View metadata, citation and similar papers at core.ac.uk
brought to you by CORE
provided by Academic Research Repository at the Institute of Developing Economies

A Distributive Comparison of Enterprise Size in Korea and Taiwan

権利	Copyrights 日本貿易振興機構（ジェトロ）アジア経済研究所 / Institute of Developing Economies, Japan External Trade Organization (IDE-JETRO) http://www.ide.go.jp
journal or publication title	The Developing Economies
volume	35
number	4
page range	382-400
year	1997-12
出版者	Institute of Developing Economies
URL	http://hdl.handle.net/2344/125

The Developing Economies, XXXV-4 (December 1997): 382–400

A DISTRIBUTIVE COMPARISON OF ENTERPRISE SIZE IN KOREA AND TAIWAN

MAKOTO ABE
MOMOKO KAWAKAMI

INTRODUCTION

WITHIN the existing research dealing with the economic development of the Republic of Korea (hereafter Korea) and Taiwan there is a broad consensus that the backbone of industrialization in Korea has been the *chaebol*s (conglomerate business groups) rather than small and medium-size enterprises (SMEs) (Kuramochi 1992, p. 380), while in Taiwan's economic development, SMEs have been the driving force for growth (Yu 1993, p. 338). In this special issue as well, the article by Hattori (1997) analyzing Korea's economic development likewise focuses on the *chaebol*s as central in carrying out the economy's development since the 1960s, while Numazaki's article (1997) analyzing Taiwan depicts SMEs supported by horizontal networks of *laoban* (owner-managers) as playing the major role in that island's economic development. In sum, the general consensus in the research to date that has focused on the main players of industrialization in the two economies is that "Korea is a big business economy while Taiwan is an SME economy." The purpose of this study is to verify by means of statistical data the appropriateness of this general perception which sharply contrasts the sizes of the enterprises that have been central to economic development in the two economies.

In Section I we will utilize census data for the Korean and Taiwanese manufacturing sectors, the most comprehensive source for evaluating the actual conditions of enterprises in both economies, in order to examine whether or not the above general perception reflects reality. This examination will entail comparing the changes in the distribution pattern of the sizes of production units in both Korea and Taiwan during a time series and at given points of time. This examination will show that both economies have been moving away from large-scale businesses, but it will also show a noticeable dichotomy in the distribution of the sizes of enterprises in the two economies. In Section II we will compare the position of large-scale business groups in both economies, as we consider that the contrasting perception of a *chaebol*-centered Korean economy and an SME-oriented Taiwanese economy derives in part from the much greater economic presence of large-scale business groups (the *chaebols*) in Korea when compared with such groups in Taiwan.[1] In Section III we will compare the share of exports that SMEs account for in both economies, and will compare the relationship between enterprise size and the ratio of export sales. Exports have played an extremely large part in the economic development of Korea and Taiwan; and the perceived dichotomy of the two economies is very likely to be derived partly from the difference in the size of the enterprises that have been the important exporters in both economies: big businesses in Korea and SMEs in Taiwan. The last section presents our conclusions.

I. ANALYZING THE CENSUS DATA

Before taking up the intended examination of this study, we first need to check the nature and compatibility of the census data for the manufacturing sectors in Korea and Taiwan and point out the limitations of such data for comparing the size distribution of production units (establishments[2]/enterprises) in both economies. After clarifying these limitations, we will utilize this data to compare the changes that took place in this distribution over time in each economy and the distribution pattern of the sizes of production units at given points in time, in order to examine the appropriateness of the general perception that contrasts the size of the enterprises that were the main engines of growth in the two economies.[3]

A. *The Nature of the Data*

In Korea a total of ten censuses were conducted between 1958 and 1993.[4] These were taken at irregular intervals until 1968, then in 1969 it was decided to conduct them every five years. To be compatible with the pertinent census data for Taiwan,

1 Taniura (1988, p. 5) points out that (1) Taiwanese large business groups are smaller in number than their Korean counterparts, and their position in the economy is less important than in Korea, and (2) Taiwan has no general trading companies, which increases the role of SMEs in foreign trade.

2 An "establishment" means "a physical unit engaging in industrial activities such as a factory, workshop, office, or mine." (ROK, NSO, *Report on Industrial Census*, 1993).

3 Enterprise size can be determined by indices other than the number of employees; capitalization, sales volume, or the value of assets can also be used. At present in Taiwan capitalization is used; an SME in the manufacturing sector is defined as a firm with capital of N.T.$40 million or less. In Korea, firms in the manufacturing sector with 20 employees or less are defined as small enterprises while those with between 21 and 300 employees are defined as medium-size enterprises. In this study we have used the number of employees for defining an SME.

4 Census titles have differed over the years. Between 1963 and 1978 they were published as *Report on Mining and Manufacturing Census* (ROK, EPB, various years), while in 1983 and 1988 they were published as *Report on Industrial Census* (ROK, NSO, 1983, 1988). Censuses are conducted every five years, and in years when no census is taken, surveys are carried out (see ROK, NSO, *Report on the Mining and Manufacturing Census*, various years). However in the surveys no data appears on "small establishments" with less than five employees.

we used the six Korean censuses taken since 1968. However the 1968 census did not contain statistics for small establishments with four workers or less which caused problems for a strict comparison with Taiwan at given points of time. For this reason, we used data since 1968 when looking only at the time-series changes for Korea, and when making comparisons with Taiwan at given points of time, we used only the data available since 1973.

The first census in Taiwan was carried out in 1954, then from the second one in 1961, they were conducted every five years, the eighth census taking place in 1991 (ROC, DGBAS, various years). We obtained the results of the last seven censuses. However there is a discontinuity in the data between the 1961 census and the later ones. For this reason we used the data from the censuses since 1966 for our analysis. We carried out our analysis of Korea using the data up to 1988, and that of Taiwan using the data up to 1986. Changes which have taken place during the 1990s will be discussed in the Conclusion.

The categories of the census data, such as classifications for number of workers and industries, for the two economies differs from year to year which put limitations on the framing of the time-series data so that it would meet the purposes of our analysis. The most severe limitation was the difference in the basic production unit used in the statistics. The Korean statistical data takes the individual establishment as the basic unit for which the most detailed information is available, while the data for Taiwan takes the whole enterprise as the basic unit. There were other less severe differences in the data for which we also had to make adjustments, but we consider that our overall statistical results remain valid.

The ideal situation for comparing the pattern of distribution of the enterprises in the two economies would be to have data that is as identical as possible. However we found that if we attempted to analyze the distribution of the size of enterprises in the two economies either based on "establishments" or "enterprises," there was only one similar point in time prior to the 1990s where we could compare the two in the area of output; this was Taiwan-1981/Korea-1983. We carried out a comparative analysis for this point in time, and for the other points in time we decided to use the data on establishments for Korea and that on enterprises for Taiwan. We will discuss below the possible problems for our analysis arising from this difference in the nature of the data.

Fortunately from the Taiwanese census data we were able to work out the size distribution for the total number of enterprises, the number of employees, and the expenses of labor compensation both on establishments and on enterprises (see Table I-B). Through a comparison of these, we were able to make some inferences about the differences between the results obtained from enterprise-based data and from establishment-based data regarding the pattern of size distribution for Taiwan.

We concluded that in the case of Taiwan, utilizing the enterprise-based data gave

TABLE I

ENTERPRISE AND ESTABLISHMENT SIZE DISTRIBUTION IN KOREA AND TAIWAN

A. Korean Manufacturing Sector, 1973–93

(%)

	Establishment-Base Data				
	No.	No. of Employees	Employee Remuneration[a]	Production Output	Value Added
1973					
1–9	87.0	17.6	6.9	4.7	5.8
10–49	9.3	12.3	10.3	7.3	7.2
50–99	1.6	7.4	7.6	6.5	6.5
100–499	1.7	24.2	26.5	28.6	27.8
500–	0.5	38.5	48.2	52.8	52.7
1978					
1–9	82.9	11.4	4.6	3.6	4.6
10–49	11.3	12.2	10.6	7.4	7.9
50–99	2.5	8.6	8.2	6.7	6.9
100–499	2.8	27.6	28.1	26.9	26.6
500–	0.6	40.2	48.4	55.4	54.0
1983					
1–9	81.6	12.6	5.2	3.2	4.3
10–49	13.0	16.5	14.1	8.1	9.2
50–99	2.6	10.6	10.2	7.3	7.5
100–499	2.3	26.3	27.9	26.0	26.3
500–	0.4	33.9	42.8	55.4	52.7
1988					
1–9	77.0	11.6	5.3	3.5	4.8
10–49	17.3	20.8	16.5	11.3	13.2
50–99	3.0	11.5	10.5	8.7	9.0
100–499	2.3	24.1	25.2	25.8	25.0
500–	0.4	32.1	42.5	50.6	48.0
1993					
1–9	79.7	19.0	5.9	3.7	4.5
10–49	16.7	27.3	24.5	17.1	18.3
50–99	2.1	11.4	11.8	9.9	10.1
100–499	1.3	19.7	23.7	24.0	24.5
500–	0.2	22.5	34.1	45.3	42.6

Source: ROK, NSO, *Report on Industrial Census* (various years).
[a] Includes salaries, wages, bonuses, and fringe benefits.

large-scale production units a greater weight in the economy than when using the establishment-based data. This becomes apparent on examining Taiwan's statistics for enterprises and establishments for 1981 and 1991, the only two years which provide statistics for both categories (see Table I-B). Furthermore, it is possible to estimate the distribution of the size of production based on the distribution of the

TABLE I (Continued)

B. Taiwan Manufacturing Sector, 1966–91

(%)

	Enterprise-Base Data					Establishment-Base Data			
	No.	No. of Employees	Expenses of Labor Compensation[a]	Production Output	Value Added	No.	No. of Employees	Expenses of Labor Compensation[a]	Production Output
1966									
1–9	72.1	12.8	9.4	14.2	n.a.	71.6	13.4	10.0	n.a.
10–49	22.4	21.2	15.9	13.9	n.a.	22.7	22.5	18.0	n.a.
50–99	2.7	8.7	7.7	6.4	n.a.	2.7	9.2	8.8	n.a.
100–499	2.3	22.5	20.2	19.9	n.a.	2.5	26.9	26.9	n.a.
500–	0.5	34.8	46.9	45.6	n.a.	0.5	28.0	36.2	n.a.
1971									
1–9	68.7	9.4	7.3	7.9	6.0	n.a.	n.a.	n.a.	n.a.
10–49	23.0	17.0	13.7	11.9	9.9	n.a.	n.a.	n.a.	n.a.
50–99	3.8	9.2	8.0	6.9	5.7	n.a.	n.a.	n.a.	n.a.
100–499	3.8	28.2	26.7	26.0	20.5	n.a.	n.a.	n.a.	n.a.
500–	0.8	36.1	44.3	47.3	57.9	n.a.	n.a.	n.a.	n.a.
1976									
1–9	68.1	10.2	7.9	6.6	5.8	n.a.	n.a.	n.a.	n.a.
10–49	22.8	17.7	14.4	11.9	10.3	n.a.	n.a.	n.a.	n.a.
50–99	4.3	11.1	9.9	8.8	6.8	n.a.	n.a.	n.a.	n.a.
100–499	4.1	30.4	28.9	29.1	24.8	n.a.	n.a.	n.a.	n.a.
500–	0.6	30.6	38.9	43.6	52.3	n.a.	n.a.	n.a.	n.a.
1981[b]									
1–29	87.1	22.3	17.9	12.0	13.0	86.8	23.5	19.5	12.4
30–299	11.8	39.7	36.9	32.9	28.3	12.1	42.6	41.2	37.0
300–499	0.5	8.4	8.5	8.2	8.1	0.6	9.9	10.5	10.9
500–	0.5	29.5	36.7	47.0	50.6	0.5	24.1	28.8	39.7
1986									
1–9	63.6	10.4	7.6	5.6	6.4	63.2	10.9	8.7	n.a.
10–49	27.7	24.0	19.2	16.7	15.1	28.1	25.6	22.1	n.a.
50–99	4.7	13.5	12.3	11.6	9.4	4.7	14.2	13.8	n.a.
100–499	3.5	28.1	29.2	29.0	25.1	3.6	30.8	33.3	n.a.
500–	0.4	24.1	31.7	37.2	44.0	0.4	18.4	22.1	n.a.
1991									
1–9	66.1	14.1	10.5	7.3	8.5	65.7	14.8	11.4	8.1
10–49	28.0	29.6	23.5	19.5	18.1	28.1	31.5	26.1	22.6
50–99	3.6	12.8	11.5	10.9	9.0	3.7	13.9	13.1	12.9
100–499	2.1	21.3	22.6	23.8	20.0	2.3	24.3	27.7	29.5
500–	0.3	22.2	31.9	38.5	44.4	0.3	15.6	21.8	26.8

Source: ROC, DGBAS (various years).

[a] Includes salaries, wages, bonuses, and fringe benefits.

[b] Size classification by number of employees for 1981 is broader than for other years.

expenses of labor compensation at establishments.[5] Through this procedure we found that the distribution of small-scale production units becomes greater when relying on the establishment-based rather than enterprise-based statistics.

Thus in Section B when comparing the Taiwanese data based on enterprises with the Korean data based on individual establishments, it is very possible that the importance of large-scale production units in the Taiwanese economy will be overemphasized than if we were able to analyze both economies using data for individual establishments.

B. *Evolution in the Size-Distribution Pattern*

Table I presents the size-distribution pattern in the Korean and Taiwanese manufacturing sector for the number of establishments / enterprises, the number of employees, employee remuneration / expenses of labor compensation, production output, and value added.[6] The table indicates, though not sharply, that big business tends to predominate in the Korean economy while in Taiwan SMEs tend to be more important players in the economy.

In the discussion below we will focus mainly on establishments/enterprises with 500 employees or more, and on those with less than 10 employees, to give a general picture of the evolution in the pattern of size distribution for these particular production units in the two economies.

1. *Establishments / enterprises with 500 employees or more*

(1) Trends

We will begin by comparing time-series changes in the position within both economies of establishments / enterprises with more than 500 employees. In both Korea and Taiwan the percentage of such large-scale establishments / enterprises in the total number of businesses is small and has decreased over time. In terms of output, the decreasing trend has been even more pronounced. In Korea from 1973 to 1983, the share of output accounted for by large-scale establishments first rose somewhat then leveled off, then dropped by about 5 points between 1983 and 1988. In Taiwan the share of output by such large-scale enterprises remained stable in the 40 per cent range between 1966 and 1981, then declined by 10 points between

[5] For the enterprise-based statistical data, the adjusted coefficient of determination between the distribution of the expenses of labor compensation and that of production is as high as 0.944. Assuming that a similarly high correspondence would be found for the establishment-based figures, we can assume the distribution of production among establishments of different size. Table I-B shows that the establishment-based data produces a larger distribution of expenses of labor compensation among smaller businesses compared to the enterprise-based statistics, and it is presumable that the same relationship holds for the distribution of production.

[6] The Korean censuses do not provide output figures for establishments with less than five employees. Therefore for these small establishments we used "value of shipments" instead.

1981 and 1986. Thus in both economies since the 1980s, the share of total production accounted for by establishments / enterprises with 500 or more employees has decreased somewhat.

Looking at this trend away from large-scale businesses in more detail and analyzing the factors that brought it about, Table II shows the percentages of change that took place in the number of establishments/enterprises and the output of these production units, and attributes these changes to two factors: (1) changes in industrial structure and (2) changes in the size distribution of establishments/enterprises within (each) specific industry. Table II presents the calculations for the two economies for the two periods that are closest to each other in point of time for (1) Ko-

TABLE II

FACTORS FOR CHANGE IN ENTERPRISE AND ESTABLISHMENT SIZE DISTRIBUTION: MANUFACTURING SECTOR IN KOREA AND TAIWAN

A. Korea

(Percentage points)

	Change in Ratio to Total Manufacturing Sector (a) + (b)	Change Attributed to Factor 1 (a)	Change Attributed to Factor 2 (b)
1968–78			
Establishments with over 500 employees:			
No. of establishments	1.4	0.3	1.1
Production output	10.0	–0.7	10.6
Establishments with 5–9 employees:			
No. of establishments	–16.7	–6.0	–10.7
Production output	–3.6	–0.1	–3.5
1978–88			
Establishments with over 500 employees:			
No. of establishments	–0.9	0.3	–1.3
Production output	–4.9	0.1	–5.0
Establishments with 5–9 employees:			
No. of establishments	–6.7	–3.7	–3.0
Production output	0.0	–0.2	0.2

Source: ROK, NSO, *Report on Industrial Census* (various years).

Note: Change attributed to Factor 1 = change attributable to changes in industrial structure; Change attributed to Factor 2 = change attributable to changes in establishment size in specific industries.

For example, the change in the ratio between period t–1 and t for establishments with over 500 employees was as follows.

$$\left(\frac{Y_l}{Y}\right)_t - \left(\frac{Y_l}{Y}\right)_{t-1} = \sum_i l_i^t \Gamma_i^t - \sum_i l_i^{t-1} \Gamma_i^{t-1} = \sum_i \Gamma_i^t \,(l_i^t - l_i^{t-1}) + \sum_i l_i^{t-1} (\Gamma_i^t - \Gamma_i^{t-1}),$$

where Y = total manufacturing sector output, Y_l = production output of enterprises with over 500 employees, i = the ith industry, t = the tth period, l_i = share of enterprises with over 500 employees in the ith industry, and Γ_i = ith industry's share of total manufacturing sector production.

TABLE II (Continued)

B. Taiwan

(Percentage points)

	Change in Ratio to Total Manufacturing Sector (a) + (b)	Change Attributed to Factor 1 (a)	Change Attributed to Factor 2 (b)
1966–76			
Enterprises with over 500 employees:			
No. of enterprises	0.2	0.2	0.0
Production output	–2.2	–0.1	–2.0
Enterprises with 1–9 employees:			
No. of enterprises	–3.8	–9.6	5.7
Production output	–7.5	–4.9	–2.6
1976–86			
Enterprises with over 500 employees:			
No. of enterprises	–0.2	0.1	–0.3
Production output	–6.5	–1.0	–5.6
Enterprises with 1–9 employees:			
No. of enterprises	–4.4	–2.0	–2.3
Production output	–1.0	–0.2	–0.8

Source: ROC, DGBAS (various years).
Note: Change sttributed to Factor 1 = change attributable to changes in industrial structure: Change attributed to Factor 2 = change attributable to changes in enterprise size in specific industries.

rean establishments and Taiwanese enterprises with more than 500 employees and (2) Korean establishments with 5–9 employees and Taiwanese enterprises with less than 10 employees.[7] The Korean side of the table shows that during the decade of 1968–78, establishments employing 500 or more workers increased their share of production by 10 points due to the increase in output by establishments in this specific size category in each specific industry. This indicated an overall trend toward large-scale production units during the ten years. However during the decade of 1978–88, the change in the size-distribution pattern in each industry, which had trended toward large-scale businesses during the previous decade turned negative resulting in a drop of 4.9 points in total output.

In Taiwan the share of total output for enterprises with 500 workers or more declined slightly during the decade of 1966–76, then dropped by a significant 6.5 points during the ten years of 1976–86. This trend away from large-scale enterprises in Taiwan could also be attributed mainly to the second factor; change in the size distribution of enterprises within each specific industry. In sum, Korea experienced a move toward large-scale establishments during the late 1960s and early 1970s followed by a move away from such large businesses in the 1980s, while in

[7] Since the Korean 1968 census data does not contain data on establishments with 4 workers or less, we had to use data for those with 5–9 workers for Korea in Table II.

Taiwan there was a gradually accelerating trend away from large-scale enterprises during the same decades.

(2) Size distribution at given points of time

In this sub-section we will look at the pattern of size distribution at similar given points of time in the Korean and Taiwanese economies and compare the share of total manufacturing output accounted for by establishments / enterprises with 500 employees or more. First we will compare the data for Korea-1983 and Taiwan-1981, the only two points for which data on establishments is available for both economies. The share of total output accounted for by establishments with 500 employees or more was 55.4 per cent in Korea in 1983 compared with only 39.7 per cent in Taiwan in 1981. Furthermore, when comparing the size distribution of output for the two economies at the same points in time, we can see that for Taiwan-1981 small-scale establishments with 49 employees or less has a larger distribution than in Korea. In this particular instance the data clearly shows the dichotomy between Korea's big-business-centered economy and Taiwan's SME-oriented economy.

In order to compare the distribution of large-scale production units in the two economies at more points in time, we will now utilize data for establishments in Korea and for enterprises in Taiwan. As shown in Table I, the share of production for Korean establishments with over 500 employees continuously surpassed that of Taiwanese enterprises of the same size category, and the gap widened markedly especially in the late 1980s; in Korea the share was 50.6 per cent in 1988 while in Taiwan it was only 37.2 per cent in 1986. Thus the data attests to the much greater importance of big business in Korea. Moreover, the enterprise-based data for Taiwan tends to overstate the presence of large businesses in the economy than does the establishment-based data, as noted earlier. Thus the actual difference between the two economies in the share of output produced by large-scale establishments / enterprises is likely to be greater than what the above figures indicate.

2. *Establishments / enterprises with less than ten employees*

(1) Trends

As shown in Table I, up to the end of the 1980s the position in both economies of establishments/enterprises employing less than ten workers followed a long-term decline. In Korea the position in the economy of establishments employing between five and nine workers continued to decline during both the 1968–78 and 1978-86 periods. As seen from Table II-A, this decline was most apparent in the number of establishments. The causes for this decline were the changes taking place in the industrial structure of the economy and changes in the distribution of the size of establishments within each industrial sector as well.[8]

[8] The decline in the number of establishments with between five and nine employees was especially

In Taiwan the position in the economy of enterprises employing between one and nine workers also continued to decline during both the 1966–76 and 1976–86 periods. During the 1966–76 period in particular, the share of output of these small-scale enterprises fell by 7.5 points due mainly to the overall change in the industrial structure (Table II-B). The decline in the position of the food processing industry, in particular, where small-scale manufacturers played a large role, contributed significantly to the steep drop in the share of output by small enterprises.

(2) Size distribution at given points of time

When comparing at given points of time the position in both economies of establishments / enterprises with less than ten employees, Table I shows that although the percentage of the number of small-scale establishments in Korea exceeded that of enterprises of the same size in Taiwan by almost 10 points, the share of output accounted for by these small enterprises in Taiwan was higher than Korea employing less than ten people. Thus the scale of production for Korean establishments employing between one and nine workers was comparatively smaller than that of similar-sized enterprises in Taiwan.

C. *Summation*

As shown in the patterns of size distribution of establishments/enterprises in Korea and Taiwan, there has been a clear trend away from both large- and small-scale businesses. Since the 1980s this trend has been particularly marked in the share of output accounted for by large-scale businesses in both economies. Looking at the factors behind this phenomenon, during the 1970s just before the move away from large-scale businesses began in both economies, Korea and Taiwan both passed through a transition point marking a change from a surplus of labor to a scarcity of labor in their economies. Previous studies show that this transition took place around 1970 in Taiwan and around 1975 in Korea.[9] Following this transition large-scale businesses were confronted with a scarcity of labor and concomitant rising wages. In response they began to subcontract production to SMEs, while at the same time automating their production processes and shifting to non-labor-intensive industries. Several studies have reported the rise of subcontracting during the 1980s,[10] and the results of our research showing a decline in the output of large businesses concur with these findings. The rise in subcontracting along with grow-

marked in the food processing and machinery manufacturing industries during 1968–78 and in the apparel industry during 1978–88.

9 For example, Kuo et al. (1981) and Sumiya and Liu (1992) date the transition in Taiwan in 1968, and Bai (1982) dates the transition in Korea around 1975.

10 For Taiwan, Ka (1993) and Wei (1993) found that subcontracting started to increase from the 1980s in response to growing labor scarcity. According to Levy (1991), in Korea the footwear industry showed a steady shift from internal production to subcontracting to SMEs during the 1980s.

ing scarcity of labor and rising wages in both economies since the 1980s seems to be one of the important factors that has brought on the trend away from large-scale businesses.

The present section has relied on census data to examine the appropriateness of the widely held perception that the main drivers of the Korean economy have been large-scale businesses while in Taiwan they have been the SMEs. However, as mentioned earlier, a comparative analysis of the two economies based on this data has definite limitations, the most critical being the absence of establishment-based statistics for both economies prior to the 1990s with the sole exception being two comparable dates in the early 1980s. Therefore we relied on data on establishments in Korea and on enterprises in Taiwan.[11] Thus the results presented in this section have been affected to some degree by the incompatibility of the categories found in the data.

In the following section we will examine the generally perceived dichotomy between the two economies by comparing and contrasting, first, the size of business groups and their position in their respective economies, and second, the size of the major exporters in both economies. As was mentioned earlier, the research to date on the Korean economy has directed most of its attention at the *chaebol* groups while that on Taiwan has focused on SMEs. We consider that such differing points of focus is due to the contrast in the positions that large-scale business groups have in their respective economies and the contrast in the size of the major exporters.

II. A COMPARISON OF THE SIZE OF BUSINESS GROUPS

A. *The Data*

A *chaebol*, or Korean conglomerate, is defined in the Monopoly Regulation and Fair Trade Act and its Rules for Implementation as a "large-scale business group."[12] Certified *chaebol*s must report to the Fair Trade Commission about their

[11] Also we had to use a rather loose classification for size categories for establishments/enterprises in order to standardize categories for comparing the number of employees. For example, if the category of establishments/establishments with 100–499 employees could be broken down into smaller segments, we could probably see the contrast between the two economies more clearly. Also, in pre-1973 Korea, establishments employing five workers or less were excluded from the census making it impossible to do an adequate comparison for the 1960s, a decade when both economies experienced accelerated economic growth.

[12] Article 2, Section 2 of the Act defines a "business group" as a collection of companies whose business affairs are under the control of a single individual. A detailed definition is also given for the meaning of "control over business affairs." A large-scale business group is defined in Article 3 of the Rules for Implementation as a business group with total assets ranking within the top thirty groups, and the government imposes various restrictions on the groups certified as being large-scale. Those large-scale business groups with a dispersed shareholding structure are excluded from the definition, as the Korean government offers incentives to promote the dispersion of shareholding in large-scale business groups.

financial situation and who their present stockholders are, and the following analysis is based on a portion of this reported information which is published in "The Financial Analysis of the Korean Thirty Largest *Chaebol*s, 1996" (NIMA 1995; hereafter referred to as "Korean *Chaebol*s"). Regarding business groups in Taiwan, we relied on surveys which the China Credit Information Service has conducted continuously since 1974 and published as "Research on Business Groups in the Taiwan-Fukien Area" (CCIS, various years; hereafter referred to as "Taiwan Research").

The criteria used in "Taiwan Research" for including business groups in its survey have been revised over the years. In the 1996/97 issue, the criterion for inclusion is to have either (1) total assets and total sales of over N.T.$400 million,[13] or (2) a sum of assets and sales exceeding N.T.$1 billion. For determining the physical size of a group, "Taiwan Research" uses "objective" criteria such as capital investment and managerial relationships among the individual member companies, and "subjective" criteria such as the existence of a mutual identity among the businesses that they belong to the same group.[14]

B. *Comparison of the Top Groups*

Using the information in Tables III and IV, we will first look at the change that has taken place in the position of large-scale business groups in the economies of Korea and Taiwan. Table III presents the shares for the top 5, 10, and 20 Korean business groups in the nominal GDP; and in Table IV we calculated total sales for the approximately 100 groups surveyed in "Taiwan Research" as a percentage of nominal GDP. Here it should be mentioned that in Table IV these absolute values have no special economic meaning themselves. First, total sales does not theoretically correspond to nominal GDP, the total amount of value added, and second, since a business group's total sales include the value of transactions among its member companies, the ratio of these total sales to GDP has little significance itself. However we have no alternative, and since our aim is to see how the position of large business groups in Taiwanese economy has changed, this indicator is sufficiently useful for the purpose.

13 During 1995, N.T.$26.49 averaged U.S.$1.

14 "Taiwan Research" lists five "objective" criteria: (1) the parent company owns at least 50 per cent of its subsidiaries' stock, or member companies of the group mutually own at least 25 per cent or a fair percentage of each other's stock; (2) the same individual invests over half of the capital in the parent and subsidiary companies; (3) the majority of director (*dongshi*), general manager (*zongjingli*), and auditor (*jiancharen*) positions in the parent and subsidiary companies are assumed by the same individuals or immediate family members, i.e., spouses and relatives within the third degree of kinship; and (4) the group is directed and supervised under the same managerial organ. The "subject" criterion means the commonly shared identity among the affiliated companies. If a collection of companies fulfills one of the "objective" criteria and meets the "subjective" condition, it is classified as a "business group" in "Taiwan Research."

TABLE III

KOREAN *CHAEBOL* VALUE ADDED AS A PERCENTAGE OF GDP, 1973–94

(%)

	1973	1978	1983	1989	1994
Top 5 groups	3.5	8.1	10.0	8.4	8.4
Top 10 groups	5.1	10.9	13.0	10.4	11.2
Top 20 groups	7.1	14.0	16.0	13.5	13.5

Sources: For 1973–89, Hattori (1994); for 1994, NIMA (1996).

TABLE IV

ECONOMIC POSITION OF TAIWANESE BUSINESS GROUPS: TOTAL SALES OF BUSINESS GROUPS AS A PERCENTAGE OF GDP, 1970–94

	Total Group Sales (N.T.$ Billion) (a)	Nominal GDP (N.T.$ Billion) (b)	No. of Groups[a]	(a)/(b) (%)
1970	54.7	226.8	100	24.1
1975	165.5	589.7	106	28.1
1980	456.9	1,491.1	100	30.6
1985	735.4	2,473.8	97	29.7
1990	1,688.6	4,222.0	101	40.0
1994	2,700.7	6,376.5	115	42.5

Source: CCIS (various years).

[a] The number of groups surveyed by the table's source. Criteria for their inclusion in the survey are detailed in footnote 14.

Table III shows that the position of the top *chaebol*s within the Korean economy grew in importance throughout the 1970s; however, in the mid-1980s this importance reached its peak and started to decline. Table IV indicates that in Taiwan the position of large business groups within the economy has been rising continuously since the 1970s.

We will now compare the position of business groups in the two economies during the past few years. Table V shows the ratio of total sales for the top thirty business groups to the nominal GDP in both economies. The figures for the latest available year, 1994—73.7 per cent in Korea and 31.3 per cent in Taiwan—are strikingly different, and an even larger difference can be seen in the calculations for the five top groups—49.0 per cent in Korea and 12.3 per cent in Taiwan. Clearly the importance of the *chaebol*s is far greater in the Korean economy than is that of large business groups in the Taiwanese economy.

The remarkably larger presence of Korean *chaebol*s in the economy shown in Table V is mainly due to the very large scale of the top *chaebol*s. For example, the total sales and assets expressed in U.S. dollars of the Cathay Group, Taiwan's largest business group in 1994, would rank only ninth in sales and fifth in assets for that

TABLE V

TOTAL SALES OF TOP BUSINESS GROUPS AS A PERCENTAGE OF GDP: KOREA AND TAIWAN, 1994

(%)

	Korea	Taiwan
Top 5 groups	49.0	12.3
Top 10 groups	60.4	19.7
Top 30 groups	73.7	31.3

Sources: For Korea, NIMA (1995). For Taiwan, CCIS (1996/97).

year among Korea's business groups. Furthermore, the number of corporations comprising Korean *chaebol*s is considerably greater than the number of member companies making up Taiwanese business groups. In 1994 twelve groups in Korea had more than twenty companies while in Taiwan there were only three such groups. Research to date has often referred to *chaebol*s as "world-class big businesses" (Watanabe 1986, p. 116) while Taiwanese business groups are described as "small-scale conglomerates mainly under the control of family management" (Liu 1992, p. 137). One can see that there is indeed a marked contrast in the size of business groups in the two economies.

In this section we have seen the substantially clear contrast between the position of the *chaebol*s in the Korean economy and that of large business groups in the Taiwanese economy. It is very likely that this dichotomy has been an important factor behind the general perception that big business has had a far more important position in Korea's economy than in Taiwan's.

III. EXPORTERS AND BUSINESS SIZE

A. *The Data*

Table VI-A provides the export sales ratios (export sales / total sales) for Korean SME manufacturers by size, and Table VI-B shows export sales ratios for SME and non-SME manufacturers in Taiwan. Table VII shows the share of exports shipped by SMEs to total exports.[15]

The definition of "SME" in Taiwanese statistics is based on capitalization while for Korea it is defined by the number of employees. To determine whether the Korean data was sufficiently comparable to the Taiwanese data, we calculated the

[15] Table VII includes not only SME manufacturers but also SME trading companies. Therefore goods exported by SME trading companies, whether produced by large-scale enterprises or not, are included as SME exports, while goods manufactured by SMEs and exported by large trading companies may be included in SME exports.

TABLE VI

ENTERPRISE SIZE AND EXPORT SALES RATIO

A. Export Sales Ratio of Korean SMEs

(%)

	Enterprise Size (No. of Employees)						
	5–9	10–19	20–49	50–99	100–199	200–299	Total
1977	6.0	19.1	10.4	12.8	28.0	42.9	21.8
1979	0.4	12.4	9.5	17.2	22.9	30.3	19.1
1981	2.7	16.3	19.3	29.9	29.3	31.4	25.5
1983	3.7	6.5	22.4	31.6	32.6	33.4	26.6
1989	7.6	11.7	16.0	21.7	26.6	33.0	21.3
1993	13.6	19.0	20.9	25.0	30.2	28.5	23.7

Source: ROK, KFSB (various years).
Notes: 1. Export sales ratio = export sales / total sales.
2. Export sales include indirect export sales.

B. Taiwan

	SMEs		Non-SMEs		Average SME Size (No. of Employees)	Average Non-SME Size (No. of Employees)
	Domestic Sales (%)	Export Sales (%)	Domestic Sales (%)	Export Sales (%)		
1973	41.8	58.2	53.6	47.5	n.a.	n.a.
1974	58.1	41.9	59.6	40.4	n.a.	n.a.
1975	45.1	54.9	62.7	37.3	n.a.	n.a.
1976	42.4	57.6	60.4	39.6	n.a.	n.a.
1977	47.5	52.5	62.7	37.3	n.a.	n.a.
1978	43.6	56.4	63.6	36.4	n.a.	n.a.
1979	42.8	57.2	59.8	40.2	117.5	611.5
1980	40.6	59.4	60.9	39.1	104.2	579.6
1981	26.4	73.6	57.9	42.1	122.5	523.2
1982	24.1	75.9	60.8	39.2	151.4	628.3
1983	28.4	71.6	65.4	34.6	n.a.	n.a.
1984	28.1	71.9	64.3	35.7	127.4	610.8
1985	28.9	71.1	64.5	35.5	105.6	534.1
1986	33.4	66.6	67.5	32.5	99.7	546.8
1987	34.8	65.2	67.9	32.1	86.8	534.4
1988	59.5	37.4	68.8	30.3	n.a.	n.a.
1989	63.3	32.7	69.7	26.9	63.8	468.1
1990	58.8	40.8	68.6	30.6	52.9	417.0
1991	61.9	37.7	68.8	30.0	46.7	354.9
1992	64.0	35.0	71.8	27.0	45.0	423.3

Source: Bank of Taiwan (various years).
Note: The definition of SMEs in the manufacturing sector has varied in the following ways:
1973–76: Enterprises capitalized at N.T.$10 million or less.
1977–81: Enterprises capitalized at N.T.$20 million or less.
1982–92: Enterprises capitalized at N.T.$40 million or less.

TABLE VII

TOTAL EXPORTS FOR SMEs: KOREA AND TAIWAN, 1981–94

(U.S.$ million)

	Korea			Taiwan		
	Total Exports	SME Exports	SME Share (%)	Total Exports	SME Exports	SME Share (%)
1981	n.a	n.a.	n.a.	22,600	15,390	68.1
1982	21,850	4,820	22.1	22,200	15,470	69.7
1983	24,450	4,890	20.0	25,120	15,930	63.4
1984	29,240	7,440	25.4	30,460	18,050	59.2
1985	30,280	8,410	27.3	30,720	18,800	61.2
1986	34,710	12,230	35.2	39,790	26,410	66.4
1987	47,280	17,810	37.7	53,540	35,900	67.1
1988	60,700	23,000	37.9	60,590	36,350	60.0
1989	62,380	26,050	41.8	66,200	40,770	61.6
1990	65,020	27,380	42.1	67,210	38,520	57.3
1991	71,870	28,700	39.3	76,180	43,330	56.9
1992	76,630	30,680	40.0	81,470	45,560	55.9
1993	82,240	35,170	42.8	84,920	46,510	54.8
1994	96,010	40,700	42.4	93,050	48,910	52.6

Sources: For Korea, SMIPC (various years); for Taiwan, ROC, MSBA (1995).
Note: SMEs include nonmanufacturing enterprises.

percentage of Taiwanese enterprises with less than 300 employees (the Korean definition of an SME) among the enterprises with N.T.$40 million or less capital worth (the Taiwanese definition of an SME) and found that as of 1990, 99.9 per cent of Taiwan's "SMEs" employed less than 300 workers. Hence, the enterprises defined statistically by the two economies as "SMEs" were largely the same size in terms of the number of employees. This indicates that the data in Table VI is sufficiently comparable.[16]

B. *Comparison*

From Table VI we can see that there is a contrast between the two economies in the relationship between enterprise size and the ratio of export sales. For Korea we were able to obtain data on the export sales ratios for SMEs (enterprises with less

[16] However there are definite problems in the quality of the data for the statistics on Taiwan contained in Table VI-B. First, the average number of employees of the enterprises surveyed shows a very discontinuous change over time: 151.4 in 1982 and 45.0 in 1992. Second, there is also a strange discontinuity in the movement of export ratios. For example, from 1987 to 1988 the share of exports shipped by SMEs dropped by 28 points. During these two years accelerated evaluation of the Taiwan dollar caused SME exports to stagnate, and it is quite possible that SMEs turned their marketing strategies away from exports and toward domestic demand. However, such a steep drop of 28 points indicates the possibility that some bias may have occurred in the survey methodology during the period covered by the survey.

than 300 employees) by size and found that there is a positive relationship between the size and the export sales ratios for SMEs (Table VI-A). In contrast, the share of exports to total sales for SMEs in Taiwan has consistently far exceeded that of non-SME exporters, and a comparison at given points of time also shows that the share of exports for SMEs in Taiwan was always higher than that for their counterparts in Korea.

We will now compare the share of SME exports as a portion of total exports in each economy. Table VII indicates that the share of SME exports is much higher in Taiwan than it is in Korea, especially up to the late 1980s. Comparing the time-series changes, we see that in Korea since 1982, the SME export ratio has steadily increased, while in Taiwan the share of SME exports to total exports remained at a comparably stable 60 per cent until the 1990s. Since then their share has decreased slightly, and the contrast between the two economies is becoming less sharp.

Despite definite data quality problems, the analysis in this section indicates that the Taiwanese SMEs have played a far more important role in the export sector than have their counterparts in Korea.[17] Both economies represent successful cases of export-oriented industrialization, but the export drive in Korea has been borne mainly by non-SMEs while in Taiwan it has been carried on by SMEs.

CONCLUSION

In the present study we examined the appropriateness of the generally held perception within research literature that contrasts the *chaebol*-led Korean economy and the SME-oriented Taiwanese economy.

In Section I we confirmed via census data a contrasting pattern of distribution in the size of establishments / enterprises in the two economies, although there were various limitations with the data due to the differing ways of categorizing the statistics. In Sections II and III we compared the position of large business groups in both economies and the position of SMEs in the export sector. Despite limitation with the data, we showed in Section II that the position of the *chaebol*s in the Korean economy is more important than is the position of large business groups in the Taiwanese economy. In Section III we showed the contrasting position of SMEs in the export sector of the two economies. In conclusion we can say that the statistical data to the end of the 1980s confirms the generally held perception contrasting enterprise size in the two economies has had its basis in those differences in the two economies that have been pointed out in this study.

[17] One more limitation is that the intermediate input-output relationship is not analyzed in this study. The export products of SMEs often contain intermediate goods supplied by large-scale enterprises and vice versa. The input-output relationship among manufacturing sectors should be taken into consideration in more detail when analyzing the relative roles played by big business and SMEs in the exporting sector.

In future follow-up research there are two points which will need to be examined further. First, starting from the eighth census conducted in 1991, Taiwan began publishing statistics at the level of the establishment providing data on the output and value added by industry and establishment size. Therefore, more adequate comparison between the two economies will be possible for the 1990s and beyond. Second, looking at the trend during the 1990s, we can see from Table I that in Korea the number of establishments employing 500 or more workers and their production as a ratio declined between 1988 and 1993, with the ratio for production dropping by 5.3 points. On the other hand, between 1986 and 1991 the position of enterprises employing more than 500 workers in the Taiwanese economy increased in importance, if only slightly. In other words, the dichotomy in the position of big business in the two economies seems to have lessened since the mid-1980s. Whether this trend will continue is a subject deserving further observation and future study.

REFERENCES

Bai, Moo-Ki. 1982. “The Turning Point in the Korean Economy.” *Developing Economies* 20, no. 2: 117–40.

Bank of Taiwan. Various years. *Zhonghua minguo Taiwan diqu gongye caiwu zhuangkuang diaocha baogao* [Report on survey of financial statements of manufacturing industry in Taiwan Area, the Republic of China]. Taipei: Bank of Taiwan.

China, Republic of (ROC), Executive Yuan, Directorate-General of Budget, Accounting and Statistics (DGBAS). Various years. *Zhonghua minguo taiwan diqu gongshangye pucha baogao* [The report on industrial and commercial census, Taiwan-Fukien Area, the Republic of China]. Taipei.

China, Republic of (ROC), Executive Yuan, Ministry of Economic Affairs, Medium and Small Business Administration (MSBA). 1995. *Zhongxiao qiye baipishu, 1995* [White paper on small and medium business, 1995]. Taipei.

China Credit Information Service [Zhonghua Zhengxinsuo] (CCIS). Various years. *Taiwan diqu jituan qiye yanjiu* [Research on business groups in the Taiwan-Fukien Area]. Taipei: China Credit Information Service.

Hattori, Tamio. 1994. “Keizai seichō to ‘zaibatsu’ no keisei” [Economic growth and the formation of Korean zaibatsu]. In *Kōza gendai Ajia* [Contemporary Asia]. Vol. 2, *Kindai-ka to kōzō hendō* [Modernization and structural transformation], ed. Katsuji Nakagane. Tokyo: University of Tokyo Press.

———. 1997. “*Chaebol*-Style Enterprise Development in Korea.” *Developing Economies* 35, no. 4: 458–77.

Ka, Chihming. 1993. *Taiwan dushi xiaoxing zhizaoye de chuangye jingying yu shengchan zuzhi: Yi Wufenpu chengyi zhizaoye wei anli de fenxi* [Market, social networks, and the production organization of small-scale industry in Taiwan: The garment industries in Wufenpu]. Taipei: Institute of Ethnology, Academia Sinica.

Korea, Republic of (ROK), Economic Planning Board (EPB). Various years. *Report on Mining and Manufacturing Census*. Seoul.

Korea, Republic of (ROK), Ministry of Trade, Industry and Energy, Korea Federation of

Small Business (KFSB). Various years. *Report on Actual State of Small and Medium Enterprises.* Seoul.

Korea, Republic of (ROK), National Statistical Office (NSO). Various years. *Report on Industrial Census.* Seoul.

———. Various years. *Report on Mining and Manufacturing Survey*. Seoul.

Kuo, Shirley W. Y.; Gustav Ranis; and John C. H. Fei. 1981. *The Taiwan Success Story: Rapid Growth with Improved Distribution in the Reublic of China, 1952–1979.* Boulder, Colo.: Westview Press.

Kuramochi, Kazuo. 1992. "Kankoku no tassei" [The achievement of Korea]. In *Gendai Nihon shakai* [Contemporary Japanese society], ed. University of Tokyo, Institute of Social Science. Vol. 3, *Kokusai hikaku* [International comparison]. No. 2. Tokyo: University of Tokyo, Institute of Social Science.

Levy, Brian. 1991. "Transaction Costs, the Size of Firms and Industrial Policy: Lessons from a Comparative Case Study of the Footwear Industry in Korea and Taiwan." *Journal of Development Economics* 34, nos. 1/2: 151–78.

Liu, Jin Qing. 1992. "Sangyō: Kanmin kyōsei no kōzu" [Industry: Coexistence between the public and private sectors]. In *Taiwan no keizai: Tenkei NIES no hikari to kage* [Taiwan's economy: The bright and dark sides of a typical NIE], by Mikio Sumiya, Liu Jin Qing, and Two Jaw-yaan. Tokyo: University of Tokyo Press.

New Industry Management Academy [Sin Sanob Gyongyongwon] (NIMA), ed. 1995. *Hanguk 30 dae chaebol jaemu bunsok, 1996* [The financial analysis of the Korean thirty largest *chaebol*s, 1996]. Seoul: New Industry Management Academy.

Numazaki, Ichiro. 1997. "The *Laoban*-Led Development of Business Enterprises in Taiwan: An Analysis of the Chinese Entrepreneurship." *Developing Economies* 35, no. 4: 440–57.

Small and Medium Industry Promotion Corporation (SMIPC). Various years. *Major Statistics of Small and Medium Industries.* Seoul: Small and Medium Industry Promotion Corporation.

Sumiya, Mikio; Liu Jin Qing; and Two Jaw-yaan. 1992. *Taiwan no keizai: Tenkei NIES no hikari to kage* [Taiwan's economy: The bright and dark sides of a typical NIE]. Tokyo: University of Tokyo Press.

Taniura, Takao. 1988. "Taiwan kōgyōkaron josetsu" [Introduction to the study of industrialization in Taiwan]. In *Taiwan no kōgyōka: Kokusai kakō kichi no keisei* [Industrialization in Taiwan: The formation of an international export manufacturing base], ed. Takao Taniura. Tokyo: Institute of Developing Economies.

Watanabe, Toshio. 1986. *Kankoku: Benchā kyapitarizumu* [Korea: Venture capitalism]. Tokyo: Kōdansha.

Wei, Yinping. 1993. "Chanye waiyi zhong shengcharn zuzhi zhuanbian de jizhi: Yi Taiwan zhixieye weili" [Mechanism of production organization change in the course of industry's relocation: A case of Taiwan's footwear industry]. Master's thesis, National Tsing Hua University.

Yu, Zong-xian. 1993. "Zhongxiao qiye" [Small and medium-size industries]. In *Taiwan jingyan sishi nian* [The Taiwan experience: 1949–89], ed. Kao Hsichun and Li Cheng. Taipei: Commonwealth Publishing Co.