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**AUSTRALIA–JAPAN RESEARCH CENTRE
ASIA PACIFIC SCHOOL OF ECONOMICS & GOVERNMENT**





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Growth and Reform in the Korean Economy

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PREFACE

This volume represents a selection of the papers presented at a conference entitled ‘Growth and Reform in Korea: Implications for Australia’ hosted by the Asia Pacific School of Economics and Government of the Australian National University and held at the theatre of Parliament House in Canberra on 24 September 2004.

The principal aim of the conference was to increase Australians’ awareness and knowledge of Korea through a review of the most recent developments in Korea. Political and economic changes are intertwined, and this was particularly true of reforms conducted in various sectors of Korea during the period following the Asian financial crisis. The East Asian financial crisis was a thorny stumbling block on the growth path of Korea and the Korean economy. The crisis halted Korea’s progress, but it shed light on the paths taken in the past and enabled many new opportunities for a better Korea to unfold. In this vein, the conference was timely. By providing up-to-date and analytic information on Korea and the Korean economy, we can openly discuss and acknowledge how far Korea has travelled in the post crisis era and what difficulties lie ahead.

There is no doubt that an adequate understanding of recent political and economic developments in Korea opens new possibilities for not only Korea but also Australia. It will further strengthen the bilateral relationship between Korea and Australia. This conference should also contribute to the promotion of research on the Korean economy and society within Australia.

The conference was organised by the Korea Conference Organising Committee comprising Professor Andrew MacIntyre, Professor Ken Wells, Professor Christopher Findlay, Professor Chong Ju Choi, Dr Jong-Soon Kang (ANU) and Dr Jung Soo Seo (ADFA at UNSW). The committee worked in association with a number of advisors — namely, Dr Leslie O’Brien (Australia–Korea Foundation, DFAT) and Mr Yong Chun Cho (Minister-Counsellor, Embassy of Korea). Preparation for the conference was assisted by Ms Marilyn Popp and Mr Bill Bannear, both of the Australia–Japan Research Centre, APSEG.

We are grateful for financial support from the Embassy of the Republic of Korea, the Australia–Korea Foundation and the Department of Foreign Affairs and Trade. The invaluable contributions to the conference of the presenters and authors of the papers are highly appreciated. On behalf of the organising committee, we would also like to express our sincere gratitude to all the participants of the conference for their enthusiastic interest in Korea.

Jong-Soon Kang and Jung Soo Seo
September 2004



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The Korean Economy: Is there Industrial 'Hollowing Out'?

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I. THE KOREAN ECONOMY: IS THERE INDUSTRIAL 'HOLLOWING OUT'

This paper explores the issue of outward foreign direct investment (OFDI) exporting Korean jobs during 1986–2003. In the midst of an overall increase in employment in Korea, there was a temporally coincident increase in OFDI and a decline in manufacturing employment. An examination of the employment structure and capital stock changes suggests that there had been a structural transition in the Korean economy from a capital intensive to a knowledge intensive base. Simple regression analyses demonstrated that the OFDI from Korea had a checking effect on rising unemployment. As such, the increase in unemployment can be attributed to the trends of the time and the East Asian financial crisis.

Introduction

One of the major features characterising the contemporary Korean economy is the extent of globalisation activities through foreign direct investment, especially outward foreign direct investment (OFDI). The main thrust of Korean OFDI took place in the mid-1980s. The nominal value of approved OFDI increased to US\$367 million and reached a peak of more than US\$6.6 billion in 1996. Although the volume of Korean OFDI decreased during the East Asian financial crisis — that is, 1997–99 — it bounced back with a strong recovery of the economy. The average annual growth rates in the nominal value of foreign direct investment (FDI) for the period 1987–2003 were 33.2 per cent for the approved amount and 29.8 per cent for the invested outward amount (Korea Ex-Im Bank 2004).¹ The proportion of the invested OFDI during the same period remained on average at 63.6 per cent of the approved OFDI amount. However, the increase in Korean OFDI during the period did not occur in leaps and bounds, as is shown in Figure 1 below. Instead, the growth rates experienced quite a high degree of volatility irrespective of whether they are measured in nominal price terms or constant price terms. The values of the standard deviation of the amounts are 89.9 per cent for the approved amount and 56.4 per cent for the invested amount. As such, the coefficients of variation of the OFDI growth rates during the period for the approved and the invested amounts are 270 per cent and 190 per cent respectively.



Figure 1 Outward foreign direct investment in Korea (current prices)



Source: Korea Ex-Im Bank (2004)

The volatile but rapid increase of OFDI brought some concern in Korea because FDI affects the domestic economy in various ways. A particular concern in Korea stems from the argument that OFDI exports Korean jobs. The concern became more intensified and acute when the trend of OFDI, as briefly described above, combined with a slowdown of the Korean economy in the late 1990s and early 2000s. Before the East Asian financial crisis, the economy was growing at an annual average rate of 7.6 per cent during 1990–96 after double-digit growth rates in 1986–88. The economy contracted by 6.9 per cent in 1998 for the first time since 1980, but the recovery in the subsequent two years of 1999 and 2000 was strong, with an annual average growth rate of 9 per cent. Since then, the Korean economy has notably slowed in that the average annual growth rate dropped to slightly over 4.6 per cent in the period 2001–03 (International Monetary Fund 2003 and 2004).

The jobless number and the unemployment rate showed patterns of movement similar to the rate of economic growth. Before the East Asian financial crisis, the Korean economy maintained almost full employment in the 1990s, with the unemployment rate hovering around 2.4 per cent. With the onset of the East Asian financial crisis, the unemployment rate drastically jumped to over 6.5 per cent in



1998–99. The total number of jobless people reached an historical high of more than 1.5 million in the same period (National Statistical Office 2003). With the recovery of the economy, the jobless figure dropped, as did the unemployment rate. However, there were signs of the jobless figure and the unemployment rate rising by 2003.

The sluggish economic growth and rising unemployment figures from the beginning of 2000 could be attributed to the rapid growth of OFDI conducted by Korean firms, suggesting that an industrial ‘hollowing out’ had been occurring in Korea.² It can also be argued that the movement in employment (and, therefore, unemployment) and OFDI in Korea may reflect more of a cyclical rather than a structural aspect of the Korean economy. This is because there are many factors other than OFDI involved in the industrial hollowing out that are implicated in the natural path of economic development.³ Therefore, it may be premature to assume an industrial hollowing out unless the current rise in unemployment is significantly associated with rising OFDI in Korea.

This paper intends to investigate the impact of foreign production on employment in Korea. Although Caves (1982) points out that an appropriate unit of analysis is the firm, this study adopts a more macroeconomic perspective. The reason for this is that firm activities go beyond the firm itself and affect other firms in the industry and other industries (Mariotti, Mutinelli and Piscitello 2003).

In the next section, the theoretical background to the relationship between OFDI and employment is briefly reviewed. In the third section, the sectoral distribution of OFDI is highlighted. In the fourth and fifth sections, the changes in overall employment and employment in the manufacturing sector are considered. The fifth section adopts a simple empirical model to investigate the employment effect of OFDI in Korea. The implications of these effects are considered in the conclusion.

Outward Foreign Direct Investment (OFDI) and employment

The lack of studies on Korean OFDI and its linkage with home country employment is not a complete surprise. It is partly because OFDI in Korea is a relatively nascent phenomenon and because theories of FDI and multinational enterprises reveal a less than clear-cut picture about this issue. Theoretical considerations of OFDI and its impact on domestic employment are quite mixed. It is argued that OFDI incurs both job creation and job displacement in the home country (for example, Baldwin 1995; Blomstrom, Fors and Lipsey 1997; Brainard and Riker 1997; Lipsey 1994; Mariotti et al. 2003; Slaughter 1995). This argument is based on the fact that profit-maximising firms, be they multinational enterprises (MNEs) or small and medium sized enterprises (SMEs), conduct FDI in response to rising cost pressures in the home country and market opportunities provided in host countries. A general strand



of the argument is that vertically integrated firms, usually from high-income countries, fragment their value chains from the perspective of global value maximisation. They move overseas the labour-intensive segment of their value chains by means of FDI in order to operate in lower income countries.⁴ Such relocations obviously involve a job displacement effect in the home country. However, these firms tend to keep high value-adding activities in the home country — usually research and development (R&D), design, management and support activities (Blomstrom et al. 1997) — thus creating jobs in the home. The job creation effects can be directly within the industry where MNEs conduct FDI or in other closely related industries.

A similar argument can be applied to SMEs, particularly those engaged in labour-intensive industries at home. SMEs conduct FDI in response to cost pressures and the deteriorated export competitiveness of the home country, seeking the cheap labour costs and/or export opportunities offered in foreign countries. In this case, most SMEs tend to relocate their entire production processes or facilities because their generic capabilities inhibit them from fragmenting their value chains as large firms do. In relocating, they shut down their operations in the home economy and start operations in the host country, thus substituting jobs in the host for those in the source. However, these relocated SMEs tend to rely on industry and marketing networks back in the home economy for materials, parts and other types of support. Firms in those network industries back in the home country will be able to experience the expansion of employment.

Horizontal FDI is usually motivated by market opportunities. Employment in the home economy normally increases to support the operations of foreign affiliates in the host, creating new employment in the home country. However, horizontal FDI displaces the home country's export and subsequently incurs the contraction of production and employment.

In sum, the net employment effect of FDI remains obscure and depends on the relative size of job displacement and creation effects. It becomes a subject for empirical investigation.

Development patterns of outward FDI in Korea

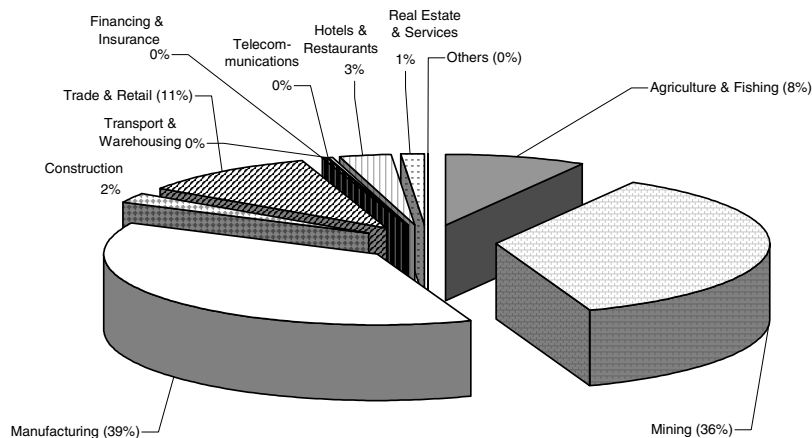
Composition of OFDI by sector in Korea

The trend of rapidly increasing OFDI in Korea over the last two decades also accompanied significant structural changes in its composition (for example, Lee and Plummer 1992). Figures 2A–C show the composition of the invested OFDI by sector in Korea for the three separate periods of the 1980s, 1990s, and 2000s (Korea Ex–Im Bank 2004). The manufacturing sector stands out amongst various sectors in terms of both the share and the sector's inter-temporal behaviour. The share of the manufacturing

sector rapidly increased to 55 per cent of the total invested OFDI in the 1990s compared with 36 per cent in the 1980s. The manufacturing share stayed high in the early part of the 2000s. All these data confirm the continued importance of manufacturing activities in the Korean economy. It is therefore obvious that the sector's survival and prosperity strategy was 'going out' when placed under pressure from rising costs, especially wage costs, or when needing to tap into emerging and incumbent market opportunities in foreign countries.⁵

Korea's mining sector is interesting in terms of the movements in its proportion of OFDI. In the 1980s, the mining sector was the second largest component of OFDI, with its share accounting for 36 per cent of total OFDI. The importance of the sector reflected the Korean government's, and thus the Korean firms', strategy of securing the supply of natural resources after having experienced two significant international oil shocks in the earlier period. During the 1990s, however, the sector slipped to third place, with a share of 6 per cent in the total invested OFDI. The decline in the share of the mining sector during this period reflected the fast growing OFDI from other sectors, such as manufacturing and trade and services, and the relatively stable supply of raw materials in international commodity markets. The importance of the mining sector further deteriorated in the early part of the 2000s. This is due to the fact that the sector divested its interests in overseas mines as part of structural reforms and debt relief programs during and after the East Asian financial crisis period.⁶

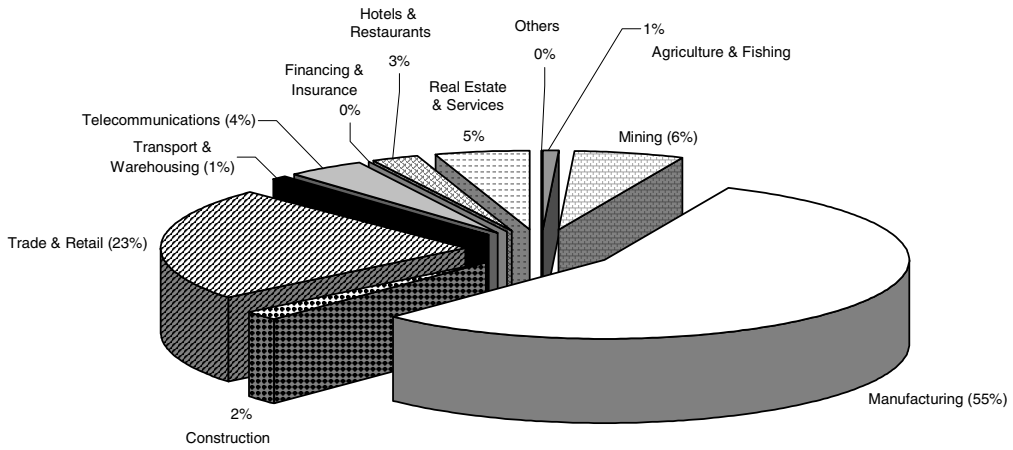
Figure 2A Outward FDI of Korea during 1980s (invested)



Source: Korea Ex-Im Bank (2004).

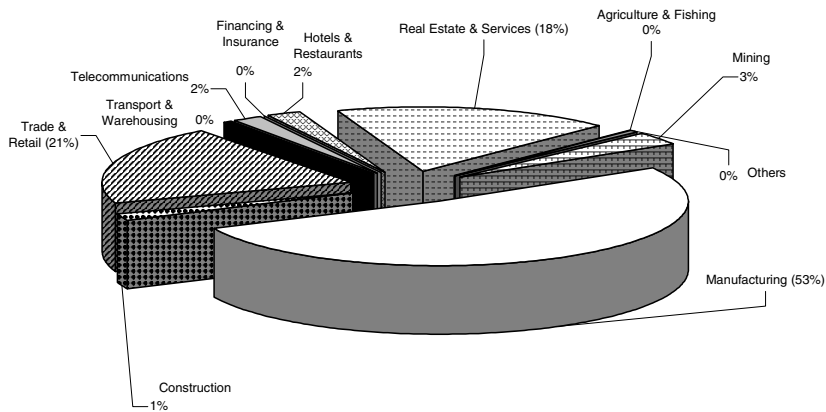


Figure 2B Outward FDI of Korea during 1990s (invested)



Source: Korea Ex-Im Bank (2004).

Figure 2C Outward FDI of Korea during 2000s (invested)



Source: Korea Ex-Im Bank (2004).



The movement of the trade and retail sector's share in the invested OFDI contrasts with that of the mining sector. It ranked as the third most important sector in total OFDI after the manufacturing and mining sectors in the 1980s. The sector's share more than doubled in the 1990s to 23 per cent, but it slightly declined in the 2000s. The importance of this sector was echoed in the trade orientation of the Korean economy during its fast economic growth period. As is well documented in the Ungson, Steers and Park (1997) studies about the role of Korean general trading companies, trading companies provided market information in foreign countries and were 'a vent for surplus' for the Korean exports for large firms and SMEs alike. However, the role of trading companies has been increasingly marginalised as the volume of trade and the size of the Korean economy has expanded. Korean firms in the manufacturing sector started to make their own efforts for export growth under the name of their globalisation strategy. When these firms were also led to minimise production costs to maximise their value chains, they went out through FDI, thus reducing their reliance on the trading companies. The technological advances in information and telecommunications technology industries also allowed SMEs to undertake their own marketing efforts, particularly in terms of e-commerce, rather than rely on the large trading companies to ship out their products to foreign clients as they did in the earlier periods.

Manufacturing sector FDI

As seen earlier, the manufacturing sector took the lion's share of the Korean OFDI during the period 1980–2000. However, the manufacturing sector itself also went through structural changes. Figure 3 shows the average shares for light manufacturing industries and heavy and chemical (HC) manufacturing industries over three different time periods: the 1980s, 1990s and 2000s.⁷ In the 1980s, there was no clear demarcation of the importance between the light and the HC industries, each accounting for 47 per cent and 53 per cent respectively in the total invested manufacturing FDI. Among light manufacturing, the non-metallic and wood and furniture industries had shares of 16 per cent and 12 per cent in the total invested OFDI, together accounting for almost 60 per cent of the invested OFDI in light manufacturing. Although they are classified as light manufacturing, the non-metallic and wood and furniture industries are more intensive in resource usage in their production process.

It is safe to conclude that the Korean OFDI in the 1980s was intended primarily to secure the supply of natural resources, particularly given that OFDI from more labour-intensive industries, such as textiles and clothing, started to surge from the late 1980s. This conclusion is lent further support by the proportions of petroleum and basic metals, both of which are also resource intensive. They had



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shares of 12 per cent and 19 per cent respectively in the total invested manufacturing OFDI during the 1980s, jointly accounting for more than 58 per cent of the heavy and chemical industry FDI. In fact, the basic metals industry was the largest investor in the period.⁸

In the 1990s and 2000s, however, manufacturing OFDI from Korea tilted toward more capital-intensive industries in that the HC manufacturing industries significantly outweighed the share of light manufacturing industries. The former accounted for 65 per cent in the 1990s and 75 per cent in the 2000s of the total invested manufacturing OFDI. Among the light manufacturing industries, the rise of the textile and clothing industry is significantly notable when other light manufacturing industries experienced downfalls in importance during the period. The upsurge of OFDI by the textile and clothing industry began in 1988 and 1989. The industry accounted for almost 15 per cent of the total invested amount in the 1990s. In 1993, more than a quarter (25.4 per cent) of the total manufacturing ODI was conducted by this industry. Since then, the share of the industry has hovered around 10 per cent of the total invested manufacturing OFDI. The upsurge of FDI in labour-intensive industries in the late 1980s to the early 1990s, particularly the textile and clothing industry and the leather and footwear industry, coincided with macroeconomic pressures, such as rising wage rates and the appreciation of the Korean won, and trade frictions with industrialised countries, particularly the United States (US) and European Union (EU).⁹

More conspicuous rises of OFDI were found in the HC manufacturing industries: the electrical and electronics industry and motors and equipment industry. In the 1990s, the OFDI of the electrical and electronics industry averaged over 24 per cent of the total manufacturing OFDI. Before the East Asian financial crisis, the industry kept increasing its share and occupied 44 per cent of the total invested manufacturing OFDI in 1996. Although the industry's share dwindled slightly in the post financial crisis period, investment in the sector resumed its momentum by the beginning of 2000. In fact, the average share of the industry remained on average at 43.2 per cent of the total invested amount in the 2000s, with a pinnacle of 75 per cent in 2001.

The motor and equipment industry experienced ups and downs in OFDI to a significant degree. The industry's share more than tripled to 13.5 per cent in the 1990s from a mere 4.4 per cent of the total invested OFDI in the 1980s. In particular, in the early to mid-1990s, the share rapidly expanded and reached its peak of almost 38 per cent in 1998. Korean car manufacturers' soldiering on direct investments around this time period was well documented in the business world (For example, Swinden 1996; Brzezinski 1997). However, the industry experienced a substantial contraction of OFDI in the post financial crisis period as the Korean car manufacturers confronted snowballing debts and subsequent insolvency problems. Consequently, the industry's share in the total invested OFDI began



a downward spiral to less than 6 per cent in 1999 and further to a meagre 1 per cent in 2000–1. However, in the remaining part of the 2000s, there was a sign of strong recovery of FDI activities by the motor industry.

Employment in Korea

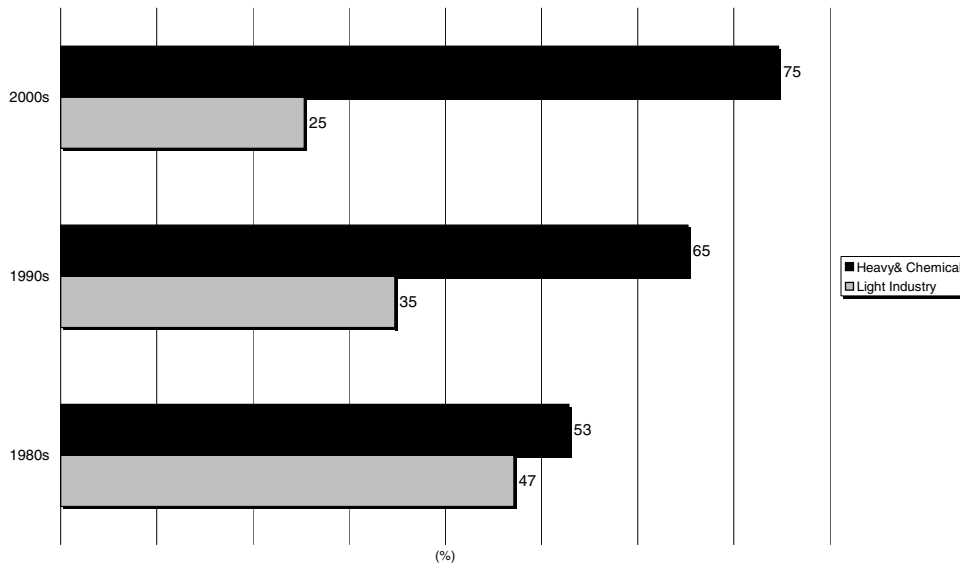
In an effort to investigate if there has been any potential impact of OFDI on employment in Korea during the period, two types of statistics are discussed in this section: unemployment statistics and the total number of people employed. Figure 3 below shows the number of jobless and the associated unemployment rate over 1980–2003. (National Statistical Office 2003) Although the jobless number and the unemployment rate fluctuated a little over time,¹⁰ they have demonstrated an apparent downward trend since 1980. This continuously decreasing trend was broken when the Korean economy was struck with a massive financial crisis in 1997. With the outbreak of the crisis, the number of unemployed skyrocketed from 568,000 people in 1997 to almost 1.4 million in 1998–9. The unemployment rate reached 6.7 per cent on average in the same period. An increase in the jobless number was unavoidable when numerous firms stumbled during the crisis and subsequent restructuring efforts of the corporate sector meant initially downsizing employment. However, an improvement in unemployment accompanied a rapid recovery of the economy in subsequent years. The number of jobless people substantially declined to slightly over 700,000 in 2002–3 and the unemployment rate fell to 3.3 per cent on average during the period.

Intuitively, it seems that the trends and movements in the number of jobless people in Korea during the period are not positively associated with the speed and extent of OFDI movements. Instead, the relationship for Korea seems to be negative, should there be any. However, it is often argued that the unemployment statistics do not fully show the true picture of a country's employment status due to quite well-known caveats associated with it.¹¹ A typical caveat is that the unemployed stop searching for jobs and are no longer counted as being unemployed. Thus, more appropriate statistics may be employment figures in Korea during the period.

Figure 4 below shows the employment trends of Korea over much a longer period: 1963–2003 (National Statistical Office 2003). Figure 5 shows these trends according to the major economic sectors: the primary sector, manufacturing sector¹² and social overhead capital and other services sector (National Statistical Office 2003). Over the last two decades — 1981–2003 — total employment in Korea has been growing at an annual average rate of 2.1 per cent. More than 2.2 million people were actively working in 2003.¹³ In terms of the growth rates of employment by sector, the biggest winner



Figure 3 Outward manufacturing FDI in Korea (invested)



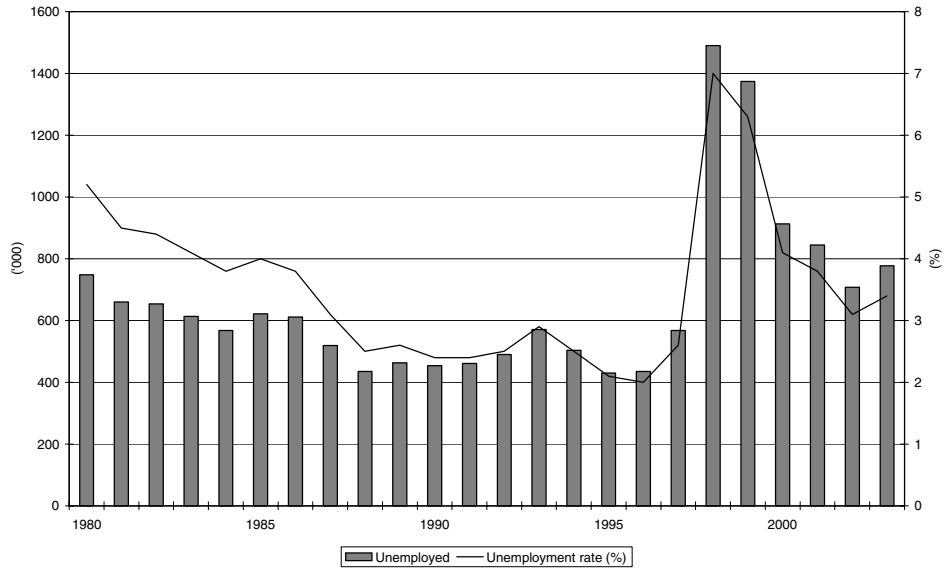
Source: Original data from Korea Ex-Im Bank (2004) were reclassified by the authors.

is the social overheads and other services sector (hereafter referred to as ‘services’), which achieved a 4.4 per cent annual average employment expansion rate during the period. The second biggest winner is the manufacturing sector, which had an annual growth rate of 1.1 per cent. However, employment in the sector was continuously decreasing in 2001–03 at the average annual rate of close to –0.7 per cent. As expected and predicted by most economic development theories, the primary sector lost employment at an annual rate of –3.6 per cent during the corresponding period.¹⁴

An interesting observation in the same figure is the change in the relative share of each sector in total employment, particularly in the manufacturing sector. While the primary sector has been losing employment throughout the period, the manufacturing sector reached its maximum share of 27.8 per cent of total employment in 1989. After this period, the manufacturing sector’s share in employment continued to decline and remained relatively stable at around 19 per cent in the 2000s, with the total number of employment standing at slightly over 420,000. On the other hand, the share of the services sector in total employment has been continuously rising throughout the period and absorbed 72.1 per cent of total employment in 2003.

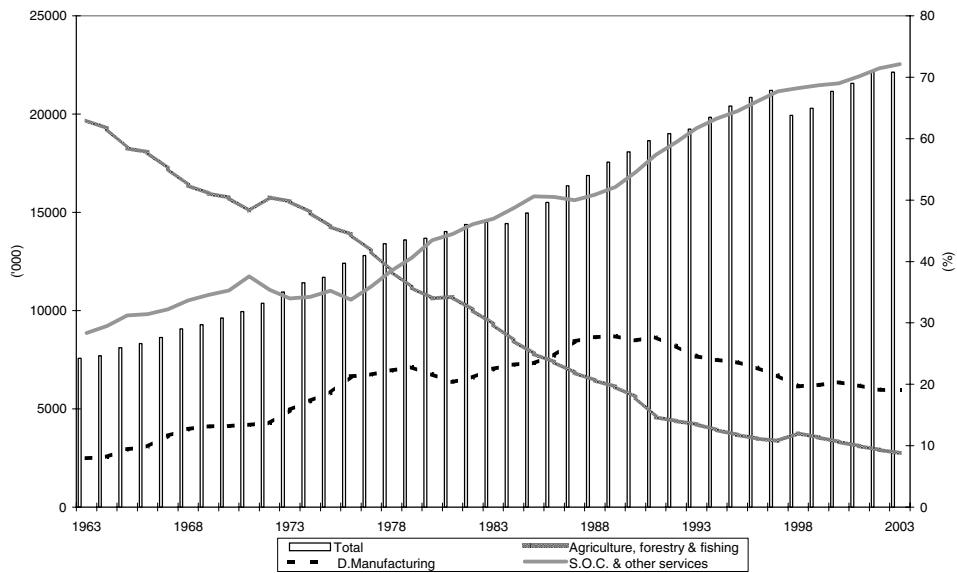


Figure 4 Unemployment trends in Korea (1980–2003)



Source: National Statistical Office (2003).

Figure 5 Employment trends in Korea (1963–2003)



Source: National Statistical Office (2003).



Considering the movements in employment by sector, it is apparent that employment in the services sector has been growing fast enough to absorb the employment release in other sectors, including the manufacturing sector. In this light, the so-called deindustrialisation revealed in employment statistics can be treated as a natural path of industrial upgrade with a more service sector orientation. There is an indication that the manufacturing sector was losing out in employment while the employment expansion in the services sector seemed to decelerate in the early part of the 2000s. Therefore, total employment grew negatively but marginally at -0.1 per cent in 2003. Nevertheless, there is no reason to believe that the downturn in employment growth in that year is attributable to the OFDI factor. It may have to do with a general downturn of the Korean economy, as noted earlier. As such, it may be cyclical.

In sum, there is no clear sign that the movements in the jobless number and the unemployment rate were positively associated with the speed and extent of OFDI movements in Korea during the period considered here. On the contrary, the relationship between the unemployment rate and the level of OFDI, should there be any for Korea, seems close to negative in the same period.

Manufacturing employment in Korea

As noted earlier, the manufacturing sector accounted for the major share of Korean OFDI, with an average share of 53.1 per cent for the approved and 51.2 per cent for the invested OFDI in 1986–2003. As such, it may be appropriate to consider the changes in employment in the manufacturing sector alone. Due to limited data availability, the employment trend for 1991–2002 will be analysed. Data for employment by industry in the manufacturing sector in 1991–2002 was obtained from the *Report on Mining and Manufacturing Survey (National Area)*, which is available from Korea's National Statistical Office website (<http://www.nso.go.kr>). The information on employment in the manufacturing industries is reported according to the three-digit Korean standard industry classification (KSIC). It was aggregated and broadly classified into light manufacturing industries and heavy and chemical manufacturing industries for ease of comparison with the development in OFDI discussed previously.¹⁵

According to the survey, employment in the manufacturing sector grew at an annual average rate of -0.8 per cent for 1991–2002.¹⁶ A distinctly notable decline in manufacturing employment occurred in the financial crisis period, particularly 1997–8. Amid the two broad groups of manufacturing industries, light manufacturing has been almost constantly shedding its workers. An exception is 1999–2000, when a rapid recovery of the economy was experienced after a massive layoff of workers in 1997 and 1998 of 9.6 per cent and 15.1 per cent respectively. Light manufacturing lost employment on



average by 3.3 per cent each year during 1991–2002. Consequently, its share of total manufacturing employment declined from 48 per cent in 1991 to 35 per cent in 2002. Heavy and chemical (HC) manufacturing experienced an annual average increase of 1.5 per cent in the number of workers during the same period. However, HC manufacturing also experienced a massive shedding of employment in 1997 and 1998 of 5.1 per cent and 13.1 per cent respectively. The share of HC manufacturing in total manufacturing employment increased to 64 per cent in 2002 from 52 per cent in 1991.

The development of employment in the light manufacturing and HC manufacturing industries indicates that, to a certain extent, inter-industry movements of workers might have occurred. Nevertheless, the absorption of employment by HC manufacturing was not sufficient enough to absorb the workers released from light manufacturing during the period. This is understandable given the characteristics of the two industry groups. Light manufacturing is relatively labour-intensive whereas HC manufacturing is capital intensive.

An interesting feature underlying the development of inter-industry movements of labourers during the period is that both industry groups experienced almost identical increases in nominal wages. Wages and salaries per worker increased annually by 8.9 per cent for light manufacturing and 8.7 per cent for HC manufacturing. Generally, when firms and business are placed under cost pressures, specifically wage costs, it is expected that production technology will increasingly become more capital intensive — that is, capital substitutes for labour. This factor substitution occurred in Korea for the light and HC manufacturing industries until the financial crisis hit the Korean economy. Capital stock per worker, measured as the amount of tangible fixed assets per worker, increased in the corresponding period. However, the capital for labour factor substitution trend changed its direction in the post crisis period such that each group experienced a negative growth of capital stock per worker.

Two interpretations are provided in relation to the observed development of capital stock per worker:

- that capital was re-substituted by labour in the post crisis period, or
- that divestment was taking place in the Korean manufacturing industries.

The first interpretation seems not impossible but unreasonable in that the wages and salaries components actually grew in the post crisis period of 1999–2002 for both the light and HC manufacturing industries. The case of divestment sounds more plausible. When the capital stock became obsolete, Korean firms did not invest enough to more than compensate the depreciated amount of capital stock. The divestment was apparent in manufacturing industries in 2000–2 where the absolute



amount of tangible capital stock decreased in both the light and HC manufacturing industries. A lack of sufficient investment occurs only when firms lose confidence in the economic future or when previously extremely capital intensive production technology significantly shifts towards a knowledge base. Unfortunately, it is not clear whether such divestments in manufacturing were due to cyclical factors, reflecting the slowdown of the global economy as well as the Korean economy, or structural factors in terms of the deindustrialisation and reorientation of the economic structure towards a knowledge base.

However, there are a couple of signs in Korea that the relationship may be structural and occurring naturally in the process of a transition towards a more knowledge-intensive and service-oriented economic structure.¹⁷ First, as considered in Section 3, employment growth in the services sector was fast enough to absorb the release of the workforce from the manufacturing sector. Second, value adding per worker grew at an average annual rate of 12.1 per cent for overall manufacturing in 1991–2002. The equivalent average growth rates were 10.0 per cent for light manufacturing and 10.4 per cent for HC manufacturing. The growth of value adding per worker constantly grew, even in 2000–2, although the growth rates were much lower than in the previous period. The positive growth of value adding per worker in 2000–2 indicates that a transition of production activities was taking place in Korea. This involved higher value added activities in manufacturing, including the production of parts and other intermediate products and R&D. Nevertheless, this divestment and the negative employment growth in manufacturing temporally coincided with the rapid growth of OFDI in Korea in the same period, as shown earlier.

Employment effects of outward FDI

It was suggested earlier that OFDI in Korea might have affected employment in Korea, particularly because of a temporal coincidence in manufacturing employment growth and OFDI activities by Korean firms. Although many factors are involved in determining employment (or unemployment), a simple regression analysis was considered appropriate. Caves (1982) points out that the appropriate unit of analysis for examining the employment effects of OFDI is the firm. However, given related effects and the potential interindustry movements of the labour force, the regression analysis was performed at a macroeconomic level. The macroeconomic level analysis was conducted using a slightly longer term series of OFDI and unemployment statistics for the period 1986–2003. This period was chosen simply because the thrust of OFDI in Korea took place around the mid-1980s.

The original regression model used to explain the movements in the number of unemployed is specified as:

$$\text{LUNM}_t = a_0 + a_1\text{LOFDI}_t + a_2T + e_t \quad \text{Eq (1)}$$

where 'T' stands for a time trend, and unemployment and OFDI values are logarithmic values (LUNM and LOFDI) with the usual assumptions for the error term 'e'.

Added to the original regression model of Eq (1) is a dummy variable, CRISIS, to control for the effect on unemployment of the East Asian financial crisis period. Thus, the CRISIS dummy variable takes a value of 1 during 1997–99 and 0 otherwise. The final regression model used for the estimation is given as:

$$\text{LUNM}_t = a_0 + a_1\text{LOFDI}_t + a_2T + a_3\text{CRISIS} + e \quad \text{Eq (2)}$$

where the error term in Eq (2) satisfies the same conditions as in Eq (1).

Tables 1A and 1B below show the results of the regression analyses on the number unemployed and the value of OFDI for 1986–2003.¹⁸ The null hypothesis was that the OFDI is positively related to the number of the unemployed — that is, OFDI exports Korean jobs. In testing the hypothesis, we used two types of OFDI: approved OFDI (AOFDI) and invested OFDI (IOFDI).

Table 1A Unemployment and invested OFDI in Korea, 1986–2003

Variable	Coefficient	Standard error	t ratio	p value
T	0.069017*	0.016004	4.3126	0.0007
LIOFDI	-0.20388**	0.094307	-2.1619	0.0484
CRISIS	0.55481**	0.24136	2.2986	0.0374
CONSTANT	6.8423**	0.51313	13.334	0.0000
$R^2 = 0.6588$				
$R^2 \text{ adjusted} = 0.5856$				

Note: * and ** indicates significance at the 1 per cent and 5 per cent level respectively.

Table 1B Unemployment and approved OFDI in Korea, 1986–2003

Variable	Coefficient	Standard error	<i>t</i> ratio	<i>p</i> value
T 0.083995*	0.014073	5.9686	0.0000	
LAOFDI	-0.33362*	0.071404	-4.6722	0.0004
CRISIS	0.56498**	0.21922	2.5773	0.0219
CONSTANT	7.7603*	0.40605	19.112	0.0000
$R^2 = 0.7458$				
R^2 adjusted = 0.6913				

Note: * and ** indicate significance at the 1 per cent and 5 per cent level respectively.

Less than parsimonious estimation procedures were adopted, although major statistical diagnostic tests supported the current model specification as appropriate.¹⁹ At the risk of generalisation, the results of the estimation seem quite satisfactory. Around 59 per cent of total variation in the jobless number was explained by the three variables, and all of them were all statistically significant at least the 5 per cent level.

The jobless number followed a positive and significant trend over time. This may reflect an increasingly higher level of labour force participation during the period 1986–2002. The East Asian financial crisis definitely added to the number of jobless people, as shown earlier and evidenced by the significant effect of the CRISIS dummy variable. However, a countervailing force against the rising trend in the number of jobless came from OFDI. LAOFDI is statistically significant at the 1 per cent level while LIOFDI is significant at the 5 per cent level. In other words, a 1 per cent increase in invested OFDI activities moderated the increase in the number of jobless by 0.2 per cent.²⁰ Considering the elasticity at the mean of the three variables, the unemployment-decreasing effect of the invested OFDI more than offsets the combined effects of the time trend and the financial crisis. In other words, a 1 per cent increase in the invested OFDI in Korea decreased the number of jobless by approximately 0.06 per cent, which is equivalent to about 466 out of 777,000 unemployed people as at 2003.

Concluding remarks and suggestions

This paper has considered the developments of OFDI and its impact on employment in Korea since the mid-1980s as one of major features of the globalising contemporary Korean economy. Although the

extent and speed of the increase in the Korean OFDI activities were sufficient to raise alarm about the FDI exporting Korean jobs, the actual movements in the employment situation in Korea were rather convincing in demonstrating that OFDI did not export Korean jobs during the period. As the simple regression analyses demonstrated, OFDI activities had at least a positive effect on checking the rising unemployment in Korea, if not allow the creation of new jobs.

The discussion of the sectoral employment patterns argued that there might have been intersectoral movements of workers, primarily from the manufacturing to the services sector. This was based on the fact that employment growth in services was fast enough to absorb the workforce released from manufacturing. Even in the manufacturing sector, it was implied that labour movement across industries might have taken place until recently, with a tendency for HC manufacturing industries to account for an increasingly larger share of manufacturing employment. Although negative employment growth was detected in more recent periods, particularly in the post crisis period of 2000–03, it seems that manufacturing activities in Korea, be they light manufacturing or HC manufacturing, tilted towards higher value-added activities. In the meantime, the net lost jobs in the manufacturing sector were absorbed by growing employment opportunities in the services sector.

In conclusion, it is not the case that OFDI caused industrial hollowing during 1986–2003 in Korea. The changes in employment, particularly in the manufacturing sector, can be instead ascribed to the natural development path of the Korean economy. It needs to be acknowledged that shedding employment opportunities in manufacturing were natural rather than the result of OFDI activities. On the contrary, the OFDI requires more support given its unemployment checking effect.

One limitation of this study is that the employment effect of the OFDI in Korea was considered only at the macroeconomic level. Thus, an examination of industry-level, if not firm-level, employment effects of the OFDI in Korea is imminently warranted.

Notes

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- 1 In constant value terms, the rates were 25.1 per cent and 22.3 per cent for the approved and the invested amounts respectively for the same period.
- 2 Industrial hollowing out is synonymous with deindustrialisation, which means simply the loss of manufacturing bases manifested in an absolute and relative decline of manufacturing outputs




or employment (Bluestone and Harrison 1982). There is a series of debates on what is causing deindustrialisation for industrialised countries such as the United Kingdom (Singh 1987) and the United States (Glickman and Woodward 1989).

- 3 Oh (2001) discusses many factors involved in the deindustrialisation process.
- 4 The choice of destination depends on the location advantages of the host countries.
- 5 Other cases included tariff-jumping so as to avoid trade frictions with industrialised countries and strategic asset-seeking FDI in technology and knowledge available in industrialised countries.
- 6 In terms of the reforms and restructuring efforts in Korea during and after the Asian financial crisis period, refer to Krause (2000) and the papers presented in this conference.
- 7 Original statistics from Korea Ex-Im Bank (2004) were reclassified by the authors.
- 8 Interestingly, the share of the electronics and electrical industry remained on average 8 per cent of the total invested FDI in the 1980s.
- 9 These phenomena were also coupled with political democratisation in the mid-1980s and the subsequent uprising of industrial disputes, which significantly spurred the OFDI from Korea (Tcha 1998).
- 10 Although the number of unemployed and the unemployment rate are different, the movements show a very close correlation between them. The correlation coefficient is 0.89.
- 11 The defects of the unemployment statistics are well discussed in any introductory macroeconomic textbook.
- 12 Mining and quarrying is not included in the manufacturing sector.
- 13 For 1963–2003, the corresponding growth rate is slightly higher at 2.7 per cent per annum.
- 14 In fact, the biggest loser is the mining and quarrying sector, where employment has decreased at an annual rate of almost 7 per cent per annum for 1981–2003.
- 15 There is a substantial discrepancy between the number of workers in the survey and the employment number available in the *Statistical Yearbook of Economically Active Population* (National Statistical Office, 2003). Although strictly speaking such a discrepancy hinders a concrete comparison between the two different sources of employment information in Korea, nevertheless both of them reveal a very similar pattern of movement during the period, particularly for 1991–2002.
- 16 According to the *Statistical Yearbook of Economically Active Population*, employment in the manufacturing sector declined at 1.1 per cent per annum on average for the corresponding period.
- 17 Lee (2000) also discusses the transition of the Korean economy toward a knowledge base.
- 18 In estimations, we used White's (1980) heteroscedasticity consistent variance-covariance matrix.
- 19 Diagnostics are available from the authors upon request.
- 20 In the case of the approved OFDI, a 1 per cent increase of OFDI decreased unemployment by 0.3 per cent.

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2

Do We Need Broadband? The Economic Impacts of Broadband on Korea

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2. DO WE NEED BROADBAND? THE ECONOMIC IMPACTS OF BROADBAND ON KOREA^{**}

Broadband has been said to bring social and economic benefits. Electronic commerce is frequently noted as a key area in which to realise these benefits. Due to the expected benefits of broadband, a number of countries have attempted to construct information infrastructure for it. Korea is among the leading performers in broadband. While there is widespread enthusiasm for the development of national broadband network infrastructure, a question is raised concerning the relationship between broadband and its social and economic benefits. There has been little research to investigate the link between them. This paper aims to investigate whether there are benefits from broadband by examining the case of Korea.

Introduction

Broadband is considered a key to enhancing the competitiveness of an economy and sustaining economic growth (Organisation for Economic Cooperation and Development 2001, 2002; International Telecommunications Union (ITU) 2001). Many governments around the world are increasingly committed to extending broadband networks to their citizens (Broadband Advisory Group 2003; Office of the e-Envoy 2001a, 2001b). They promote the use of this technology in a belief that broadband will contribute to economic and social development by enhancing productivity and introducing new services.

Korea is among the leading performers in broadband. In September 2002, the number of broadband subscribers reached 10 million. With over 70 per cent of all households connected with broadband. As at mid-2004, there were 11.6 million subscribers (Ministry of Information and Communication 2004a). This contrasts with Australia, where the number of broadband subscribers reached one million at the end of June 2004 (Australian Competition and Consumer Commission 2004), which equates to about 10 per cent of total households. It is reported that Australia is two years behind other developed countries like the United States of America and Canada (Riley 2004). This comparison only considers the number of subscribers. When we take into account the quality of services — that is, speed — the year gap will increase. While 1 mbps or above is a norm in many leading countries, 256kbps is still the standard plan in Australia. Further, there is a strict download cap in Australian broadband services that discourages users from becoming active surfers.



While there is widespread enthusiasm for the development of national broadband network infrastructure, a question is raised concerning the relationship between broadband and its benefits. For example, an Australian commentator has asked if there is any evidence that the broadband take-up has stimulated economic growth in, for instance, Korea (Fist 2003). Another was quoted as saying ‘the OECD’s assessment of broadband importance to the overall economy...doesn’t explore that claim with any real substantial evidence’ (Mackenzie 2003). While there are contrasting views on the relationship between broadband and socioeconomic developments, there has been surprisingly little research to investigate the link between them.

The aim of the paper is to examine the impacts of broadband on Korea, a country with the highest penetration rate of broadband. This paper consists of three sections following the introduction. Section 1 shows the current status of broadband in Korea. Section 2 presents the impacts of broadband on Korea. The impacts are examined in three aspects: electronic commerce, overall economic effects and new business opportunities. Section 3 concludes the paper by highlighting its limitations and suggestions for further research.

Broadband in Korea

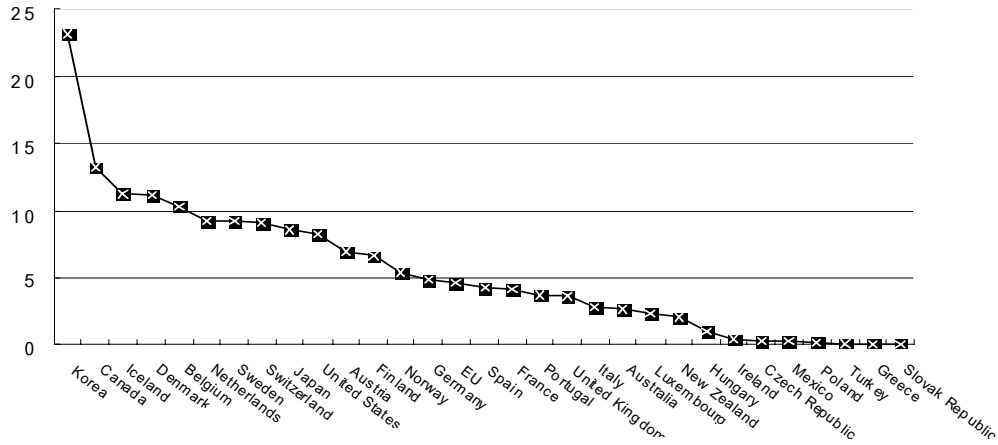
Korea is noted for its rapid economic development over recent decades. In 1997, financial crisis overwhelmed the country and the government vigorously implemented economic reforms that enabled the economy to recover swiftly from it. In this process, the information technology (IT) sector was considered a driving force that would enable the recovery of, and further push the growth of, the overall economy. The Korean government set the basic direction for a knowledge-based society with the program Cyber Korea 21 in 1999 (Ministry of Information and Communication 1999), which further accelerated IT development. As a result, the IT industry grew from 8.6 per cent of gross domestic product (GDP) in 1997 to 13 per cent in 2000, the highest of any Organisation for Economic Cooperation and Development (OECD) countries¹ (Korea Information Society Development Institute 2002).

Korea has the highest penetration of broadband in the world (Figure 1). The number of broadband subscribers in Korea reached 11 million in mid-2003 (Figure 2), with about 77 per cent out of 14.3 million homes connected at the speed of over 2mbps. What is more astonishing is that all this was achieved in less than four years after the introduction of the first broadband services in July 1998.

The widespread use of broadband has changed the way people use the Internet and the way they live their lives (Lee, O’Keefe and Yun 2003). As is shown in Table 1, Korea had the second highest ratio

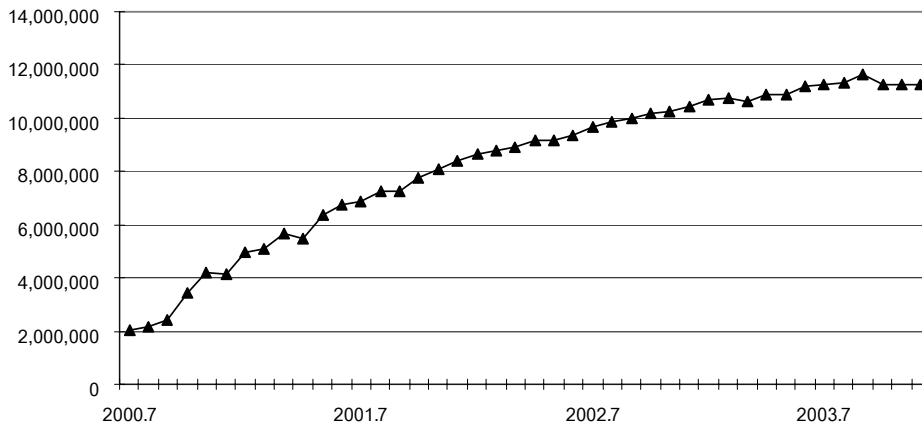


Figure 1 Broadband access in OECD countries per 100 habitants



Source: Organisation for Economic Cooperation and Development (<http://www.oecd.org>) 2003.

Figure 2 Number of broadband Internet subscribers



Source: Korean Network Information Center (<http://www.krnic.net/>), 2004.



Table 1 Number of Internet users per 10,000 inhabitants in 2003

1	Iceland	6,747.40
2	Korea	6,034.20
3	Sweden	5,730.74
4	US	5,513.77
5	New Zealand	5,262.37
6	Netherlands	5,219.46
7	Canada	5,128.29
8	Denmark	5,128.15
9	Finland	5,089.30
10	Singapore	5,043.59

Source: ITU (<http://www.itu.org>), 2004.

of Internet users at over 60 per cent in 2003 International Telecommunications Union (ITU), 2004). This can be attributed to the wide penetration of broadband. As broadband Internet is widely and deeply embedded in ordinary people's lives, Koreans perceive broadband Internet as a necessity and take it for granted since it is there and very much part of their daily lives.

Table 2 shows market share by service provider and technology. There are three main operators providing broadband services in Korea. The incumbent operator, Korea Telecom (KT), is the market

Table 2 Market share by service provider and technology

	xDSL	Cable	APT LAN	Satellite	Total	Ratio
KT	5,511,620		430,264	3,993	5,945,877	50.9
Hanaro	1,096,016	1,380,648	300,205		2,776,869	23.8
Thrunet		1,278,209	4,445		1,282,654	11.0
Onse		397,778	2,454		400,232	3.4
Dreamline	50,508	83,191	3,308		137,007	1.2
DACOM	55,298	135,108	4,432		194,838	1.7
Others	34,947	756,283	148,712		939,942	8.0
Total	6,748,389	4,031,217	893,820	3,993	11,677,419	100.0
Ratio	57.8%	34.5%	7.7%	0.0%	100.0%	

Source: Ministry of Information and Communication (<http://www.mic.go.kr/>), 2004.



leader, with 51 per cent market share (5.5 million subscribers), followed by Hanaro Telecom with 24 per cent and Thrunet with 11 per cent. In terms of technology, KT primarily uses Digital Subscriber Line (DSL), Hanaro uses a mix of cable and DSL (depending on the service area), and the Thrunet service is mainly provided via cable modem. The local area network (LAN) means that broadband connection is provided to apartment blocks using telephone lines or unshielded twisted pair (UTP) cable.

The rapid rollout and take-up of broadband services in Korea has been achieved through a combination of several factors: facilities based competition, government leadership, geography and demographics, the Internet café, called PC (personal computer) rooms, phenomenon, pricing and some unique elements of Korean culture². Having outlined the current status of broadband, the next section describes the impacts of the broadband diffusion.

Impacts of broadband development

The impacts of broadband on the economy and society of Korea are enormous. Three areas are examined: electronic commerce, overall economic effects and new business opportunities.

Electronic commerce

Electronic commerce is often mentioned as a key area on which broadband can make direct impacts. Broadband has helped to facilitate continued growth in electronic commerce in Korea. Here some indications of positive impacts of broadband on electronic commerce are presented. First of all, the use of the Internet as an access method to financial services is currently at maturity. The number of Internet banking users and the amount of online stock trading have shown sustained growth throughout the period of broadband diffusion. As seen in Table 3, the ratio of online stock trading to total trading grew very fast and reached 66.6 per cent in 2001.

Internet banking has also seen huge growth (Table 4). The number of Internet banking users was 22.7 million in 2003. This number increased over five times the 4.1 million figure at the end of 2000. In terms of the percentage of users among the total population, Korea records 24.2 per cent, with only two countries ahead — Sweden with 29.4 per cent and Norway with 28 per cent (Lee, O'Keefe and Yun 2003). It seems partly due to the fact that transactions have been made easier and faster by broadband and are therefore much more attractive to users.

Table 3 Online stock trading

	Amount of online transactions	Amount of total transactions	Ratio
1999	495.3	1,947.5	25.4 per cent
2000	1,348.1	2,411.2	55.9 per cent
2001	1,220.8	1,833.1	66.6 per cent
2002	1,332.6	2,072.5	64.3 per cent
2003	981.3	1,627.8	60.3 per cent

Note: Unit: Trillion Korean Won.

Source: Korea Securities Dealers Association (<http://www.ksda.or.kr/>) 2004.

Table 4 Number of Internet banking users

	Number of users	Growth rate
1999	1,230	
2000	4,090	232.5 per cent
2001	11,310	176.5 per cent
2002	17,710	56.6 per cent
2003	22,754	22.2 per cent

Note: Unit: Per 1,000 persons.

Source: Ministry of Information and Communication White Paper 2004.

Online shopping is another area which shows the rapid growth of electronic commerce in Korea. Table 5 shows the ratio of online shoppers who have bought or ordered goods or services on the Internet during the past month out of Internet users who have personally used the Internet in the same period. Korea has seen a big increase in online shoppers. The authors of the Global eCommerce Report (Taylor Nelson Sofres Interactive 2002) conclude that easy-to-use broadband Internet services and price competitiveness are major reasons for this trend.

Table 5 Online shoppers (per cent)

Rank	2002	2001
1. U.S.A	32	33
2. Korea	31	19
3. Germany	26	28
4. Norway	25	19
5. U.K.	23	24
6. Denmark	22	18
7. Netherlands	20	18
8. Ireland	19	18
8. France	19	12
9. Israel	18	16

Source: Taylor Nelson Sofres Interactive 2002.

Overall economic effects

Fast broadband deployment has contributed to the growth of other sectors. Korean information communications technology (ICT) equipment vendors benefited significantly and continued to generate growth in the period of the global economic downturn. Local vendors exploited the volume and growth of the domestic market to develop innovative and competitive solutions for network operators and to enhance their technological knowledge and expertise. Several equipment vendors are now seeking to export their products and services aggressively to overseas markets. Asymmetric Digital Subscriber Line (ADSL) related exports grew exponentially from US\$0.3 million in 1999 to US\$11.2 million in 2000 to US\$240 million in 2001. This is expected to double in 2002 (Ministry of Information and Communication 2002). Amongst those equipment manufacturers, Samsung has been successful as a key supplier to KT, eventually becoming the dominant supplier for Digital Subscriber Line Access Multiplexer (DSLAM). Samsung stated that an important factor to their success was their innovation in supplying key software for the low cost management of all ADSL related equipment. Leveraging their experience and expertise obtained in the domestic market for the last several years, Samsung are entering broadband markets overseas.



Operators such as KT are clearly among the major direct beneficiaries. They have succeeded in generating new revenue flows from data services to compensate for declining revenues from plain telephony services. Their strong performance in the broadband sector came at a time when other foreign telecom operators such as AT&T, Nippon Telegraph and Telecommunications (NTT) and British Telecom were experiencing difficulties growing revenues.

According to a recent report by the Ministry of Information and Communication (2002), about 11 trillion won (including 350 billion won of the government loan) has been spent on the installation of high speed Internet service networks and related facilities for the period 1998–2001. This investment generated 17 trillion won worth of industrial output and 5.8 trillion won worth of added value. It also generated 590,000 jobs (Table 6).

New business opportunities

Broadband has generated new business opportunities. The e-entertainment sector, in particular online games, has been a major beneficiary of the deployment of broadband. Here online games mainly refer to massively multiplayer online role play games (MMORPG) that require high bandwidth for transmitting graphic data (Kim 2002). MMORPG is one of the most engaging forms of online games. They create a ‘virtual world’ where hundreds of thousands of players participate. Korea is now home to some of the world’s leading online game companies. Some online games — for example, NC Soft’s *Lineage* — are highly interactive and replicate various human behaviours. In peak hours, hundreds of thousands of players are participating simultaneously. Each player’s actions can shape that world. These

Table 6 Economic effects of the broadband investment

	1998	1999	2000	2001	Total
Investment (100 million Korean won)	6,719	14,741	48,168	40,248	109,876
Industrial output generated	10,385	22,784	74,451	62,209	169,830
Value-added generated	3,548	7,783	25,434	21,252	58,016
Direct employment (persons)	12,632	27,713	90,556	75,666	206,567
Indirect employment	23,449	51,446	168,106	140,466	383,467
Total employment	36,081	79,159	258,662	216,132	590,034

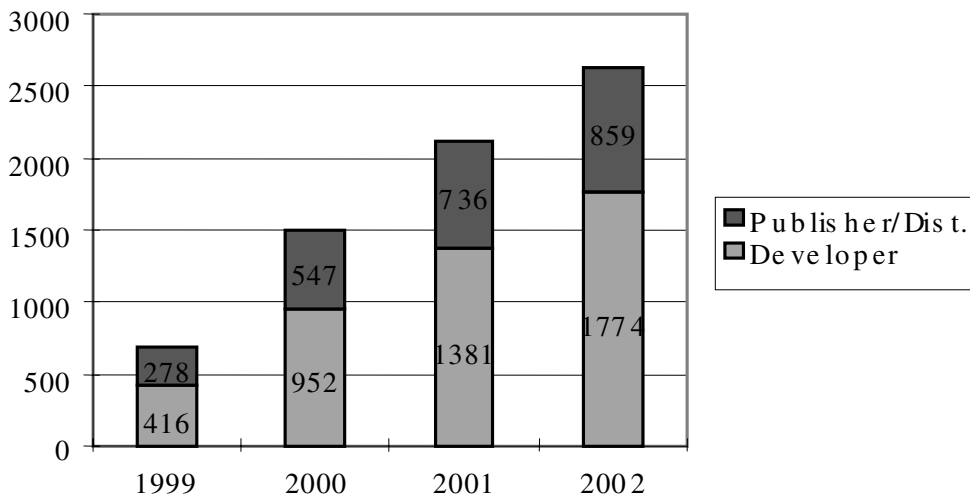
Source: Ministry of Information and Communication, 2002.

games are less about dexterity and more about interaction with real human beings in real time (Kim 2002).

Strong competition in this sector has driven innovations in both products and business models. Several of these companies are now focusing on exporting their products, skills and expertise overseas. It was recently reported that the online game industry is growing on a strong basis (Yang 2002). Due to the growth of the online game industry, the number of computer game companies has increased by three times over a four-year period (Figure 3). During the same period, the number of employees in the industry has increased by about 50 per cent annually and reached 33,870 in 2002 from 13,500 in 2000.

Another new business potential comes from mobile Internet. Although mobile Internet is not a direct outcome of broadband and requires a separate infrastructure, broadband Internet, its users and related developers — for example, content providers — will be a firm basis for the success of mobile Internet. First of all, broadband Internet provides the infrastructure not only for wired users but also for mobile users. Even if all the users were connecting through mobile Internet, there should be wired lines for fulfilling their requests. The more mobile Internet users, the more physical wired lines would be needed for maintaining the same level of service.

Figure 3 The number of computer game companies



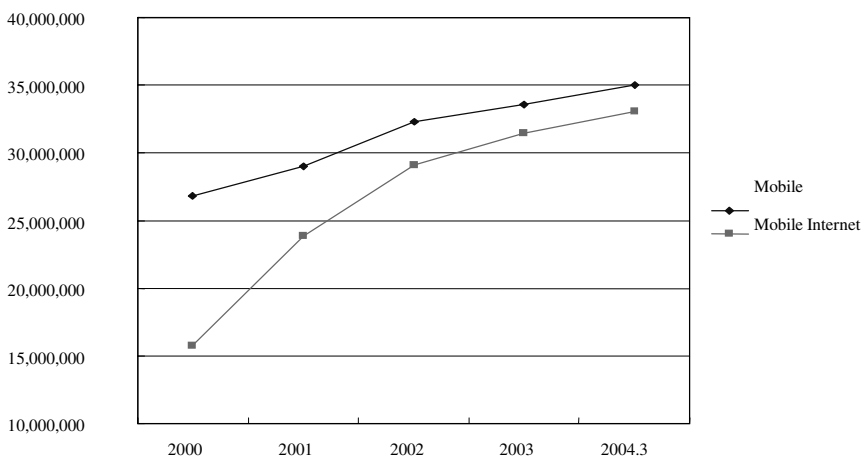
Source: Korea Game Development & Promotion Institute 2004.



From the users' perspective, mobile Internet and wired Internet are complementary because mobile Internet can satisfy the need to use the Internet while moving around. The users who have been experiencing broadband Internet can easily turn to mobile Internet because their personalised knowledge of what's in cyber space and how to get what they need is directly applicable to the use of mobile Internet. Also important are related developers for broadband Internet because they have the experience of successful developments and operations in broadband Internet. Their understanding of underlying technologies will be useful to deploy new networks and develop relevant and saleable contents.

Until recently, the mobile communication industry has concentrated on voice communication whereas the wired communication industry has reoriented itself to data communication. As the mobile phone market has been saturated, however, the average revenue per user (ARPU) for voice communication seems to have reached its highest point. Mobile communication companies are now turning to mobile data communication in search of new sources of revenue. Until now, they have been aggressive in promoting and taking in mobile Internet subscribers. It seems that they have succeeded in creating a market with a good size. Figure 4 shows the increase of mobile phone and mobile Internet users. The number of mobile Internet subscribers is shown at over 30 million, around 90 per cent of mobile phone users.

Figure 4 Number of mobile phone and mobile internet users



Source: Ministry of Information and Communication (<http://www.mic.go.kr/>) 2004a.

**Table 7 Sales of mobile communication and mobile Internet**

	2001	2002	2003
Total Sales	12,843.5	16,254.2	16,924.2
Mobile Internet Sales	628.3	1,656.6	2,115.6
Ratio	4.89	10.19	12.50

Source: Choi, S.M. Internal seminar presentation 2004.

As Table 7 shows, despite its large number of subscribers, mobile Internet as a business is still in its early stage, taking only 12.5 per cent out of total mobile communication sales. Therefore, it is a long way to go before mobile Internet generates sufficient revenues for those companies involved — for example, carriers, content providers, among others. However, it can surely be said that broadband Internet will be a firm basis for the growth of mobile Internet.

Recently the Korean government announced a new strategy called IT 839 Strategy. This strategy was drawn up to give a new momentum to the economy after broadband. It is named 839 because it has three pillars — services, infrastructure and new growth engines — which have eight, three and nine new projects respectively (Table 8). Although broadband is not directly related to all of them, it is a foundation or a starting point for some — for example, the home network service. As seen in this section,

Table 8 IT 839 Strategy

8 Services	Wireless Broadband, Digital Multimedia Broadcasting, Home Network, Telematics, RFID (Radio Frequency Identification) based service, W-CDMA, Terrestrial Digital TV, Internet Telephony (VoIP)
3 Infrastructures	Broadband Convergence Network, Ubiquitous Sensor Network, Next-Generation Internet Protocol Next-Generation Mobile Communications, Digital TV, Home Network, IT SoC (system-on-chip), Next-Generation PC,
9 New Growth Engines	Embedded Software, Digital Contents, Telematics, Intelligent Service Robot

Source: Ministry of Information and Communication 2004b.



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broadband offers many new business opportunities for companies operating in related areas and a springboard for future infrastructure development.

Conclusion

While it is generally accepted that broadband will bring social and economic benefits, there are some doubts raised on the link between them. As the ongoing development of broadband networks will require billions of dollars of infrastructure investment from both the public and the private sectors (Broadband Advisory Group 2003; Computer Science and Telecommunications Board 2002; National Broadband Task Force 2001; Office of Technology Policy 2002), these doubts need to be cleared before any significant commitment is made. It would be prudent to base policy decisions and financial commitments on substantive evidence on the link between broadband and its social and economic benefits rather than on speculation and hyperbole. Much argument and policy for broadband Internet seems to be based on an inadequately tested belief about the link.

The motivation of this paper was to provide evidence, if any, of the positive link between them. We examined broadband development in Korea and could see some positive impacts. Most importantly, broadband Internet not only provides a driving force for new businesses for related industries but also forms a springboard or a firm foundation for future infrastructure in the network economy. Although the examples presented in the paper show positive impacts, they remain anecdotal. This paper lacks theoretical clarity. Furthermore, the paper misses out the other side of the story — that is, some negative impacts. For example, restructuring is taking place in broadband related industries due to over- and overlapped investments. There are also some social problems, such as broadband addiction.

A theoretical framework to measure and assess the societal effects of IT investments needs to be developed. Future research in this direction will help governments at various levels and industries to base their policy and strategic decisions on substantive evidence.

Notes

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1 The IT industry share of GDP in the United States, the global leader in the IT industry, is 8.3 per cent (Department of Commerce 2000).

2 This is beyond the scope of the paper. For details, see Lee et al. (2002, 2003).



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3

Current Trends in Korean Industrial Relations: Towards Social Partnership?

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3. CURRENT TRENDS IN KOREAN INDUSTRIAL RELATIONS: TOWARDS SOCIAL PARTNERSHIP?

Industrial relations issues remain at the forefront of the contemporary political economy of Korea. After more than a decade of predominantly neo-liberal industrial relations policy and adversarial industrial relations, recent Korean governments have attempted to use social partnership as a mechanism to achieve cooperative and peaceful industrial relations and to balance economic efficiency with social equity in the context of globalisation. This paper examines developments in Korean industrial relations since democratisation with a particular focus on the challenges facing the Roh Moo-hyun government as it attempts to build social partnership between labour and capital.

Introduction

Until the late 1990s, Korean governments attempted to limit and constrain the power of the independent unions while at the same time gradually increasing labour market flexibility. These policies were largely unsuccessful. The election of Kim Dae-jung as President, and the pressures for reform associated with the IMF bailout, marked a critical juncture in Korean industrial relations. The Roh Moo-hyun government has continued the social partnership experiment begun by Kim Dae-jung. This paper has two aims. First it seeks to put the current social partnership experiment in historical perspective and argues that current developments in Korean industrial relations remain heavily influenced by Korea's experience of rapid economic development and democratic transition. Second the paper examines the extent to which the Korean experience with social partnership over recent years confirms views about social partnership developed in relation to recent European examples. The first section provides a brief overview of recent debates about social partnership in Europe ; the second section of the paper presents an historical overview of developments in Korea industrial relations since the early 1960s; section three reviews recent developments in the Korean labour market; and the final section focuses on the fate of the Korean Tripartite Commission, Korea's recent experiment with social partnership.



Social partnership: some theoretical and comparative observations

The concept of social partnership refers to a process of negotiation between unions, employers and the government that is designed to improve economic performance and at same time ensure social equity. Related terms include concertation and neo-corporatism. As Ferner and Hyman (1998:xv–xvi) put it:

The idea of social partners implies ... first a societal recognition of the different interest of workers and employers; second an acceptance—indeed encouragement—of the collective representation of these interests; and, third, an aspiration that their organised accommodation may provide an effective basis for the regulation of work and the labour market.

With the development of stagflation in the developed market economies during the 1970s, there were a number of attempts by governments in developed market economies to use social partnerships to control inflation. With a few notable exceptions, including Sweden, these policies proved to be unstable and largely ineffective. Analyses of successful forms of social partnership during this period stressed two key factors. The first was the existence of central organisations of employers and, more importantly, unions who could take on a representative role and ‘transcend sectionalism’ (Goldthorpe 1984:325). The focus of analysis thus shifted to establishing the extent to which unions and employer groups were ‘encompassing’ enough to control the demands of their affiliates and thus provided the structural preconditions for social partnership. The second set of factors associated with successful social partnership during this period related to the ability of the government to offer workers a political trade-off, or exchange, for wage restraint. For many this implied the existence of a social democratic government operating within a Keynesian economic policy framework prepared to use expansionary fiscal policy to compensate workers and employers for wage restraint (see, for example, Scharpf et al. 1991).

On the basis of this analysis, it was widely argued that, while social partnership represented a real ideological alternative to deregulation and decentralisation in the face of economic downturn, so few countries had the structural preconditions necessary that the widespread development of stable social pacts was unlikely. Rather it seemed that in response to deteriorating economic conditions, developed market economies were more likely to adopt the dualist pattern of labour market regulation that characterised countries like the United States (Goldthorpe 1984). Furthermore, international economic conditions, particularly instability in international currency markets during the 1980s, made it increasingly difficult for national governments to use expansionary fiscal policy deemed necessary for



ensuring wage restraint. The collapse of centralised collective bargaining in Sweden in the mid-1980s graphically demonstrated the difficulties of sustaining a social pact, even where the structural preconditions for corporatism appeared to be favourable.

During the 1990s, durable and effective social pacts developed in a number of European countries, most notably in Ireland and Italy. Since the late 1980s, there have been five separate social partnership agreements in Ireland between the government, unions, employers and, most recently, farmers and civil society groups. As Baccaro (2003:688) notes, social partnership in Ireland appears to have played a significant role in turning around the Irish economy during this period with real GDP increasing almost four times as fast as in other European economies during this period. The 1992 signing of a tripartite anti-inflationary agreement that banned wage indexation marked the beginning of a new social pact in Italy which negotiated changes to collective bargaining, pension reform and the introduction of new forms of contingent work during the 1990s. While appearing to be less economically successful than the Irish social pact, that social partnership, Baccaro argues, has played an important role in stabilising Italian politics (2003:690).

In both the Irish and Italian cases the emergence of an effective social pact was surprising because both lacked the encompassing organisation of labour and capital capable of ensuring compliance from affiliates. Baccaro argues that both countries were able to develop ‘alternative, but equally effective, mechanisms of inter-organisational co-ordination’. In particular, he argues that the development of democratic structures within unions and the use of effective communication by union leadership in the two countries overcame the internal tensions associated with social partnership. At the same time he suggests that the involvement of organised employer groups was largely unimportant in the development of social pacts in the two countries (Baccaro 2003).

Not only do the new social pacts in Europe suggest that the existence of encompassing organisations is not necessary, they also indicate that an effective social partnership can be constructed without the need for political exchange. Hansel (2003) argues that recent social pacts have not required the existence of a political trade-off for wage restraint, because the context for social partnership has changed. She argues that during the 1990s, with the advent of the European Monetary Union (EMU), European governments have turned to social pacts in situations where they believe that negotiated wage restraint will ease the transition towards tighter economic policy. Because of the increasingly restrictive economic policy context, unions have less room to manoeuvre and are left with a choice of negotiating



adjustment within a social partnership or suffering the impact of restrictive policy without any input. In both Italy and Ireland the social pacts were formed in the context of what were widely perceived to be major economic crises.

The preceding discussion has a number of implications for assessing Korea's experiment with social partnership. First, while Korea lacks the structural preconditions, especially the encompassing organisations, which have traditionally been associated with social partnership, to the extent that it can develop alternative mechanisms for consensus building, especially within the union movement, it may be able to sustain a stable social partnership framework. Second, social partnership in Korea is likely to be dependent on the extent to which the government and unions think that negotiation is necessary for them to adjust to an increasingly restrictive economic climate.

A brief overview of Korean industrial relations

Korea Inc: implications for industrial relations post-democratisation

Korea's history of compressed development from the early 1960s has a number of important implications for its contemporary industrial relations and its experiment with social partnership. The main features of Korea's economic and political development since the 1960s are well known and are only briefly summarised here. Following a military coup led by Park Chung-hee in the early 1960s, Korea embarked on a process of state-led, export-oriented industrialisation (EOI) in two phases — labour-intensive industrialisation from 1961 to 1972 and capital-intensive industrialisation from 1973 on. Both phases of EOI were characterised by what Amsden (1989) calls 'industrialisation through learning', in which Korean companies competed in mature markets and product lines on the basis of economies of scale and price competitiveness rather than differentiation. Unlike some of the other Asian newly industrialising countries (NICs), who made use of foreign direct investment, the Korean state's chosen agents for industrialisation were the *chaebol*—family owned businesses, many of which were implicated in corruption scandals during the Rhee period (Eckert 1993).

The state played two key roles for the *chaebol* which allowed them to develop rapidly into large, diversified but regionally concentrated conglomerates. First, the Korean government borrowed heavily in international markets, particularly the US, and channelled this money as working capital into the *chaebol* through low-interest loans. The high debt-to-equity ratios of the *chaebol* made it easier for the state to direct and control their activities (Woo 1991). Second, the state took steps to control and subordinate labour. As part of initial efforts to quash political opposition, Park banned strikes,



deregistered all existing unions and arrested many union leaders. He also established a new trade union confederation, the FKTU, under government control. This was followed in 1962 and 1963 by sweeping revisions to labour laws which were designed to control and limit union activity. Labour repression was further enhanced in 1972 under the ‘revitalising constitution’ with direct police and Korean Central Intelligence Agency (KCIA) intervention in labour disputes, a revision of the labour laws and the introduction of firm-level Labour Management Councils (LMCs) as the primary grievance settlement body (see Deyo 1987; Leggett and Park 2004).

The period of authoritarian control of labour had a number of important implications for post-democratisation industrial relations. First, because Korea’s competitiveness had largely been based on the ability of the *chaebol*, with the assistance of the state, to control labour costs, the emergence of a strong independent union movement in key sectors of the economy was particularly significant. The efforts of these workers to increase wages, reduce working time and improve conditions — after more than two decades of suppression — had a direct impact on the competitiveness of the *chaebol*. Furthermore, because they had been able to rely on state-supported labour control, Korean labour management was incredibly backward. Korean companies had developed few of the sophisticated labour management techniques associated with worker commitment and the ability to compete on quality and differentiation. Thus, because of the top-heavy structure of the Korean economy, industrial relations issues had direct significance for Korean economic performance (Wilkinson 1994).

By the same token, Korea’s experience of labour suppression had also created a highly fragmented labour movement and a highly decentralised bargaining structure. Of particular significance was the relationship between the FKTU and its affiliates and the new independent union movement. In many cases the new independent unions formed in opposition to not only company management but also government-controlled FKTU unions. However, if the independent union movement was to sustain itself and go beyond workplace bargaining over wages in conditions, it needed to develop industry-level and peak-level representation. As we shall see, the legal status of confederations of independent unions and the willingness of these confederations to enter into official dialogue on behalf of their affiliates is one of the most important issues in contemporary Korean industrial relations.

Industrial relations in Korea since 1987

There have been a series of dramatic changes in Korean industrial relations, often convulsive, since democratisation. It is useful to briefly review the phases of development in order to provide a context in which to analyse current trends and likely future directions. One means of distinguishing between



various phases is to divide the period from 1987 to 2004 into four phases: democratisation and instability (1987–89); neo-corporatism (1990–92); neo-liberalism (1993–97); the social partnership experiment (1997 to the present which is dealt with in section 4 below).

The 29 June 1987 democratisation announcement marked an important shift in Korean industrial relations. The new Korean government declared the principle of autonomous industrial relations, including the legal right for employees to unionise and for unions to bargain collectively. Yet there remained prohibitions on more than one union per enterprise, third party intervention in disputes and political activity by unions. These were the provisions that had been used to suppress independent unionism during the 1970s, and in the early 1990s they were again used to constrain independent unionism.

As the figures in Table 1 illustrate, in the aftermath of the democratisation announcement there was an explosive growth of unions and widespread strikes for wage increases. Between 1987 and 1989, the number of union members doubled and the number of enterprise unions almost tripled. The increased unionisation was highly concentrated in large organisations. By 1989, more than two thirds of workers in firms of 500 or more were unionised. This compares with less than 10 per cent of employees in firms with less than 300 employees (Lee and Lee 2004:146). During this period wages increased by an average of 15 per cent per annum, although favourable external economic conditions associated with the three lows (low exchange rate, low oil price and low interest rates) offset the economic impact of increased wages (Lee, S.H. 2004). This period also saw the development of regional and industrial confederations of independent unions that were the genesis of the Korean Confederation of Trade Unions (KCTU).

The landslide election of the conservative Democratic Justice Party in 1990, under the leadership of President Rho Tae-Woo, resulted in a reversion to authoritarian repression of illegal trade unions (notably those associated with the KCTU). This involved much greater state intervention in ‘illegal’ industrial disputes and the strict enforcement of third party intervention provisions in the labour law. At the same time, in a ‘divide and rule’ strategy the government sought to incorporate the FKTU as the official trade union centre and a political partner. One of the consequences of this was that an increasing number of unions shifted their allegiance from the FKTU towards industrial confederations associated with the KCTU.

As the economic climate deteriorated, the government also issued wage guidelines and attempted to constrain wage growth within these guidelines. While the number of strikes declined and unionisation fell from its heights in 1989, the highly decentralised nature of collective bargaining in Korea and the high level of unionisation in large companies meant that the government and employers were unable

Table 1 Selected employment relations indicators in Korea

	Unions			Industrial disputes		Unemployment rate (%)
	Membership ('000)	Density (%) ¹	Number of unions	Number of strikes and lockouts	Workers involved ('000)	
1970	473	12.6	3500	4	1	
1975	750	15.8	4091	52	10	
1980	948	14.7	2635	407	49	5.2
1985	1004	12.4	2551	265	29	4.0
1986	1036	12.3	2675	276	47	3.8
1987	1267	13.8	4103	3749	1262	3.1
1988	1707	17.8	6164	1873	294	2.5
1989	1932	18.6	7883	1616	409	2.6
1990	1887	17.2	7698	322	134	2.4
1991	1803	15.9	7656	234	175	2.3
1992	1735	15.0	7527	235	105	2.4
1993	1667	14.2	7147	144	109	2.8
1994	1659	13.5	7025	121	104	2.4
1995	1615	12.6	6606	88	50	2.0
1996	1599	12.2	6424	85	79	2.0
1997	1484	11.5	5733	78	44	2.6
1998	1402	11.5	5560	129	146	6.8
1999	1481	11.8	5637	198	92	6.3
2000	1527	11.6	5898	250	178	4.1

Note: 1 With respect to total employees.

Source: Leggett and Park (2004), compiled from Korea Labor Institute (various issues), *Quarterly Labor Trend*.

to constrain wage growth within the guidelines. In response to declining competitiveness, Korean employers also attempted to introduce changes in labour management, which included the introduction of performance-based reward systems, the increased use of irregular workers and multi-tasking. These changes were strongly resisted by independent unions. Thus by 1993, while firm-level collective bargaining had become the accepted mechanism for setting wages and conditions, relations between labour and management remained highly antagonistic (Lee, S.H. 2004).

Under the Kim Young-Sam government there was a shift from authoritarian control to an increasingly neo-liberal policy stance. In the period leading up to the election of Kim Young-Sam, the independent unions had called for revisions of the labour laws to remove the ban of political activity by unions, allow for multiple unionism and give public sector employees rights to form unions and bargain. Korea's accession to the International Labour Organisation in 1991 and its efforts to become a member



of the Organisation for Economic Cooperation and Development (OECD) heightened expectations that the reform-oriented Kim Young-Sam government would revise labour laws in line with union demands. However, employers were opposed to these changes and were calling for changes to labour laws that would increase levels of labour market flexibility.

In May 1996 a Presidential Commission on Industrial Relations Reform (PCIRR) was set up to discuss labour law reform. While it was hoped that this would create the situation for agreement between employers and unions and resolution of the legal status of the independent union movement, the PCIRR failed to reach a consensus. Instead, the New Korea Party unilaterally introduced labour law revisions to the National Assembly in December 1996, which mainly addressed employer concerns but did not resolve the state of the independent union movement

The pro-employer approach to labour law reform taken by the Kim Young-Sam government, in part, reflected a shift in the balance of power between the government and the *chaebol*. While during the authoritarian period the government had been able to use access to credit as a means of controlling the *chaebol*, financial market liberalisation during the 1990s, which had been accelerated under Kim Young-Sam, had allowed many of the *chaebol* direct access to international financial markets. With access to foreign loans, the *chaebol* became less dependent on the state. While the dramatic growth of private, largely short-term, debt in Korea during the 1990s was to have significant implications for the Korean economy during the East Asian financial crisis (see Shin and Chang 2003 and below), in the mid-1990s it created a situation in which employer opinion was able to dominate the reform agenda. Employer interest in issues like the ability to redeploy labour, lay off workers and engage temporary workers reflected not only the pressures associated with globalisation but also the extent to which collective bargaining with strong independent unions had eroded the traditional sources of competitiveness of Korean firms.

The manner in which these reforms were introduced — late at night in the absence of opposition parties in the National Assembly — sparked the biggest general strike in Korean history in January and February of 1997. Importantly, protest against the labour laws was jointly coordinated by the KCTU and FKTU and indicated a greater degree of inter-union cooperation than in the past. In February 1997 the government was forced to withdraw the labour law amendments and introduce a revised labour law that included a timetable for the legalisation of the KCTU and public sector bargaining rights and delayed the introduction of layoffs for managerial reasons. While the 1997 strike demonstrated the continuing significance of the independent union movement in Korea, despite reductions in trade union density during the 1990s, it also highlighted the limitations of enterprise bargaining and the need for the union movement to engage in the political process to maintain its position (Lee and Lee 2004). In



particular, on the eve of the East Asian financial crisis, many argued that without this engagement the independent union movement in Korea was likely to be confined to the highly ‘economistic’ role of setting wages and conditions for a small minority of workers.

The changing context of industrial relations in Korea

The past decade has witnessed significant fluctuations in the Korean labour market. During the pre-crisis years between 1987 and 1997, unemployment remained generally below 3 per cent and average annual economic growth reached almost 8 per cent. Yet soon after the onset of the East Asian financial crisis in 1998, the annual unemployment rate approached 9 per cent. Following a remarkable economic recovery and the introduction of employment measures by the government, the unemployment rate dropped to around 3 per cent by the end of 2001. Yet one of the legacies of the financial crisis has been the rising proportion of contingent workers — from 5 per cent in 1997 to 10 per cent by 2001. A survey by the Korea Labour Institute (KLI) (2002) revealed that 27 per cent of firms increased the number of their contingent workers after 1997. The proportion of companies employing inside contracting, spin-off and outsourcing was 19 per cent, 21 per cent and 45 per cent, respectively, in the years up to 2000. According to the National Statistics Office, non-regular workers accounted for 51 per cent of the total workforce by 2002 (Lee 2002; Lee and Lee 2003). Non-regular workers are subject to considerable discrimination. They receive only 50 to 70 per cent of the wages of regular workers and are excluded from any employment benefits because they are outside the jurisdiction of the Labour Standards Act. They include a high proportion of women, young people and foreign workers. The increased utilisation of non-regular workers is due to a number of factors. These include the desire of employers to avoid long-term employment commitments and entitlements, the ageing of the Korean labour force and the growing labour force participation of women (although this remains low by international comparisons). Further research is needed in order to understand fully the causes and consequences of the growth of non-standard work and how this can be addressed by legislative changes.

Although working hours have decreased steadily since the 1980s, Koreans still work very long hours compared with other industrialised countries. The average hours worked per week in 2004 was 48.1, which was the highest in the OECD. A number of factors contribute to the long working hours: the culture in Korea, including cultural norms; rigidity in the labour market; and pressure on workers to work overtime and not take paid leave or holidays. Compared with other industrialised countries, flexible working hours arrangements and part-time employment account for a much smaller proportion of the Korean labour market. In 2000, agreement was reached by the Korean Tripartite Commission



to improve 'the working hours and related systems for wages, holidays and vacations' to grant a better quality of life for Korean citizens, which created a heated debate. Proposals have been brought forward to amend the Labour Standards Act to reduce statutory working hours to 40 per week and introduce a five-day working week, but this is yet to be implemented (Kim 2004).

Although female participation in the labour force steadily increased to almost 50 per cent before the financial crisis of 1997, the ensuing mass layoffs saw the female participation rate slump to 47 per cent and it has yet to return to the levels of 1997. The employment rate of Korean women in the 25 to 54 year age group is only 56 per cent, which is far below the OECD average of 69 per cent. Furthermore, the difference between male and female employment rates is 32 per cent, compared with the OECD average of 19 per cent. The gender differential is even more pronounced among university graduates, with the proportion of females standing at 35 per cent, compared with 11 per cent across the OECD (OECD 2002). This is despite the relatively high level of university education among women in Korea. The proportion of Korean women in professional and semi-professional jobs in Korea has increased from 11 per cent in 1993 to 15 per cent in 2002, yet the proportion in relatively unskilled services, sales and manual work increased from 43 to 50 per cent during the same period. This is twice the proportion of men in this category of the labour market.

Another measure of gender inequality in the Korean labour market is the fact that 42 per cent of women are classified as irregular workers (in temporary and daily work) compared with 26 per cent of men — and that these jobs tend to have the worst working conditions and least security of tenure (Hwang and Chang 2004). Women were also badly affected during the 1997 financial crisis when they suffered disproportionately compared to men in workforce reductions and found it more difficult to re-enter to the labour market except through temporary and contingent jobs (Chang 2001). Ahn (2003) argues that the rigid internal labour market of most Korean businesses acts as a barrier to women who seek to re-enter the workforce, even if they had previously been regular workers with high-level qualifications. Although a Law Ensuring Equal Opportunity and Treatment for Men and Women in Employment was enacted in 2001 and a Ministry of Gender Equality was established in 2001, the current taxation and social security scheme, as well as most remuneration systems, assume that men are the bread-winners in families. Hence, further structural reforms are necessary in Korea to promote greater equality at work and in the labour market.

The role of foreign workers in the labour market is another emerging issue of significance in Korea. In the tight labour market conditions of the early 1990s, there was a major influx of foreign workers, particularly into manufacturing industry. By 2002, however, 80 per cent of foreign workers were residing illegally in Korea and there was widespread criticism of human rights abuses of these workers,



who were excluded from the protection of Korean labour laws and were subject to poor working conditions. The labour laws were amended to provide partial legal protection, basic labour standards and occupational health and safety. It is proposed that the existing industrial trainee scheme will be broadened to provide comprehensive training for foreign workers on a longer-term basis. A 'work permit' system is under consideration to provide legal status for foreign workers and enable them to gain access to national pension and unemployment insurance coverage. However, foreign workers remain a sensitive political issue that receives little attention despite the fact that there has been an explosive growth in illegal and irregular migration of workers to and from countries in Asia as labour markets become increasingly globalised.

As noted previously, Korean labour-management relations have long been characterised by conflict and low levels of trust between workers and management. Governments have played a very active role in shaping relations between unions and employers dating back to the repressive laws before 'democratisation' in 1987. More recently, the government has sought to play more of a mediating role and foster greater cooperation between the parties through the Tripartite Commission established by President Kim Dae-jung in 1998. However, labour-management relations continue to attract criticisms as a major impediment to achieving increased productivity and prosperity. The OECD's Annual Economic Survey in 2003 argued that Korea needed to increase labour market flexibility and reduce protection for regular workers despite opposition from the trade union movement. However, it should also be noted that lack of transparency in corporate governance practices, particularly among the *chaebol*, was highlighted by the OECD as a significant problem. Hence, recent Korean governments have sought to reform both the *chaebol* and the unions in order to achieve greater flexibility in the labour market and improved labour-management relations.

There have been a number of positive developments in recent years. Labour-management relations have become more institutionalised through strengthening the collective bargaining system and government recognition of the Korean Confederation of Trade Unions (KCTU), even though relations between the KCTU and the government remain strained. There have been several amendments to the Labour Relations Act that have extended the collective bargaining rights of unions, although there are criticisms that these are still below international standards. A key issue of concern remains limitations on the right of civil servants to engage in collective action. Participation in illegal strikes can result in arrest and detention, which remains a frequent occurrence in Korea. However, although the incidence of strikes remain high in comparison with other OECD countries, the number of working days lost per year has remained fairly constant since 1992, despite a decline following the 1997 financial crisis when



unemployment rose sharply. Nevertheless, the introduction of effective dispute resolution procedures remains a high priority in Korea.

Much of the focus of industrial relations in Korea has been on national-level issues related to collective bargaining, dispute settlement and labour market reform. Yet what happens at the workplace level is most significant for the individual employee. Occupational health and safety has been long neglected in Korea. Every year, about 2,500 workers are killed due to industrial accidents and another 20,000 are disabled. An international comparison of lost work-days per 1000 employees due to industrial accidents in 1996 revealed that Korea was four times higher than Taiwan and 46 times higher than Singapore. Apart from the human cost, this high level of industrial accidents undermined firm- and national-level competitiveness. Traditional authoritarian systems of management in Korea also provided little opportunity for employees to participate in decision making at the workplace level, which resulted in an emphasis on compensating employees for injury rather than involving them in designing safer and more employee-centred systems of work. Similarly, training has traditionally been job-specific rather than focusing on broader development and education of workers.

Korea has a long tradition of vocational education as well as a tax-levy training system. Yet Lee and Kim (2004) report that this system has not provided for longer-term learning and that many firms simply pay the tax rather than provide training to a broad cross-section of their workforce. As Korea makes the transition from an industrially based manufacturing to a knowledge economy, it may find that the emphasis of education and training needs to change from rigid specialisation and memory of facts to more creative, cross-functional and problem-solving approaches (Kochan 2004). Human resource management also needs to focus more on employee development rather than seniority-based approaches to pay and promotion. Park and Noh (2001) argue that the majority of Korean companies are beginning to reform their wage systems, performance evaluation, promotion and career development systems to respond to the changing needs and demands of employees. However, there remains the need for greater diffusion of the HR systems which emphasise more team-based organisational principles, individual and group incentive compensation, the use of the external labour market to fill job vacancies and career development (Park and Yu 2003).

A new social partnership? The fate of the Korean Tripartite Commission

Ironically, the financial crisis later in 1997 and the IMF bailout gave the government of President Kim Dae-jung the opportunity to introduce more far-reaching industrial relations reforms than those achieved under the previous government and created the conditions for the development of a social pact for the first time in Korean history.



During 1996 there was sharp decline in Korea's current account balance to \$23.7 billion (more than 5 per cent of GDP), largely reflecting falling export earnings from semiconductors. While not serious by international standards, high levels of short-term debt and declining international investor confidence associated with Thai and Indonesian currency crises and the collapse of Hanbo and Kia, produced a major financial crisis. On 3 December 1997 the Korean government announced that it was seeking a loan from the IMF. The IMF bailout package committed the Korean government to a series of major reforms designed to address what the IMF saw as long-term structural problems in the Korean economy. These included restructuring the financial system, corporate governance reforms, the introduction of tight monetary and fiscal policy, privatisation of state-owned corporations, and policies designed to increase labour market flexibility. In particular, the IMF sought amendments to labour laws that would make widespread redundancies possible (Shin and Chang 2003:34-41 and 56).

The dramatic deterioration of the economic situation following the IMF intervention created the crisis conditions for the formation of a social pact. The Korean Tripartite Commission (KTC) was established as a presidential advisory body and included representatives from the government, both the KCTU and FKTU, the Federation of Korean Industries and the Korean Employers Federation. In late January 1998 it released the 'Tripartite Joint Statement on Fair Burden — Sharing the Process of Overcoming the Economic Crisis' and on 9 February 1998 it released a detailed social pact. This pact agreed to the immediate revision for the labour laws to allow layoffs for managerial reasons and the use of agency workers. In return it put in place income security programs for the unemployed, recognised the KCTU, reduced restrictions on union political activity and gave government employees the right to organise and teachers bargaining rights (from July 1999).

During the negotiations KCTU officials had failed to gain employer acceptance for concession bargaining, which protected employment by reducing wages and/or working time. Instead, the agreement accepted the legal right to lay off workers in return for other concessions. The social pact was rejected by KCTU affiliates by a margin of two to one. The KCTU leadership resigned en masse. The newly elected KCTU leadership refused to rejoin the KTC.

Since mid-1998, the KTC has made limited progress. After direct negotiation between the government and the KCTU, which committed the KTC to discussing the restriction of the layoff system and use of temporary workers, reductions in working hours and the strict prohibition of unfair labour practices, the KCTU joined the second KTC in June 1998. However, in August the government unilaterally announced a plan for restructuring the banking sector and the privatisation of public enterprises. Both raised the prospect of significant redundancies. The KCTU accused the government of using the KTC to rubber stamp policy decisions that had been made elsewhere and eventually withdrew in February 1999.



The Commission has subsequently undergone a series of attempted renewals, the most recent being by President Rho Moo-hyun. A number of proposals have been put forward to revive the KTC. These include strengthening both the political and technical profile of the KTC as a key institution for national-level social dialogue and using the KTC as the main policy-making forum in labour policy. It has been proposed that the membership of the KTC should be extended to include a broader range of interest groups and specialists, including the establishment of a ‘policy consultation group’ for each industrial sector. It is also argued that the national and industry-level activities of the KTC should be supplemented by more decentralised and firm-level consultative systems. Although Korea has had Labour Management Councils for a number of years, the experience has been mixed and joint consultation has not been widely utilised. Another proposal is to upgrade and strengthen other labour market institutions that could complement the work of the KTC. This includes broadening the role of the National Labour Relations Commission, which is under-utilised in its role of providing mediation and conciliation to help minimise and settle industrial disputes (Lee and Lee 2004).

Despite these proposals, the future of Korea’s experiment with social partnership remains uncertain. The breakthroughs achieved by the first KTC support the findings of studies of recent social pacts in Europe. The East Asian financial crisis created the sense of crisis necessary for the social partners to enter into a social pact, without the promise of significant political exchange, and, even though both the unions and employers lacked ‘encompassing’ organisations, the KTC was able reach agreement on labour law reform.. Nevertheless, while these conditions made the original social pact possible, a number of factors have prevented the development of ongoing social partnership as has been the case in a number of European countries. The changes in labour law, which made it possible for Korean employers to shed significant amounts of labour during the crisis, and Korea’s rapid economic recovery have reduced the incentive for business to sustain its involvement in social partnership. Employers achieved many of the increases in labour market flexibility they had wanted in the first social pact and industrial restructuring has reduced the threat posed by independent unions.

By the same token, the impact of the original social pact reduced both the willingness and the ability of organised labour to remain engaged in social partnership. As Kong (2004: 34) puts it ‘the benefits of some future political inclusion ... were not very tangible in comparison with the loss of members and influence caused by economic restructuring’. Kong suggests that because of the relatively new and underdeveloped nature of social welfare protection in Korea, in comparison with European countries which have been able to form social pacts in the 1990s, the impact of industrial restructuring fell more heavily on rank and file union members. The failure of the KTC to entertain trading off wages



for job security, and the widespread use of layoffs by Korean employers in the aftermath of the crisis, effectively made it impossible for Korean union leaders to convince affiliates and rank and file union members of the benefits of social partnership. This was exacerbated by the legacy of highly decentralised bargaining in Korea that concentrated most of the decision-making authority in the Korean union movement at the enterprise. Thus, unlike Ireland and Italy, Korean union leaders were not able to develop a functional equivalent to the ‘encompassingness’ necessary for a stable social pact. In effect, the actions of employers and the government in the first social pact undermined the likelihood of ongoing social partnership. In response to these developments, the KCTU, and to a lesser extent the FKTU, have returned to an oppositional stance, with a focus on developing industry-wide bargaining to overcome the problems of decentralised bargaining (Lee and Lee 2004). Despite the efforts of the government to revive social partnership, these developments suggest that a revival of social partnership in Korea is highly unlikely.

It has been argued that while environmental factors provided favourable conditions for the successful initiation of the KTC, structural and attitudinal factors have hampered its effectiveness of its operation in the longer term. This argument emphasises the catalytic effect of the 1997-98 financial crisis in bringing the various parties together and producing the ‘great compromise’ of February 1998. However, once the crisis passed, the parties returned to their tradition of adversarial labour relations - attitudes shaped by Korea’s pattern of economic development and what has happened since democratisation. The lack of centralised union and employer organisations as well as the absence of a Social Democratic or Labour party meant that there was an absence of institutional structures to maintain support of the KTC. Finally, the absence of a social partnership ideology and mutual trust was detrimental to the development of positive attitudes to the KTC. While Baccaro (2003) and others have suggested that some of the new social pacts in Europe have persisted and achieved success despite the lack of traditional supportive mechanisms, the comparison of these European examples with the Korean case suggests that the ongoing success of social partnership is in part determined by the ability to develop effective and stable institutional arrangements within which social partnership can take place. The Korean case is different from the models of democratic corporatism that have emerged in some European countries and it remains a dynamic and developing political economy in which new labour market institutions are still evolving. The ongoing challenge for the Korean government is to persuade the unions and the employers that social partnership offers a better alternative than a return to strong central controls over a laissez-faire approach which gives free rein to the market. Just as earlier experiences of Korea has provided an example of how ‘neo-liberalism mutates when transplanted to



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different local environments' (Kong, 2004: 39), the current experiment with social partnership may yet reveal that Korea will forge a new model of democratic corporatism fostered by strong government initiative and commitment to building new labour market institutions.

Conclusion

Since 1987 Korea has experienced dramatic changes in industrial relations and industrial relations issues are likely to remain central to economic reform into the future. In contrast to developments in many developed countries during the same period, Korea has witnessed the development of a strong and militant independent union movement that has been able to improve the wages and conditions of workers, especially in the core manufacturing sector of the economy, and an improvement in labour rights. Collective bargaining has become institutionalised for a significant percentage of Korean workers. However, the highly decentralised and antagonistic character of collective bargaining in Korea, which largely reflects Korea's history of compressed development, will remain a significant impediment to the development of stable and peaceful industrial relations in Korea. While the East Asian financial crisis created the conditions for the developments of a social pact for the first time in Korean history, despite the absence of the structural pre-conditions deemed necessary, the prospects for a revival and continuation of social partnership are unfavourable. This suggests that, without the development of a stable institutional framework, the highly antagonistic pattern of industrial relations that prevailed in Korea during the 1980s is likely to continue.

Notes

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4

Chaebol Investments and Government Policy

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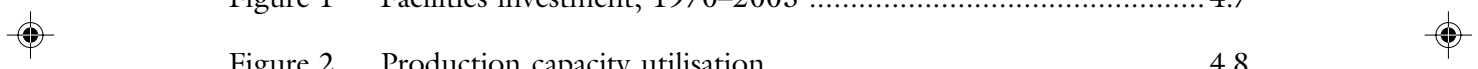


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4. *CHAEBOL* INVESTMENTS AND GOVERNMENT POLICY

Introduction

Has Korea lost her magic touch? The economic rut that Korea finds itself in is now nearly 10 years old. After three decades of spectacular growth, per capita income has hovered around the US\$10,000 level since 1995 and now there is obvious general frustration in the air.

A careful study of the Korean economy will reveal many weaknesses. This paper studies one of these weaknesses: investment spending on facilities. Conventional wisdom holds that one key reason behind Korea's stalling economic growth is the lack of sufficient investment in facilities, or under-investment, especially by the *chaebol* companies. The government has focused in on this under-investment theme and has put considerable pressure on the *chaebols* to invest more aggressively. So far, the *chaebols* have responded with words and promises only.

Historically, one of the main pathological features of the *chaebols* has been their propensity to over-invest. Consequently, charges of *chaebol* under-investment by the government and conventional wisdom need to be investigated. The second section of this paper introduces *chaebol* problems. The third studies investment in facilities and shows that Korea is not under-investing. The fourth and fifth discuss the implications of Korea's not under-investing and how this affects government policy.

A key area of open conflict between the government and the *chaebols* is on the question of under-investment. The sixth section discusses the nature of this conflict and possible change if the government were to accept that idea that the *chaebols* are not under-investing. Concluding remarks are given in the last section.

Chaebol problems

Korea has a love-hate relationship with the *chaebols*. Moreover, any feeling toward the *chaebols* is easily magnified because the livelihood of the average Korean is heavily dependent on them. The 30 largest conglomerates collectively account for over one-third of all sales and employ one-tenth of the labour force in Korea.

The part of Korea that loves the *chaebols* does so because, along with the government, the *chaebols* played a crucial role in producing the spectacular economic growth and development during the four decades following the Korean War. These days, the *chaebol* companies form the bedrock of the Korean economy and there is wide recognition that the nation's international competitiveness in global markets



will most likely come from their ranks (Boston Consulting Group and Mael Kyungje Shinmun 2003). The special government concessions given to Samsung and LG, waiving the ban on building large production facilities in the Seoul area, are manifestations of this belief.

Whether true or not, the notion that the future success of the Korean economy is inextricably tied to the success of the *chaebols* is a bitter pill to swallow. This is because the *chaebol* system is perceived to contain serious flaws. One of the earliest works that study the *chaebol* problem is Jones and Sakong (1980). Since then, substantial research has gone into understanding the historical pattern of *chaebol* behaviour (see Chang 2003), while other studies have explored the roots or causes of the *chaebol* problem (So 1994). The 1997 financial crisis gave *chaebol* research a new impetus, with strong emphasis being placed on corporate governance (see Lee 2003) and restructuring (see Lee 2000 and Ahn 2001).

What is the '*chaebol* problem'? In the narrow sense, the term '*chaebol* problem' refers to the excessive concentration of ownership of economic resources, the oligopolistic market structure in which the *chaebols* thrive and the process through which *chaebols* are formed, grow and develop. A broader interpretation of the *chaebol* problem will include anti-*chaebol* sentiment. This study does not deal with the subject of anti-*chaebol* sentiment per se. Sticking to the narrower definition of the *chaebol* problem, Chang and Park (2000) formulate a comprehensive list of the main charges levelled at the *chaebols*. According to them, the *chaebol* problem in the first place consists of low profitability, high financial leverage, abnormal ownership structure, peculiar mode of financing and excessive diversification.

Using data from other countries at different points in time and by bringing to bear multiple measurement criteria for understanding the *chaebol* features viewed by conventional wisdom to be pathological in nature, Chang and Park provide a refreshing view of the *chaebol* problem. They conclude that these are all basically non-problems. They find 'there is no clear evidence that Korean corporate profitability is exceptionally low by international standards'. Similarly, they believe the pre-crisis debt-equity ratio in Korea (between 300 and 350 per cent) to be acceptable and not exceptionally high by international standards. Moreover, they do not think that the high debt-equity ratio should be held responsible for bringing about the financial crisis.

Chang and Park defend the cross-holding structure of the *chaebol* companies on the grounds that it is a way for *chaebols* to multiply their funds available for investing 'by creating fictitious capital on the basis of which new shares could be issued'.

On the related topic of the high reliance on debt financing while avoiding equity financing, Chang and Park claim this is only a part of the story. As they see it, the Korean *chaebols* were aggressive fundraisers in the equity market and if debt financing seems to loom so large, it is because 'they found even these large sums raised in the stock market insufficient for the aggressive investment strategy they had adopted'. As it turns out, the often-criticised 'octopus tentacles' strategy, or the pursuit of excessive



diversification, is also not such a serious problem. Despite the large number of subsidiaries, for most *chaebols*, two to four core companies generate over 70 per cent of all group sales. Chang and Park believe, therefore, that the *chaebols* are quite focused.

What, then, is the real *chaebol* problem? Chang and Park redefine the real *chaebol* problem to be two things: their strong tendency to over-invest and the abuse of their ever-growing political power. While an analysis of the growing political power of the *chaebols* is beyond the scope of this essay, a discussion of their investment behaviour is not.

Investment and conventional wisdom in Korea

Over-investment is such an old Korean problem that Chang and Park would be embarrassed to claim any originality for coming up with the idea (see, for example, Jwa 2002). Indeed, so chronic was the problem over the last three decades, the frequent debates were not so much about ‘Is there over-capacity?’ but rather, ‘What can we do about it?’ Conventional wisdom believed (correctly) in the existence of over-capacity.

Conventional wisdom today is completely different. Consider what the Korean economy is going through these days. Business is in a prolonged slump, the unemployment rate among youth is 7.6 per cent and the pace of economic growth is closer to 4 per cent than the 6 per cent predicted earlier in the year by the government. Producer and consumer sentiments are extremely poor.

It is not difficult to pinpoint the main areas of economic weakness: consumer spending and investment in facilities. Consumer spending took a crippling blow after the spending binge accompanying the mini-economic rebound of 2002. The number of individuals with bad credit ratings exceeds 3.7 million, or about 10 per cent of the population above age 15. Furthermore, with household debt at KRW 458 trillion (roughly US\$400 billion), or 60 per cent of GDP, lenders are now trying to reduce their exposure to households. However much all of Korea would like to see a sharp recovery in consumer spending, short of resorting to some drastic measures (which, incidentally, can never be ruled out), the economy is likely to be stuck with this unusually low spending rate for the foreseeable future. The government knows this and is consequently paying greater attention to the other problem area: investment in facilities or, more accurately, what conventional wisdom would call under-investment.

During the early phase of Korea’s economic development, between 1970 and 1986, Korea’s investment in facilities averaged 7.4 per cent of GDP. The Korean economy took off in the mid-1980s and facilities investment averaged 12.8 per cent of GDP between 1987 and 1996. The economic recession that followed the financial crisis of 1997 had a major impact on facilities investment. As can be seen in Table 1, there was a heavy drop in facilities investment, with the year-over-year growth rate

Table 1 Growth rate (%) of expenditures of GDP

	1996				1997				1998				1999			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Expenditure on GDP	7.4	7.2	6.6	6.9	4.9	6	5.1	2.8	-5.3	-7.9	-8.1	-6	5.9	9.7	11.1	10.9
Final consumption expenditure	7.1	7.2	6.2	7.3	3.9	3.9	5.1	0.1	-11	-12.2	-11	-8.3	7.1	9.5	10.9	11.2
Private	7.1	7.2	5.9	6.8	4	3.9	5.5	0	-13.8	-15.3	-13.9	-10.8	8.3	11.1	13	13.6
Household	7.1	7.1	5.9	6.8	4	3.9	5.5	0	-14	-15.5	-14.1	-10.9	8.5	11.3	13.2	13.8
Non-profit institutions serving households	6.6	8.5	7.6	7.2	4.7	4.7	5	3.4	-4.9	-5.7	-5.6	-5.4	1.1	3.2	2.4	2.3
Government	7.3	7.1	7.4	9.8	3.6	3.8	3.1	0.4	3	1.9	2.4	2.1	2.3	3.6	3.2	2.4
Gross capital formation	9.9	9.4	11.8	10.7	2.5	-1.2	-7.6	-11.8	-39.8	-31.8	-35	-18.4	20.6	25.6	24.7	24.6
Gross fixed capital formation	7.3	5.9	10.9	9.1	1	3.3	-4.2	-7.6	-20.8	-24.4	-25.4	-20.7	-1.4	9.3	10.2	13.2
Construction	11.2	5.8	8.4	5.9	-1.9	3.2	2.2	4.2	-4.4	-9.8	-15.8	-16.4	-8.8	-1.7	-2.5	-3.3
Machinery & equipment	2.3	5.5	14.1	14	3.5	2.6	-14.2	-26.2	-41.1	-48.4	-45	-33.1	10.6	35.8	46.9	54.1
Intangible fixed assets	19.1	15	18.3	13	20.9	14.6	2.5	-3	-5.1	-9.2	0.3	8.9	18.5	36.8	-4.5	37.2
Changes in inventories	-95.2	-126.7	-17.6	55.7	-1358.3	-691.5	142.3	-91.5	-1395.7	166.5	134.1	467	-75.7	-99	-56.8	354.7
Exports of goods & services (less) Imports of goods & services	19.6	9.8	5.8	14.5	11	24.9	26.7	23	25.6	12.9	8.6	6.3	8.6	13.5	18.4	17.5
Statistical discrepancy	15.5	13	11.1	17.7	8.1	7.7	5.6	-6.5	-26.9	-25.1	-25.3	-9.4	26.3	27.1	31	26.9
	-2001	-191.8	13.9	-217.8	-170.2	123.3	-1.5	127.6	-164.5	-147.7	-78.9	-337.9	-291.7	232.5	174.2	-204.1

Table 1 contd.

	2000				2001				2002				2003				2004	
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q
Expenditure on GDP	13.1	9.4	8.2	4.3	3.5	3.7	3.4	4.6	6.5	7	6.8	7.5	3.7	2.2	2.4	3.9	5.3	5.5
Final consumption expenditure	10.3	8.7	5.8	4	2.2	4.2	5.7	7.3	9.4	8.5	7.3	5.3	0.9	-0.8	-0.9	-1.1	-0.6	0.2
Private	11.9	10.2	7.7	4.5	2	4.4	5.6	7.6	9.8	8.7	7.8	5.5	0.3	-1.8	-1.9	-2.2	-1.4	-0.7
Household	12.1	10.4	7.7	4.6	2	4.4	5.6	7.7	9.9	8.8	7.7	5.5	0.2	-1.9	-1.9	-2.3	-1.4	-0.6
Non-profit institutions serving households	2.8	1.3	3.9	0.6	4.2	4.3	4.4	3.3	7.5	6.5	9.6	5.2	3.5	1.6	0.8	3.8	1.1	-3.2
Government	3.8	2.4	-1.7	2.2	3.3	3.3	6.4	6.2	7.6	7.3	5.3	4.2	4	3.7	3.5	3.5	2.8	4.3
Gross capital formation	27.9	10.4	13.8	-0.9	-3.7	-4.3	0.1	6.2	4.2	9.1	7.6	3	8.2	-0.5	-1	1	-0.5	6.4
Gross fixed capital formation	23.7	14.8	10.8	3.5	-3.7	-3.5	-0.5	6.2	7.7	7.3	2.4	9.1	4.6	3.7	2.6	3.6	1.8	4.5
Construction	-3.1	-0.1	-0.4	-0.2	1	0.8	9.6	10.7	11	6	-2.4	8.4	8	7.3	7.9	7.4	4.1	3.8
Machinery & equipment	61.2	43.1	31.1	8.4	-9.4	-10.6	-14.2	-1.3	3.3	8	9.1	9.6	1.9	-0.6	-5	-2.4	-0.3	6.2
Intangible fixed assets	66.3	22.6	5.7	13.1	7.3	6.3	2.2	9.2	14.6	15.9	13.6	13.1	-2.3	-3.8	0.2	0.4	-3.3	0
Changes in inventories	-47	38	16.5	-30	-32.3	-6	16.5	-12.9	5.7	149.2	-30.1	-128.1	-64.2	-56.6	133.2	-348	-87	103.3
Exports of goods & services	24.7	19.3	20.2	13.3	5.8	-2.5	-7.7	-5.8	1.1	12.5	16.2	23.5	15.9	8.4	14.9	23.1	26.9	27.2
(less) Imports of goods & services	31.4	20.6	22.1	8.4	-2.6	-8.4	-5.7	0	4.7	17.9	19.3	19.1	14.2	5.2	7.7	11.7	11.8	20.6
Statistical discrepancy	87.1	-20.9	-6.5	-16	-56.6	-35.9	-139.4	-20.9	55.8	29.8	68.2	-227.3	-23.8	-357	79.3	-98	-332	-59

Source: KOSIS.

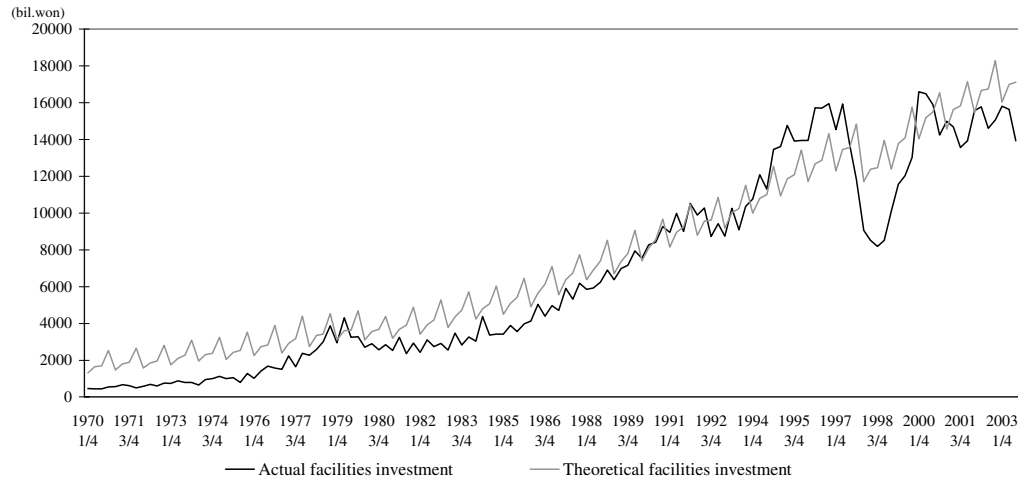
Table 2 Facilities investment as % of GDP

	1995				1996				1997					
	3Q	2Q	1Q	0Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q		
C/Y	63.9	57.9	56.8	54.2	63.7	57.9	56.5	54.1	63.1	56.8	56.7	52.7		
I/Y	34.9	40.2	40.8	39	34.9	39.7	42.5	39.8	33.6	38.6	38.7	35.8		
Mach & equip/Y	16	15.4	15.6	14.2	15.2	15.2	16.7	15.2	15	14.7	13.6	10.9		
	1998				1999				2000					
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q		
C/Y	57.5	52.2	53.1	50	58.8	52.9	54	51.2	58.1	53.3	53.7	51.3		
I/Y	28.1	31.7	31.4	30.2	26.2	31.6	31.2	30.8	28.6	33.2	31.9	30.6		
Mach & equip/Y	9.3	8.2	8.1	7.8	9.8	10.2	10.8	10.8	13.9	13.3	13.1	11.2		
	2001				2002				2003				2004	
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q
C/Y	57.3	53.6	54.9	52.8	59	54.5	55.4	51.8	57.1	52.3	53	48.7	53.5	49.3
I/Y	26.6	30.9	30.7	31	26.9	30.9	29.5	31.5	27.1	31.4	29.5	31.4	26.2	31.1
Mach & equip/Y	12.2	11.5	10.8	10.6	11.8	11.6	11.1	10.8	11.6	11.3	10.3	10.1	11	11.3

plummeting to -41.1 per cent in the first quarter of 1998, -48.4 per cent in the second, -45.1 per cent in the third and -33.1 per cent in the fourth. The fall in investments can be appreciated from a different perspective: facilities investment as a percentage of GDP for these four quarters is very low, ranging between 7.8 per cent and 9.3 per cent.

One remarkable Korean achievement, and something that President Kim Dae-jung and his government like to take credit for, is the speed of economic recovery from the financial crisis. It is hard to put an exact date on when the financial crisis 'ended', but by the third quarter of 1999 the GDP growth rate was up to 11.1 per cent (albeit off a low base the previous year) and facilities investment as a percentage of GDP was back up into double digits at 10.8 per cent. Incidentally, facilities investment as a percentage of GDP reached a high of 13.9 per cent in the first quarter of 2000, and it has not dropped below 10 per cent since the second quarter of 1999.

Figure 1 Facilities investment, 1970–2003



Source: KOSIS

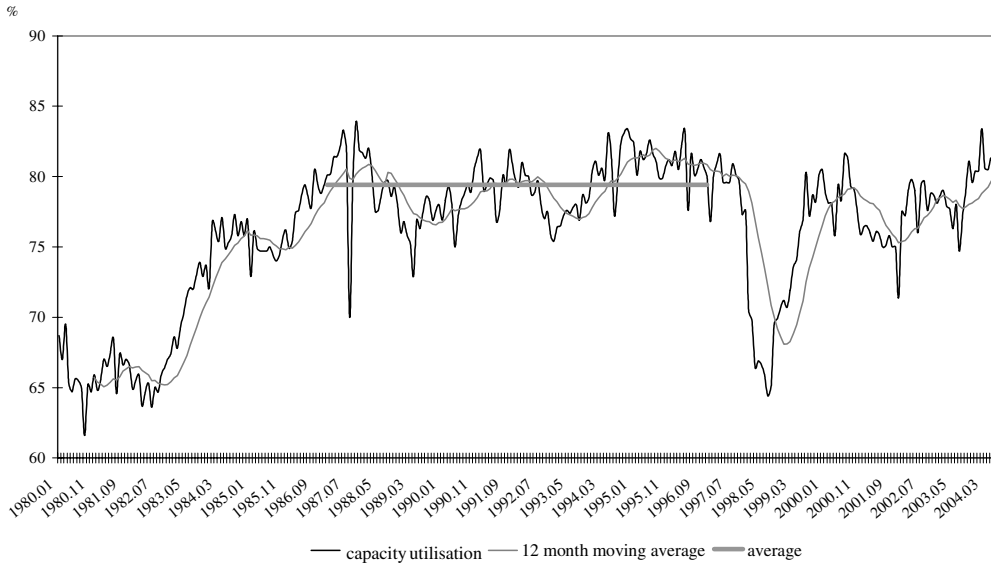
On the basis of the data on facilities investment as a percentage of GDP since the third quarter of 1999, it is difficult to conclude that Korea is suffering from under-investment. To be sure, the numbers consistently are a little - one or two percentage points - lower than the 12.8 per cent averaged between 1987 and 1996. However, it is worth keeping in mind that 12.8 per cent is a troublesome benchmark because this number comes from a period when the Korean economy was over-investing.

Consider investment in facilities. If for some reason there is over-investment, then the phenomenon should show up as excessive excess production capacity. In other words, since some slack in the production capacity is desirable or optimal, over-investment will enlarge the size of the slackness. The best way to discern excessiveness is to observe changes in the facilities operation utilisation rates. Over-investment should result in lower capacity utilisation rates. Conversely, if there is under-investment, then one would expect to observe higher capacity utilisation rates.

Figure 2 depicts production capacity utilisation rates since 1980. Between 1987 and 1996, the capacity utilisation rate averaged 79.4 per cent and ranged from 77.0 per cent to 82.0 per cent. Aggregate demand fell because of the financial crisis and the capacity utilisation rate fell sharply to 68.1 per cent in 1998. The ensuing economic recovery was accompanied by a rebound in the utilisation rate; the utilisation rate measured 76.5 per cent in 1999, 78.6 per cent in 2000, 75.3 per cent in 2001, 78.4 per



Figure 2 Production capacity utilisation



Source: KOSI.

cent in 2002, and 78.3 per cent in 2003. All of these numbers are below the 79.4 per cent average recorded during the over-investment years of 1987 to 1996. To be sure, most recently, since October 2003, the utilisation rate has moved above the 79.4 per cent level, going to a high of 83.4 per cent in February 2004. However, the rate has been dropping steadily as of March and the most recent data from July shows the utilisation rate at 79.4 per cent.

The data from production capacity utilisation rates therefore appears to support the assertion that the recent levels of facilities investment in Korea are not excessively low and should not be labelled as ‘under-investment’.

The problem of not under-investing

Followers of the conventional wisdom will be surprised to learn that Korea is not under-investing. After all, hardly a day goes by when economic news headlines are not shouting some grim message about the economic slowdown and the lack of investments and consumer spending (see, for example, Maeil Kyungje Shinmun, September 14, 2004). Moreover, President Roh Moo-hyun and his senior policy



makers are adding to the sense of drama and desperation by publicly asking the *chaebols* to increase investments.

What is really going on?

Under-investing takes place when the level of investment falls below some optimal amount. This paper has attempted to argue that the investment behaviour in Korea in recent years does not deviate sufficiently far from the investments seen during the go-go days of 1987–1996, when the *chaebols* were prone to over-invest. It may be true that the *chaebols* are not investing as aggressively as in the years leading up to the financial crisis in 1997. However, this does not mean that the *chaebols* are now under-investing.

If the Korean economy is not under-investing, then the investment behaviour must be either optimal or excessive. And if this is the true situation, then some important inferences may be drawn.

First, economic recovery will be farther away in the future than otherwise. The economy is in a vicious circle: slower economic growth lowers capacity utilisation rates, which lowers the need to invest, which in turn contributes toward slowing economic growth further.

Second, the government should reconsider what motivates the *chaebols*. In particular, the *chaebols* are not being uncooperative in an attempt to spite or threaten the new government. The *chaebols* are not playing a complicated game with the government, but are simply investing at levels they believe are suitable given the current market conditions and future outlook for the economy.

Third, attempts by the government to raise investment artificially may boost economic growth temporarily, but will eventually lower growth over the long term. Left alone, the tendency should be for the economy to adjust the investment levels to remove excess capacity. Government interference will exacerbate the problem of excess capacity, and therefore be counter-productive.

Fourth, the government should revisit its *chaebol* policy.

Implications for government policy

The government clearly is not happy with the current low levels of investment. Unfortunately, government unhappiness cannot justify calling these levels of investment ‘under-investing’. On the contrary, it is possible to conjecture that the decision makers in charge of investments are responding optimally to poor economic conditions and a bleak future outlook. It should also be noted that past investments decisions affect today’s production capacity, as well as capacity utilisation.

The government, frustrated with the continuing stagnation in investments, shows signs of wanting to resort to strong-arm tactics to force the *chaebols* into investing more aggressively. (For



example, before President Roh hosted a dinner at the Blue House on 25 May 2004, the *chaebol* invitees all announced plans to increase 2004 investments by roughly 30 per cent, collectively.) Upon further reflection, however, it is easy to see that pushing the *chaebols* more deeply into over-investment behaviour is a bad idea and may be dangerous since it may add to the speed and duration of an economic downturn in the future.

In general, investment decisions today affect future production capacity. When the investment cycle has run its proper course downward, production capacity will once again be in short supply and the economy will embark on the upward part of the investment cycle. This happens quite naturally, without active government involvement in more mature economies. In the case of Korea, the difficult lessons about natural investment cycles and the required optimal investment decisions are just being learned, Korea having just gone through a painful financial crisis. The government should realise that the *chaebols* are extracting the right market signals, probably for the first time collectively, and making well-informed investment decisions. Consequently, a better course of action would be to wait patiently for the economy to go through the investment cycle.

It is conceivable that an activist economic policymaker may want to intervene in the investment cycle by encouraging under-investing as a way to shorten the time taken to reach the bottom of the cycle. This seems alright theoretically, but to engineer such a forced economic slowdown may not be practical politically. Moreover, since the Korean economy has little or no experience with aggregate under-investment, the policy makers would be operating in an uncharted territory.

The above arguments should not be misconstrued. In particular, the government should not think that it must not be proactive on matters concerning investments. Since investment decisions today are a function of the economic condition and the outlook for the future, the government may attempt to change market conditions (for example, interest rates, government spending) and outlook (for example, free trade agreements, improvement in economic and systemic infrastructure).

Finally, the government would do well to avoid being impatient. Contrary to conventional wisdom, the economy is not under-investing. This means that economic recovery is farther away in the future than if the economy had been under-investing.

President Roh's *Chaebol* policy

In the 2002 presidential race, Mr. Roh Moo-hyun ran an effective election campaign, which emphasised reform and transparency. As President, Mr. Roh has thrown his political weight behind efforts to reform Korean politics. It is still too early to say whether political reforms are headed in the right direction and go far enough. What President Roh has done, however, is set the wheels of political reform in motion.



How about the wheels of economic reform? Sadly, these appear to be stuck. When President Roh first stepped into the Blue House in February 2002, he promised to carry out reforms throughout the course of his five-year presidency. It comes as a surprise, therefore, to see so little action on the economic front.

On reflection, there were some good opportunities. The SK Global scandal, the credit card crunch, corporate slush funds for politicians and unruly labour disputes are just a few of the opportunities that came knocking, which the government failed to exploit. The President also briefly flirted with two mini-visions — the ‘North East Asian Hub’ and ‘20,000 dollar income’ — but quickly put them on the backburner. On the policy front, frequent surveys show emphatically that no economic policy has managed to impress the general public.

As a result, the economy is in an anticipation mode. Each day without action only heightens the sense of anticipation. This, of course, is bad and has unpleasant economic consequences. Take, for example, what happens with investments. The cycle of ‘no action, greater anticipation’ raises the level of uncertainty, which in turn affects investment decisions negatively.

President Roh and his government should be more transparent on the question of economic reforms. If there is some new vision for the economy, then this vision should be carefully spelled out. Similarly, if there is a plan for *chaebol* reform, then those plans should be circulated. This is consistent with the earlier presidential promise of transparency.

What if there is no new vision for the economy and no plan for *chaebol* reform? Odd as this question may sound, it may not be that far removed from the truth. And if there is no vision and no plan at this time, this fact should be made known. Apart from suffering some minor embarrassment for not being fully prepared, the damage would be negligible. The payoff, on the other hand, will be the removal of some fundamental uncertainty hanging over the economy.

Conclusion

Korea today is at an important crossroad. After three decades of robust economic growth, Korea’s per capita income has been stuck around the US\$10,000 mark since 1995. Confidence is in short supply and many economists believe that Korea is in a crisis.

Local commentators find much reason to form a pessimistic economic outlook. These include, among other things, increasing competition from China, decreasing aggregate demand, rising inflation and declining long-run potential GDP growth rate. Behind these concerns, however, lies a more fundamental problem. The government–*chaebol* partnership, long thought to have been a crucial element of Korea’s spectacular economic growth, appears to be in a state of flux.



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The government is unhappy with the *chaebols* for not investing more aggressively. They have asked repeatedly for greater ‘cooperation’, but thus far the *chaebols* have only paid some lip service and taken no discernable action. On the flip side, the *chaebols* are also unhappy with the government. They feel that the government is coercing them into making additional investments whose business merits are questionable. Having experienced the financial crisis, each *chaebol* knows that to over-invest is dangerous and that any business failure will be its responsibility.

Conventional wisdom is on the side of the government and believes that Korea is under-investing in facilities. This paper has argued that Korea is not under-investing in facilities and that the government should not misread the true situation. The *chaebols* are probably engaging in investments that make business sense. And even though these levels of investment may fall short of what the government would like to see, the government should not interpret their behaviour to be threatening or challenging.

A complex power game between the government and the *chaebols* will be counter-productive. In some respects, the game is already tending toward an unhappy equilibrium because of the fundamental uncertainty brought about by a lack of economic vision from the new President and his government. There is no question that the *chaebols* fear and anticipate a government backlash against their economic power. If the government has a coherent *chaebol* policy, it should be released to the public sooner rather than later. On the other hand, if there is no such *chaebol* policy, then that fact should also be made known to the public. If nothing else, at least this admission will clear some bad air.

Notes

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