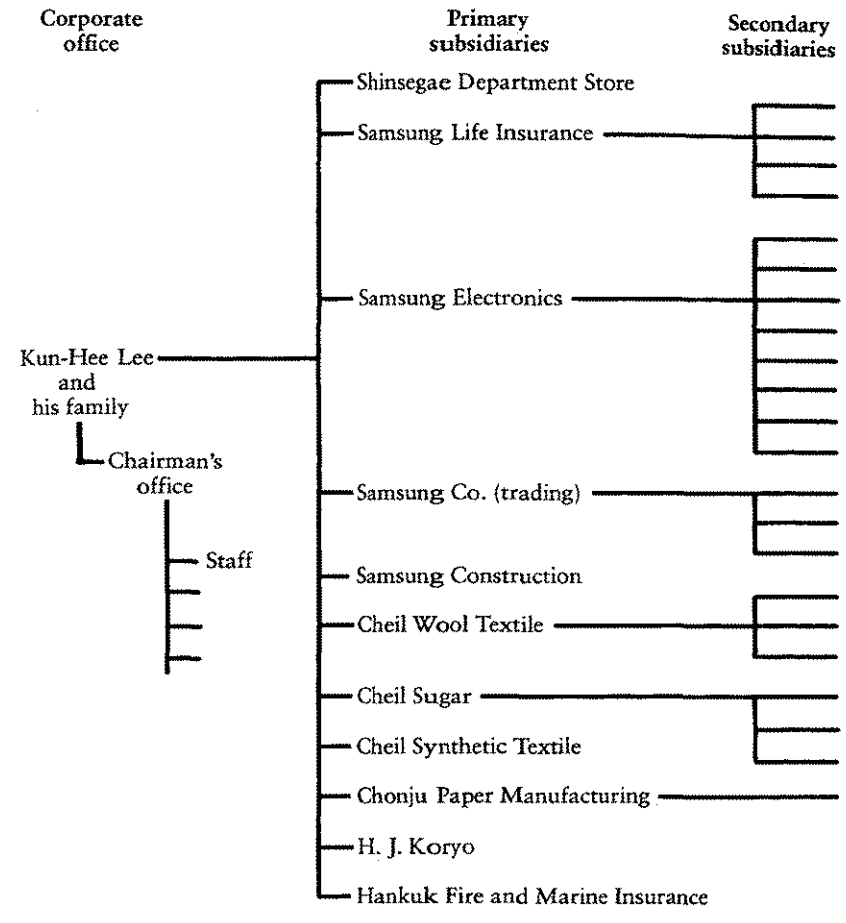

Figure 11.1. Organization of the Samsung chaebol, ca. 1988.
Source: Compiled from company information.

in American conglomerates or British family enterprises.[40] Most impressive of the corporate offices is that of the Samsung group depicted in Figure 11.1, in which a senior salaried manager administers the chairman's office composed of ten departments, each with some 250 professionals responsible for various industries and functions.[41] Therefore, Korean big

[40] Amsden and Hikino, "Project Execution Capability."

[41] Young Ki Lee, "Conglomeration and Business Concentration in Korea," in Kwon, *Korean Economic Development*, pp. 325–340.

businesses are more of the Chandlerian "entrepreneurial" rather than "personal" variety.

As illustrated in Figure 11.1, at the top of a typical business group in Korea was the founding family or family holding company, which was usually not incorporated. These families, through substantial if not majority shareholding, controlled all the operating units, which were legally independent but mostly privately held. Some of the large, significant subsidiaries, such as Hyundai Motors, Samsung Electronics, Goldstar (Electronics), and Daewoo Heavy Industries, had their shares publicly traded. Nevertheless, even the publicly held companies were in fact controlled by the family through its own holdings and intragroup mutual share holdings. At most, some groups were more open to nongroup ownership than others. For instance, in the Samsung group, out of eleven significant operating units nine were publicly held whereas in the Hyundai group, out of twenty-one significant operating units only five had been converted into publicly held corporations.

Each major operating unit or subsidiary, in turn, controlled many smaller subsidiaries. This subordinate level of subsidiaries was usually privately held and majority-controlled within the group. Often there was one more layer of subsidiaries and associated companies which were privately held and minority controlled within the group. Concerning equity holding, this three-layer tight hierarchy was common, even though the group or individual operating units may have had regular transactions with other companies or "outside" companies, as noted earlier.

By the 1990s there was some conflicting evidence that family ownership and management practices in Korea were weakening. Even an earlier reputable survey undertaken of 107 enterprises in 1983 showed that 20.9 percent of nonfamilial company presidents had been selected from within the company and 29.0 percent came from outside.[42] Nevertheless, with the exception of KIA, which by 1988 had become one of Korea's top-ten business groups, all the other leading chaebol remained family-owned and -managed.

[42] Jung Nyun Kim, "Growth of Enterprise and Management Capability," *Monthly Chosun* (in Korean), February 1984, as cited by Dong-Ki Kim, "The Impact of Traditional Korean Values on Korean Patterns of Management," in Kim and Kim, *Management behind Industrialization*, pp. 133–160.

STATE ENTREPRENEURIAL CAPITALISM AND THE DISCIPLINE OF BUSINESS

Prewar Japan and postwar Korea share in common family-owned and/or family-controlled enterprise groups. These groups have operated in many technologically unrelated industries, have employed extensive hierarchies of middle managers, and have occupied key positions in both countries' economic development. Nevertheless, unlike the prewar zaibatsu, the chaebol have not had their own banks. The banking and corporate finance functions are carried out by the Ministry of Finance. To a far greater extent than in Japan, therefore, the Korean state subsidized business as well as disciplined it.

The big business groups in Korea (and in Japan) have been self-disciplined to the extent that they have competed fiercely with one another, despite the fact that group affiliates are expected to buy from each other if no better product is available from "outside" firms.[43] (This intense intergroup market competition is what has persuaded Morikawa that Japan's enterprise system resembles the American system of competitive managerial capitalism.)[44] Nevertheless, after 1975 intergroup competition in Korea was enhanced immeasurably by the government: each chaebol tried to qualify to establish a general trading company – which held out large profit-making opportunities – by meeting tough government performance standards regarding minimum export volume and number of export products.[45] Only in the early 1990s, at government's instigation, did groups even begin to cooperate in technology sharing.[46]

Under Japanese colonialism all banks in Korea (and Taiwan) were state-owned. After a brief interlude in the 1950s when, at the insistence of American aid advisers, state commercial banks were divested to private

[43] Market concentration peaked in the late 1970s but has generally decreased over time as markets have deepened. In 1970, 1977, and 1987 the share of oligopolies in shipments went from 35.1 percent to 48.6 percent to 40.2 percent, while the share of competitive market structures went from 39.9 percent to 26.1 percent to 44.3 percent. See Kyu-Uk Lee, S. Urata, and I Choi, "Recent Developments in Industrial Organizational Issues in Korea," mimeograph copy (Washington, DC: Korea Development Institute and World Bank, 1986), and Kyu-Uk Lee and Jai-Hyong Lee, *Business Groups and Economic Concentration* [in Korean] (Seoul: Korea Development Institute, 1990).

[44] Morikawa, Chapter 10 in this volume.

[45] Cho, *The General Trading Company*.

[46] "Technology Flows," *Business Korea*, 10, 2 (August 1992), p. 53. For a general discussion of competition policy in Japan and Korea, see Alice H. Amsden and Ajit Singh, "The Optimal Degree of Competition and Dynamic Efficiency in Japan and Korea," *European Economic Review*, 38 (1994), pp. 941–951.

owners (better described as speculators), they were swiftly renationalized by the military government of Park Chung Hee (banks in Taiwan in this period never succumbed even temporarily to privatization). With nonbank financial institutions still relatively weak, the Ministry of Finance has maintained tight control over all forms of credit, which gives the government even today enormous leverage over the private sector.[47] For instance, by regulating the financial portfolios and size of nonbank financial institutions, and by retaining power to investigate their financial irregularities, the government can still effectively determine the price of credit.

In addition, the Ministry of Finance and Economic Planning Board (now merged into the Ministry of Finance and Economy) have disciplined companies by means of price controls, in the name of curbing monopolistic abuses and dampening inflation. As late as 1986 the prices of 110 commodities were under government guidance, including flour, sugar, coffee, red pepper, electricity, gas, steel, chemicals, synthetic fibers, paper, drugs, nylon stockings, automobiles, and televisions. While such surveillance formally ended with liberalization after 1987, key oligopolies are still subject to government price surveillance. In the case of automobiles, for example, for thirty years no foreign cars were to be seen on Korean roads and no Korean cars were to be seen on foreign roads. All the same, the industry's leader, the 90 percent locally owned Hyundai Motor Company, became the first late-industrializing automobile maker to export to Europe and the United States. The industry was induced to cut costs and thereby raise profits because automobile prices were, and continue to be, supervised by the government. Typically Korean automobile companies have been allowed to set the price of a new model above world prices, which has helped them recoup fixed investment, but then are pressured to keep prices down, which has induced them to improve productivity and quality. Between 1974 and 1991 average prices of Korean automobiles in real won *fell* for small, medium, and large models.[48]

The Korean government's five-year plans have targeted specific industries for special support, and specific businesses within these industries

[47] Alice H. Amsden and Yoon-Dae Euh, "South Korea's 1980s Financial Reforms: Goodbye Financial Repression (Maybe), Hello New Institutional Restraints," *World Development*, 21, 3 (1993), pp. 379–390. Until recently Korean companies could not persuade foreign banks to lend to them without a guarantee from the Korean government. This dependence gave the government control over the allocation of foreign credit as well as domestic credit.

[48] Alice H. Amsden and Kang Jong-yeol, "Up-Scaling in the Korean Automobile Industry," paper prepared for the International Motor Vehicle Program, MIT, Cambridge, MA, 1995.

have been targeted for incentives to carry out government plans. If in Japan the relations between business and government have been "cooperative," in Korea (and a fortiori in Taiwan) they have been hierarchical, with government on the top. A positive result relates to Korea's subsidy allocation system. Given the absence of proprietary technology and the inadequacy of low wages as a competitive weapon in all but the most labor-intensive industries, protection from foreign competition and subsidization of credit have been commonplace in late industrialization (even the Korean cotton textile industry had to be subsidized in the 1920s and then again in the 1950s and 1960s because it could not compete at market-determined production costs against the more efficient textile industry of Japan).[49] Subsidization, however, is an open invitation to low quality and high costs, as manifest in many industries in Eastern Europe, India, and Latin America. Korea and Taiwan have generally avoided such inefficiency because their subsidies have been allocated according to a distinct principle. In slower-growing, late-industrializing countries, subsidies have tended to be allocated according to the principle of "giveaway." In Korea and Taiwan, subsidies have been allocated according to the principle of "reciprocity," in exchange for concrete performance standards that are monitored by fairly competent state officials.[50]

The most important performance standard has pertained to exports. The government protected Korean industry from foreign competition but at the same time forced it to meet export targets determined jointly by business and government, thereby bridging the dichotomy between export-led growth and import substitution.[51] Targeted firms and industries were given subsidized credit and access to foreign exchange, but at the same time they were prevented from engaging in capital flight – legislation passed in Korea in the 1960s stipulated that any illegal overseas transfer of $1 million or more was punishable with a minimum sentence of ten years' imprisonment and a maximum sentence of death! Companies were allowed to import foreign technology but they were pressured to build their own technological capabilities, being constrained by the Ministry

[49] Amsden, *Asia's Next Giant*.

[50] Alice H. Amsden, "The Diffusion of Development: The Late-Industrializing Model and Greater East Asia," *American Economic Review*, 81, 2 (May, 1991), pp. 282–286; Alice H. Amsden, "A Theory of Government Intervention in Late Industrialization," in L. Putterman and D. Rueschemeyer (eds.), *The State and the Market in Development* (Boulder, CO: Lynne Rienner, 1992), pp. 53–84.

[51] Y. W. Rhee, B. Ross-Larson, and G. Pursell, *Korea's Competitive Edge: Managing the Entry into World Markets* (Baltimore: Johns Hopkins University Press, 1984).

of Science and Technology to import the same technology only once and at the lowest possible cost.[52] Firms were permitted to exploit their labor, and working hours were among the longest in the world. But they had to invest in labor training (or pay a tax to finance government training programs). Local firms were always given the advantage over foreign firms, but the government used the threat of foreign entry to elicit good performance.

Most of all, firms were disciplined informally, in the form of bureau chiefs in the Ministry of Finance, Ministry of Commerce and Industry, and Economic Planning Board telephoning company CEOs or top managers and lecturing them on appropriate behavior ranging from buying locally made inputs, introducing specific foreign technologies, investing (or not) in new capacity (all capacity expansions required government approval), diversifying export markets, and improving product quality. Such arm-twisting was facilitated in Korea by the fact that the same small set of companies operated in multiple industries – the government had to deal with a relatively small number of groups (in Japan, by contrast, the number of leading enterprises was larger: the automobile and electronics industries, for example, were dominated by different companies). The group form of business, moreover, facilitated discipline because the performance of a single conglomerate could be judged on multiple counts – only if a group succeeded in one industry would it be rewarded by the government with a license and credit to enter yet another industry.

Thus, discipline of business by government took various forms, both direct and indirect, including stimuli to competition associated with the formation of general trading companies, price controls, credit allocation conditionality, performance standards attached to subsidies, and informal "administrative guidance."

The importance of state discipline over big business was appreciated by Korean President Park Chung Hee, along with his keen appreciation (some would say to a fault) of the central role of big business in catching up. He writes in his book, *Our Nation's Path*:

> One of the essential characteristics of a modern economy is its strong tendency towards centralization. Mammoth enterprise – considered indispensable, at the moment, to our country – plays not only a decisive role in the economic development and elevation of living standards, but further, brings about changes in the structure of society and the economy. . . . Therefore, the key problems facing a free economic policy are coordination and supervisory guidance, by the state, of mammoth economic strength.[53]

[52] Linsu Kim, "South Korea."

The ability of the government to discipline subsidy recipients meant that a long-term approach to profit maximization could be adopted. Oligopolistic sectors were supported for lengthy periods but ultimately became competitive internationally.

The Korean state officials who monitored subsidies were recruited from the same elitist universities that provided the salaried managers employed by the big business groups. Middle management in the bureaucracies of government and business was one and the same. The "golden parachute" system that existed for government officials in Japan existed for them in Korea. According to Hattori,[54] the background of as many as one-third of Korea's top salaried corporate managers was in government service (including public enterprise).

"NEW INDUSTRIAL POLICY" IN THE 1990S

By the 1990s the enterprise system of state entrepreneurial capitalism in Korea was facing new challenges. Demands for democracy erupted in 1989 and finally triumphed in the demise of the military rule which had earlier conditioned business–government relations. At the same time Korean enterprises were trying to adjust themselves to the complexities of diversifying into more demanding technology areas. Government support of business was still necessary at the margin, protecting infant high-tech sectors from foreign competition and providing them with cheap credit for R&D. Yet the old formula of allocating such support reciprocally, in exchange for monitorable performance standards, was under siege. *Any* support for business was opposed by Washington and the Korean general public. Big business was not adverse to subsidies, but had become powerful enough to resist (or at least rail against) "conditionality."

The debate surrounding the government's "new industrial policy" focused on the persistence of the chaebol's family ownership and exclusive control, which, in people's perceptions, symbolized the old undemo-

[53] Park Chung Hee, *Our Nation's Path: Ideology for Social Reconstruction* (Seoul: Dong-A, 1962), pp. 228–229.

[54] Tamio Hattori, "The Relationship between *Zaibatsu* and Family Structure: The Korean Case," in Akio Okochi and Shigeaki Yasuoka (eds.), *Family Business in the Era of Industrial Growth: Its Ownership and Management*, International Conference on Business History, Proceedings of the Fuji Conference (Tokyo: University of Tokyo Press, 1984), pp. 111–141.

cratic regime. Particularly controversial was the hierarchical structure of the groups and the enormous power the families exercised over them. The top decision-making function was still almost completely vested in the private family circle, and, therefore, to the dismay of the public (and business historians), little information was available on the way decisions, especially related to finance, were made.

Korea's international competitive environment had also changed. Korean wages were no longer low by world standards, new product development (or improvement) was more urgent, and government support to business was being reduced. The chaebol were being pressured by the government to abandon their generalist approach and specialize in fewer business areas in order to achieve scale economies, to expand marketing networks, and to recruit managers who understood market research, product development, brand promotion, and so forth. Chandlerian three-pronged investment was becoming even more critical as the chaebol's need to upgrade increased.

Yet certain fundamentals of the Korean system of industrial development remained intact in the mid-1990s, thirty years after the start of rapid industrial growth. The rhetoric was one of liberalization (in keeping with a new General Agreement on Tariffs and Trade) but the reality was otherwise.[55] For instance, the private sector accounted for roughly 80 percent of Korea's R&D expenditures (compared to only 20 percent of Taiwan's R&D), but the most important mechanism for funding corporate R&D was preferential state credit. Government scaled down its direct support to capital-intensive industries but strengthened its patronage of technology-intensive industries. After thirty years of government favoritism toward big business, small and medium-sized enterprises were given more weight, but support to them did not take a free-market form. Instead, the Ministry of Finance and Economy instructed the banking system to apportion smaller enterprises a specified share of total credit. Trade was free except in the one case that mattered for Korea's long-term competitiveness: there was a ban on selected imports (such as automobiles and consumer electronics) from Japan and from Japanese-owned factories in third countries if, in the latter case, the domestic content of

[55] For a general discussion of the persistence of support to business after the Uruguay Round and the formation of a new World Trade Organization in 1995, and the costs of forcing such support to take covert rather than overt forms, see Alice H. Amsden, "Post-Industrial Policy in East Asia," 1995, Council on Foreign Relations, Asia Project Working Paper, 58 East 68 Street, New York, NY, 10021.

these imports was under 60 percent. These barriers were justified by the fact that Korea ran a chronic and large trade deficit with Japan and had to diversify its source of imports. In fact, restrictions on Japanese-made imports afforded Korean high-technology industries effective protection from their toughest competitors.

Thus, Korea's big businesses and enterprise system were changing in conjunction with global developments and endogenous industrial maturation. But history seemed to matter. Korea's lack of proprietary technologies to industrialize, and its long and continuing struggle to catch up with the world technological frontier, created institutions, such as the chaebol, which were emblematic of a latecomer. By the 1990s these institutions had begun to evolve toward something new, but not necessarily toward something similar to what characterized the industrial leaders of the North Atlantic region, whose rise to riches was inseparable from innovation of major new technology.