

Restructuring Korea Inc.

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2 The Korean model in historical perspective

If we are to correctly analyse the events leading up to the 1997 crisis and its aftermath, it is necessary to correctly understand the ‘traditional’ Korean economic model – or what is commonly known as Korea Inc. This is a critical exercise because how we understand this system is obviously going to influence how we understand the crisis and how we evaluate the recent ‘reforms’ intended to restructure it. Therefore in this chapter we discuss the key features of this system and explain its logic.

Our understanding of the Korean model is based on the framework of Alexander Gerschenkron (1962, 1963, 1968, 1970).¹ He provided the first systematic framework to view the catching-up process in historical and comparative perspectives, and therefore has been the key reference point for many scholars who study late-industrialisation.² Through a historical, but also consciously comparative, framework, he allows us to understand the changing roles of the state and of the private sector institutions in response to changing conditions for industrialisation, such as technology and international political economy.

In this chapter, we outline Gerschenkron’s theoretical framework (section 2.1) and then discuss the catching-up strategies pursued by the East Asian NICs. We first discuss the case of Korea, which is a classic case of Gerschenkronian ‘substituting strategy’ – or a strategy where late-developing countries pursue an ‘independent’ developmental path by finding functional substitutes for the institutions used for industrial financing by the forerunners. We argue that ‘the state–banks–*chaebol* nexus’ in the Korean model – often characterised as Korea Inc. – was such an institutional substitute (section 2.2.1). We go on to contrast the Korean model with the ‘complementing strategy’ pursued by Singapore and Taiwan, where a late-developing country deliberately forges a strategic (though not passive) alliance with the advanced countries rather than pursuing a fully ‘independent’ path of development. Then

we discuss the role of the state in these three countries and see how the differences in the catching-up strategies pursued affected the role of the state (section 2.3). The following section (section 2.4) discusses the *chaebols* – or the family-owned, diversified conglomerates – as the distinctive and critical element in the Korean model, before we summarise the discussion in the chapter and provide some concluding remarks (section 2.5).

2.1 Gerschenkron's 'patterns of industrialisation' and the Korean model

Gerschenkron's 'patterns of industrialisation' is a three-country paradigm mainly derived from the experiences of Britain, Germany, and Russia in the nineteenth century. From the three countries, he identifies distinctive institutions spearheading industrialisation as follows: (1) in Britain, the first country to experience the Industrial Revolution, the accumulated private wealth was a major source of industrial finance and individual entrepreneurs played a central role in driving industrialisation; (2) in Germany, a 'moderately backward' country, the universal banks played a major role in financing industrialisation and organising the private sector; (3) in Russia, an 'extremely backward' country, the state directly mobilised financial resources and created new industries. From these patterns, Gerschenkron makes a sweeping generalisation: 'The more backward a country's economy, the greater was the part played by special institutional factors . . . [and] the more pronounced was the coerciveness and comprehensiveness of those factors' (1962: 354).

According to Gerschenkron, this pattern was a combined consequence of the differences in: (1) the technological trend of the day; (2) the 'degree of backwardness'; and (3) the necessity and willingness on the side of the latecomers to directly compete with forerunners. He observes another pattern, that is, '[t]he more backward a country's economy, the more pronounced was the stress in its industrialization on bigness of both plant and enterprise . . . [and] the greater was the stress upon producers' goods as against consumer goods' (1962: 354). This was because, during the latter half of the nineteenth century when Germany and Russia embarked on industrial catching-up, technological progress was most rapid in heavy industry and the 'evolution of technology and changing composition of industrial output induced growing capital-output ratios and made for increases in the optimal size of plant' (1970: 113). And 'it was largely by application of the most modern and efficient techniques that backward

countries could hope to achieve success, particularly if their industrialization proceeded in the face of competition from the advanced country' (1962: 9). In a nutshell, the catching-up strategy of the latecomers in Europe was to focus on heavy industries and leapfrog the forerunners in size of plants and enterprises (Figure 2.1).

Different institutional patterns across countries were a direct result of this catching-up strategy. British industrialists were forerunners in industrialisation and did not face strong international competition. British industrialisation was therefore more of an unorganised and autonomous process.³ The technological trend during the First Industrial Revolution was also not so much towards the increasing capital-output ratios as that during the Second Industrial Revolution when Germany and Russia earnestly began their catching-up efforts. It was thus enough for the British commercial banks to provide industrialists with only operating capitals.

However, Germany and Russia required special institutions to mobilise resources to realise their catching-up strategies. The universal banks carried out this role in Germany, because the banking sector had already developed to a certain level although the country was far behind Britain in industrialisation. The universal banks combined investment banking, which was pioneered by *Crédit Mobilier* of

	Britain	Germany	Russia
Timing of entry	– late-18c – forerunner	– mid-19c – moderately backward	– late-19c – extremely backward
Spearheading institutions	– individual entrepreneurs – banks providing operating capital	– universal banks	– state
Functional patterns	– gradual accumulation of capital – less organised	– mobilising resources through banking system and concentrate them on heavy industries – 'bigger and bigger' plants	– coercive mobilisation of resources and focus on heavy industries – still 'bigger and bigger' plants

Figure 2.1 Gerschenkron's 'patterns of industrialisation'.

France, with the short-term activities of the commercial banks. As a result, according to Gerschenkron (1962: 15), they were 'from the vantage point of centralized control, . . . at all times quick to perceive profitable opportunities of cartelization and amalgamation of industrial enterprises'.

In Russia, an extremely backward country where 'the standards of honesty in business were so disastrously low . . . [and] fraudulent bankruptcy had been almost elevated to the rank of a general business practice' (1962: 19–20), there was little to expect from the private sector. The Russian state took over the entire role of devising a catching-up strategy and implementing it. 'Not only in their origins but also in their effect, the policies pursued by the Russian government in the [eighteen] nineties resembled closely those of the banks in Central Europe', Gerschenkron (1962: 20) thus points out.

It should be noted that a main driver in Gerschenkron's scheme is competition among nations. If Germany and Russia had been content to remain in their dependent status, they would not have needed to adopt this strategy, which was certain to exert great strains in their societies. The strategy was taken because they wanted and needed to compete with Britain in terms of industrial and military might. Gerschenkron's central concept of 'substitutes' was derived from this competition for supremacy among the European powers. Those different strategies and institutions adopted by the latecomers were substitutes for the lack of the supposed 'prerequisites' of development like capital, technologies, or well-functioning financial intermediaries, which were present in the forerunners. In this respect, we may name this Gerschenkronian-type catching-up strategy as a 'substituting strategy'.

Since Gerschenkron's pattern is a historical model developed on the basis of the experience of a specific set of countries in a specific time period, i.e., the large European countries in the nineteenth century, it needs to be modified if we are to apply it to the East Asian countries in the twentieth century.⁴ Two points are especially important in this regard.

First, the technological trends or institutional forms that feature in Gerschenkron's pattern may not be applicable to other time periods and other localities. For example, by the latter half of the twentieth century, the heavy industry was, although still important, no longer the new and technologically most dynamic industry as it was in the nineteenth century. For another example, in the late-twentieth century, it was business groups, such as Japan's *zaibatsu* or the *keiretsu* or Korea's *chaebols*, and not the universal banks as in nineteenth-century Europe, that played a key role in entrepreneurial decisions

and investment mobilisation. Changes in technological and institutional environment should be carefully taken into account when we apply a historical model to another historical setting.

Second, because he conceived economic development in terms of competition among major countries in major industries, Gerschenkron does not give enough attention to the nineteenth-century small European countries, which underwent industrialisation mainly through exploiting complementary relations with bigger forerunner countries rather than attempting to directly compete with them. He acknowledges the Danish case as a clear exception to his model, but he does not delve on it much further.⁵ However, a pronounced trend in the second half of the twentieth century was the ever-increasing process of globalisation, which has enlarged room for latecomers to grow through utilising international specialisation in the manufacturing sector. In this milieu, some East Asian countries deliberately pursued a 'complementing strategy', which primarily exploits complementary relations between the forerunners and the latecomers. Bigger countries like Japan and Korea still employed Gerschenkronian substituting strategy, but smaller countries like Singapore and, to a lesser degree, Taiwan developed mainly through complementing the forerunners' industrial needs by participating in increasingly global subcontracting networks. And currently many commentators are even treating it as the 'normal', if not necessarily the only viable, strategy for late industrialisation in an age of increasing 'globalisation' (Dunning and Hamdani 1997; Dunning and Narula 1996; Lipsey 1997; World Bank 1999).

With these points in mind, we shall below employ Gerschenkron's framework as a broad interpretative tool for comparing the East Asian catching-up models.

2.2 East Asian catching-up models

2.2.1 Substituting strategy: South Korea

The US, Japan, and Korea are ideal countries to which to apply Gerschenkron's three-country paradigm in the twentieth century.⁶ The US was the clear technological leader in most industries after World War II. Japan was substantially behind the US, but far ahead of Korea, making it plausible to designate Japan as a 'moderately backward' country and Korea as an 'extremely backward' country. Japan and Korea also adopted the Gerschenkronian substituting strategies.

Their substituting strategy was basically of 'nationalistic' or 'mercantilistic' character, focusing on building internationally competitive

'local' industries. Although they heavily imported foreign technologies, foreign direct investment (FDI) was generally discouraged. The control of major industries was firmly in the hands of locals in the two countries. Japan financed its industrialisation mostly through domestic resource mobilisation, with FDI and foreign debts negligible in its overall industrial financing. Japan's foreign debt was equivalent to only 0.35 per cent of GDP in 1975, even lower than those of even the financially open US (4.07 per cent) and the U.K. (6.33 per cent), not to speak of France (0.53 per cent) and Germany (0.40 per cent) (IMF 2000). The ratio of FDI to gross capital formation in Japan was only 0.1 per cent during 1970–90 (Table 2.1). Korea financed its industrialisation partly through domestic resource mobilisation, and, reflecting its relative backwardness as compared with Japan, through foreign loans. The share of FDI to gross fixed capital formation in Korea remained the lowest among the East Asian NICs with just over 1 per cent during 1970–90. On the other hand, Korea's reliance on foreign debt was the highest among the East Asian NICs, as shall be discussed below.

Japan and Korea also pursued unbalanced growth strategies by periodically concentrating their national resources on some strategic industries targeted for import substitution (and often exports too). Similarly to the European experience in the nineteenth century, they stressed capital-intensive industries in their catching-up process. The Japanese catching-up was led by heavy and chemical industries, and by the electronics industry, a new key industry of the twentieth century. Korea's catching-up was focused on even narrower segments of the

Table 2.1 Ratio of FDI inflows to gross fixed capital formation in selected East Asian countries, 1971–1997 (%)

<i>Country</i>	<i>1971–1980</i>	<i>1981–1990</i>	<i>1991–1997</i>
Japan	0.1	0.1	0.2
Hong Kong	5.1	9.9	8.7
Republic of Korea	1.2	0.9	1.0
Singapore	15.8	26.2	25.9
Taiwan	1.3	1.3	2.7
Indonesia	3.5	1.5	5.5
Malaysia	13.6	11.3	17.2
Philippines	1.0	3.8	7.3
Thailand	2.3	4.8	4.1
China	0.0	1.5	12.0

Sources: Akyuz *et al.* (1998) and UNCTAD (1999, 2000).

above-mentioned industries, pursuing a more unbalanced growth reflecting its relative backwardness as compared with that of Japan. In both countries, import substitution in the heavy and chemical industries, and later in the 'high-tech' industries, was regarded as crucial in building an independent national economy.

The patterns of institutional solutions to the problems of backwardness in Japan and Korea were also similar to Gerschenkron's schemes for Germany and Russia, respectively. In Japan, the *keiretsu* was a functional substitute for the German universal banks. With commercial banks and general trading companies at the centre of their operation, the *keiretsu* was a major vehicle for financing and organising industrial expansion. For instance, the steel industry and the automobile industry became major exporters mainly as a result of fierce domestic competition among the *keiretsu*, despite the fact that the government was initially reluctant to regard them as key export industries.⁷ It is certainly true that the Japanese state, as a 'developmental state', undertook some important entrepreneurial roles in the Japanese industrial development (Johnson 1982; Allen 1981; Dore 1986). But its role was more of a supporter than of an initiator and organiser of catching-up, when compared with that in its later-comers in East Asia.⁸

In contrast, the Korean state had to undertake a much greater role because of the relative underdevelopment of its private sector. It nationalised commercial banks and totally subordinated their lending decisions to industrial policy. The *chaebols*, the Korean version of family-owned conglomerates, were the children of the state-led heavy and chemical industrialisation (henceforth HCI) in the 1970s. The state designated strategic industries and picked up companies or business groups to undertake the task of building these new industries whilst providing them with subsidies and protections.⁹ The state-banks-*chaebol* nexus thus became the central feature of the Korean economic system (Figure 2.2).

A consequence of this nationalistic development supported through bank financing was a heavy reliance on debts by industrial firms. The debt-equity ratio of the manufacturing sector in Japan reached nearly 500 per cent at the height of its heavy and chemical industrialisation in the 1970s. Korea's comparable figure also shot up to nearly 500 per cent in the early 1980s (Figure 2.3). The two countries were able to substantially reduce the debt-equity ratios of their corporations thereafter mainly thanks to their successes in the HCI, though the level remained relatively high when compared to those of other countries (further on this in sections 3.2.4 and 4.1).

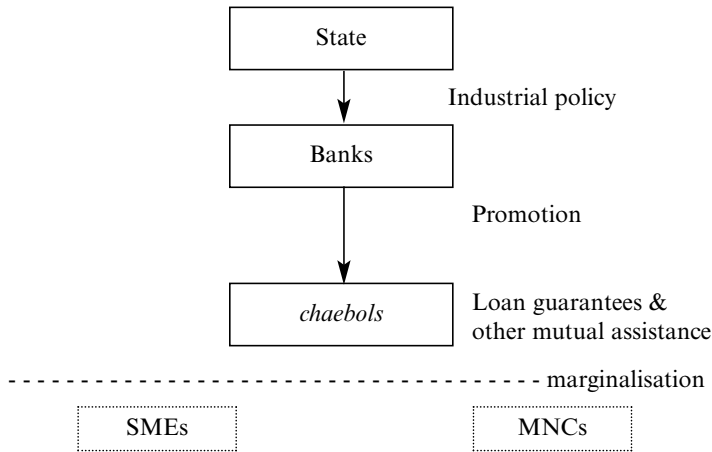


Figure 2.2 Korea’s nationalistic model.

In anticipation of our comparison between the three East Asian NICs later in the book (sections 2.2.2 and 4.1), the following features of the Korean economy should be noted in particular.

The first is the reliance on foreign debt in industrial financing. Japan, with its relatively developed machinery and material industries that had been already developed to a certain level before the end of

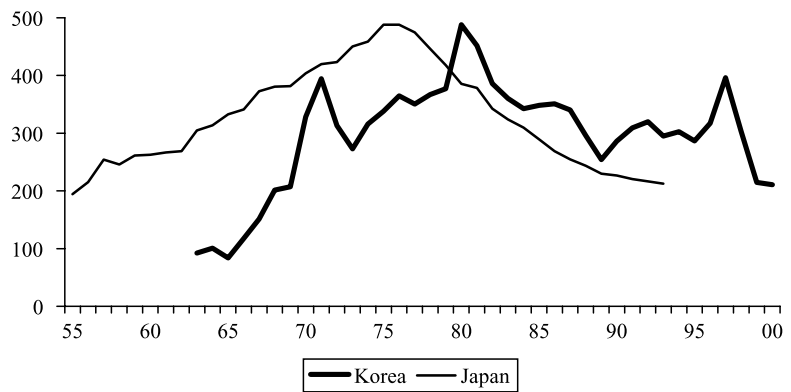


Figure 2.3 Trend of debt–equity ratio in Japanese and Korean manufacturing firms.

Sources: BOK website, Bureau of Statistics (Japan).

World War II, was able to finance its heavy and chemical industries mainly with its own domestic resources and export earnings. Taiwan and Singapore had less need of foreign loans because they did not participate in the HCI on as large a scale as Korea did, on the one hand, and because they were more willing to attract equity investments from multinational companies (MNCs), on the other hand. However, Korea had to rely on foreign debts heavily because it had to import a lot of capital equipment and advanced technologies in building the heavy and chemical industries, whilst securing that these industries remain under local ownership. Therefore, the period of the HCI was characterised not only by a jump in the corporate debt–equity ratio but also by a sharp increase in foreign debt (refer to Table 2.3 on page 22).

Second, the growth of the *chaebols* should be given particular attention. As noted above, they were products of the state-led HCI in the 1970s. But they rapidly began to take initiatives of new large-scale projects from the 1980s, similar to the development of St Petersburg banks in the early twentieth century, the Russian counterpart of the German universal banks.¹⁰ For instance, the *chaebols*' foray into the semiconductor industry in the 1980s can be better understood as a result of oligopolistic competition among them in spite of the initial reluctance of the government to support it (Yoon 1990; Shin 1996).

The pace of the *chaebols*' expansion was partly reflected in the phenomenal growth of research and development (R&D) expenditure by the private sector, which increased 128 times in nominal terms from 21.7 billion won (\$24.6 million, 1\$=850 won) in 1976 to 2,698.8 billion won (\$3,175.0 million) in 1990. During this period, despite the rapid growth in absolute amount of over 16 times from 39.2 billion won in 1976 to 651.0 billion won, the R&D expenditure by the public sector fell as a proportion of total R&D – it fell from 64 per cent in 1976 to 19 per cent in 1990, similar to that of Japan in the 1990s (Table 2.2 and Figure 2.4).

Table 2.2 Major R&D indicators in Korea (billion won, %)

	1976	1981	1986	1988	1990
R&D expenditures	60.90	293.13	1,606.9	2,454.1	3,349.8
Funds from government	39.18	121.71	374.3	522.9	651.0
Funds from private sources	21.72	171.40	1,232.5	1,931.2	2698.8
Gov't: private (%)	64:36	42:58	23:77	20:80	19:81
R&D/sales (%)	0.36	0.67	n.a.	1.61	n.a.
R&D/GNP (%)	0.44	0.65	1.77	1.94	1.95

Source: Shin (1996, Table 4.3).

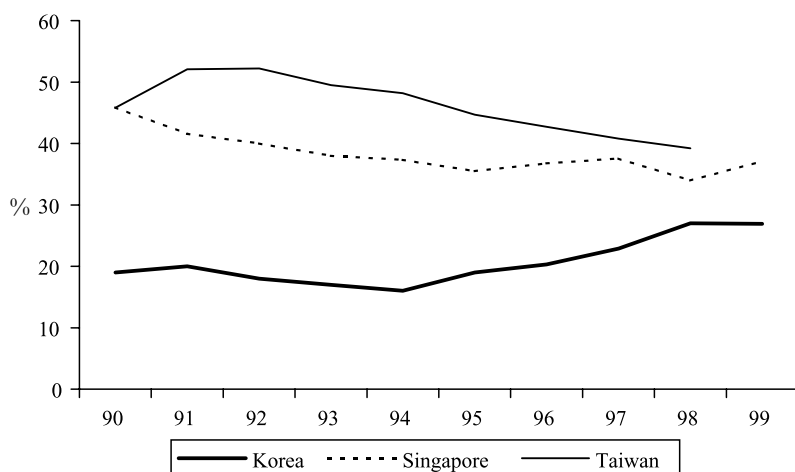


Figure 2.4 Public share of R&D in total R&D investment in Korea, Taiwan and Singapore.

Sources: STEPI website, NSTB, Bureau of Statistics of Taiwan website.

In this way, *chaebols* were securely established as the main bearer of high-risk projects in Korea since the 1980s. This pattern is quite different from those of Taiwan and Singapore, where their governments still play a central role in R&D activities and high-risk projects, as we can see from Figure 2.3 and as shall be discussed below (sections 2.2.2 and 2.3).

Third, the Korean economy was characterised by the continuing weakness of the small and medium-sized enterprises (SMEs). This was mainly because the *chaebols* were engaged in international competition in assembly industries. With Japan as a close but an advanced neighbour, it was more convenient for the Korean manufacturers to import parts and intermediate goods from Japan, rather than to rely on the underdeveloped local SMEs, in securing export competitiveness of their assembled products. Along with the marginalisation of foreign companies, the relative weakness of SMEs was the flip side of the *chaebol* dominance in the Korean economy.

2.2.2 Complementing strategy: Singapore and Taiwan

Singapore and Taiwan were also 'extremely backward' countries from the Gerschenkronian point of view. They were, like Korea, far behind Japan in their industrial development. Reflecting their levels of relative backwardness similar to that of Korea, the state was the prime agent

to initiate and organise industrialisation in both countries. Their states employed a broad range of industrial policy measures and continually led structural changes of their economies (Wade 1990; World Bank 1993; Lall 1994; Rodrik 1996; Champonniere and Lautier 1998; Low 1998; Wong 2001). However, catching-up patterns of Singapore and Taiwan were somewhat different from what Gerschenkron's schema envisaged for 'extremely backward' countries, reflecting new technological and international environment in the twentieth century.

Singapore developed mainly through attracting and upgrading FDIs by providing the MNCs with competitive and continuously upgraded 'complementary assets' like infrastructure, human capital, fiscal incentives, and so on. The Singaporean policy-makers were not interested in competing with its forerunners.¹¹ Instead, they attempted to directly connect the economy to the 'First World' (Lee 2000; Mirza 1986; Huff 1994; Low 1998). Since its industrialisation was spear-headed by MNCs, which already had their own technical and financial resources, Singapore did not face a pressing need to invest in local innovative capacity and to mobilise the necessary financial resources. Attracting MNCs itself was intended to solve the problems of accessing advanced technologies and of financing industrialisation at the same time. Government-linked companies (GLCs), i.e., what the public enterprises are called in Singapore, filled the areas in which MNCs were not interested but which the Singaporean government regarded as strategic to the country's development, such as shipbuilding, steel-making and so on. As a city-state depending its survival on trading, Singapore hardly could afford to protect domestic industries. Among the East Asian countries, Singapore developed through the most internationalist route for industrialisation (Figure 2.5).

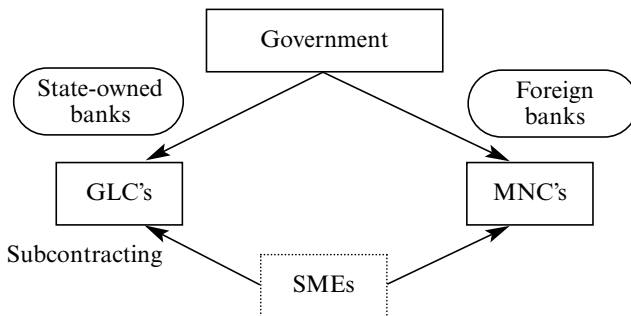


Figure 2.5 Singapore's internationalist model.

Taiwan initially took a nationalistic path of development relying on three pillars, i.e., the public enterprises, the *guangxiqiye* (local business groups), and the SMEs. It underwent a short period of import-substituting industrialisation and imposed heavy regulations on foreign direct investment. But it soon shifted to reducing protections and attracting MNCs in order to compensate for the lack of big local companies. The Taiwanese industrial structure is currently based on a complex relationship between four major players, i.e., the public enterprises, the *guangxiqiye*, the MNCs, and the SMEs (Wade 1990; Whitley 1992; Fields 1995; Hou and Gee 1993). It can be said that Taiwan developed through a semi-internationalist path of catching-up (Figure 2.6).

The Taiwanese private companies, the *guangxixiqiye* or the SMEs, have seldom attempted to directly compete with their forerunners in Japan or in the US. Taiwanese public enterprises also focused on domestic industries, mostly related to military industries or upstream industries for local companies. The Taiwanese state encouraged and even arranged alliances with MNCs when it felt it necessary to venture into high-cost and high-risk areas like semiconductors.¹² The dominance of the SMEs and partnering with MNCs in high-risk projects reduced the need for external funding in the course of its industrialisation. As a result, and partly affected by the Taiwanese government's entrenched anti-inflation policy, Taiwanese firms maintained low debt-equity ratios, as we shall see below.

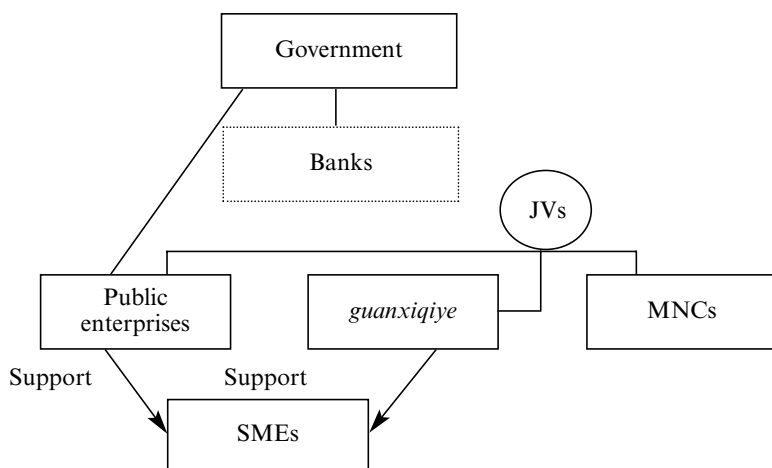


Figure 2.6 Taiwan's semi-international model.

A major factor behind the emergence of the Taiwanese or Singaporean 'complementing strategy', which had few precedents in the nineteenth century, was the acceleration of globalisation in the latter half of the twentieth century.¹³ MNCs took off in the 1960s with FDI flows increasing at twice the rate of the growth of the world output and 40 per cent faster than world exports during the decade. After a short period of deceleration in the 1970s, FDI flows quadrupled in the 1980s, growing three times faster than trade flows, and almost four times faster than GDP (Dicken 1992; Julius 1990; Ernst 2002; UNCTAD 2000). The beginning of the electronics industry in Taiwan and Singapore in the 1960s, which later became the largest manufacturing industry in the two countries, can be attributed to MNCs' relocation of labour-intensive production segments to developing countries (Henderson 1989; Chen *et al.* 2000). At the beginning, the countries provided MNCs mainly with low-wage labour as a complementary asset. However, as MNCs continued to deepen and broaden their global production networks, they upgraded and diversified their complementary assets so that MNCs could remain and expand in their territories.¹⁴

In comparison with the substituting strategy pursued by Japan and Korea, one weakness of the complementing strategy lies in its relative underdevelopment of R&D and marketing capabilities. Mainly as parts-suppliers to the more advanced companies, those adopting complementary strategies have relatively less incentive in investing in R&D and marketing. For, in setting up complementary relations, MNCs normally supply R&D capability, higher-end production capability, brand names, marketing networks, and so on. Needless to say, this does not exclude the possibility that the latecomers can move up to higher-end production capabilities. In fact, the successes of Singapore and Taiwan have hinged on their abilities to continuously climb up the technology ladder. However, in comparison with countries adopting substituting strategies, the pace of accumulation of those high-end capabilities tends to be slower in countries adopting complementing strategies.

This explains why the pattern of R&D financing began diverging between Singapore and Taiwan, on the one hand, and Korea, on the other hand, from the 1980s, when they all seriously started investing in 'high-tech' industries. As noted before, the private sector, especially the *chaebols*, rapidly took over the leading role in R&D investment in Korea. In Taiwan and Singapore, however, the overall growth of R&D expenditure was far slower than that in Korea. The gross expenditure on R&D (GERD) to GDP in Korea was increased from 0.65 per cent

in 1981, to 1.77 per cent in 1986 and further to 2.69 per cent in 1997, while it increased from 0.94 per cent in 1983 to 1.01 per cent in 1986 and to 1.88 per cent in 1997 in Taiwan, and from 0.26 per cent in 1981 to 0.86 per cent in 1987 and to 1.47 per cent in 1997 in Singapore (see Table 2.2. and Figure 2.7; also see Hou and Gee 1993). Moreover, in the absence of large private sector firms that can assume a large role in R&D, the public share of R&D investment remained much higher in Taiwan and Singapore than in Korea. The ratios of private-sector R&D expenditure to GDP in Taiwan and Singapore were 1.11 per cent and 0.92 per cent, respectively, in 1997, whilst the corresponding figures for Korea was 2.07 per cent.

On the marketing front, the complementing strategies also resulted in the relative underdevelopment of large local trading companies in Taiwan and Singapore. This contrasts with the pivotal role that the general trading companies (GTCs), as the *chaebols'* trading arms, played in export expansion in Korea.¹⁵ In contrast, Singapore's exports depended predominantly on MNCs' marketing networks reflecting its reliance on MNCs for production activities. The Taiwanese government briefly and half-heartedly attempted to nurture local large trading companies, but it was not successful – local trading companies accounted for only around 20 per cent of Taiwan's total trade in the 1980s whilst the Japanese *sogo shosha* accounted for 50 per cent of the total trade (Fields 1995; Whitley 1992).¹⁶

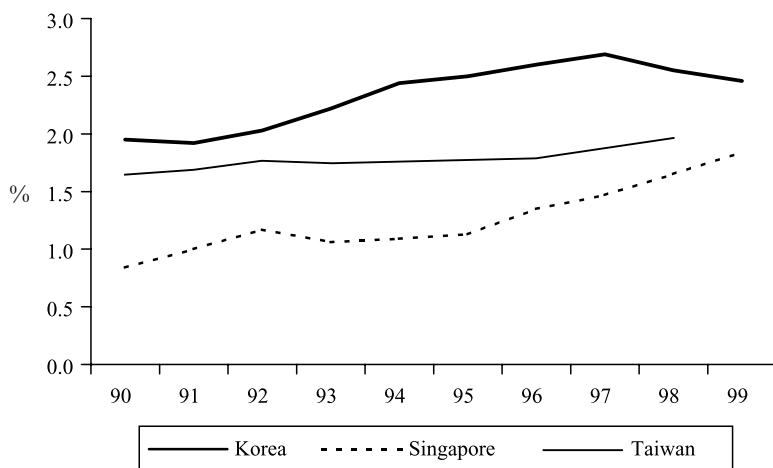


Figure 2.7 Trend of GERD/GDP among Korea, Taiwan and Singapore.

Sources: STEPI website, NSTB, Bureau of Statistics of Taiwan (2000).

In entering the high-tech industries, Taiwan used a method that can be named an 'orderly spin-off' strategy'. Public research institutes like the Industrial Technology Research Institute (ITRI) (especially ERSO, a division of ITRI specialising in the electronics industry) and the Institute for the Information Industry (III), developed major technologies. Based on those technologies, they then set up venture companies with combined investments from the government, the private sector, and sometimes from foreign companies (Hou and Gee 1993; Chen *et al.* 2000). Major high-tech venture companies were therefore in fact half-public enterprises, despite being formally private companies, because original technologies were endowed from public research institutes and 30–40 per cent of the initial funding came from the government. In this sense, it can be even argued that the state's involvement increased in Taiwan when the country ventured into high-risk sectors, thus compensating for the relative lack of the strong private sector. Reflecting this, the public share of R&D investment in Taiwan was maintained at almost the same level at around 60 per cent in most of the 1980s, when Korea saw a drastic increase the relative share of R&D investment by the private sector (Hou and Gee 1993, table 2.2).

In Singapore, where industrialisation was led by MNCs, R&D investment was also spearheaded by MNCs. Foreign companies' share of industry R&D remained well over 60 per cent of total industry R&D expenditure in the 1990s (Wong 2001), and local private sector's capability was far underdeveloped compared to those of Taiwan or Korea. Therefore, when Singapore increasingly needed to complement MNCs' operations with high-end assets, it was the state that initiated investments in upgrading local technological capabilities. The state set up and enlarged various research institutes, and launched programmes to nurture local venture firms, for example, the Technopreneurship 2000, and to develop local venture capital markets. In the semiconductor industry, following the Taiwanese model, the Singaporean government established new companies like Chartered Semiconductor as (half-) public enterprises with MNCs' equity participation.

The complementing strategy has one definite advantage over the substituting strategy. It is less risky, as it avoids direct competition with the forerunners and as it spreads financial risks among equity owners. Therefore, Taiwan and Singapore faced much less urgency to build domestic institutional mechanisms for large-scale mobilisation of financial resources. Their banks were less mobilised for industrial financing than their Korean counterparts, though the governments of both countries were active in investing in some areas which they

regarded strategically important.¹⁷ One result of this, especially when combined with their greater openness to FDI that we discussed earlier, was that Taiwan and Singapore relied much less on foreign debts than Korea did (Table 2.3).

Their complementing strategies also resulted in relatively low corporate debt-equity ratios in Taiwan and Singapore *vis-à-vis* that in Korea. The debt-equity ratio for the Taiwanese manufacturing sector was 95.1 per cent on average during 1974–5, while that of its Korean counterpart was 342.20 per cent during the same period (Figure 2.8). According to Demigruc-Kunt and Maksimovic's (1996) study covering the period of 1980–91, the debt-equity ratio of Singapore firms was 123.3 per cent while that of Korean firms was 366.2 per cent.

2.3 The role of the state

The role of the state was critically important in the catching-up processes of the three East Asian countries, reflecting their similar level of economic backwardness at the beginning of industrialisation. The state was the only agent that could break the inertia in society and was able to design and manage the catching-up system in these 'extremely backward' countries, as Gerschenkron saw in the case of Russia in the nineteenth century. The state was 'developmental' in the sense that economic growth was 'enshrined near the top of the regime's value hierarchy' (Jones and Sakong 1980: 41), and this developmental objective was supported by 'hardness' of the state in the three countries. Korea's catching-up earnestly began with the formation of an authoritarian regime led by President Park Chung Hee (1961–79). Taiwan maintained the most explicitly authoritarian regime by governing the country under martial law until 1987.

Table 2.3 External debt to GDP ratios of Korea, Taiwan and Singapore (% , selected years)

	1976	1982	1985	1993	1996	1997
Korea	36.7	52.0	52.1	12.7	20.2	25.5
Taiwan	13.6	12.8	14.5	7.6	8.0	9.3
Singapore		22.0	22.8	9.5	10.7	16.5

Sources: Table 3.1 for the Korean figures. The Taiwanese figures are calculated from OECD's External Debt of Developing Countries and the Joint BIS-IMF-OECD-World Bank statistics on External Debt. The Singaporean figures are calculated by combining the GDP figures from the IMF's International Financial Statistics, with the external debt figures from OECD's External Debt Statistics, and the exchange rates from the Statistics of Singapore website.

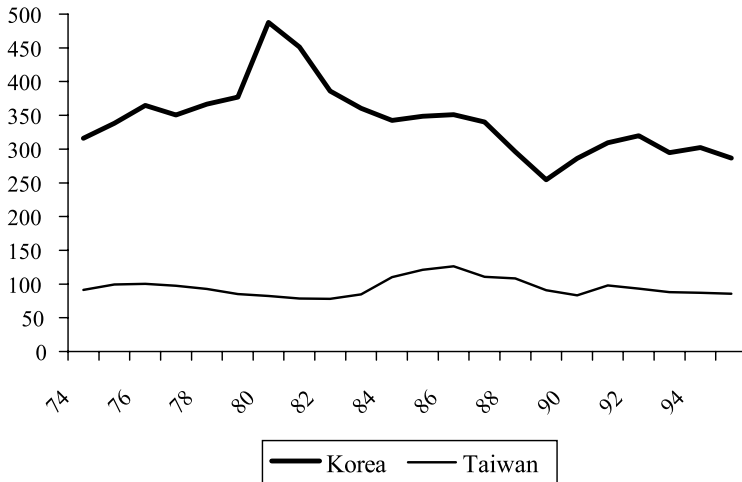


Figure 2.8 Debt-equity ratio of Korean and Taiwanese manufacturing firms (%).

Sources: BOK website, Fields (1995: 108, Table 4–5), Bank of China in Taiwan, quoted in BOK (1999a).

Singapore's economic spurt started with the formation of a new country in 1965 after the city-state was separated from the Malaysian Federation, and it has been supported by People's Action Party's (PAP) one-party domination.

Despite these commonalities, there were considerable differences in the relationship between the state and the private sector among the three East Asian NICs according to their different catching-up strategies and historical background.

Taiwan was a heterogeneous country with a deep divide between the 'mainlanders' and the 'local Taiwanese',¹⁸ with the Kuomintang (the Nationalist Party) seizing the former Formosa Island after the defeat by the Communist Party and with the mainlanders dominating over the local Taiwanese. The Kuomintang government did not entrust the heavy and chemical industries, which were seen as crucial to national security, to the local Taiwanese businessmen, and developed them instead through public enterprises, the top echelon of whose management almost invariably constituted by mainlanders. The result was the relative underdevelopment of large-scale private enterprises. The extent of state domination in the Taiwanese economy is reflected in

the extremely high share of capital formation accounted for by the public sector in the country (Figure 2.9).¹⁹

However, the Kuomintang government allowed relative freedom to the ‘Taiwanese’ in pursuing economic gains through SMEs and provided them with wide-ranging supports. Reflecting its bitter experience with hyper-inflation in the mainland, it also maintained a strong anti-inflationary policy. Consequently, its support to the industry thus relied less on monetary than on fiscal policies like tax breaks and high depreciation allowances. It of course allocated policy loans, but they ‘were broadly targeted to support exports or anti-inflationary import package . . . and industry-specific loans were rare’, as Cheng (1993: 56) points out. In addition, the Taiwanese state heavily invested in R&D through public research institutes (e.g., ERSO), spun off start-ups, which it supported in a number of ways (e.g., technology transfer, arranging alliances with foreign partners) (section 2.2.2).

Singapore developed mainly through MNCs, leveraging on its advantages as a city-state located at a historically important port in South East Asia and having a large pool of English-speaking population. The strategy was also a way to ensure its national security from its then hostile neighbours, Malaysia and Indonesia, by connecting the country directly to the advanced countries.

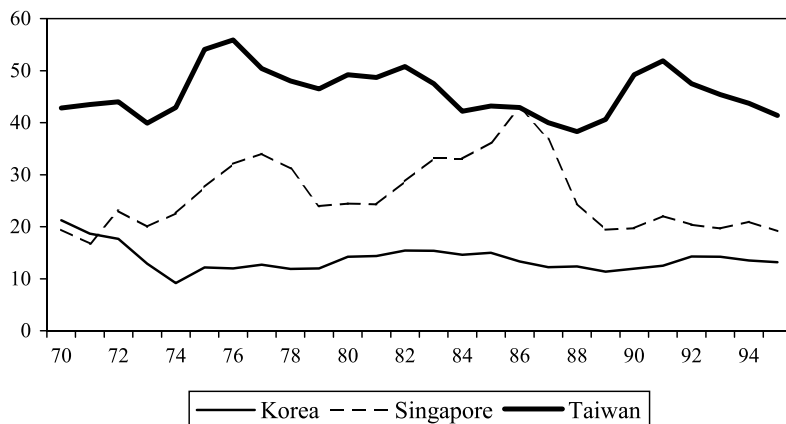


Figure 2.9 Public share to gross fixed capital formation in Korea, Taiwan and Singapore (%).

Sources: National Statistical Office (Korea) website, Singapore Department of Statistics website, Bureau of Statistics of Taiwan (2000).

The role of the state in industrialisation was therefore directed at attracting and upgrading MNCs' investment by providing them with complementary assets like infrastructure, human capital, fiscal incentives, and so on. The Economic Development Board (EDB) was particularly important. Since MNCs brought capital and technologies with them, fiscal policies were more important than monetary policies in influencing the path of economic development. The Singaporean state also supported SMEs, though on a much smaller scale than did its Taiwanese counterpart, by encouraging MNCs to transfer their technologies to local subcontractors and providing incentive to upgrade skills in SMEs, as, for example, reflected in Local Industry Upgrading Program (LIUP). In some industries like shipbuilding and steel-making, in which MNCs were not interested, the Singaporean state directly developed them through GLCs (Wong 2000).

The experiences of Taiwan and Singapore contrasts with that of Korea. The Korean state entrusted the *chaebols* as a major undertaker of industrialisation, although it developed some basic inputs industries like steel, petro-chemical, and fertiliser through public enterprises in the earlier stage of economic development in the 1960s. The state set up an overarching framework of industrial policy for import substitution whilst promoting exports generally. It pushed for upgrading of local industries through industry-specific, sometimes firm-specific, policy measures, including subsidies, protections, restriction of the number of firms in strategic industries, and so on. It also guaranteed foreign borrowings of the private sector, which until recently had very low international creditworthiness. Commercial banks kept providing the *chaebols* with 'patient' money under the guidance of industrial policy. In contrast to Taiwan and Singapore but in line with Gerschenkron's catching-up model, the financial system was extensively mobilised for industrial expansion, resulting in a very high portion of policy loans in the total loans from commercial banks.²⁰

One important observation is that, although initially in many ways much more pervasive than in Taiwan or Singapore, state intervention in Korea subsequently shrank much more quickly than in the two other countries. This was because the very success of the Korean system resulted in the growth of very strong private sector agents, namely the *chaebols*, which made state intervention less necessary and which had the political clout to resist continuing state intervention. In Taiwan and Singapore, in contrast, private sector firms remained relatively weak, and, as a result, the state has maintained or even strengthened the leading role in initiating high-risk projects until the 1990s (section 2.2). This is why the issue of regulating the private

sector has been such a contentious issue in Korea for the last two decades (see section 3.4), whereas such issue has received virtually no attention in Taiwan and Singapore. And it is why the responses to the challenges of globalisation and pressure for market opening in the 1990s were very different in the two sets of countries.

2.4 The role of the *chaebols*

As we discussed earlier, the *chaebol* was a key institution that defined the Korean catching-up system. In some ways, it is what uniquely defines the traditional Korean model. However, it is important to note that business grouping is more a general feature of industrial structure in developing countries and is not unique to Korea, although the size and dominance of business groups in the economy may vary greatly across countries (Hirschman 1968, 1986; Strachan 1976; Leff 1978; Yasuoka 1984; Granovetter 1994; Ghemawat and Khanna 1998).^{21,22}

Business group can be defined as 'a set of firms which act in different product markets under common entrepreneurial and financial control', if we slightly modify Leff's (1978: 663) definition.²³ In contrast with a diversified firm in which its different business units are not independent legal entities, member firms of a business group are legally independent. In contrast with independent individual firms, which normally transact with each other through market mechanism, member firms in a business group usually transact with each other through a non-market mechanism, i.e., hierarchy. *Diversification among member firms under centralised coordination* is a major characteristic of business group.

The widespread existence of business groups in developing countries can be explained by their greater abilities to exploit the economies of scope, accorded by the following three factors – the first two relating to the use of financial resources and the last relating to the use of non-financial resources.

First, the business group is a mechanism to increase the amount of capital as much as the universal banks were in the nineteenth century. A universal bank lends money to a company on the basis of holding the company's shares as its assets and it can therefore increase the lending to the company more than when it does not hold the company's shares. Likewise, business groups increase their capital through 'mutual shareholding', or 'circular shareholding' without actually putting real money, as we shall elaborate below in discussing 'fictitious' capital of the *chaebols*. This is a way of utilising leverage based on interlocked shareholdings: the more interlocked are shareholdings, the

more assets can be created on the same initial paid-in capital. Diversification through independent firms is also a better way to exploit the leverage of borrowings from financial institutions than diversifying within existing firms, as in the former case leverage can be spread across the new firms without increasing the leverage of the existing firms.

Second, the structure of business group works as a mini-capital market for member firms. Financial resources can be mobilised across member firms through direct subsidy, corporate lending, loan guarantees, and so on, and can be directed to projects the group considers strategically important. In this respect, Leff (1978: 672) argues that 'to some extent the groups approximate the functioning of a capital market in the less developed countries'. If capital market is underdeveloped, it may be more efficient to rely on intra-group mobilisation of capital than to rely on capital markets. If a business group has financial institutions as its member firms, the intra-group capital market can be even more effective.

Third, the centralised decision-making at the group level may save entrepreneurial resources. This is so-called the 'central office effect'. As Leff (1978: 670) points out, 'the group *structure* itself reduces the amount of entrepreneurial capacity which is required per unit of innovative decision making'. The same applies to other non-financial resources such as technologies, engineering skills, marketing capabilities, and so on. The group structure reduces the amount of those resources required per unit of economic activities though intra-group transfer.

These advantages also mean that business groups may be more suitable in sustaining long-term projects which require a long gestation period for learning and creating new technologies. Continuous stream of profits from existing businesses may be directly mobilised for or guarantee new uncertain projects. Member firms can provide various indirect financial supports through purchasing products at higher-than-market price, and supplying inputs at lower-than-market price. The intra-group transfer of managers and skilled workers often makes it easier to solve problems arising in the process of carrying out new projects. In this regard, Freeman (1987: 51) stresses that the oligopolistic competition resulting from the formation of business groups 'permits and encourages a long-term view with respect to research, training and investment'.

In terms of international competition, the business group can be understood as an 'institutional innovation' that has allowed the late-comers in the late-twentieth century to compete with their forerunners

on a more equal footing – in the same way the universal bank allowed Germany to compete more effectively with Britain.

The German universal bank in the nineteenth century allowed German firms to mobilise scarce resources and concentrate them on some strategic industries in competing with the British forerunner firms, as Gerschenkron emphasised. At the time, individual firms in Germany did not possess sufficient technological, managerial, and financial strengths to directly compete with the British firms. However, greater resource mobilisation and better managerial guidance that the universal banks provided compensated for their weaknesses.

Likewise, the business group has compensated for the lack of resources in the latecomer firms of the late-twentieth century in their competition with superior forerunner firms in developed countries. It is difficult for them to win the competition if they compete individually, but they can increase their chances by grouping. The Japanese *keiretsu* provided an exemplary case of gaining edge in international competition through grouping during the postwar period.²⁴ The Korean *chaebols* likewise showed their strengths in international competition by utilising their group structure. Let us elaborate more on the case of the *chaebols* below.

As we pointed out in section 2.2, the main impetus for the *chaebols*' rise was provided by the HCI programme. Origins of some of the *chaebols* can be traced back to the early 1950s, but they experienced substantial expansion during the period of HCI drive in the 1970s. The share of the top ten *chaebols*' value-added to GDP more than doubled from 5.1 per cent in 1973 to 10.9 per cent in 1978 (Table 2.4). The average number of affiliated firms of the top ten *chaebol* increased from 7.5 in 1972 to 25.4 in 1979 (Cho 1991: 184–5).

A characteristic feature of the *chaebols*' expansion was the correlation between group size, growth rate, and specialisation in the heavy and chemical industries (henceforth HC industries). In the 1970s, 'the largest groups grew much more rapidly than the smaller groups' (Jones 1987: 102), with the *chaebols* on the whole growing

Table 2.4 Trend in the *chaebol* share of GDP, 1973–1978 (%)

Groups	1973	1974	1975	1976	1977	1978
Top 5	3.5	3.8	4.7	5.1	8.2	8.1
Top 10	5.1	5.6	7.1	7.2	10.6	10.9
Top 20	7.1	7.8	9.8	9.4	13.3	14.0
Top 46	9.8	0.3	2.3	12.3	16.3	17.1

Source: Jones (1987), Table 3.

much faster than the overall economy. As we can see in Table 2.5, the top five groups' average growth rate was 31.6 per cent during 1973–8, and the growth rate falls as the group size becomes smaller. This size–growth relationship is closely associated with differing degrees of specialisation on the HC industries across groups of different sizes, with the larger groups relying more in the HC industries than the smaller ones. The top five *chaebols* accounted for 31.7 per cent of total valued-added in the HC industries in 1978 but only 5.7 per cent in light industry, with the share in light industry tending to increase as the group size becomes smaller.

This correlation between group size, pattern of specialisation, and growth rate is consistent with our previous discussion on the business group's structural advantages in developing countries. The HC industries were 'new' industries for Korea and required a large-scale capital mobilisation and a long gestation period for investment. The *chaebol* structure, with a high degree of diversification and centralised control, was critical in determining the success in these industries.

The Hyundai Heavy Industries (HHI), currently the largest shipbuilder in the world, is a case in point.²⁵ Shipbuilding was a new business for the Hyundai Group when HHI was set up in 1971. HHI ambitiously started by constructing the then largest shipyard in the world but it suffered from lack of demand from the outset. The initial level of technological capability of HHI was so low that it could not even meet the delivery date of simple replication of ships with the tested designs and proven capital equipment of an experienced European shipbuilder. In these adverse conditions, intra-group resource mobilisation was decisive in sustaining this long-term project, as the following documentation testifies:

Table 2.5 The *chaebol* growth rates and the share of the HC industries (%)

Groups	Growth rates (1973–7)	Shares of industries (1978)	
		HC industries	Light industries
Top 1–5	31.6	31.7	5.7
Top 6–10	24.2	9.0	1.2
Top 11–20	21.2	11.6	8.2
Top 21–46	14.1	7.4	11.9
Top 1–46	24.2	59.7	27.0
Economy	9.9		
Manufacturing	17.2	48.9	51.5

Source: Adapted from Jones (1987), Tables 4 and 12.

The top-ranking Korean manager of HHI was formerly a high-level manager of the Hyundai Construction Company (HC), and when HHI ran into problems keeping to schedule, engineers from HC were mobilised. In addition, Hyundai Construction provided HHI with many of its front-line supervisors, managed the construction of the Mipo dockyard, and helped supervise feasibility studies. Hyundai Motors dispatched engineers to help in the struggle to reduce throughput time and also provided technical assistance in assembly line and training techniques. Hyundai Cement sent people to work in production control. All in all, as HHI managers pointed out, 'a lot of people joined'. *The possibility of mobilizing such personnel enabled HHI to act quickly and to avoid delays of recruiting fresh talent in the market.*

(Amsden 1989: 286–7)

In addition, HHI could pick up the shipbuilding designs of Govan, a Scottish shipyard, at a bargain price, because the representative of the Hyundai Group in London read in a British newspaper that Govan was going bankrupt. Even more interestingly, when HHI faced problems in its upstream or downstream industries, the Hyundai Group dealt with them by establishing new firms in those very industries. So it founded Hyundai Merchant Marine Company (HMMC) to buy ships from HHI when foreign buyers refused the delivery of vessels constructed by HHI. Hyundai Engine and Heavy Machinery Manufacturing Company (HEMCO) was established in order to provide HHI with an alternative to high-priced Japanese engines.

Similar stories abound in relation to other *chaebols*, but another important example is the Samsung Group's entry into the semiconductor industry through Samsung Electronics Co. (SEC), which became the largest producer of memory chips in the world by 1992. Samsung's foray into semiconductors would not have been possible without the intra-group resource mobilisation. The group started the semiconductor business by acquiring a venture firm, Korea Semiconductor Inc. (KSI) in 1974, whose name was changed to Samsung Semiconductor Co. (SSC) in 1978, and later to Samsung Semiconductor and Telecommunication Company (SST) in 1982. This semiconductor firm was 'notorious within the Samsung Group as a symbol of low productivity' (Choi 1994: 87). According to Jun and Han (1994), the cumulative deficit of the firm was about 200 billion won (US\$227 million when US\$1=881.33 won, the annual average of exchange rate in 1986) by the end of 1986 from its inception, which far exceeded the ordinary profits of the whole Samsung Group in that

year, 120 billion won. But the company maintained an over 50 per cent investment-to-sales ratio all through the 1980s, which was sustained by the group's strategic concern and financial support from member firms. SEC on its own was much smaller than its key competitors such as Toshiba or Hitachi, but the Samsung Group was comparable to them in size.²⁶ SEC compensated for its relative lack of resources as compared to Japanese forerunners by group-level resource mobilisation and more narrowly focusing its catching-up effort on DRAM manufacturing (Shin 1996: Ch. 8).

The group structure has been maintained largely by inter-subsidiary shareholding.²⁷ As Table 2.6 shows, the ownership control mechanism of the *chaebols* is in fact twofold: owner families control the 'key' member firms (these firms are *de facto* holding companies of the group) and the other member firms are interlocked through circular shareholding. The overall control of the groups has been maintained through relatively stable, *albeit* decreasing, inter-subsidiary ownership, while the share of family ownership has decreased rather quickly.

As we pointed out above, this interlocked shareholding was itself a way of enlarging investment funds through creating 'fictitious capital'.²⁸ If the *chaebols* were to maintain their business grouping without interlocked shareholdings being thus created, the owner families would have had to raise additional capital from their own pockets, which would have been impossible – they were unable to maintain their ownership shares over time even with the help of interlocked share-

Table 2.6 Changes in the share of 'insider' ownership of the *chaebols* (%)

	1983	1987	1989	1990	1991	1992	1993	1994	1995	1996
Top 30	57.2	56.2	46.2	45.4	46.9	46.1	43.4	42.7	43.3	44.1
Family	17.2	15.8	14.7	13.7	13.9	12.6	10.3	9.7	10.5	10.3
Subsidiaries	40.0	40.4	32.5	31.7	33.0	33.5	33.1	33.0	32.8	33.8
Top 5	–	60.3	49.4	49.6	51.6	51.9	49.0	47.5	48.1	45.2
Family	–	15.6	13.7	13.3	13.2	13.3	11.8	12.5	9.4	8.6
Subsidiaries	–	44.7	35.7	36.3	38.4	38.6	37.2	35.0	38.7	36.6
Hyundai	81.4	79.9	–	60.2	67.8	65.7	57.8	61.3	60.4	56.2
Samsung	59.5	56.5	–	51.4	53.2	58.3	52.9	48.9	49.3	46.7
Daewoo	70.6	56.2	–	49.1	50.4	48.8	46.9	42.4	41.4	40.1
LG	30.2	41.5	–	35.2	38.3	39.7	38.8	37.7	39.7	38.3

Source: Chang and Park (1999).

Note: The figures for the top thirty and the top five *chaebols* are the weighted average of individual *chaebols* (according to the size of their capital base) in the respective grouping.

holding. And without such fictitious capital, the *chaebols* would not have been able to invest as much as they have done, given that, even with interlocked shareholding, they had to rely on the stock market much more heavily than the large firms in the developed countries (see section 3.2.4). Thus seen, both from the point of view of the *chaebols* and from that of the overall economy, interlocked shareholding provided investment funds which otherwise would not have been available during the country's high-growth period.

Interlocked shareholding was not the only thing that the group structure allowed the *chaebols* to use in raising new investments. When a member company applies for loans to commercial banks, loan guarantees and other implicit or explicit promises of assistance from its sister firms functioned as major collaterals the banks could count on. Likewise, other things being equal, *chaebol* affiliates could raise more money from the capital market than could independent firms, as they were seen as having lower risk due to their group affiliation. And, as we pointed out above, the *chaebols* could maintain a higher financial leverage of individual firms than independent firms by spreading the loan risk across member firms. A consequence of this money-drawing ability was concentration of domestic financial resources in the hands of the *chaebols*. In 1997, 47.9 per cent of the total debts in the Korean economy were taken by the thirty largest *chaebols*, which employed only 4.15 per cent of total workforce (Table 2.7).

The credit creation system in Korea has been centred at the state–bank–*chaebol* nexus – commonly known as Korea Inc. The government formulated industrial policy and guided the commercial banks to provide loans to strategic industries. And the group structure further expanded credit available to the *chaebols* through interlocked shareholding, loan guarantees, and other mutual assistance among member firms. This state–bank–*chaebol* nexus worked particularly well in the

Table 2.7 The share of the *chaebols* in the Korea economy (% , 1997)

	<i>5 largest chaebols</i>	<i>30 largest chaebols</i>
Value-added	8.48	13.05
Assets	29.22	46.25
Debts	29.79	47.94
Sales	32.29	45.86
Ordinary profit	–2.22 (46.11)	46.73 (46.09)
Employment	2.70	4.15

Source: Adapted from Choi (1999, Table 2.2).

Note: *Figures in parentheses are for 1995.

HC industries, where economies of scale mattered and large-scale capital mobilisation was necessary. When compared to Taiwan and Singapore, Korea's advancement was therefore pronounced in those items such as cars, steels, shipbuilding, plant engineering, and Dynamic Random Access Memories (the most capital-intensive and standardised segment of the semiconductor industry).²⁹

2.5 Concluding remarks

In this chapter, we first defined the traditional Korean economic system, based on the close relationship between the state, the banks, and the *chaebol* – a system that is commonly known as Korea Inc. – from a Gerschenkronian perspective of catching-up. We characterised the Korean system as a late-twentieth-century example of a late-industrialiser following the Gerschenkronian 'substituting' strategy. We first put it in historical perspective by comparing it with the earlier examples of the countries that pursued such strategy, such as Germany, Russia, and Japan. And then we put it in a comparative perspective by contrasting it with those of Taiwan and Singapore, which pursued a 'complementing' strategy during the same period. Following this, we discuss the role of the two most important players in the Korean system, namely the state and the *chaebols*, comparing them with their counterparts in Taiwan and Singapore whenever possible.

The discussion in this chapter shows how the nature and the evolution of the Korean economic system were influenced by the particular development strategy that the country pursued as well as the historical context in which it was pursued. By discussing the Korean system in historical and comparative perspectives, we were able to show how the pursuit of a substituting strategy shaped the evolution of the roles of the Korean state and the business groups, as well as their mutual relationship, in a way that is a lot more complex than the conventional wisdom portrays – a system in which a dictatorial and corrupt, if generally competent, state ran things in league with large and diversified conglomerates that were only sustained through state help, including preferential lending from state-controlled banks. It is on the basis of this understanding that we start our analysis of the 1997 crisis and its aftermaths in the following chapters.

Notes

1 Restructuring Korea Inc.: the 1997 financial crisis and structural reform

- 1 For a comparison of these three crises, see Chang and Yoo (2002).

2 The Korean model in historical perspective

- 1 For a fuller discussion and extension of Gerschenkron's theory, see Shin (1996; 2002).
- 2 For instance, refer to Hirschman (1958; 1968), Rosovsky (1961; 1972), Amsden (1989), and so on.
- 3 It cannot be denied that the British government practised mercantile policies of protecting and supporting its local industries like other European countries in the eighteenth century and the early nineteenth century (refer to Kemp 1993; Deane 1979; Chang 2002). As Kemp (1993: 92) points out, the British Industrial Revolution progressed hand in hand with nation-building, and 'a more complex state apparatus' and 'a hierarchy of officials' were established. However, on the whole, in comparison with those of the follower countries in the nineteenth century like Germany and Russia, private-sector initiatives played a more important role in British industrialisation.
- 4 Gerschenkron (1970: 130) himself emphasises this aspect as follows: 'We deal in particular or existential propositions. It is the very nature of an historical hypothesis to constitute a set of expectations which yields enlightenment and increases the stock of our empirical knowledge within a spatially and temporally limited zone.'
- 5 He argues that, in Denmark, 'no comparable sudden spurts of industrialisation and no peculiar emphasis on heavy industries could be observed' and instead the country gradually developed by utilising a complementary relationship coming from 'the great opportunities for agricultural improvement that were inherent in the proximity of the English market' (1962: 16).

- 6 For a fuller discussion and extension of Gerschenkron's schema to these countries, see Shin (1996).
- 7 For the case of the steel industry, see Yonekura (1991). For the case of the automobile industry, see Kawahara (1997: 64–5); Morikawa (1997); Sato (1980); Komiya (1990); Hirono (2000).
- 8 Similarly, Patrick and Rosovsky (1976: 47) argue that 'the main impetus to growth has been private . . . Government intervention generally has tended (and intended) to accelerate trends already put in motion by private market forces'.
- 9 For studies on the role of the state in the Korean industrialisation, refer to Jones and Sakong (1980), Amsden (1989), Chang (1994), among others.
- 10 For the Russian case, refer to Gerschenkron (1962: Chs 1 and 6).
- 11 In fact, Singapore did not have a close forerunner, like Japan for Korea or Germany for Russia, to compete and emulate. Located in Southeast Asia, it was surrounded by equally, and often more, underdeveloped neighbours.
- 12 For instance, TSMC, currently the largest semiconductor foundry in the world with \$5.3 billion of sales in 2000, was set up in 1987 as a joint venture between the Taiwanese government (48 per cent), Phillips (27 per cent), local private investors (25 per cent) (Hou and Gee (1993); Chen *et al.* (2000); Lim and Pan (1991)).
- 13 According to an estimate, 'the stock of FDI reached over 9 per cent of world output in 1913, a figure which had not been surpassed in the early 1990s' (Bairoch and Kozul-Wright (1996: 10)), implying that the globalisation of production is not a new phenomenon in the latter half of the twentieth century. This is certainly true at the aggregate level, but a little over half of FDI went directly to the primary sector during this period, and the MNCs were not a major driving force in the world economy then. Moreover, during the earlier period, the growing role of FDI in the manufacturing sector was as a substitute for trade in response to rising tariff barrier (Kenwood and Lougheed 1994, quoted in Bairoch and Kozul-Wright (1996: 11)). This was quite different from the trend in the latter half of the twentieth century, when trade liberalisation progressed hand in hand with the increasing role of MNCs in the world economy.
- 14 The beginning of the electronics industry was similar in Korea. The Korean electronics industry in the 1960s was characterised by a 'dual structure'. The consumer electronics sectors like radios and TV sets, which had domestic demand, was under strict import-substituting policy, while it was simultaneously promoted as export items. But other segments, like semi-conductors, electronic calculators, tape recorders and electronic digital watches, were initially developed solely for exports without significant linkages with domestic demand (Kim 1980; Suh 1975; Shin 1996). The difference in the Korean case is that the country later pursued vigorous integration of those enclave developments into the national economy, thereby displacing MNCs with local enterprises, rather than trying to upgrade MNCs investment by upgrading the complementary assets.

- 15 In an attempt to increase exports and reduce its reliance on foreign companies, the Korean government introduced various taxation and financial incentives to promote GTCs in 1975. Leveraging also on the *chaebols'* expansion, the Korean GTCs increased its share of country's exports from 14.0 per cent in 1975 to 47.9 per cent in 1982 while the share of the *sogo shosha*, Japanese GTCs, decreased from 15.6 per cent in 1976 to 7.9 per cent in 1982 (Cho 1986; Fields 1995).
- 16 The share of local traders, in which not only GTCs but also the local SMEs, state enterprises, and trading agencies are included, was 82.1 per cent in 1982 in Korean export, whereas the corresponding figure was around 40 per cent in the 1980s in Taiwan (Fields 1995: 204, 225).
- 17 For instance, the Taiwanese government was slow in commissioning development banks for industrial promotion and began to authorise strategic industry loans managed by the development banks only in 1982. But this sector-specific credit facility accounted for only 4.3 per cent of total loan dispensed by state-owned banks in 1988 (Cheng 1993: 56–7).
- 18 Despite the name, the 'Taiwanese' are not indigenous people of the island. They are the descendants of the immigrants from the Fujian province of China over the last few centuries. The indigenous people of Taiwan are not ethnic Chinese and are called the 'Kaoshan' (meaning 'high-mountain dwellers'). There are very few of them left and they are socially excluded.
- 19 Therefore, the state sector was much bigger in Taiwan than in Korea. In 1976, public enterprises accounted for 22 per cent of Taiwan's gross domestic product but the share was only 9 per cent in Korea (Johnson 1987: 149).
- 20 Policy loan in Korea therefore constituted more than 40 per cent of total domestic loan even in 1993 when the country already began opening its financial markets (World Bank 1993: 309). According to one estimate, it reached 74.1 per cent in 1985 (Kim 1986).
- 21 Leff (1978: 664–5) argues that business groups in developing countries did not draw much attention until the late 1970s because of the dominance of MNCs in terms of firm size in many developing countries. He finds widespread existence of business groups among local firms in countries commonly regarded as dominated by MNCs.
- 22 Of course, it must be added that even in today's developed countries, business groups played an important role in their high growth periods in the nineteenth century or in the early twentieth century. During the period, (quasi)-business groupings through cartels and trusts were very important in these countries (Trebilcock 1981; Chandler 1990; Pohl 1982).
- 23 He defines the 'economic group' as 'a multicompany firm which transacts in different markets but which does so under common entrepreneurial and financial control'.
- 24 Refer to Sato (ed.) (1980); Aoki (ed.) (1984); Imai and Komiyama (ed.) (1994); Odagiri (1992); Miyashita and Russell (1994); Morikawa (1997).
- 25 For the case of the general machinery, see Amsden and Kim (1986). For the computer industry, see Kim and Lee (1987).

- 26 For instance, the total sales of Samsung group were \$21.1 billion in 1987 (Mody 1990: 295, Table 3), and those of Hitachi and Toshiba were \$23.6 billion and \$20.2 billion, respectively (KEIPA 1988: 173–5, US\$=123.5 yen at the end of 1987).
- 27 The inter-subsidiary shareholding in Korea was in the form of ‘circular shareholding’, in which member firm A owns member firm B’s stocks, B owns C’s stocks, and C in turn owns A’s stocks, because, unlike in Japan, ‘mutual shareholding’ or ‘cross shareholding’ has been forbidden by law. In the two countries, holding companies were forbidden until recently during the postwar period.
- 28 For a more elaboration of this, see Chang and Park (1999). In Japan, mutual shareholding rapidly increased during the heavy industrialisation of the 1960s and the early 1970s, reaching to nearly 30 per cent in 1973 for the five largest horizontal *keiretsu* (Hashimoto and Taketa 1992: 346–7, table 7.6). It seems to us that this trend implies that mutual shareholding was also employed in Japan to increase investment funds during its high-growth period.
- 29 In contrast, the Taiwanese or Singaporean catching-up in the semi-conductor industry was marked in ASICs, half-customised chips, which require much less capital outlays but more responsiveness to varying customers’ needs than DRAMs (Shin 1996; Mathews and Cho 2000).

3 The 1997 financial crisis and its aftermath

- 1 Contrast this with the situations in the Southeast Asian countries, which had current account deficits of 7–10 per cent of GDP for a few years in the run up to their crises. Their current account situation was already so vulnerable in 1995 that the Thai and the Malaysian currencies became targets of currency speculation in the aftermath of the Mexican financial crisis.
- 2 The corruption surrounding the Hanbo case was, despite the currently popular perception, *not* typical of what was going on in the country under its ‘traditional’ state-led model of development. Needless to say, in the traditional model, a large sum of money flowed from big business to the politicians and top bureaucrats. These flows were often tied to particular projects in areas like urban planning and government procurements, but they were rarely directly related to particular *projects in the main manufacturing sectors*. Moreover, under the Kim Young Sam government, for the first time in the post-1960s Korean history, we heard the names of some particular *chaebols*, such as Samsung, talked about as being ‘close to the regime’. In the old days, the *chaebols* as a group were preferentially treated, but rarely was any one or few of them regarded as being closer to the government than others. The Hanbo scandal was the first revelation that there had been a fundamental transformation in the state–business relationship in Korea, which meant that the major manufacturing sectors were now not as insulated from corrupt political exchanges as before. For further details, see Chang *et al.* (1998).