University of Wollongong
Research Online

Faculty of Business - Economics Working Papers

Faculty of Business

2003

A Comparison of the Performance of SMEs in Korea and Taiwan: Policy Implications for Turbulent Times

C. Hall
Macquarie Graduate School of Management

C. Harvie
University of Wollongong, charles_harvie@uow.edu.au

Publication Details

Hall, C and Harvie, C, A Comparison of the Performance of SMEs in Korea and Taiwan: Policy Implications for Turbulent Times, Working Paper 03-05, Department of Economics, University of Wollongong, 2003.

Research Online is the open access institutional repository for the University of Wollongong. For further information contact the UOW Library: research-pubs@uow.edu.au

University of Wollongong
Economics Working Paper Series
2003

http://www.uow.edu.au/commerce/econ/wplist.html

A Comparison of the Performance of SMEs in Korea and Taiwan: Policy Implications for Turbulent Times

Chris Hall

and

Charles Harvie

WP 03-05

May 2003

A Comparison of the Performance of SMEs in Korea and Taiwan: Policy Implications for Turbulent Times

Chris Hall
Macquarie Graduate School of Management
Email: 100231.1327@compuserve.com

and

Charles Harvie*
School of Economics and Information Systems
University of Wollongong
NSW
Australia 2522
Telephone: +61 242 213702
Fax: +61 242 213725
Email: charles_harvie@uow.edu.au

ABSTRACT

A comparison of the role and performance of SMEs in Korea and Taiwan during the 1990s and early 2000s shows that the reputation for SMEs to be flexible in the face of adversity is well deserved, but should not be take for granted. Both Taiwan and Korea have built much of their economic success on SMEs. Both economies are very open to external shocks; both were affected by the 1997 Asian Crisis, and to a lesser extent, the "tech wreck" of 2001. Both economies have faced the need to restructure their industrial competitiveness, and both have active policies to support entrepreneurship and SMEs. Within this broad context of similarities, there are also some differences in approach and structure. All of this can give a better understanding of how managers and policy makers can help to create jobs and build a more competitive economy.

SMEs provide about 80 percent of private sector employment in both economies, so SME performance is an important economic and social issue. The paper shows, for example, that Korean SMEs were subject to rather bigger devaluation shocks and currency volatility than their Taiwanese counterparts. However SME exporters in both economies showed considerable resilience in the face of shocks and SMEs in both economies have significantly improved their liquidity and debt ratios since 1997, suggesting they are better prepared now than before. They have done so in the face of a sharp decline in bank lending to SMEs. Over the decade there has been a steady structural decline in the importance of manufacturing SMEs in both economies.

The paper examines the relative performance of SMEs in Taiwan and Korea over a turbulent decade, and it examines the SME policies and initiatives adopted. It seeks to extract some lessons for other economies seeking to develop an entrepreneurial and resilient SME sector in the face of global turbulence.

* Charles Harvie is Co-Director of the Centre for SME Research and Development, University of Wollongong. He is currently on secondment at the Hunter Valley Research Foundation, Newcastle, NSW, Australia, where he is Director of Research.

1. Introduction

Most governments in Asia now face two key policy problems. The first is the creation of jobs. The second is the creation of an internationally competitive industrial structure. These two problems are closely linked. Job creation is often necessary to replace jobs lost due to structural change, international competition, and turbulence from abroad. Job creation was not a major issue in Asia until the 1997 Asian Crisis. Export led catch-up growth could be depended on to generate enough jobs to meet political objectives. The collapse of asset bubbles and the contagion from abroad in 1997 showed a distinctly more negative side of globalisation, as industrial structures failed to adapt quickly enough and the unemployment queues grew.

SMEs are generally regarded as being good at job creation, at providing a major source of competitive renewal for an industrial structure, and at being quick to adapt to changing circumstances. SMEs are also a significant source of exports. SMEs play an important role in all the Asian economies, typically contributing over 99 percent of all enterprises, over 60 percent of private sector employment, and about 30 percent or so of exports (Hall (2002)).

Korea and Taiwan were, and still are, leaders in the Asian model of development. Both economies have been subject to a series of externally imposed "shocks" in the last decade; the Japanese stagnation starting in 1994, the 1997 Asian Crisis, and the more recent "tech wreck" of 2001. Both economies have relied heavily on SMEs for their marked success in development over the last few decades, but they have done so in different ways. Both economies keep good records of their SME activity. It is thus instructive to look at how the SMEs in Korea and Taiwan have performed over the last decade or so, because they provide an almost "laboratory" comparison.

The definition of an SME is similar, but not identical, in Korea and Taiwan. The definitions are set out in Tables 1 and 2. As can be seen, the upper limit for an SME in manufacturing in Korea is 300 people employed, while in Taiwan it is 200. For commerce and services the upper limit of an SME is larger in Taiwan, at 50 employees, than in Korea at 20 employees. Taiwan does not usually distinguish between small and medium firms in its statistics. Although these may seem like substantial differences, most SMEs employ less than 10 people. In APEC generally, about 70 to 80 percent of SMEs employ less than 5 people (APEC 2003). There is only a very small percentage of firms, typically ranging from about 1 percent to about 4 percent, which have more than 100 employees. As a rough rule of thumb it is useful to see the vast bulk of SMEs as having *less than* 100 employees, and most have less than 20 employees.

Table 1: Korea - Definition of an SME

	small	medium
Mining manufacturing and transportation	50	51 - 300
Construction	30	31 - 200
Commerce and other services	10	11 - 20

Table 2: Taiwan - Definition of an SME

	employees	operating revenue	paid up capital
Manufacturing, construction, mining and quarrying	<200		< NT $80 million
Commerce Transport and other Services	<50	< NT $100 million	

The issue of the contribution and performance of SMEs is of more general interest to other developing economies, especially those in the Asian region (see Harvie and Lee (2002a, 2002b)). There is a strong commitment to a more open and integrated regional Asian economy. The accession of China, and Taiwan, to the WTO in 2001 is one important step. Moves in ASEAN to a free trade grouping by 2005, and of ASEAN plus China are other examples. This also has to be seen in the broader commitment of APEC members to free trade for more advanced economies by 2010 and for all members by 2020. All this ensures that there is a strong commitment to increased integration, trade, investment, and competition in the region.

In this context there is also a re-appraisal of the Asian Growth and Development Model (AGDM) taking place. This model traditionally placed considerable importance upon the development of an export oriented industrial sector; maintenance of macroeconomic stability; maintenance of relatively stable exchange rates; high saving and investment; close government-large business-banking relationships; directed credit; and high human capital (Harvie and Lee (2002)). Some evidence from total factor productivity (TFP) models (Anh (2001)) suggest that a disproportionate contribution of growth in Asia has tended to come from increased inputs rather than from increased efficiency. Export growth will still remain an important aspect of Asian growth, but an increasing proportion will be intra regional trade, and thus will require continual industrial restructuring and efficiency gains. There is a recognised need for increased emphasis on efficiency improvements, and greater competitiveness. What is also recognised is that this has not come from policies directed at creating large firm conglomerates, or directed finance, or from cronyism. What is now emerging is a need for a greater emphasis on an "entrepreneurial engine" which requires a policy and business environment that supports SMEs in a competitive, adaptable and innovative role. How can Asia encourage a more flexible, competitive, innovative and efficient industrial structure? The solution is not just to encourage more SMEs at the expense of large firms. The issues are more complex than that. By understanding better how Taiwanese and Korean SMEs have performed over the last decade we can get some better insights as to how to how to develop a better and more entrepreneurial business environment.

The paper proceeds as follows. First, the overall context within which SME development in Korea and Taiwan has taken place is reviewed. Second, the paper looks at available evidence on the relative performance of SMEs in Korea and Taiwan, particularly in the context of the financial and economic crisis of 1997-98. Third, the policy framework for the development of the SME sector in Korea and Taiwan is compared and contrasted. Finally, a brief summary of the major conclusions and evidence from this paper is then presented.

2. The context - the business environment in Korea and Taiwan

The environment in which businesses operate affects their performance, especially in the case of SMEs that generally have less control over their environment than larger firms. It is widely accepted that Taiwan's business environment was affected less by the 1997 Asian Crisis than that of Korea. A first *a priori* hypothesis is thus that we should expect that Korea's SMEs would be affected much more by the turbulence of the 1997 period. However, all events have a context, and it is useful to look at the broader context. The business environment ranges from the broad macro policy settings, to institutional arrangements, to specific micro policy initiatives. There are some important similarities and differences in the business environment in Korea and Taiwan, and these are examined briefly below.

It is useful to look at the business environment in three periods: first, from 1990 to the end of 1996, from the beginning of the decade to just before the Asian Crisis in 1997; second from the Asian Crisis to about the end of 1998, when the Asian Crisis was settling down, and growth was re-emerging; and third from about 1999 to the beginning of the world downturn in 2001. In the *first* period, from 1990 until the end of 1996, the overall business environment was very conducive for SMEs in both Korea and Taiwan. In both economies GDP growth was strong, driven by exports and domestic consumption, and inflation low. The Japanese slowdown was beginning to have an evident effect on exports and investment in the region, but SMEs and policy makers had time to adjust. In the *second* period the 1997 crisis affected Korea much more than Taiwan, both in terms of immediate impact and in terms of subsequent industrial restructuring. Although in both economies currencies devalued sharply, and there were interest rate rises and shortages of liquidity in the months immediately following the crisis, Korean SMEs were affected much more than Taiwanese SMEs. Korean GDP growth slowed sharply and then accelerated to catch up with Taiwan. Korean SMEs were subject to a much more turbulent and uncertain business environment than Taiwanese SMEs. In the *third* period, from 1999 to end 2000, the economies were moving back into a more stable growth mode. At the end of this period a fourth period emerges, with the downturn in the world economy starting with the "tech wreck". This impacted on the high tech export oriented manufacturing sector of both Korea and Taiwan. Unfortunately, data for the period post 2000 is difficult to get at the time of writing, so this fourth period is omitted from further analysis at this point.

Macro economic context

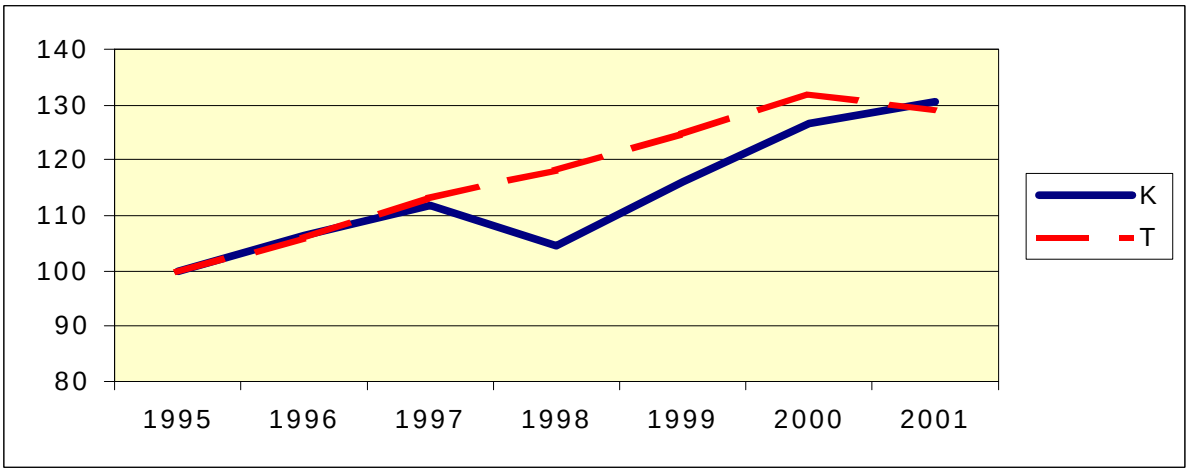
Both Taiwan and Korea were leaders of the Asian Tigers, and successfully maintained a high level of GDP growth of around 6 to 8 percent per annum throughout the first half of the 1990s, while at the same time keeping inflation at around 4 percent, and unemployment below 3 percent (Hsiao and Hsiao (2001), Lee and Rhee (1999)). As can be seen in Figure 1, Korean GDP growth slipped behind Taiwan's in 1997 and 1998, but by 2001 Korea had caught up again and had achieved the same level of growth from 1995 to 2001 as Taiwan.

Exchange rate context

Taiwan moved to a floating exchange rate in 1989, but retained some controls on capital flows to limit sudden large speculative flows. These were progressively relaxed during the 1990s. The New Taiwan Dollar (NTD) appreciated strongly in the period 1990 to 1995. Korea moved to a managed exchange rate in the early 1990s, which allowed the rate to be determined by market forces, but restricted fluctuations to within a band. Korea shifted to a free-floating exchange rate system on 16 December 1997 as a response to the Asian Crisis

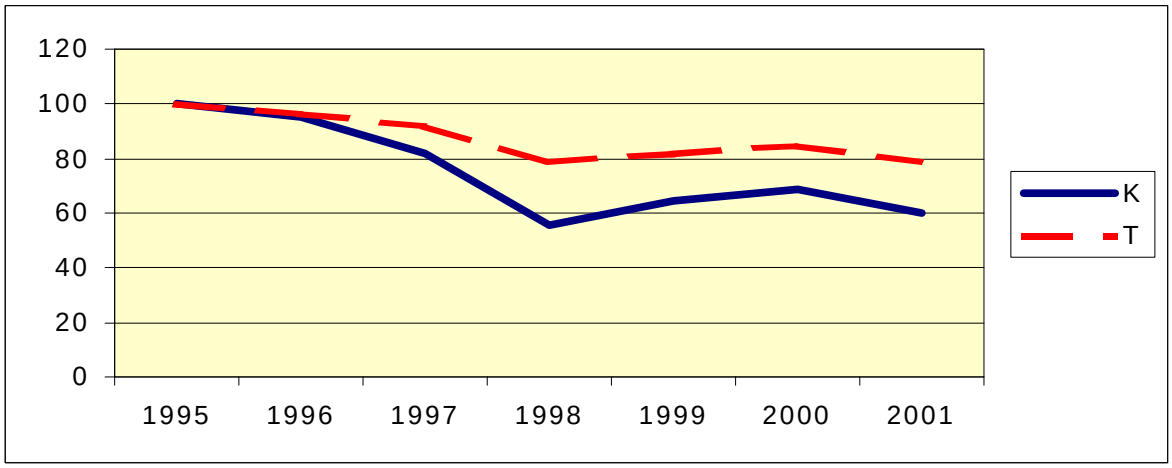
and rapidly dwindling official reserves. As can be seen in Figure 2 both currencies devalued relative to the USD (the US being a major trading partner for both economies) in 1997, but the Korean Won lost more than 40 percdent of its value relative to about half that decline in the NTD.

Figure 1: GDP Growth in Korea and Taiwan



Notes: indexed as 1995 = 100
Source: Reserve Bank of Australia, World Bank

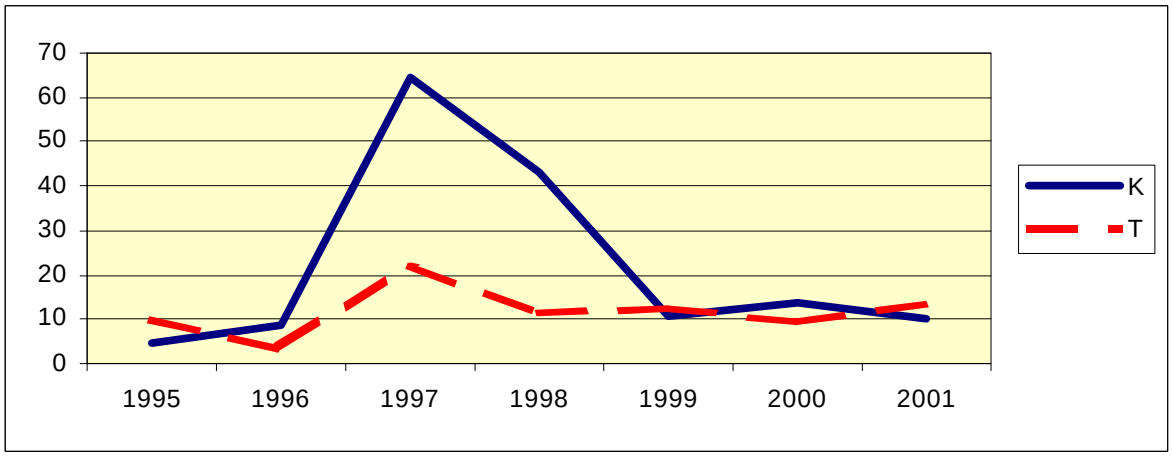
Figure 2: Exchange Rate Movements in Korea and Taiwan Relative to the USD



Note: Indexed to 1995 = 100
Source: OANDA

What is perhaps of more significance is the extent of currency volatility. Figure 3 shows the extent of volatility as measured by the average range of highest and lowest interbank bids relative to the average exchange rate for a year. This is only a crude measure of volatility, but it helps to show that the Korean Won was much more volatile in the 1997/98 period than the NTD. It subsequently moved back to a volatility similar to that of the NTD.

Figure 3: Exchange Rate Volatility in Korea and Taiwan (%)



Note: measured as range for year (highest bid - lowest offer) as a percentage of the mean exchange rate for the year
Source: OANDA

FDI and foreign debt context

Lee and Rhee (1999, p 59) show that Korea, along with a number of other economies that were most affected by the contagion of 1997, had a high proportion of short term foreign debt, and a high ratio of short term foreign debt to foreign exchange reserves. For example, in 1996, Korea had a total foreign debt of USD 99 billion, USD 67 billion of which was in short term debt, and most of it was held by banks. This was nearly double the level of foreign exchange reserves. By contrast, Taiwan had only USD 22 billion in foreign debt, and although it too had a high proportion of short-term debt (USD 18 billion), held mostly by banks, its total debt was only about 30 percent of its foreign exchange reserves. Whilst this did not appear to make much difference in borrowing ability until 1997, it had significant consequences for credit assessments and on banking system liquidity and funds in the period after 1997. Hsiao and Hsiao (2001) observe that Korea had much higher ratios of foreign portfolio investment to international reserves throughout the decade compared with those of Taiwan. "For Korea, the ratio was only 13 percent in 1989, but increased rapidly and reached a whopping 372 percent in 1997, and then decreased to 145 percent in 1998. This signals the danger of a currency crisis in won in the case of sudden flight of inward portfolio investment. For Taiwan, the ratios had maintained at a very low level. They were -0.32 percent in 1989, and increased slightly and steadily to a mere 15 percent in 1996, well within the 100 percent threshold level" (ibid p 360).

In the decade prior to 1995 Taiwan had not relied heavily on foreign borrowing to support its investment, funding it instead from domestic saving. Taiwan had actively encouraged FDI (foreign direct investment) as a means of acquiring technology and funds, but those funds were mostly in the form of equity. Korea, by contrast, had relied on borrowing abroad to fill the gap between domestic saving and investment, which was generally between 1 and 3 percent of GDP. Korea had not channelled this as FDI, but instead had taken funds as debt, and thus faced much higher burdens when the currency devalued sharply in 1997 Ahn (2001). In Korea, the balance of trade and balance of payments had consistently been in deficit throughout the 1990s and before, while in Taiwan both were in surplus. (Hsiao and Hsiao (2001))

Industrial structure context

The difference in the industrial structure of Korea and Taiwan is well known and is frequently commented on. Taiwan has often been known as the "kingdom of SMEs", while Korea is renowned for its conglomerate *chaebol* structure that emphasises large firms and often is seen as relegating SMEs to a minor role (Hong, Park and Park (1999)). In practice, from about 1990 onwards, SMEs played an important and similar structural role in both economies. SMEs make up over 95 percent of enterprises in both Korea and Taiwan, as they do in most economies. As can be seen from Table 3, SMEs contributed about 80 percent of private sector employment in both Korea and Taiwan. This is higher than the APEC average of around 60 percent. Korean SMEs were smaller than their Taiwanese counterparts, employing about three or four people, relative to six or seven in Taiwan. There is about one SME for every 20 people in both Korea and Taiwan, or, put another way, about 5 percent of the population in each country manages an SME. This is similar to the ratio observed in most developed economies (Hall (2002b)). The number of SMEs in manufacturing has declined in both economies, as firms relocate to lower cost manufacturing locations such as China. Although the industrial structures had grown to be more similar than is commonly assumed, there remained large differences in the financial flows going to SMEs in the respective economies. This is dealt with further below.

Table 3: Structural Comparison of SMEs in Korea and Taiwan

	1990	1996	2000
Percentage of private employment by SMEs			
Korea	78.4	78.7	81.9
Taiwan	82.3	82.8	81.0
Number of persons employed per SME			
Korea	4.3	3.2	3.3
Taiwan	7.0	6.3	6.3
Number of people per SME			
Korea	20.5		17.0
Taiwan	25.3		20.6

Source: Hall APEC (2002)

Financial structure context

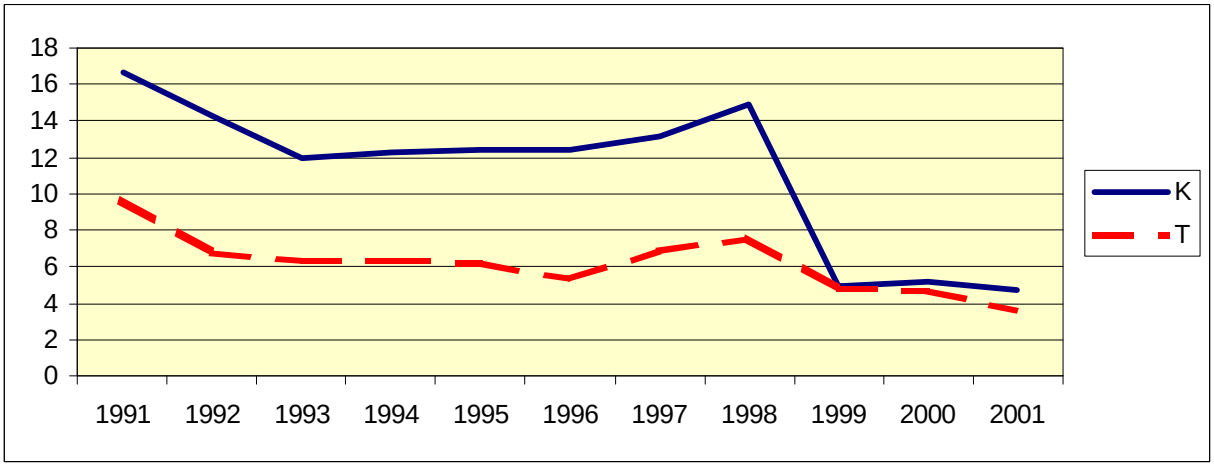
There was a major institutional difference in the financial sectors in Korea and Taiwan, particularly in regard to the banking sector. Korea's financial sector was subject to significant reform as Korea moved to join the OECD in the early 1990s. However, as Hsiao and Hsiao (2001) observe, quoting Shim ((2000) p 154) the "Korean banks kept lending to *chaebols* which the government preferred ... Korean banks ... developed few skills in credit analysis or risk management, ... Reflecting the history of directed lending, banks generally did not insist on, or receive, full financial information from *chaebols*". Similar views are put by Kawaii (2000), who observes " While extensive financial sector problems surfaced in the second half of 1997, the seeds had been sown much earlier. These weaknesses were the result of years of bad lending practices and an inadequate supervisory and regulatory framework. Problems included imprudent lending practices, poor credit risk management by banks, poor funding risk management by borrowers and lax or ineffective oversight by regulators. One important feature was the close relationship between government, businesses and the financial sector,

particularly through groups of affiliated businesses known as *chaebols*. " The dimension of the banking problem in Korea can be gauged by the government setting aside some 64 trillion Won (or about 14 percent of GDP) in 1998 to deal with non performing loans. This has not proved sufficient to fully deal with the problem.

Taiwanese banks, by contrast, were less concentrated than their Korean counterparts, and, although this proliferation of relatively small banks has led to the need for rationalisation and merger, most Taiwanese banks had capital adequacy ratios above the 8 percent BIS (Bank for International Settlements) requirements. A bad debt and non performing loan problem also exists in Taiwan, but did not emerge as such until 2000, and represents about 9 percent of non performing loans as a proportion of all loans, based on official Central Bank estimates.

Annual average overnight call rates in Korea were about double the annual average overnight call rates in Taiwan up until 1999; Korean rates were about 12 percent relative to about 6 percent in Taiwan. Given the relatively high base rate in Korea it is not surprising that short-term funds flowed relatively freely to Korean banks in the period up to the Asian Crisis. The onset of the Asian Crisis led to increases in rates, as shown in Figure 4. Figure 4 averages the overnight call rates out over a year, so the surge in rates is muted, but it shows that there was a distinct spike in rates in 1997/98 which was accompanied by a liquidity shortage, especially affecting smaller firms. Again, Korea was affected much more than Taiwan. The monthly average overnight call rate rose to a maximum of 25.34 percent in Korea in January 1998, relative to a maximum in August 1997 in Taiwan of 8.12 percent.

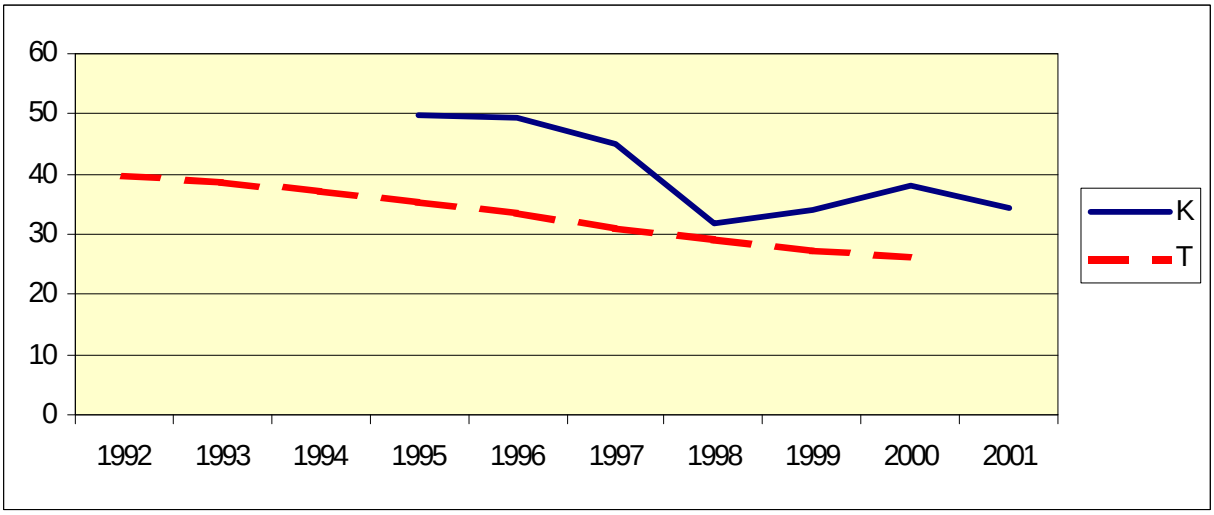
Figure 4: Overnight Call Rates in Korea and Taiwan (%)



Notes: yearly averages. The peak in Korea in 1997 was significantly higher on a daily basis.
Source: Bank of Korea, Central Bank of China (CBC) Taiwan

Furthermore, there has been a decline in the relative amount of bank finance available to SMEs in both economies. Figure 5 shows that the proportion of loans to small firms in Taiwan fell from about 40 percent in 1990 to only 26 percent in 2000. The Korean decline was from 50 percent in 1995 to 34.5 percent in 2001. The decline in Taiwan is almost linear, while in Korea the drop in availability of bank credit to SMEs was quite sharp, and occurred in the immediate post 1997 period.

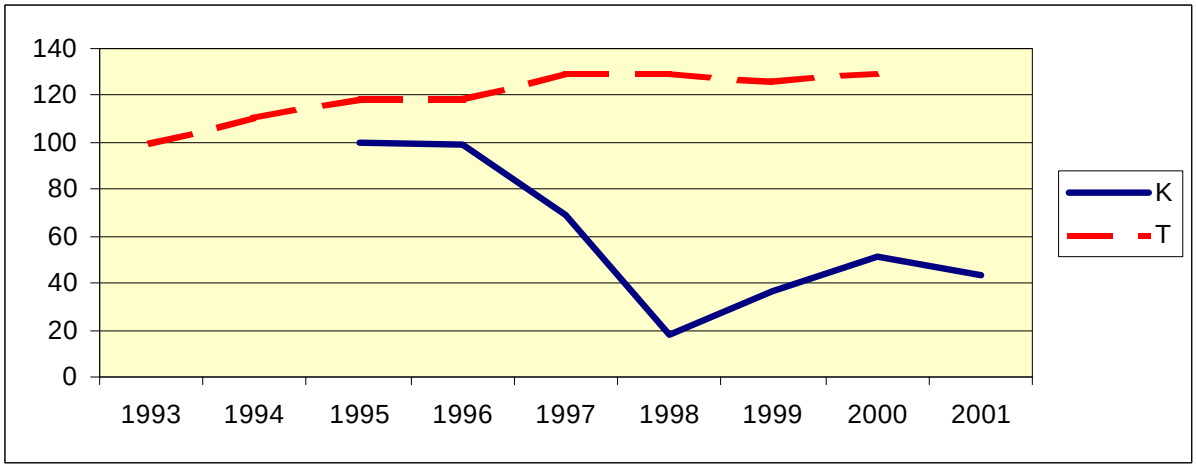
Figure 5: Proportion of Bank Loans to SMEs in Korea and Taiwan (%)



Notes: For Korea, refers to proportion of loans for plant and equipment only.
Source: Korea Small Business Administration www.smba.go.kr, which in turn draws from Industrial Bank of Korea, Monthly Industrial Bank Survey. Taiwan, MOEA, White Paper on SMEs (various years).

The total volume of bank funds going to SMEs is shown in Figure 6. This shows that the volume in Taiwan actually increased over the decade to 2000 (even though the proportion going to SMEs relative to large firms dropped off steadily). In Korea, the volume of bank funds available to SMEs dropped dramatically in 1998, to only 18 percent of the level in 1995, and by 2001 was still only 40 percent of the level being made available prior to the 1997 Asian crisis.

Figure 6: Index of Total Loans to SMEs in Korea and Taiwan



Note: Korea indexed to 1995 = 100, Taiwan indexed to 1992 = 100.
Sources: As for Figure 5

In summary, both Korean and Taiwanese SMEs faced a similar business environment up to the 1997 Asian Crisis, although Korean SMEs were subjected to a less sympathetic financial environment (Park and Anh (1999)). It can be argued that Korean SMEs generally could be seen as relatively disadvantaged to Taiwanese SMEs, and especially so in the period immediately post 1997.

3. A comparison of the performance of SMEs in Korea and Taiwan

SMEs play an important role in creating jobs, and in building a flexible, adaptable base for an internationally competitive economy. The performance of SMEs in terms of industrial renewal, employment creation, export growth and productivity is thus a matter of interest to policy makers. Measuring and comparing the relative performance of two populations of SMEs is a difficult thing to do, however, for at least three reasons:

First, it is difficult to operationally measure some relevant variables, such as productivity or competitiveness. The measures adopted in this paper are proxies for more fundamental aspects of performance and are intended for use only in a broad overview sense.

Second, it is difficult to obtain reliable and comparable statistics on many variables. The statistics used here are in the public domain, and are official statistics. As far as is possible the statistics used are reasonably comparable, but they are not always available for the entire period desired.

Third, SMEs are very diverse, so the dispersion of the variables can overwhelm some evidence of underlying features and trends. It would be useful to break the statistics down into smaller groups (eg by industry, and by firm size), but this is not easily done in a comparable way.

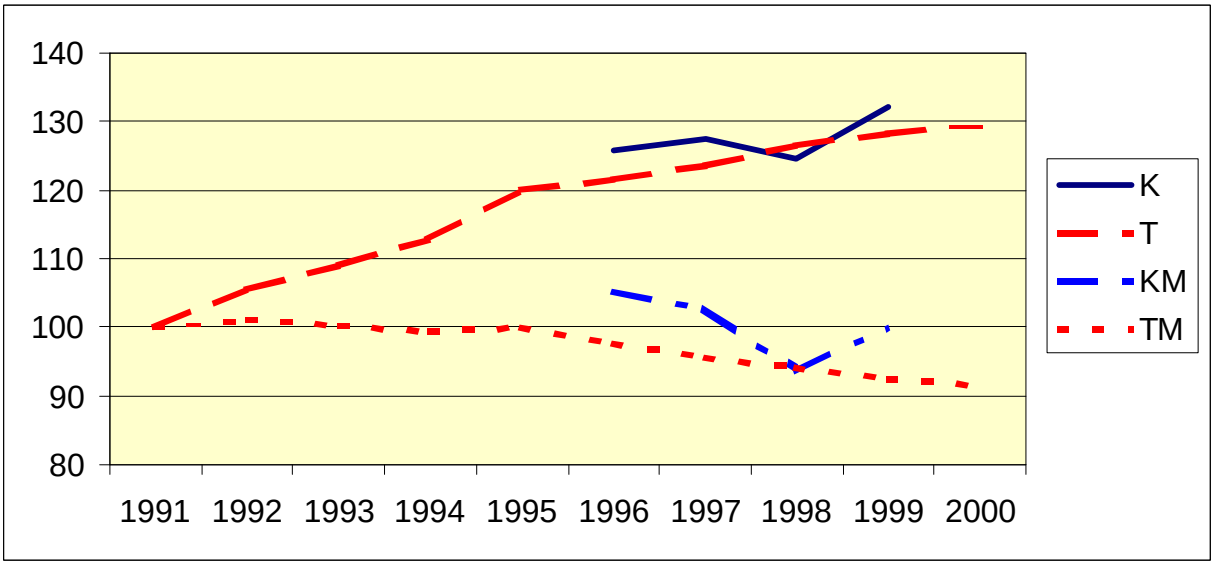
Subject to these difficulties of measurement, how have Korean and Taiwanese SMEs performed over the decade? Our second *a priori* hypothesis is that Taiwanese SMEs might outperform Korean SMEs simply because the Korean SMEs have been subjected to a more turbulent and unpredictable business environment (Gregory et al (2002)).

Growth in the total population of SMEs

Net growth in the population of SMEs is a crude indication of the level of entrepreneurial activity. Figure 7 shows that the total population of SMEs in both Korea and Taiwan grew roughly in line with GDP from 1991 to the end of the decade. Off an index base of 100 in 1991 the number of SMEs in Korea grew to 132.2 in 1999, while in Taiwan the equivalent figure was 128.5. While the growth in Taiwanese SMEs followed a steady year to year increase, the population in Korea dropped quite sharply in 1997 to 1998, from 127.6 to 124.5, before it bounced back up and overtook the Taiwanese SME population growth.

What is also notable in Figure 7 is the relative stagnation or decline in the number of manufacturing SMEs. The number of manufacturing SMEs in Taiwan has steadily declined from an index of 100 in 1991 to 91.7 in 2000. The decline was steady, and commenced in about 1995. In Taiwan's case this is probably the result of a process of "hollowing out" similar to that in Japan, as manufacturers sought alternative low cost manufacturing bases in Mainland China and elsewhere in Asia. In Korea's case the available figures suggest a relatively stagnant manufacturing population, which was hit quite hard in 1997 but which bounced back quickly by 1999.

Figure 7: Growth of the Population of SMEs and of Manufacturing SMEs in Korea and Taiwan



Note: Index is 1991 = 100 except for Korean Manufacturing SMEs where the index is 1992 = 100.
Sources: For 1990 data, APEC (1994). For data after that Hall, APEC (2002)

Exit rates and bankruptcy rates

Exit rates give another perspective of the corporate population and the performance of SMEs. High exit rates indicate that many firms are leaving the market. If this is coupled with high start-up rates then it is an indication of a turbulent economy, with a rapid rate of renewal. This renewal rate is then a crude indicator of the ability of the economy to adapt to change by renewing its corporate base. For example, in very crude terms if 10 percent of the population of firms die each year, and 10 percent are born, it takes only ten years for the whole economy to be "renewed". Exit rates are not the same as bankruptcy rates; as a rough guide only about one firm in ten that exits actually goes bankrupt. SMEs tend to take the brunt of this turbulent renewal process, and it is a guide as to their performance contribution to the economy.

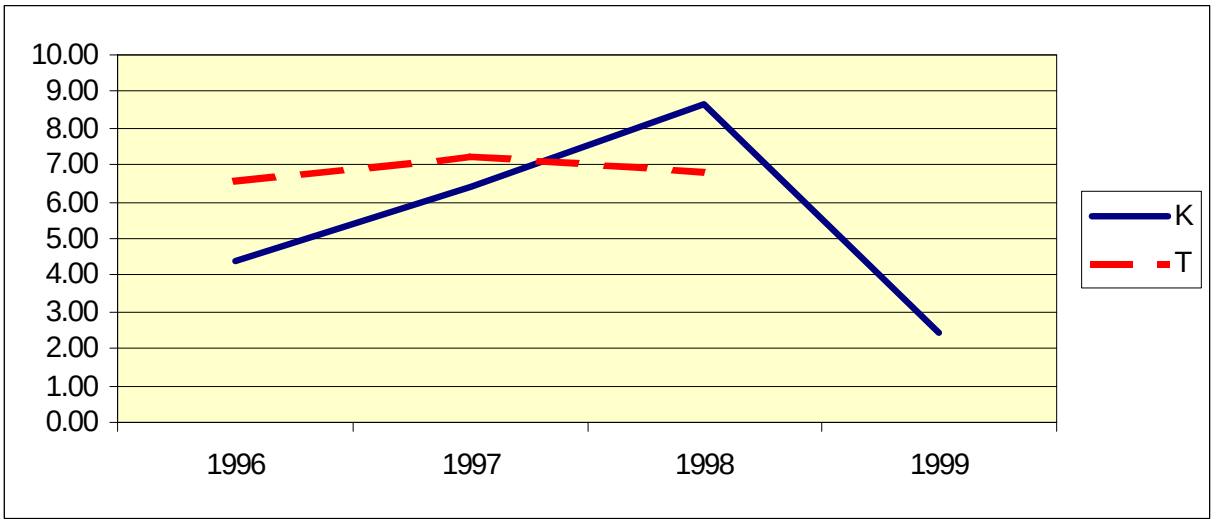
Unfortunately only limited data are available on exit and bankruptcy rates. Neither Korea nor Taiwan break down exit or bankruptcy figures by size of firm so we have to assume that the proportion of SMEs to large firms has not changed in the relevant period, and that most exits and bankruptcies are SMEs. Korea provides only bankruptcy rates, but Taiwan provides only exit rates. To try to get some level of comparison, Figure 8 provides estimates of exit rates in Korea based on an assumption that bankruptcies are 10 percent of all exits.

Although only limited data are available for the two economies, the exit rates are similar. If we exclude the abnormally low figure in 1999 for Korea the average estimates are about 6.7 percent for both economies, suggesting a crude renewal cycle of about 14 or 15 years. This is slightly below the 7 percent average exit rate for those APEC economies that have available data, but much less than the rate of 9.8 percent in the USA (Hall 2002, p 52). Japan, by contrast, has an exit rate of about 3 percent, slightly above the entry rate of about 2.7 percent, suggesting the stagnant Japanese economy has a renewal cycle of around 33 years.

The figures for exits in Taiwan have remained relatively steady over the period, even including the critical Asian Crisis period. Even in 1998 in Taiwan entry rates exceeded exit

rates, and the firm population grew. Korean exit levels rose steeply in the aftermath of the 1997 crisis period, but fell back to abnormally low levels in 1999.

Figure 8: Exit Rates as a Percentage of all Firms in Korea and Taiwan



Notes: Exit rates are as a percentage of all firms, not just SMEs. Exit rates for Korea are estimates only; see text for estimation procedures.
Source: Korea from Hong, Park and Park (1999), and SMBA www.smba.go.kr. Taiwan, MOEA, White Paper on SMEs (1999).

Exports

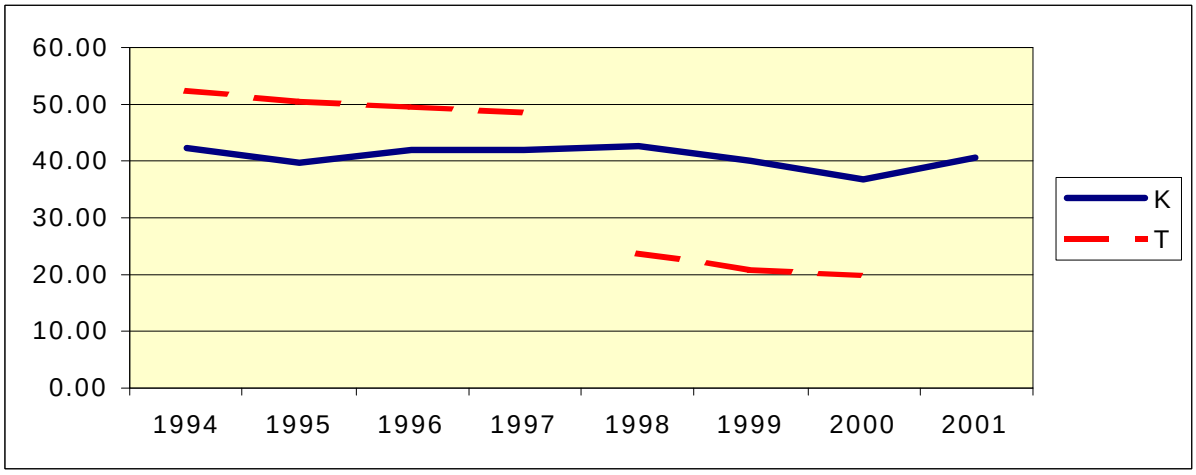
The contribution of SMEs to exports is an approximate guide to their international competitive performance. The contribution of SMEs relative to larger firms is shown in Figure 9. The Taiwanese data are not from the same series. Estimates of the value of SME exports up until 1999 were arrived at by deducting large firm exports from the total export figure; there was no data actually collected from SMEs. Since 1999 the estimates are based on value added tax data, and the previous estimates are no longer available.

Based on the value added data the contribution of Taiwanese SMEs to total direct exports is 21.6 percent, rather less than the APEC average share of SME exports weighted by the trade level of 28.2 percent. In Korea, the estimates suggest that SMEs contribute about 40 percent of exports relative to large firms. What is interesting is that the 1997 crisis did not appear to have much impact on the *relative* share of SME exports in Korea or Taiwan. The relative proportion of exports by SMEs in both economies has stayed steady throughout.

Figure 10 shows the absolute level of exports by SMEs expressed as an index. In Korea, the rate of growth of exports by SMEs has been strong and steady, growing from an index level of 100 in 1995 to 157 in 2001. This is almost double the rate of growth of GDP (which grew to an index of 130 over the same period), and it was only affected slightly by the turbulence of the 1997 period when, in 1998, the index remained stagnant. It then grew at a catch up rate in 1999 and 2000. Because of the change in the way the Taiwanese figures are calculated, only a relatively short series is available which makes comparison difficult. However, off a base of 100 in 1998, it appears that Taiwanese SME exports shrank to 97.1 in 1999 before growing to an index value of 111 in 2000. This suggests that Taiwanese SME export performance is not much better than GDP growth. The preceding series suggests that SME export growth was stagnant in much of the period to 1999. Part of this relative lack of

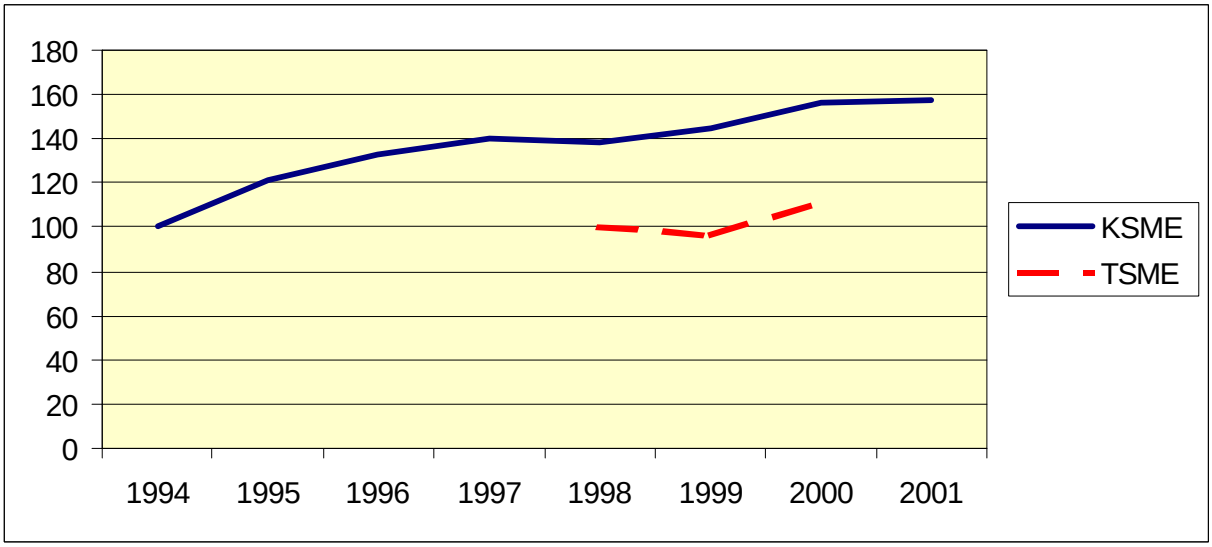
performance of Taiwanese SME exporters may be attributed to the move abroad of manufacturers, who then export from other countries such as Mainland China.

Figure 9: SME Exports as a proportion of Total Exports in Korea and Taiwan



Notes: The method of estimating SME exports was changed in Taiwan in 1997, and the series are not comparable. See text for details.
Sources: For Korea, 1994 - 98 Kotra (1999, p 23), SMBA www.smba.go.kr for 2000 - onwards. 1999 is an estimate. For Taiwan, Hall APEC (2002) and Taiwan, MOEA, White Paper on SMEs (various years).

Figure 10: Index of Growth of SME Exports in Korea and Taiwan



Note: Korea index is 1994 = 100, Taiwan index is 1998 = 100. See text for details of discontinuity in Taiwanese series.
Sources: as for Figure 9

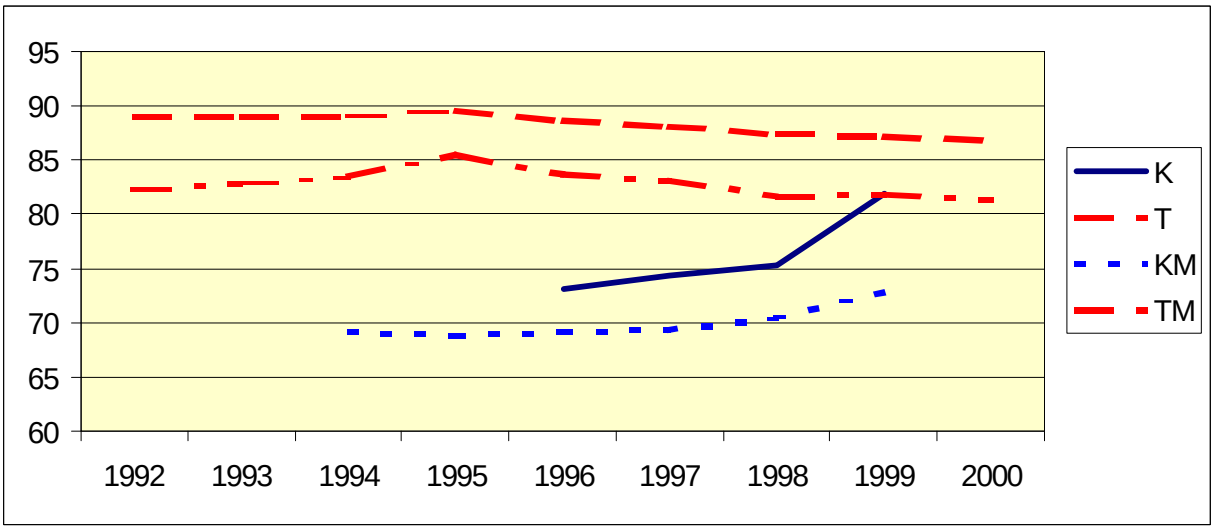
Employment

The contribution of SMEs to employment is important in a structural sense and in a dynamic sense; SMEs provide the vast bulk of all jobs in both Korea and Taiwan. As can be seen in Figure 11 SMEs contributed on average about 88 percent of total non agricultural employment in Taiwan, though this has fallen slightly from 89 percent in 1992 to 87 percent in 2000 with most of the fall being a gradual drop off in the importance of SMEs since 1995. In Korea, the proportion of employment by SMEs is somewhat less, an average of 76 percent, and although the available data series is shorter there seems to have been a sharp increase in

the contribution of SMEs from 73 percent in 1996, to 83 percent in 1999. The 1997 Asian Crisis does not appear to have had any notable impact on the relative proportion of employment by SMEs in either economy.

The relative contribution of SMEs in manufacturing is slightly less than that for all industries, and shows a similar but more muted pattern. SMEs in Taiwanese manufacturing contributed 83 percent of all manufacturing employment, while in Korea the average was about 70 percent. The Taiwanese proportion of SME employment has been declining slightly since 1995, while the Korean contribution has been growing steadily.

Figure 11: Proportion of Employment by SMEs in Total and in Manufacturing in Korea and Taiwan (%)

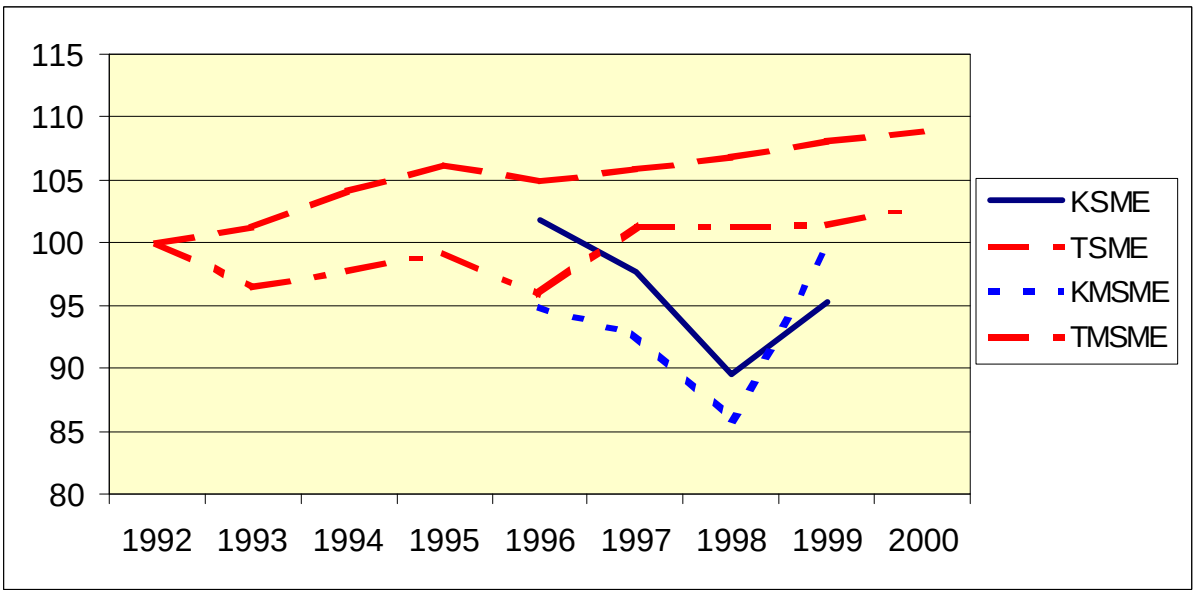


Notes: Figures are percentages of SME employment in relation to all employment in the private sector for Korea (K) and Taiwan (T), and percentages of SME employment in manufacturing only in Korea and Taiwan (KM and TM).
Sources: Korea, for 1992 is APEC (1994), for 1996 - 1997, KOTRA (1999), and SMBA (www.smba.go.kr) after that. Taiwan, MOEA (various years) White Paper on SMEs.

Figure 12 gives the level of SME employment expressed as an index, based on 1992 as 100. SME non-agricultural employment in Taiwan grew steadily from 1992 to 2000, even though it shrank relative to large firms. There was a slight decline in 1996, but the 1997 Asian crisis appears to have had no effect on the contribution of Taiwanese SMEs to employment. Korea, by contrast, saw SME employment almost stagnant up until 1996, and then it fell sharply from an index value of 101 in 1996 to a low of 89.6 in 1998 before starting to recover again. Even though the proportion of Korean employment in SMEs relative to large firms increased sharply in this period, the total level of SME employment fell. The Asian Crisis thus seemed to impact on Korean SMEs much more than Taiwanese ones, at least in terms of employment. However, the Korean SMEs seem to have been more resilient than large firms in responding to the crisis, and played an important part in providing jobs.

Much the same pattern is evident in the manufacturing industry employment figures. Taiwanese manufacturing SME employment actually shrank from 1992 to 1996, and then grew slowly. In Korea there was a steady loss up until 1996 and then sharp loss of SME employment after 1997, but there was a strong rebound after that which brought manufacturing employment back to about where it was in 1992.

Figure 12: Index of Employment by SMEs in Total and in Manufacturing in Korea and Taiwan

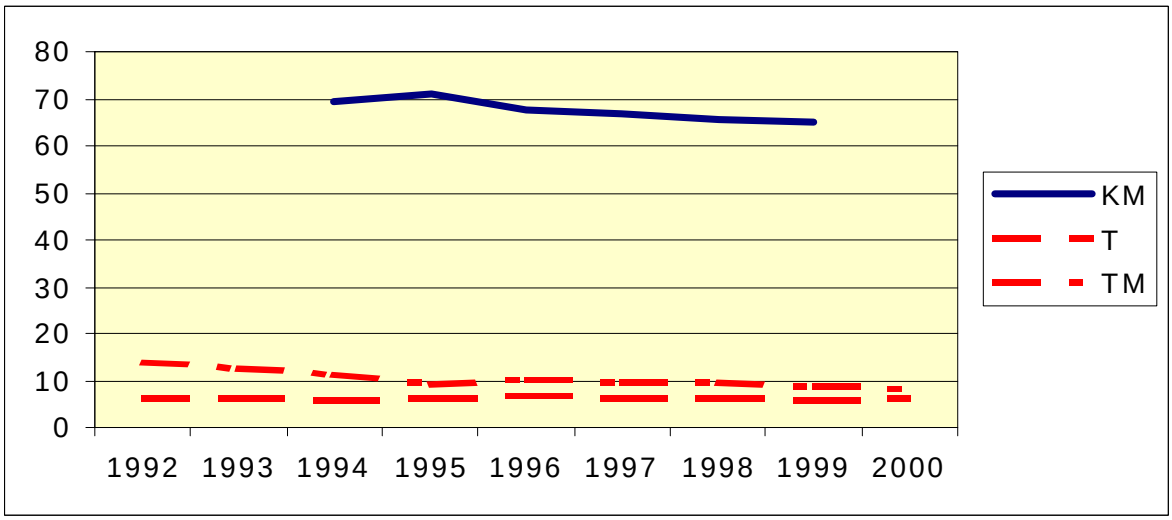


Notes: Index 1992 = 100.
Sources: as for Figure 11.

Productivity

Improved productivity is an important outcome of innovation. SMEs are often regarded as innovators. This SME innovation is not necessarily at a basic research level, but more at a product and process application level. Productivity thus gives some measure of the performance of SMEs as innovators. Productivity is notoriously difficult to measure, interpret and compare. Directly comparable measures of productivity improvement are not available for SMEs in Korea and Taiwan. Korean figures allow measurement of output per employee, while Taiwanese figures allow measurement of sales per employee. Unfortunately, Korean figures are only available for manufacturing industry. Figure 13 shows the proportion of output or sales per employee in SMEs expressed as a proportion of the output or sales of employees in large firms. It thus gives an approximation of the relative productivity of SME employees relative to their counterparts in large firms. It would appear that Korean SME employees produce about 70 percent of the output of their large firm counterparts. By contrast, the sales per Taiwanese SME employee are only about 10 percent of the sales per employee of large firms. Although these figures are not directly comparable, the difference is quite marked and hard to explain. In both Korea and Taiwan, there seems to have been a slight decline in the performance of SMEs relative to large firms, but in neither case was there any marked effect from the 1997 Crisis.

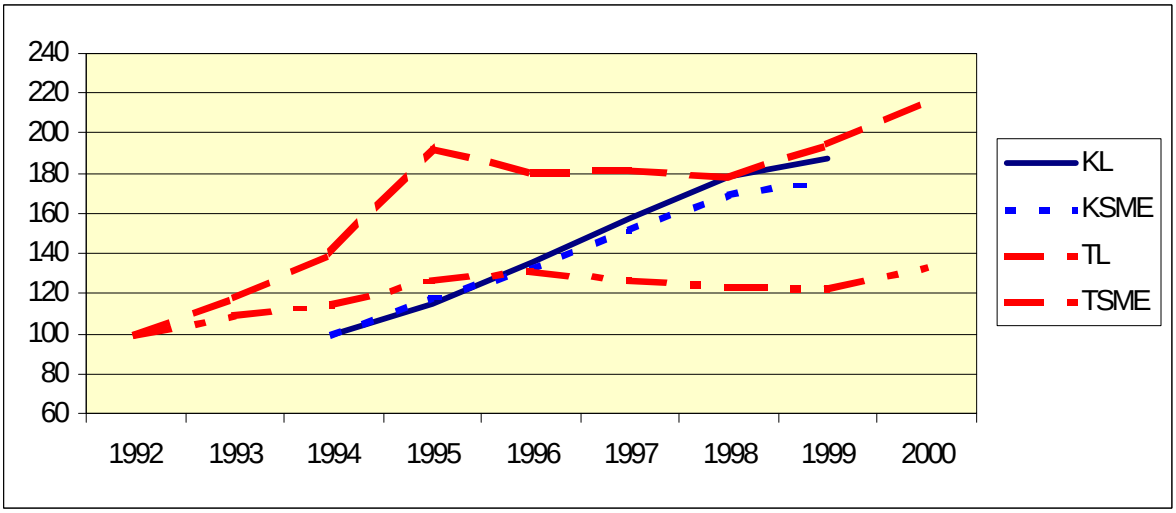
Figure 13: Approximations of Productivity of SME Employees as a Percentage of Large Firm Employee Productivity in Korea and Taiwan for All Firms and for Manufacturing



Notes: KM and TM refer to Manufacturing. Korean figures are based on output, Taiwanese figures are based on sales. They are not directly comparable. See text for details. Korean data are not available for all industries; only manufacturing industry data are available for Korea.
Sources: Korea figures are sourced from Korean Small Business Corporation, and from www.smba.go.kr. Taiwan MOEA (various years) White Paper on SMEs.

Figure 14 shows manufacturing productivity (measured as sales or output per employee) in large firms and in SMEs as an index, with 1994 as 100 for Korea and 1992 as 100 for Taiwan. In Korea it appears that SMEs have kept close track of large firm improvements in productivity since 1994. However in Taiwan, SME manufacturing productivity has dropped well below large firm rates of improvement, and, to the extent that comparisons can be drawn, well below rates of growth of productivity in Korean large and small manufacturing firms. Taiwanese manufacturing productivity remained rather stagnant in both SMEs and large firms from 1995 to 1999, when it started to improve sharply again.

Figure 14: Index of Changes in Productivity of SMEs and Large Firms in Korea and Taiwan for Manufacturing Firms



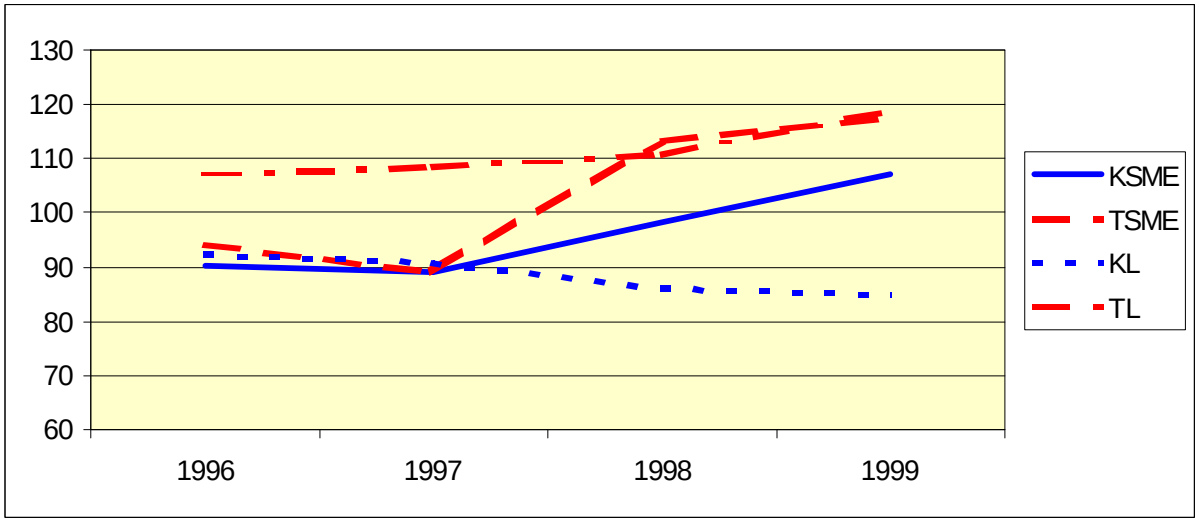
Notes: Korea Index 1994 = 100, Taiwan index 1992 = 100. Data are only for Manufacturing.
Sources: as for Figure 13.

Debt and current ratios

The ability of SMEs to cope with turbulence, and to provide an entrepreneurial engine of job creation and innovation, is heavily dependent upon their financial position. The Asian Crisis made clear that the financial position of firms in Asia, particularly large firms, was less adequate than it might have been. Ratio analysis is commonly used to interpret the adequacy of financial performance. Both Korea and Taiwan provide ratio analysis statistics at an aggregate level, but only two of the statistics are comparable between the two countries; the current ratio and the debt ratio.

The current ratio gives current assets relative to current liabilities. A ratio of less than 100 indicates that current liabilities exceed current assets, and thus the liquidity of the firm is poor. Figure 15 shows that in the 1995 to 1999 period,, only Taiwanese large firms had adequate current ratios. From 1997 Taiwanese SMEs improved their current ratio position sharply, and Korean SMEs also improved their position although a little more slowly. On the available figures Korean large firms were still suffering from a poor liquidity position in 1999, and that position had deteriorated, not improved, in the years following the Asian Crisis.

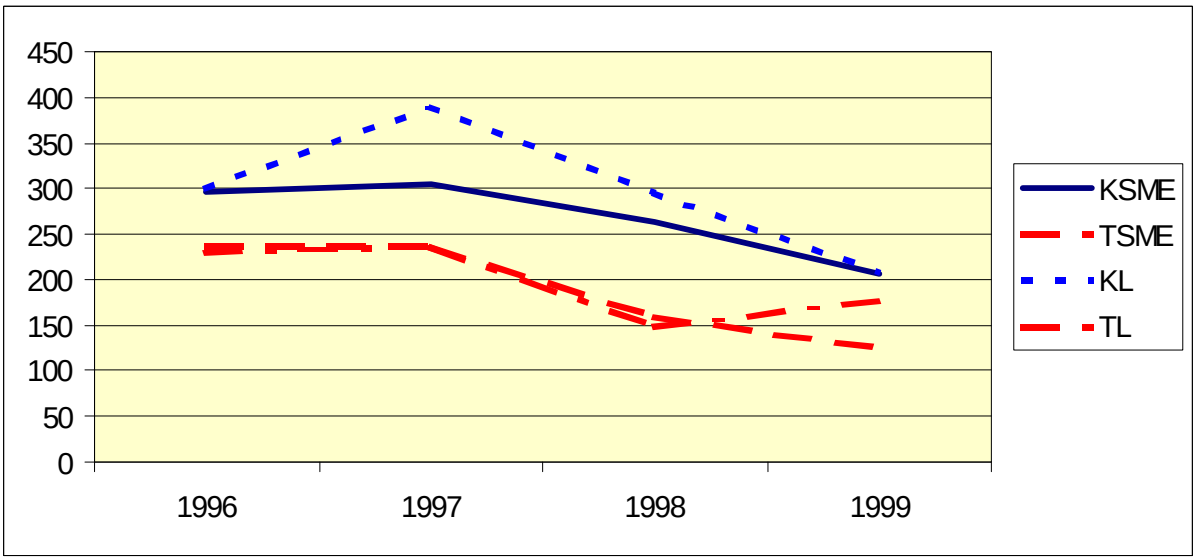
Figure 15: Current Ratio of SMEs and Large Firms in Korea and Taiwan



Notes: Current Ratio = current assets/current liabilities. See text for details.
Sources: Korea from www.smba.go.kr. SME Management Indices by Korean Federation of Small Business. Information on Larger firms from Management Indices by Bank of Korea. Taiwan MOEA (various years) White Paper on SMEs.

The debt ratio gives the ratio of debt to net worth. The higher the debt ratio the lower is the ability of the firm to repay those debts out of its long-term assets, after other claims have been made. A ratio of 300 indicates that debt is 300 percent of net worth. One of the problems compounding the Asian Crisis was that many firms had acquired debt levels that they were unable to service. Figure 16 shows that in both Korea and Taiwan, and in both SMEs and large firms, there was a steady drop in the debt ratios from 1997. Korean firms generally have a higher debt ratio than Taiwanese, but Korean SMEs were better positioned to weather out the Asian Crisis in 1996 than their large counterparts.

Figure 16: Debt Ratios for SMEs and Large Firms in Korea and Taiwan



Notes: Debt ratio = long term debt/net worth. See text for details.
Sources: as for Figure 15.

4. Policy approaches

In the heat of the 1997/98 period, both economies adopted short term policies aimed at supporting SMEs (Kawaii (2000)): short term loans to give protection from defaulting creditors; access to readjustment finance; extended credit guarantee so that SMEs could get loans at favourable rates, etc. These were similar in many respects in both economies. For example in 1998 the Japanese Miyazawa initiative made about USD 1.3 billion available for working capital for SMEs, or about USD 500 for each of Korea's 2.6 million SMEs, while Taiwan made about NTD 39 billion available for SMEs, or about USD 600 for each of Taiwan's 1.04 million SMEs. In Korea's case these reforms were also in the context of broader structural reforms (Shim (2000)). While these policy initiatives may well have eased the pain a little for SMEs they do not really explain why Korean SMEs have shown such resilience, and essentially achieved better performance on most indicators over the decade. Was there some difference in the basic policy framework that might explain the difference?

Taiwan has had a long history of policy support for SME development. This policy has gone through a number of evolutionary stages, as the economy has developed and needs have changed (Seong (1995)). Korea has adopted a more ambivalent policy approach, and in the early 1970s its policy was not sympathetic to SMEs. However, from the early 1980s, Korea adopted a policy and programs to encourage SME development (Leaven (2002)). The SME policy framework in Korea and Taiwan differs in some respects but not in any fundamental way, and has been similar through most of the 1990s. Table 4 summarises the policies adopted in each economy. This is based on survey results drawn from research carried out for APEC (Hall (2002) by one of the authors (Hall). It is based on the five broad policy areas originally identified by the APEC SME Policy Level Group (PLG) as being of particular relevance to the role of government in developing and implementing SME policy in an open APEC economy (access to information, finance, technology, human resource development (HRD), and market access). The tables show a "1" where there is a reasonably clear answer

of “yes” to the question or criterion indicated in the table. These questions and criteria were developed in conjunction with senior policy makers. Where there is a blank, it indicates that the answer is "no” or “insufficient information to tell”. The percentage columns give the percentage of the APEC economies that responded “yes” to that particular question. There were 17 economies covered in 1994, and 20 in 2001. The responses are based on official responses made to the APEC Survey of SMEs carried out in 1994 by Taiwan (Chinese Taipei), the Survey of Best Practices by Japan in 1995, the SME Profile by Malaysia in 1998, and a specific survey which was completed by member economy representatives in 2001. Preliminary results were circulated at the 2001 APEC Ministerial Meeting in Shanghai, and corrections or comments were sought. Further opportunity for corrections and comments was given to members at the SME WG Meeting in Vina del Mar in 2002, and at the Ministerial Meeting in Acapulco in 2002. Whilst there may still be some disagreement with some of the data for specific policies in specific economies, this gives, as reasonable as possible, a picture of the policy stances adopted.

Table 4 suggests that there is virtually no difference in the fundamental policy stance adopted in Korea and Taiwan during the period identified. This is despite there being quite significant differences across APEC in policy approaches.

Table 4: A Comparison of Policy Approaches to SMEs in Korea and Taiwan, 1994 and 2000

	1994			2000		
GENERAL	ROK	CT	%	ROK	CT	%
Are policies designed in such a way as to NOT discriminate between SMEs and large firms?			**47**			**40**
Are policies designed to discriminate in favour (or against) SMEs or specific groups (e.g affirmative action for minority or women entrepreneurs)	1	1	**41**		1	**60**
Are any programs designed to meet special needs of SMEs (whether they discriminate or not)?	1	1	**100**	1	1	**90**
Are any programs targeted at any particular group of SMEs (e.g SMEs as subcontractors to larger firms, "picking winners", export oriented SMEs, etc ?)	1	1	**47**	1	1	**70**
Are *most* programs intended to provide or support a business environment which encourages globally competitive SMEs?	1	1	**100**	1	1	**90**
Is there a basic SME Act or "Magna Carta" which sets out obligations of govt to SMEs?	1	1	**24**	1	1	**45**
Is there an agency or administration within govt with the primary responsibility for SMEs?	1	1	**65**	1	1	**85**
INFORMATION ACCESS	ROK	CT	%	ROK	CT	%
Is there a single point where people can go for advice and referrals on where to get information about govt regulations etc?		1	**29**	1	1	**75**
Is there a single portal or entry point for people seeking advice on govt regulations and requirements?		1	**24**		1	**60**
Is there any govt support for providing firms (including SMEs) with access to intelligence and information of a non govt nature (e.g market research, technical information etc)	1	1	**41**	1	1	**80**
FINANCE	ROK	CT	%	ROK	CT	%
Is there govt underwriting of credit guarantee for SMEs in domestic operations?	1	1	**47**	1	1	**45**
Is there govt support (including credit guarantee) for SMEs engaged in exports?	1	1	**53**	1	1	**70**
Is there govt support (tax concessions, pooled funds etc) for start-up and venture companies?	1	1	**41**	1	1	**70**
Is there govt support (subsidised or regulated interest rates, etc) for SMEs or small business generally?	1	1	**65**	1	1	**50**
Is there any govt supported program in place to provide micro finance to			**6**		1	**60**

those (e.g to ethnic or minority groups) seeking to start a business?						
Are SMEs given any concessional or favourable tax rates (e.g special exemptions on certain taxes, reduced company tax rates etc)?	1		**18**	1	1	**60**
TECHNOLOGY	ROK	CT	%	ROK	CT	%
Does govt provide any support (tax concessions, access to public research institutions, public incubators etc) for basic research	1	1	**59**	1	1	**85**
Does the govt provide support (incubators, underwriting, network or cluster support etc) for the commercialisation of innovations or start up of innovative companies?	1	1	**65**	1	1	**85**
Does the govt provide any programs to assist SMEs to adopt information technology and better management systems	1	1	**29**	1	1	**85**
Does the govt provide any programs to encourage the adoption of more efficient technology (e.g pollution control, manufacturing processes etc)	1	1	**59**	1	1	**85**
HRD	ROK	CT	%	ROK	CT	%
Is there govt support (e.g part payment, loans, facilities, trainers, facilitators etc) for training or consulting and advice to SMEs?	1	1	**100**	1	1	**90**
Is there govt support (e.g part payment, loans, advisors etc) for providing diagnostic services and advice to SMEs?	1	1	**71**	1	1	**85**
Is entrepreneurship or business a *required* subject in pre university schooling?			**0**			**20**
MARKET ACCESS	ROK	CT	%	ROK	CT	%
Are there export advisory services that are available to firms at less than full market cost?	1	1	**82**	1	1	**65**
Is there govt support (e.g part payment, loans, training etc) for networking or cluster start up or cooperatives	1	1	**71**		1	**70**
Are there business matching services provided by govt or supported by govt?	1	1	**47**	1	1	**75**
Is there any legal process or protection for SMEs suffering from unfair competition, predatory activity etc from large firms?			**6**	1	1	**50**
Is there reciprocal recognition of intellectual property rights (patents, licenses, copyright, trademarks etc) already established in another economy?			**0**	1	1	**70**
Are govt agencies required to procure a proportion from SMEs?			**6**		1	**40**
Is there govt support for (financial support, infrastructure etc) for databases to allow large firms and subcontractors to exchange information and opportunities	1	1	**41**			**55**
Are non-domestic SMEs (i.e. not registered in that economy) able to access govt procurement or govt sponsored networks (such as credit guarantee or subcontractor networks)?			**0**			**25**

Notes: see text for explanation.
ROK - Republic of Korea
CT – Chinese Taipei (Taiwan)
Sources: Hall APEC (2002)

5. Summary and conclusions

From the foregoing we can surmise that:

- SMEs in both Korea and Taiwan were subject to considerable turbulence and volatility as a result of the Asian Crisis in 1997, and as a more general result of a number of contextual factors (external debt, interest rates, industrial structure, exchange rates etc) that they had little or no control over.
- Korean SMEs were subject to more turbulence and volatility than their Taiwanese counterparts, and suffered a relative disadvantage in terms of the business environment they operated in. Korean SMEs faced higher interest rates, and more difficulty in getting access to bank finance than their Taiwanese counterparts.
- SMEs in both Korea and Taiwan performed similarly in terms of net growth in the number of SMEs over the entire period, but, as might be expected, Korean SMEs were hit harder by the 1997 crisis. Korean SMEs then showed considerable resilience in terms of catching up quickly and then overtaking Taiwan in the post crisis period.

- Export performance of SMEs was strong throughout the period, and the 1997 crisis did not seem to have any noticeable effect on the share of SME exports relative to larger firms. However, Korean SME exports grew at about double the rate of GDP growth, while Taiwanese SME export growth appears to be not much better than GDP growth. Comparison here is made difficult by changes in the series used in Taiwan.
- In both economies, SMEs continued to provide the bulk of jobs. However, in Taiwan large firms outstripped SMEs in terms of job growth. In Korea the reverse was the case. Even though job growth in SMEs was negative for a short period post 1997, Korean SMEs generated far more jobs than their large counterparts. In both economies, manufacturing employment in SMEs was stagnant or declining.
- Taiwanese productivity growth in SMEs seems to be falling below large firm performance, and has been relatively stagnant since the early 1990s, while in Korea productivity seems to be improving, and SME productivity growth is closely tracking that of large firms.
- Taiwanese SMEs improved their current ratios markedly post 1997. Korean SMEs also made improvements but not by so much, and the Korean large firms still had serious cash ratio problems in 1999. Similarly, Taiwanese SMEs had better debt ratios than Korean SMEs, both before and after the Asian Crisis.

Thus, the first *a priori* hypothesis is readily accepted. Korea's SMEs were affected much more by the immediate aftermath of the 1997 Asian Crisis than those of Taiwan. However, the evidence seems to contradict the second hypothesis. Although we might expect that Taiwanese SMEs would outperform Korean SMEs because the latter were subject to more external impacts and turbulence, the reverse seems to be the case on many indicators. Certainly the Korean SMEs were substantially affected and had lower performance in the relatively short period immediately after 1997, but, overall, Korean SMEs seem to be matching or even outperforming Taiwanese SMEs in all respects bar the financial ratios. This has some important implications for other economies in the region. The ability to develop an internationally competitive industrial structure which is able to adapt quickly and take advantage of opportunities is very important in the face of a turbulent global environment. What lessons can be drawn from the experiences of Taiwan and Korea?

Resilience is a characteristic of SMEs. Why Korean SMEs performed so well under such adverse conditions relative to their Taiwanese equivalents can really only be explained by more detailed research and analysis, but at least some of the explanation seems to lie with the restructuring of large firms in Korea, and the restructuring of the financial system in particular, under the auspices of the IMF and World Bank programs. This opened up opportunities for SMEs that were not so readily available in Taiwan. It also forced many Koreans from jobs in large firms, and into SMEs.

Both economies, despite some common misconceptions about the relative importance of the *chaebol* in Korea, place heavy reliance on SMEs. SMEs play a very important role in the industrial structure of Korea and Taiwan, and this explains why both economies were able to weather the storms of 1997 and 1998 so well.

Both Korea and Taiwan had adopted a good basic framework of SME policies and had this in place by the mid 1990s in Korea's case, and rather earlier in Taiwan's case. The policy frameworks adopted were advanced relative to the APEC average. This seems to have given both economies a competitive edge when it came to assisting their SMEs to adjust to the unknown.

The basic lesson then is that the reputation for SMEs to be flexible in the face of adversity is well deserved, but should not be take for granted. Turbulence and volatility are not in themselves necessarily bad. Although the impact of turbulence is no doubt painful for those directly affected, turbulence can offer opportunities for structural adjustments to take place. This adjustment process can allow for longer term benefits, and opens up short-term opportunities by breaking down barriers. Provided the SME sector is able to take advantage of the opportunities that arise, and provided SMEs have incentives to exit from low-opportunity areas without bearing unreasonable costs, then the SME sector actually seems to be able to perform better under turbulence. This process is assisted by a good SME policy framework, which makes it more likely that SMEs can take advantage of the opportunities created by turbulence.

References

Anh, Choong Yong (2001), A search for robust East Asian development models after the financial crisis: mutual learning from East Asian experiences, Journal of Asian Economics, 12 (3), Pages 419-443.

APEC (1994), The APEC Survey on Small and Medium Enterprises, Chinese Taipei.

Chinese Taipei, MOEA (various years), White Paper on SMEs, SMEA, Taipei.

Gregory, Gary, Harvie, Charles, and Lee, Hyun-Hoon (2002), Korean SMEs in the 21st Century: Strategies, constraints and performance in a global economy, Economic Papers, 21 (3) p 64 - 79.

Hall, Chris, APEC (2002), Profile of SMEs and SME Issues 1990 - 2000, APEC, Singapore.

Hall, Chris (2002b) Entrepreneurship Densities in APEC and Europe: How many entrepreneurs should there be in China, or other developing economies? Small Enterprise Research, 10 (1) p 3 - 14.

Harvie, Charles. and Lee, Boon-Chye (2002a) (eds.), The Role of Small and Medium Enterprises in National Economies in East Asia, Edward Elgar, Cheltenham, UK

Harvie, Charles. and Lee, Boon-Chye (2002b) (eds.), Globalisation and Small and Medium Enterprises in East Asia, Edward Elgar, Cheltenham, UK

Harvie, Charles and Lee, Hyun-Hoon (2002) New regionalism in East Asia: how does it relate to the East Asian Development Model?, *ASEAN Economic Bulletin*, Vol.19, No.2, pp.123-140, August, 2002.

Hong Soon-Yeong, Park Jang-Hyuk, Park Jong-Young (1999), Status and Prospects of Small & Medium Enterprises (SMEs) in Korea, Korea Small Business Institute, Seoul.

Hsiao, Frank S. T. and Hsiao, Mei-Chu W. (2001), Capital flows and exchange rates: recent Korean and Taiwanese experience and challenges, Journal of Asian Economics, Volume 12, Issue 3, Autumn, Pages 353-381

Kawaii, Masahiro (2000), The resolution of the East Asian crisis: financial and corporate sector restructuring, Journal of Asian Economics, Volume 11, Issue 2, Summer, Pages 133-168

Kim, Joo-Hoon (1998) Financial Crisis and the SME in Korea, Korean Development Institute, Working Paper at http://www.kdi.re.kr/pub_attach/968_4_00000968.pdf

KOTRA (1999), A strategy for Internationalization of SMEs in the Asia Pacific Region: Lessons form the empirical study on Korean and other APEC member economies, APEC, Singapore.

Leaven, Luc (2002), Financial constraints on investments and credit policy in Korea, Journal of Asian Economies, 13 (2) p 251 - 269.

Lee, Jong Wha and Rhee, Changyong (1999), Social Impacts of the Asian Crisis: policy challenges and lessons, UNDP Working Paper # 33, UNDP

OECD (1997), Globalisation and SMEs, Vol 1 and 2, OECD, Paris.

OECD (2000), SME Outlook, OECD Paris.

Park, Sung-Hoon, Ahn, Hyungdo (1999), The Impact of the Korean Financial Crisis on SMEs: A Case Study of Korea http://www.kt-i.org/sep_oct_01/tradeproducts/market.htm

Puri, Tribhuvan N., Kuanb, Chikuang and Maskooki, Kooros (2002), An analysis of currency crisis in South Korea, Global Finance Journal, Volume 13, Issue 2, Pages 121-146

Seong, S (1995), Korean Country Paper, in Park, Eul Yong (1995) Small and Medium Sized Enterprises and Economic Development, KDI, Seoul.

Shim, Y., (2000), Korean bank regulation and supervision: crisis and reform, Kluwer Law International, London.