

**AN EXPLORATORY STUDY OF MEASURING HUMAN
RESOURCE MANAGEMENT EFFECTIVENESS
IN SMALL AND MEDIUM ENTERPRISES**

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ABSTRACT

Business functions are both interconnected and indispensably individually -- each important in its own right. If we were to take a more analytical look at them, though, we would find "people" to be the most important business function of all. Although Huselid, Jackson, & Schuler (1997) have provided an inventory by which Human Resource Management Effectiveness (*HRME*) can be evaluated, no clear steps or methods for using this inventory effectively have since been provided, nor has a set of accepted standards been made available by which the effectiveness of the inventory can be measured. Additionally, the emphases found in Human Resource Management activities in industries overseas are different, as is the content of such activities. It is for these reasons, then, that the present study will design a questionnaire, suitable for use by industry, to measure the effectiveness of human resource management, employing as its focus high-tech companies in Taiwan.

The main goal of the present research is to develop a localized measurement inventory suitable to the task of making evaluations of HRME in Taiwanese industry. In addition to researching relevant literature on the subject, the steps involved in the construction of our inventory will include a Consultation of organizational behavior in Taiwan and the opinions of Human Resource Management experts, scholars, and practitioners. We will summarize information; select measurement indicators; and construct initial evaluation dimensions and items. Formal inventory reliability tests will use the following to certify the stability and internal consistence of inventory : Cronbach's a Coefficient, the Item-Total Correlation Coefficient, and Test-Retest Reliability. We will also emphasize the level of effectiveness of the inventory and employ the Human Resource Management Effectiveness Inventory constructed by foreign scholars Huselid, Jackson, & Schuler (1997) which was used as a criterion while performing Canonical Correlation Analysis to test and verify the Concurrent Validity. As regards the Construct Validity, we will test and verify the measurement traits using Multitrait Multimethod Analysis. We will also perform Confirmatory Factor Analysis (CFA) using the Linear Structural Relation (LISREL) model, including Multi Factor CFA and Second-Order CFA to test and verify the suitability of using our study's inventory to evaluate structure and topic models. The tests mentioned above will reveal the validity and reliability of the inventory of the present study to be quite high, and that it will prove the effectiveness of inventory which businesses in Taiwan can use to measure HRME.

Keywords: Human Resource Management, Human Resource Management Effectiveness, Measurement, SMEs



I. PURPOSE AND RATIONALE OF THE RESEARCH

Business functions are both interconnected and indispensably individually -- each important in its own right. If we were to take a more analytical look at them, though, we would find "people" to be the most important business function of all. In recent years, academia has conducted numerous studies investigating the relationships between HRM practice and HRME, and competitive advantage and the organizational performance. The results clearly show the strategic importance of HRM in business functions (Arthur, 1994; Wright, McMahan & McWilliams, 1994; Delaney & Huselid, 1996; Delery & Doty, 1996; Hiltrop, 1996; Chen Zheyuan, 1997; Qiu Guizhen, 1997; Xu Hengsheng, 1998; Chen Mengqian, 1998; and Wen Quanfeng, 1998).

It is easy to see from the above the influence HRME can have on the organizational performance, and for this reason, the way in which HRME is measured is naturally a point of concern for both academic and industry. Despite this, very little research has been done addressing this important issue.

In 1997, Huselid, Jackson, & Schuler divided HRM into two areas -- technical and strategic -- and provided an inventory by which HRME could be evaluated. Additionally, they discovered that HRME has a highly positive impact on an organization's results. Yet, despite having an inventory by which HRM Effectiveness can be evaluated, no clear process or methodology has been constructed for applying this inventory, nor has a set of accepted standards been made available by which the effectiveness of the inventory can be measured.

The emphases found in Human Resource Management activities in industries overseas differ as well. If researchers were able to consult with scholars and experts on Taiwan, look closely at the dimensions and indicators of the island's high-tech industry HRME, and afterwards construct an inventory suitable for evaluating HRME in Taiwanese high-tech industries, the provided future HRME research could prove significant, especially regarding evaluation accuracy. For this reason the present research will attempt to do just that.

This study has as its main purpose the development of a localized inventory suitable for precise and efficient evaluation of HRME in Taiwanese high-tech industries. Specifically, it will attempt the following:

1. to analyze and examine foreign and domestic theories and literature dealing with both HRM and HRME
2. to consider which types of dimensions and indicators are best suited for an evaluation of HRME
3. to collect and organize the opinions of scholars, experts, and practitioners as regards HRME dimensions, indicators, and items.
4. to construct an inventory by which evaluations of Taiwanese high-tech industry HRME can be conducted



II. LITERATURE REVIEW

The purpose of the present research is to construct an inventory for the evaluation of HRME in Taiwanese high-tech industries. This section, the literature relevant to this study, has been divided into the following three parts:

1. Definitions and characteristics of high-tech industry

The development characteristics of high-tech industries are different from those of ordinary industries. Since the so-called "high-tech" industry of today may become a "traditional" industry tomorrow, we have yet to come up with a single definition for what precisely constitutes a high-tech industry. Using industry attributes, a definition of a high-tech-industry could include the following: 1) high precision products, 2) highly sophisticated systems, 3) products with high added value, 4) technology that improves quickly, 5) fast growing markets, and 6) high risk investment. An explanation for the definition of a high-tech industry follows:

(1) The Republic of China Council for Economic Planning and Development (1991) definition of and indicators for high-tech industry include the six following characteristics : the degree of market potential, the amount of industry relevance, the degree of added value in products, the level of technology, the amount of pollutants produced, and the level of reliance on energy resources. The CEPD's "big ten booming high-tech industries" are: communications, information, consumer electronics, semi-conductors, precision instruments, automation, top-grade aerospace materials, specialized chemistry, pharmaceuticals, healthcare, and pollution prevention.

(2)Huang Dilun (1996) organized the views of scholars and summarized definitions relating to "high-technology", "high-tech industries", "high-tech products", and "high-tech companies", finally categorizing them into conceptual and operative types. These two types are explained below:

A. Operative -- Usually considers ratios dealing with technological intensity, research and development (hereafter referred to as *R & D*), and staff size. Here, technological intensity refers to the proportion of R&D expenditures figured into the sales value of a product.

B. Conceptual -- Here, invention and innovation are the keys to survival for high-tech industries. Technology is sophisticated and improves quickly, products are sophisticated and have short life cycles, market competition is fierce, changes occur rapidly, and levels of uncertainty and risk are high. There are two main forces that bring about the development and promotion of high-tech products -- the evolutionary push of the technology itself and the pull of demand. The overall proportion of scientists (in the natural sciences), engineers, and technical experts is high as well.

(3)Using measurement indicators, Chen Wen xian and Gao Feng jie (1997) believe an industry is "high-tech" if:

1) both the proportion of technicians to overall staff members and the proportion of R & D expenses to overall operating expenses exceed industry averages.



- 2) both the proportion of technicians to overall staff members and the proportion of R & D expenses to overall operating expenses exceed 10%.
 - 3) all of the following surpass industry averages -- the ratio of R & D expenses to overall capital expenditures, the ratio of management personnel to R & D personnel, and frequency of new technological innovations.
 - 4) based on investment criteria estimates, one of the following conditions is met -- the industry is a) in the spotlight and has potential to develop further, b) has a unique competitive advantage, c) is a key industry, d) has strategic alliances with industries which are have vested interests.
 - 5) it is a key industry being strategically promoted by the government (one of the "Big Ten Burgeoning Industries").
- (4)Based on research done on the experiences of high-tech industries around the globe, Liu Chang yong (1997) defined 10 criteria that must be met by developing high -tech industries:
- 1) If the development of the lower, middle, and upper segments of an industry's systems ,or the degree that they cooperate with each other, does not occur completely in the same region, the region will become a key for the global division of industrial labor and cooperation if it can find discover a competitive niche, or provide superior added value of some sort.
 - 2) The number of businesses, the scale, density, and level of relatedness in an industry have already reached a certain level of symbiotic impetus that is both intimately related and beneficial -- that is to say that internally there is intercompetition, while externally there is mutual benefit. Scale and density are usually able to bring about increased effectiveness, which increases each business's ability to compete externally.
 - 3) The technology, products, and markets in an industry all continue to develop, and market competition is extremely fierce. Surviving industries are all strong and resilient, and a few leading businesses become strong enough to compete with large-scale companies.
 - 4) Must have abundant experience, be able to make products based on their technology, and have the ability to accumulate something is rising here quickly. If a business has these traits, it will always be able to remain a leader in a rapidly changing market.
 - 5) Must have ample funding, quality personnel, fine strategic support, a long-term R & D investment strategy, and abundant amounts of all the resources required for a growing business.
 - 6) Must have a benchmark business that is able to break through all level related bottlenecks, and deal with all the early dangers an industry will encounter while developing.
 - 7) Must be able to create an external environment that facilitates industry growth (including Taiwan and the rest of the world), and must be able to continue its development in a highly competitive global market.



- 8) The industry exudes a strong entrepreneurial and competitive spirit. There is the free flow of personnel and capital. There are significant amounts of new business starting up, which gives the industry a "new face".
- 9) Must have a capitalistic market that is able to support technology-based high-risk startup ventures and new product innovations. For these reasons, laws and institutions must also be able to spur on the formation of a free market.
- 10) The government must give strong strategic support, provide resources, and take action when necessary. Additionally, the government must coordinate and integrate the direction of industry development and help it become more competitive abroad.

From the above discussion, we can see that high-tech industries have the following characteristics: a high R&D ratio, new technological innovations that occur quickly, environmental change that occurs quite frequently, be highly sophisticated, have product cycles that are short, are low polluters, and offer high added value. In the future, high-tech industries will be among the most important industries, influencing the work and quality of life of every citizen in Taiwan. High-tech industry management topics will become increasingly important for this reason. High-tech industries were chosen as the focus of the present study for this reason as well.

2. High-tech Industry Human Resource Management

Having technology and being innovative are two characteristics of high-tech industries. Development and technological change are closely related in such industries, requiring that they invest heavily in both R & D personnel and capital. The key to success for high-tech companies lies in how they manage the highly qualified, highly skilled human resources they have available to them. In recent years, the flourishing state of high-tech industrial development has, in general, led to a shortage of professional and technical talent. The intense competition between high-tech opponents has given rise to a flurry of cross-company recruitment activity that has left personnel turnover levels at record highs. Human resource capital expenditures (including hiring and training) are relatively high and have become a burden for high-tech industries. Chen Meiru (1991) found that successful high-tech industries focus heavily on personnel management. Personnel "management" for these companies is not simply administration of personnel matters, but rather personnel administration raised to the level of human resource management and organizational development.

Maidique and Hayes (1984) interviewed 250 American high-tech industry executives (of which at least 30 were CEOs) in the fields of biochemistry, semi-conductors, computers, medicine, and aerospace. They concluded that high-tech companies are successful for six basic reasons: They

- 1) have business focus -- They focus on one product or a group of highly related products, putting a lot of resources into R & D.
- 2) have adaptability -- When faced with a crisis, they are able to change or adjust their business strategies accordingly, including making organizational changes if necessary.



- 3) have organizational cohesion -- They are able to construct good channels of communication throughout all levels of the company, implement job rotation systems to prevent organizational rigidity, encourage long-term employment through various means, and attach importance to training.
- 4) enjoy an entrepreneurial culture -- They have good communication and cooperation, are able to tolerate errors, and are risk takers.
- 5) have a sense of integrity -- They make long-term commitments to related interest groups (personnel, stock holders, suppliers, the local area).
- 6) have a "hands-on" top management -- The management of a successful high-tech business does not only want to understand how its organization operates, it wants to clearly understand the principles behind its technology, and it wants to interact with the relevant personnel.

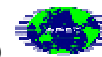
To summarize Maidique and Hayes, an organization's cohesion, its entrepreneurial culture, and its sense of identity are all related to HRM. Maidique and Hayes also emphasized the importance of communication and interaction. The results of their study show that in addition to needing to have a handle on the technology and needing to be innovative, high-tech companies must also have good cohesion. Such cohesion, they point out, can be achieved by opening up channels of communication, implementing a job rotation system, and offering long-term employment and intensive training opportunities.

Grissom and Lombardo (1985) conducted telephone interviews with managers at 18 high-tech company personnel offices in the Philadelphia area to discover what types of HRM problems they encounter. Their talks revealed that for high-tech companies which are in the process of developing, the key HRM challenge faced is finding ways to recruit and keep suitable professional talent.

Cascio (1988) researched the HRM activities at Whirlpool Technologies in Singapore and found the following: When recruiting and keeping skilled labor proves difficult, high-tech companies have to resort to offering highly attractive remuneration and benefit packages to bring in and keep their staff. Examples of items in such packages would be stock options and profit sharing. Cascio suggests that high-tech companies remain positive, innovative, focused on the future so appropriate training activities can be planned today, and that they merge career planning activities for company personnel with staff development and training activities.

Bright (1988), who used questionnaires to investigate employees at the management level of high-tech companies, came up with eight characteristics of successful high-tech companies. Of these, Bright emphasized a company's need to use financial and human resources efficiently, especially where creativity is concerned.

With 30 high-tech companies as a sample, Huiling Wu's research (1990) found five different types of HRM: "internal cultivation", "group reward", "group participation", "utility evaluation", and "independent fighters". There are obvious differences between the HRM activities of these five strategic types. Since the research was exploratory in nature, Wu only



revealed the existence of the five types and did not go into which type might be most suitable for high-tech companies, or which type achieved the best results.

Among the key characteristics of successful high-tech businesses summarized and organized by Chen Meiru (1991), personnel management (organization, leadership) is of primary importance. Key activities and elements include: assignment rotations, long-term hiring, leaders who are both seasoned and responsible, efficient personnel, and specialized training. Chen found that "operationally successful" and "middle type" businesses in the Hsin Chu Science Park all listed sales as the most important management function, with R & D in second place. A large discrepancy between current industry conditions and theory was found as well. Wu felt the reasons for this might be that these companies were all in their initial periods of development at the time, were small in scale, and had steady growth as a goal. As such, Personnel Administration is still in the realm of routine administrative affairs and has not as yet been put on the level HRM.

With companies in the Hsin Chu Science Park as a sample group, Ma Weiyang (1997) looked into the managerial environment and current strategies of Taiwanese high-tech companies. Ma found the lack of qualified personnel to be a common problem among high-tech firms engaged in R & D activities -- a personnel shortage of nearly 70%, in fact. A high rate of employee turnover is a problem also faced by Taiwanese high-tech firms.

3. Human Resource Management Effectiveness

Originally, the word "effectiveness" referred to the level of a predetermined goal that was meant to be reached once resources had been systematically allocated for the endeavor. "Effectiveness" was an indicator that could be measured and provide comparisons. In the present study we will use the HRME concepts put forth by Huselid, Jackson, and Schuler (1997) to explore how effective Taiwanese high-tech companies are when engaged in HRM activities.

Huselid, Jackson, and Schuler used Institutional Theory as their theoretical basis for including the technical and strategic effectiveness categories in their research of HRME. Institutional Theory holds that in a competitive environment, businesses will attempt to satisfy their stakeholders to gain legitimacy and acceptance, in order to increase the organization's growth and its ability to survive. Huselid et al feel that traditional HRM is technical HRM, and that it was formed mainly to satisfy both internal and external stakeholders. External stakeholder expectations usually have the greatest influence on the decisions companies make regarding their technical HRM activities -- for example, when observing laws and regulations set down by the government regarding jobs and hiring. Conversely, internal stakeholders, like managers and employees, wish their organizations had a perfect personnel system. Huselid et al came up with 14 different technical HRM activities in their research, which include a system for recruiting, a candidate selection process, an evaluation process, and a plan for remuneration and benefits, to name a few.

Compared to technical HRM, strategic HRM is much more innovative, allowing for independent workers, flexible work hours, and **authorized** personnel. No clear steps or methods for how strategic HRM activities can be implemented exist, however, nor is there a



set of accepted standards by which to measure such implementation. Despite the absence of other material pertaining to strategic HRM, Huselid et al felt certain technical HRM to be more effective than strategic HRM and even supported this conclusion in their empirical research of American industry. Huselid et al, however, did suggest that American companies should improve the effectiveness of their strategic HRM, lest they run into the ceiling effect -- a condition brought about by the desire to gain competitive superiority by continuing to improve technical HRM -- a condition which would hamper industry progress. Table 1 below shows technical and strategic HRM indicators as developed by Huselid, Jackson, and Schuler.

? .RESEARCH DESIGN

1.Constructing Process of the Inventory

The draft of the inventory will be drawn up in the constructing process. We invited twenty experts in the field to assess the content validity . After finishing the assessment of the measuring construction and fitness of the topic, we accomplish the pretest inventory. The following step is to take samples for pretesting. After the pretest, we take those effective samples to do construct validity by factor analysis, and take the common factor as the dimension, and delete the item with the weaker explanation. According to the retaining dimension and item, we construct its reliability, and design the exact inventory. By the exact inventory, we get the effective samples to test their reliability and validity. This is the constructing process (See figure 1). So far, we have accomplished the pretest inventory, and are doing the pretest. Right after finishing the pretest, we can proceed to exploratory factor analysis, and test the exact inventory on the reliability and the validity.



Table1 factor structure of the human resource management effectiveness

Technical HRM effectiveness	Strategic HRM effectiveness
1.Benefits and services	1.Teamwork
2.Compensation	2.Employee participation and empowerment
3.Recruiting and training	3.Workforce planning-flexibility and deployment
4.Safety and health	4.Workforce productivity and quality of output
5.Employee education and training	5.Management and executive development
6.Retirement strategies	6.Succession and development planning for management
7.Employee/industrial relations	7.Advance issue identification/strategic studies
8.Social responsibility programs	8.Employee and management communications
9.EEO for females, minorities, etc.	9.Work/family programs
10.Management of labor costs	
11.Selection testing	
12.Performance appraisal	
13.Human resource information systems	
14.Assessing employee attitudes	

Data Source: Huselid, Jackson & Schuler (1997), p. 176.

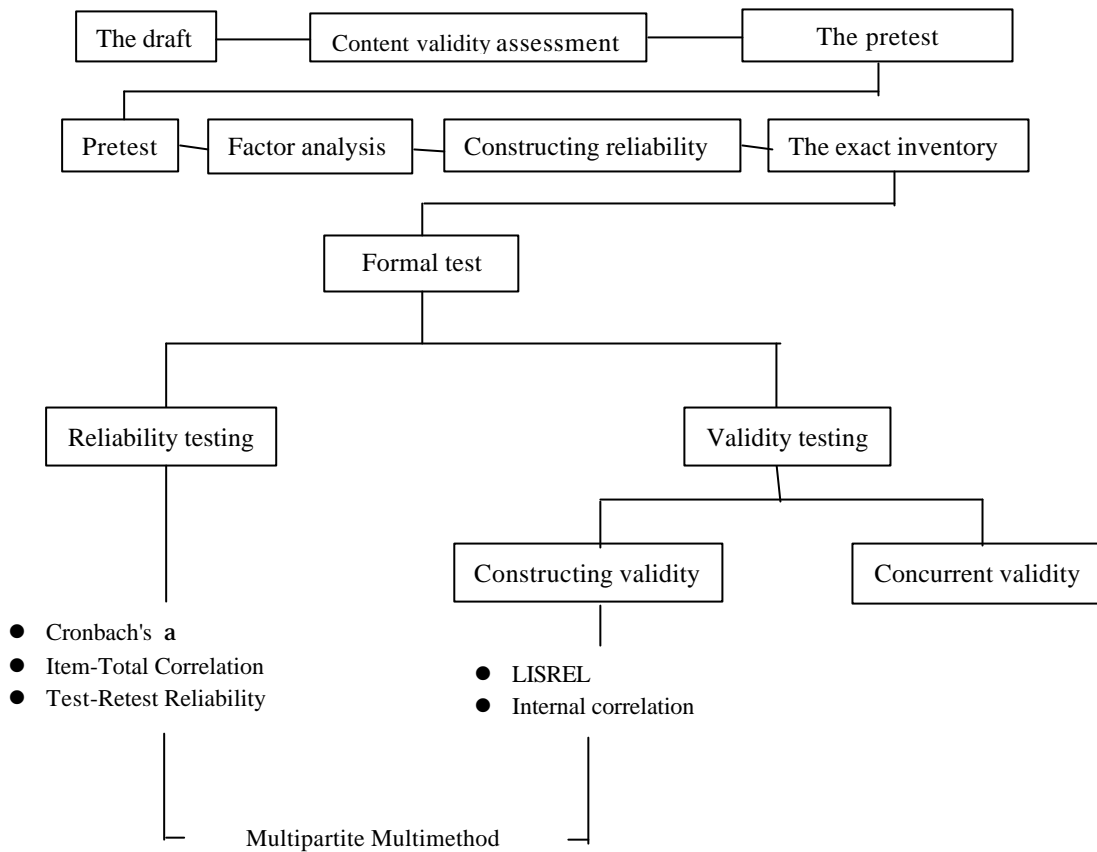


Figure1 Research Flow

2.The development designing and practice of the inventory

(1)Drafting the pretest inventory

According to the measuring construction and the indicator, we initially draw up to 2 constructions and 29 topics, and then invite experts to assess them. Based on the comments and advice the experts make, we will fix them and complete 2 constructions and 39 topics of the pretest inventory. The list of the scholars and experts as follows:



Table 2 Consultation of Scholars and Experts

Name
Tong-chuan Huang
Huo-tsan Chuang
Zai-cheang Lee
Tin-yang Liu
Chiang Hsu
Ing-chuang Huang
Shyh-er Chen
Guo-long Huang
Jian-chong Jian
Bih-Shiaw Jaw
Liang-zhi Huang
Chong-jui Pan
De-chi Lee
Ching-dong Lin
Chung-ren Jin
Huan-tao Chiu
Ci-ru Guo
Pei-guang Chen
Bo-min Liu
Po-yao Chang
Yuan-ta Ko
Guan-chun Wang

(2)Pretest and factor analysis

Of the 400 copies of questionnaires distributed by the human resource departments of each manufacturing company, 289 employees responded, producing a gross return rate of 72.25 percent (289/400). Of these responses, a total of 9 were discarded because the respondents failed to answer a majority of the questions, making the effective return rate 70 percent . In the present study, Inventory Validity Construction by Factor Analysis and the statistical analysis software SPSS for Windows 8.0. were used on a predetermined and categorized set of multi-subject samples. Principal Components Analysis was then used to identify and select common factors with Eigenvalue greater than 1.0. These factors were then processed by the orthogonal rotation of factor axes, using the Varimax Solution. Once axes rotation was complete, the size differential between the factor loadings of each common factor's subject variables were at maximum, which was of benefit when attempting to recognize and name the factors. The steps involved in this process were as follows:

A.Expunging Subjects with Little Explanatory Value Using Principal Components Analysis

Once raw data had undergone factor analysis, all communalities with a degree of effectiveness greater than 0.6, as well as all factor loadings rated at greater than 0.5 were saved. These, then, underwent a second round of factor analysis. In all, five subjects were deleted.



B.Determining the Number of Factors to Keep Using Scree Plotting

The results of the scree plotting, which took place during the first round of factor analysis, revealed that scree factor numbers increased sharply for factors four and five. When the subject data we wished to keep from the first factor analysis was put through factor analysis once again, the scree test results for factor four were easy to see. The extracted Eigenvalues for common factors, the explanatory variation percentages, the factor loading of the subjects contained in these percentages, and the communalities are detailed in the table below. Respectively, these four common factors have 11, 6, 7, and 5 subjects each, amounting to a cumulative explanatory variation percentage of 70.663%. The factor load for each subject is 0.5 or higher, and the degree of effectiveness for communalities is 0.6 or higher.

C.Formal Inventory Evaluation Structure and Subjects

Based on the results of our second round of factor analysis, we were able to readjust our evaluation structures, as well as name them. In total there were four evaluation structures and twenty-nine subjects.

Table 3 Factor Analysis Summary

Dimension	Eigenvalue	Pct of Var	Cum Pct	Rank Of Item	Communalities	Factor loading
HR Planning And Strategy	16.631	57.347	57.347	12	0.677	0.763
				24	0.716	0.837
				26	0.723	0.833
				27	0.763	0.839
				28	0.753	0.830
				29	0.719	0.820
				30	0.713	0.807
				31	0.780	0.840
				32	0.787	0.812
				33	0.669	0.703
Teamwork Competency	1.619	5.581	62.929	19	0.635	0.738
				20	0.755	0.762
				21	0.742	0.714
				22	0.767	0.777
				23	0.720	0.811
				25	0.643	0.787
People-Job Fit	1.213	4.184	67.112	10	0.662	0.777
				11	0.680	0.721
				13	0.703	0.712
				15	0.707	0.764
				16	0.676	0.756
				17	0.667	0.651
Training and Industrial Relations	1.030	3.550	70.663	3	0.661	0.712
				4	0.695	0.672
				5	0.723	0.668
				6	0.688	0.550
				7	0.703	0.725



? .CONCLUSION AND RECOMMENDATIONS

1.Conclusion

Because the research is only an exploratory research, we are unable to reveal you the final stage, the exact inventory and the results of the validity and reliability testing. Also we haven't proceeded to the exploratory factor analysis, so that some of the constructions and topics, listed in the figure 3, will be changed. What we listed in figure 3 are the results that we studied through discussing documents and advice sought from experts. (Each construction and indicator in the draft refers to: (1) The validity inventory of HRM, by Huselid, Jackson & Schuler (1997); (2) Freund & Epstein (1984), Arthur (1992), Pfeffer (1994), Delaney, Lewin & Ichniowski (1989), Huselid (1995), MacDuffie (1995), Youdt, Smell, Dean & Lepak (1996), etc. They addressed optimum HRM Practices; (3) the most important Activities of 17 items of HR department, addressed by Tsui (1987); (4) HRM Performance, addressed by Bih-Shiaw Jaw (1994) and Qiu gui-zhen (1996); (5) high-tech HRM Practices, generalized by Wen jin-feng (1998), and other scholars' treatises and opinions.) There are a few differences in the inventory of HRM Validity constructed by Huselid, Jackson and Schuler (1997). We are more concerned that the scholars and experts in our country focus on the measuring construction and the indicator of domestic high-tech HRM Validity. These differences are not caused by the technical problems, but are due to the different national condition, culture, and enterprises' characteristics. According to these factors, we proceed with the construction evaluation and the fitness assessment of topics and make some precise additions and deletions. Therefore, the inventory of HRM Validity we constructed is similar, but not identical to the one constructed by Huselid, Jackson and Schuler. Besides, the topics and the language in use are all Taiwan-oriented in meaning. Compared to other foreign inventories or other edits translated in Chinese, the one we construct in this research is much more suitable for our domestic industry, and lowers the bottom line of influences which result from cultural differences. These are the advantages and characteristics.

2.Recommendations

The inventory is still under construction; therefore, about the conclusions, there remains much we need to improve. When we follow up on the exploratory factor analysis, exact inventory and the reliability testing, we can get much more precise results of the research. According to this research, we have the following suggestions:

- (1) The inventory is more like the measurement of effectiveness of HRM practice implementation--strategic and technical HRM effectiveness. The follow-up researcher may add another dimension, for example, the professional ability of HR manager and ability relative to enterprise. In this way, the inventory can be more precisely improved.
- (2) In order to let people, who fill up the inventory check the items based on his/her perceive, we adopt Likert 7 points scale to construct the inventory. If they know little about the affairs of enterprises' HRM, they lose subjectivity easily and cause bias in the result. Therefore, the follow-up researcher can add in, except for the



perceived indicator, specific measurable objectivity indicator, such as the percentage of personnel expense in total revenue, the turnover rate of staffs, the training hours of each staff member per year, etc. So, this will make the measuring mode of HRM Validity much more precise.

- (3) When the inventory is completed, it can be provided a strict measuring instrument for the follow-up researchers to do research on what is relative to the HRM Validity and such other variables as organizational performance, the business competitiveness, and business competitive advantage. The follow-up researchers can focus on different industries or another object of study and analyze them, in order to test the exact inventory on the reliability and the validity, continuously. In this way, the inventory will gradually become flawless.



REFERENCES

- Arthur, J. B. (1992). The Link Between Business Strategy and Industrial Relations System in American Steel Minimills. *Industrial and Labor Relations Review*, Vol. 45, pp.488-506.
- Cascio, W. F. (1988). Strategic Human Resource Management in High Technology Industry. *Managing the High Technology Firm Conference Proceedings*. Boulder: University of Colorado-Boulder.
- Delaney, J. T., & Huselid, M. A. (1996). The Impact of Human Resource Management Practices on Perceptions of Organizational Performance. *Academy of Management Journal*, Vol. 39, No. 4, pp. 949-969.
- Delery, J. E., & Doty, D. H. (1996). Modes of Theorizing in Strategic Human Resource Management: Tests of Universalistic, Contingency, and Configurational Performance Predictions. *Academy of Management Journal*, Vol. 39, No. 4, pp. 802-835.
- Grissom, G. R., & Lombardo, K. J. (1985). The Role of the High-Tech HR Professional. *Personnel*, Vol. 62, No. 6, pp.15-17.
- Hiltrop, J. (1996). The Impact of Human Resource Management on Organizational Performance: Theory and Research. *European Management Journal*, Vol. 14, No. 6, pp.628-637.
- Huselid, M. A., Jackson, S. E., & Schuler, R. S. (1997). Technical and Strategic Human Resource Management Effectiveness as Determinants of Firm Performance. *Academy of Management Journal*, Vol. 40, No. 1, pp. 171-188.
- MacDuffie, J. P. (1995). Human Resource Bundles and Manufacturing Performance: Organizational logic and Flexible Production Systems in the World Auto Industry. *Industrial and Labor Relations Review*, Vol. 48, pp.197-221.
- Maidique, M. A. & Hayes, R. H. (1984). The Art of High-Technology Management. *Sloan Management Review*, Winter 1984.
- Pfeffer, J. (1994). *Competitive Advantage Through People: Understanding the Power of Work Force*. Boston: HBS Press.
- Wright, P. M., McMahan, G. C., & McWilliams, A. (1994). Human Resources and Sustained Competitive Advantage: A Resource-Based Perspective. *International Journal of Human Resource Management*, Vol. 5, pp.301-326.
- Youndt, M. A., Snell, S. A., Dean, J. W., & Lepak, D. P.(1996). Human Resource Management, Manufacturing Strategy, and Firm Performance. *Academy of Management Journal*, Vol. 39, No. 4, pp.836-866.

**DECLINING RELATIVE WAGE AND RISING MANPOWER
SHORTAGE RATE OF SMEs: CAUSES AND HRM POLICY
IMPLICATIONS**

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DECLINING RELATIVE WAGE AND RISING MANPOWER SHORTAGE RATE OF SMEs: CAUSES AND HRM POLICY IMPLICATIONS

ABSTRACT

The wage differentials by industry, occupation, education and gender have been diminished in Korea since 1980's. Wage differentials by firm size, however, have increased. Most of the previous studies explained these rising wage differentials by firm size with unionization. The effect of union on wage is greater in firms with more employees, since unionization rate is highly correlated with firm size. According to this explanation, rapid unionization in late 1980's lead to substantial increases in wages especially of large firms and increases in labor shortages especially of SMEs that were unable to pay the raised market wages.

This paper presents an another important cause of widening wage differentials by firm size. Industrial restructuring after the 1980s has proceeded in a such way that unproductive low wage sectors were transferred from large firms to SMEs. To analyse the characteristics of structural change in manufacturing sector, this paper classifies manufacturing industries into group: one based on technology, one on orientation, one on wages and one on skills. The structural change of SMEs and large firms are compared based on above four classification methods. It is shown that SMEs' employment in low value sectors, that is low-technology, labor-intensive, low-wage, and unskilled sectors, have risen faster than SMEs' employment in high-technology, science-based, high-wage and skilled sectors. Large firms' employment has been mainly increased in high value sectors.

In the wake of economic crisis, the unemployment rate soared from 2.6% in 1997 to 6.8% in 1998. Under the loose labor market, the maximization of job creating potential of SMEs is an urgent policy priority. Korea needs to move from the price competitive mass-production system to the diversified quality production system. For this transition, fostering competitive capacity of SMEs is essential. The mobilization of workforce of large firms to the SMEs need to be facilitated if workers are more productive in SMEs than in large firms. Government provides various incentives to induce more workers to SMEs. These measures will be reviewed and partly evaluated.



INTRODUCTION

In 1996, the Korean economy rose to 11th place in the world in terms of size with a real GDP of US\$ 484.6 billion. After rapid growth in the 1970's and 1980's, the Korean economy entered a period of stable growth in the 1990's. During 1990 to 1996 period, Korea's real GDP grew 7.4 per cent annually, compared to an annual rate of 9.1 per cent in the 1980's. Per capita GNP recorded US\$ 10,537 in 1995, and US\$ 10,548 in 1996. These figures were praised as the advent of the five-digit income era.

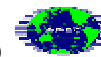
However, the Korean economy ran into trouble in mid-1997, due to an enormous short-term foreign debt by business and financial institutions that far exceeded Korea's foreign exchange reserve. Creditors started to lose confidence in Korea's ability to pay off debts. This lowered the value of Korea's currency, the won, and stopped foreign creditors from rolling over short-term debts. To settle the maturing debt, Korea agreed on a US\$ 57 billion IMF rescue package in December 1997.

Various explanations are given for Asian financial crisis. Krugman(1999) sees Asian crisis not as a consequence of crony capitalism or bad government policy but as of vulnerability to self-fulfilling panic. Some studies find major fallings of the Korean economy in excessive domination of *chaebol*, or the huge conglomerates (Nanto and Johns, 1997).

The *chaebols* have been the engine of phenomenal economic growth of Korea. Korea's current status as a world-market contender in such industries as automobiles, steel, shipbuilding, semiconductors, petrochemicals is attributable to the *chaebols'* capability of acquiring technical and financial resources (L. Kim 1997). Capital control and allocation were the key instruments of the government's industrial policy. The major beneficiaries of these instruments were the *chaebols*. The *chaebols* have founded firms in one industry after another. 1 The resulting massive economic concentration led to the belief among government and business circles that allowing *chaebol* to collapse would pose a systemic threat to economy. They were too big to be allowed to fail. In consequence, banks were directed by the government more and more towards questionable *chaebol* investments (D. Nanto and V. Johns, 1997).

The Korean economy needs to be restructured from a mass-production system to a diversified quality production system (Rodgers, 1993). For this transition, fostering competitive capacity of SMEs is essential. Two indicators, wages and manpower shortage rates, suggest that SMEs have had hard times in moving themselves from low value-added sectors to high value-added sectors.

This paper focuses on recent trends of wages and manpower shortage rate of the SMEs. This paper finds main reasons of widening wage differentials by the firm size and increasing manpower shortage rates of SMEs from characteristics of industrial restructuring. Industrial restructuring after the 1980s has proceeded in such a way that unproductive low wage sectors were transferred from large firms to SMEs. In that process, wage differentials by the firm size has increased simply because most of SMEs employment are generated in low wage sectors. The shortage rate is inversely



correlated with firm size. This is mainly because SMEs offer lower wage. As will be shown later in this paper, the SMEs' high manpower shortage rates, especially for production workers, are also closely related with the characteristics of industrial restructuring.

In the next section, the general explanation on Korean SMEs is given. The analysis of characteristics of structural change in manufacturing sectors follows. Lastly, this paper identifies implications on HRM (Human Resource Management) policies for SMEs. Some government policies for inducing more productive workers to SMEs are reviewed and partly evaluated.

THE SMEs IN KOREA

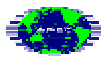
The major criterion of defining SMEs in Korea is the size of employment. The Basic Law for SMEs defines various cut-off levels of employment size for various industries.² In general, SMEs are defined as firms with less than 300 employees. <Table 1> shows various statistics of the SMEs in the manufacturing sector. As presented, the SMEs accounted for 99.1 percent of establishments, 69.3 percent of employment, and 46.5 percent of value added in manufacturing sector for the year of 1997. As shown in the table, the proportion of SMEs' employment has risen at a much faster rate than the proportion of SMEs' value-added in manufacturing sector. This suggests that restructuring has proceeded in a way that unproductive low wage sectors are transferred from large firms to SMEs in the manufacturing industry.

<Table 1> The SMEs in the manufacturing sector

	91	92	93	94	95	96	97
The number of SMEs	71,105 (98.5)	73,657 (98.6)	87,913 (98.9)	90,447 (99.0)	95,285 (99.0)	96,241 (99.1)	91,324 (99.1)
Employment in SMEs (in thousand persons)	1,853 (63.5)	1,845 (65.8)	1,987 (68.9)	2,026 (69.1)	2,034 (68.9)	2,006 (69.2)	1,870 (69.3)
Value added of SMEs (in billion won)	39,563 (45.8)	45,662 (47.6)	54,549 (50.3)	63,748 (49.2)	73,808 (46.3)	82,281 (47.2)	84,148 (46.5)

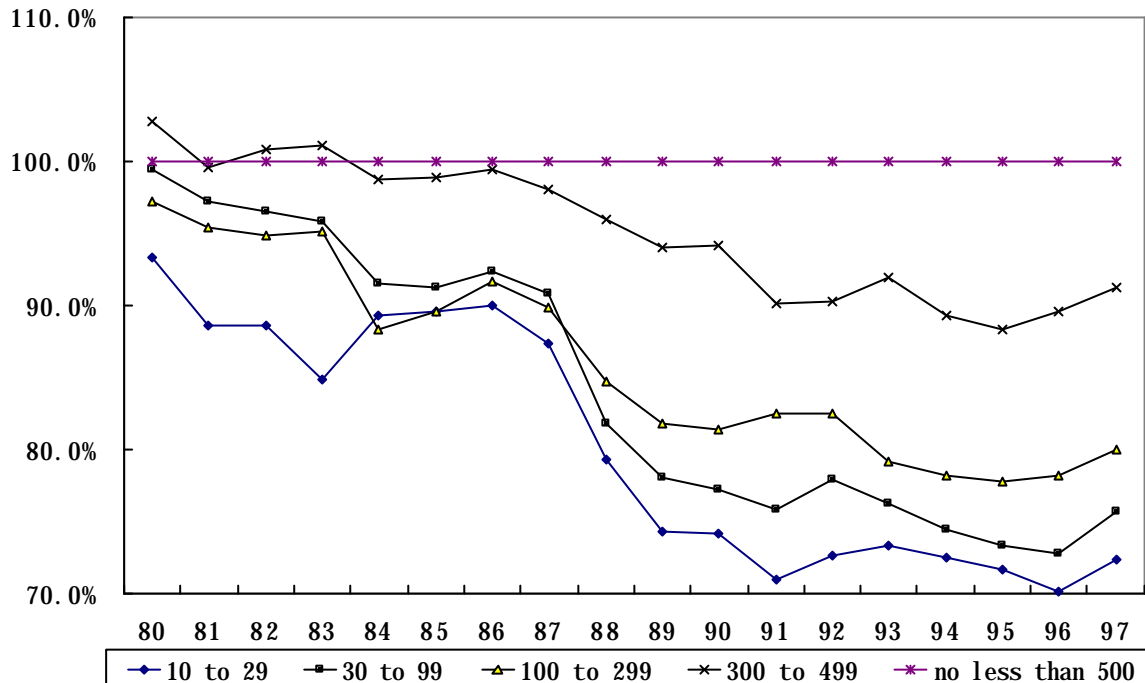
Note: The number in bracket denotes a ratio to whole manufacturing sector.

Source: National Statistical Office, Report on Mining and Manufacturing Survey, Relevant Issues



THE WAGE DIFFERENTIALS BY FIRM SIZE

<Figure 1> Change in Relative Average Wage by Firm Size (Average of Establishments Hiring more than 500 Employees=1)



Source: Ministry of Labor, Report on Monthly Labor Survey, Various Years

The wage differentials by industry, occupation, education and gender have been diminished in Korea since 1980's. Wage differentials by firm size, however, have increased substantially. Wage differentials by firm size have abruptly increased since the June 29th Declaration in 1987.3 As is shown in <Figure 1>, the wage differential by firm size abruptly widened from 1987 to 1989. The trend of widening wage differentials by firm size persisted afterwards. The financial crisis of 1997, however, somewhat mitigated widening trend.

For widening wage differentials by firm size, many studies have given union effect as a major source. The effect of union on wages is greater in firms with more employees, since unionization rates are highly correlated with firm sizes or their relation to *chaebols*.

According to 1992 estimates, the unionization rate of firms employing 10 to 99 workers was below 10 per cent, while the rate was above 60 per cent for firms employing 1,000 or more workers. The sectoral unionization rate was estimated to increase 5 per cent as the employment share of *chaebols* increases by 10 per cent in a particular industrial sector. Workers employed by big businesses, especially *chaebols*, have greater incentives to organize unions as means for rent-seeking activities. When they organize unions, they can exercise greater leverage on bargaining tables not only because of their membership size but also because of rents accrued in their



establishments through government backup for the big enterprises (Lee and Kim, 1997).

The unionization explanation, however, is not sufficient. As is shown in <Table 2>, the unionization rate jumped suddenly in 1987, reached its peak in 1989 and then gradually declined. As shown in <Figure 1> and <Table 3>, the relative wage of SMEs has been persistently declining.

<Table 2> Trends in the Unionization Rate

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
(A)	15.7	15.5	17.3	22.0	23.3	21.5	19.7	18.4	17.2	16.3	15.3	14.7
(B)	12.4	12.3	13.8	17.8	18.6	17.2	15.9	15.0	14.2	13.5	12.7	12.2
(C)	16.9	16.8	18.5	19.5	19.8	18.4	17.2	16.4	15.6	14.5	13.8	13.3

Note: (A) : the number of unionized workers divided by the total number of permanent employees in the non-agricultural sector

(B) : the number of unionized workers divided by the number of employees including both permanent and temporary workers

(C) : the number of unionized workers divided by the number of employees excluding civil servants and private school teachers

Source: Ministry of Labor, Yearbook of Labor Statistics, Relevant Issues

<Table 3> Relative wage of SMEs in manufacturing sector

	1980	1985	1987	1989	1991	1993	1995	1996
Relative Average Wage of SMEs (Large Firms' Average Wage=100)	80.2	75	72.2	66.3	67.2	65.9	64.3	61.9

Source: National Statistical Office, Report on Mining and Manufacturing Survey, Relevant Issues

THE SHORTAGE RATE

The manpower shortage rate is inversely correlated with firm size. As presented in <Table 4>, shortage rate of firms with 10 to 29 employees is more than four times higher than that of firms with 500 or more employees. <Figure 2> shows trends in manpower shortage rates by firm size. The inverse relationship between manpower shortage rate and firm size has been persistent.

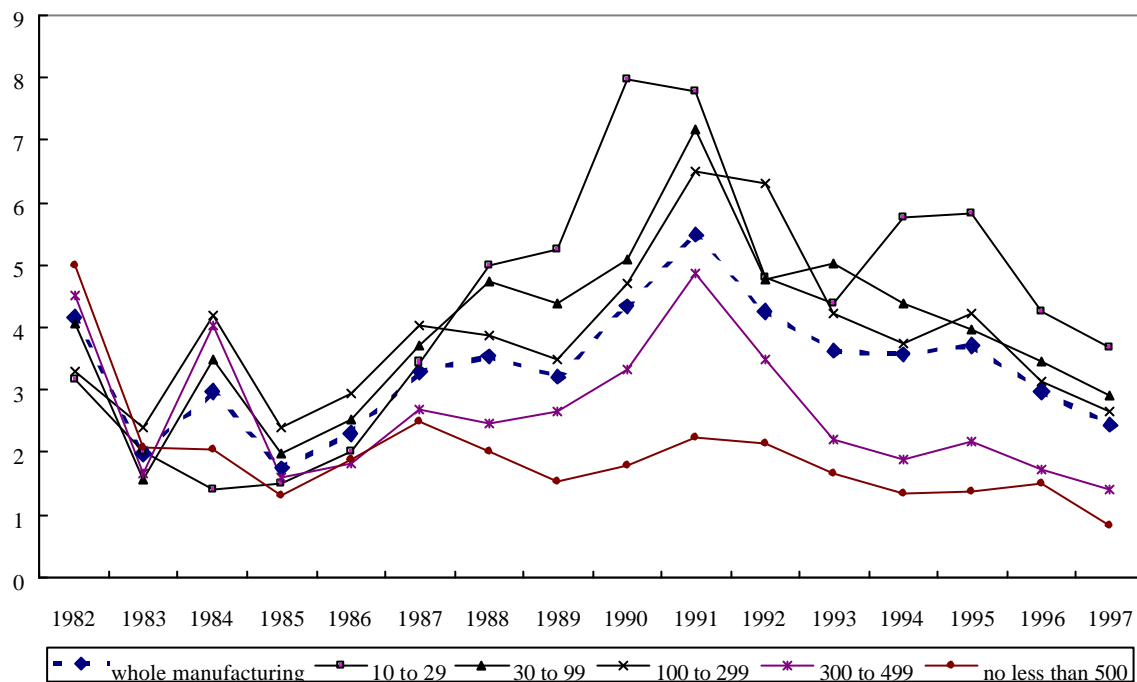
<Table 4> The Shortage Rate by Firm Size in 1997

	10-29 employees	30-99 employees	100-299 employees	300-499 employees	500 or more employees
The Shortage Rate	3.67	2.91	2.66	1.41	0.83

Source: Ministry of Labor, Reports on Employment Forecast, 1997



< Figure 2> Trends in manpower shortage rate by firm size



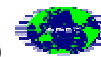
Source: Ministry of Labor, Report on the Labor Demand, various years

SMEs' high shortage rates do not imply that SMEs have excess demand for labor. Excess demand, by definition, represents firm's willingness to hire more workers at market wage. High shortage rate of SMEs is a consequence of SME's inability to pay raised market wage. Kim and Lee (1997) presented the relationship between the number of bankruptcies of SMEs and the shortage rates as an evidence for this argument. The number of bankruptcy cases was 4,138 in 1990, 6,154 in 1991, 10,761 in 1992, and 9,496 in 1993. Bankruptcy cases increased as much as 75 per cent in 1992, one year after the shortage rate reached its peak, then declined. This suggests that many firms suffered from labor shortages in 1991 might have gone bankrupt in 1992. Hence, SME's high shortage rate has to be regarded not so much as a consequence of excess demand of labor but as a consequence of SMEs' low competitiveness.

In the next section, we investigate the characteristics of structural change in manufacturing sector to identify a possible cause of SMEs' low competitiveness.

THE CHARACTERISTICS OF STRUCTURAL CHANGE IN MANUFACTURING SECTOR

Manufacturing industries can be classified into different groups with differing characteristics on the basis of criteria such as technology (or R&D intensity), orientation, wage and skills (Papaconstantinou, 1995). Manufacturing industries can be classified on the basis of their R&D intensity into high-, medium-, and low-technology groups. <Table 5> gives list of manufacturing industries belonging to each group according to this aggregation scheme.



<Table 5> Classification of Manufacturing Industries by R&D intensity

High Technology	Aerospace(3845), computers and office equipment(3825), communication equipment and semiconductors(3832), electrical machinery(383-3832), pharmaceuticals(3522), scientific instruments(385)
Medium Technology	Chemicals excluding drugs(351+352-3522), rubber and plastic products(355+356), non-ferrous metals(372), no-electrical machinery(382-3825), motor vehicles(3843), other transport equipment(3842+3844+3849), other manufacturing (39)
Low-Technology	Food, beverages, tobacco(31), textiles, apparel and leather(32), wood products(33), paper and printing(34), petroleum refining(353+354), non-metallic mineral products(36), iron and steel(371), metal products(381), shipbuilding(3841)

Note: The number in bracket is ISIC (International Standard of Industrial Classification) code

Source: OECD, Industrial Policy in OECD Countries: Annual Review 1992

The Manufacturing industries can be classified into the following five groups on the basis of orientation, i.e., primary factors affecting competitiveness. Those are resource-intensive(access to natural resources), labor-intensive(labor costs), scale-intensive(length of production runs), specialized-supplier(differentiated products), and science-based(rapid application of scientific advance). <Table 6> gives list of manufacturing industries belonging to each of the five categories.

<Table 6> Classification of Manufacturing Industries by Orientation

Resource-intensive	Food, beverages, tobacco(31), wood products(33), petroleum refining(353+354), non-metallic mineral products(36), non-ferrous metals(372)
Labor-intensive	Textiles, apparel and leather (32), fabr. Metal products(381), other manufacturing (39)
Specialized Supplier	Non-electrical machinery(382-3825), electrical machinery(383-3832), communication equipment and semiconductors(3832)
Scale-intensive	Paper and printing(33), chemicals excluding drugs(351+352-3522), rubber and plastics(355+356), iron and steel(371), shipbuilding(3841), motor vehicles(3843), other transport(3842+3844+3849)
Science-based	Aerospace(3845), computers(3825), pharmaceuticals(3522), scientific instruments(385)

Note: The number in bracket is ISIC (International Standard of Industrial Classification) code

Source: OECD, Structural Adjustment and Economic Performance, 1987

Manufacturing industries can be classified into high-, medium-, and low wage groups. This classification uses average labor compensation across nine countries (Australia, Canada, Finland, Germany, Japan, Norway, Sweden, United States and United Kingdom) for 1985. The high-wage group is defined as industries in which the wage was more than 15 per cent above the median, the medium wage group as industries within 15 per cent of the median, and the low-wage group as industries at least 15 per cent below the median (Papaconstantinou, 1995). <Table 7> Shows list



of manufacturing industries belonging to each group.

<Table 7> Classification of Manufacturing Industries by Wage

High Wage	Chemicals excluding drugs(351+352-3522), Aerospace(3845), pharmaceuticals(3522), petroleum refining(353+354), computers and office equipment(3825), motor vehicles(3843)
Medium Wage	paper and printing(34), rubber and plastic products(355+356), non-metallic mineral products(36), , iron and steel (371), non-ferrous metals(372), metal products(381), shipbuilding(3841), non-electrical machinery(382-3825), communication equipment and semiconductors(3832), scientific instruments(385)
Low Wage	Food, beverages, tobacco(31), textiles, apparel and leather(32), wood products (33 electrical machinery (383-3832), other transport equipment (3842+3844+3849), other manufacturing (39)

Note: The number in bracket is ISIC (International Standard of Industrial Classification) code

Source: Papaconstantinou, Globalization, Technology, and Employment: Characteristics and Trends, STI Review No. 15, OECD, 1995

The estimates of the proportion of production workers in manufacturing employment by industry can be also basis of classification. Industries with high estimates are classified as unskilled and industries with low estimates are classified as skilled. In <Table 8>, list of manufacturing industries belonging to skilled and unskilled are given.

<Table 8> Classification of Manufacturing Industries by Skills

Skilled	Food, beverages, tobacco(31), paper and printing(34), Chemicals excluding drugs(351+352-3522), pharmaceuticals(3522), petroleum refining(353+354), fabricated metal products(381), computers and office equipment(3825), communication equipment and semiconductors(3832), aerospace(3845), scientific instruments(385)
Unskilled	Textiles, apparel and leather(32), wood products (33), rubber and plastic products(355+356), non-metallic mineral products(36), iron and steel (371), non-ferrous metals(372), non-electrical machinery(382-3825), electrical machinery (383-3832), shipbuilding(3841), motor vehicles(3843), other transport equipment (3842+3844+3849), other manufacturing (39)

Note: The number in bracket is ISIC(International Standard of Industrial Classification) code

Source: Papaconstantinou, Globalization, Technology, and Employment: Characteristics and Trends, STI Review No. 15, OECD, 1995

In the following, we analyze the characteristics of structural change in manufacturing sector from 1973 to 1996, using aforementioned four aggregation scheme of manufacturing sector on the basis of technology, orientation, wage and skills. Employment growth of large firms and SMEs are differentiated.

The employment growth of Korean manufacturing sectors since 1970's led by SMEs. From 1973 to 1996, the employment of SMEs has grown at an annual rate of 5.9

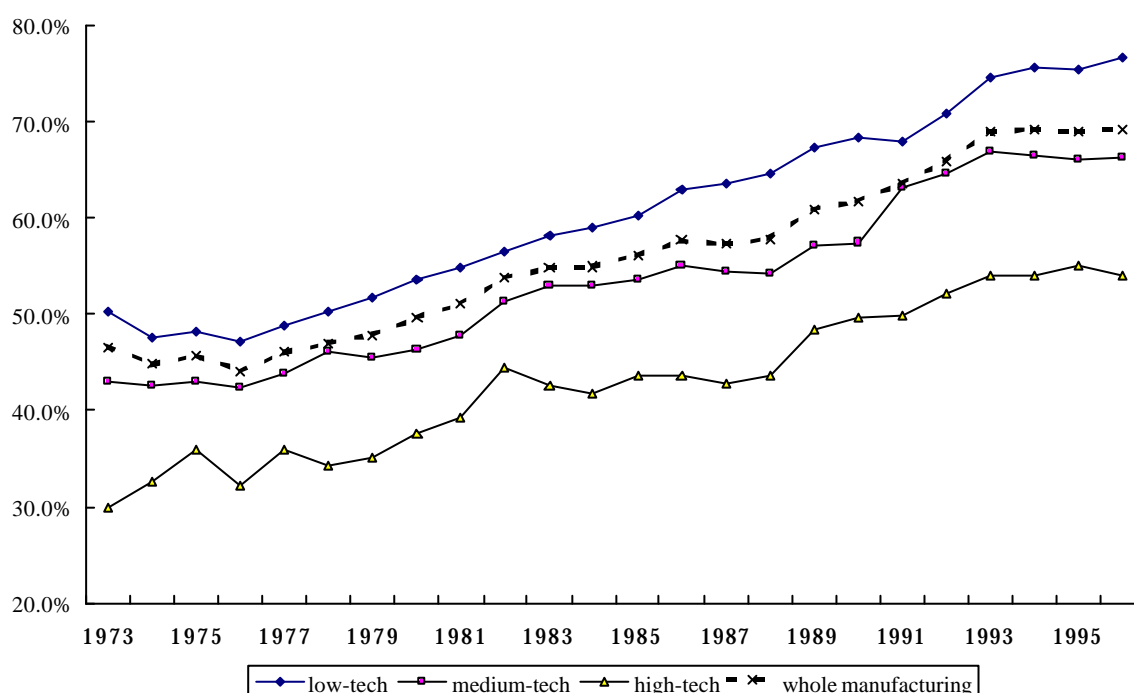


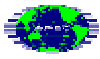
per cent whereas the employment of large firms has grown at an annual rate of 1.6 per cent. Consequently, the proportion of SMEs' employment in manufacturing sector increased from 46.6 per cent in 1973 to 69.2 per cent in 1996.

The proportion of SMEs' employment in each group of aforementioned four aggregation schemes by technology, orientation, wage and skills has changed very differently. <Figure 2> shows the proportion of SMEs' employment in each group of aforementioned four different classifications.

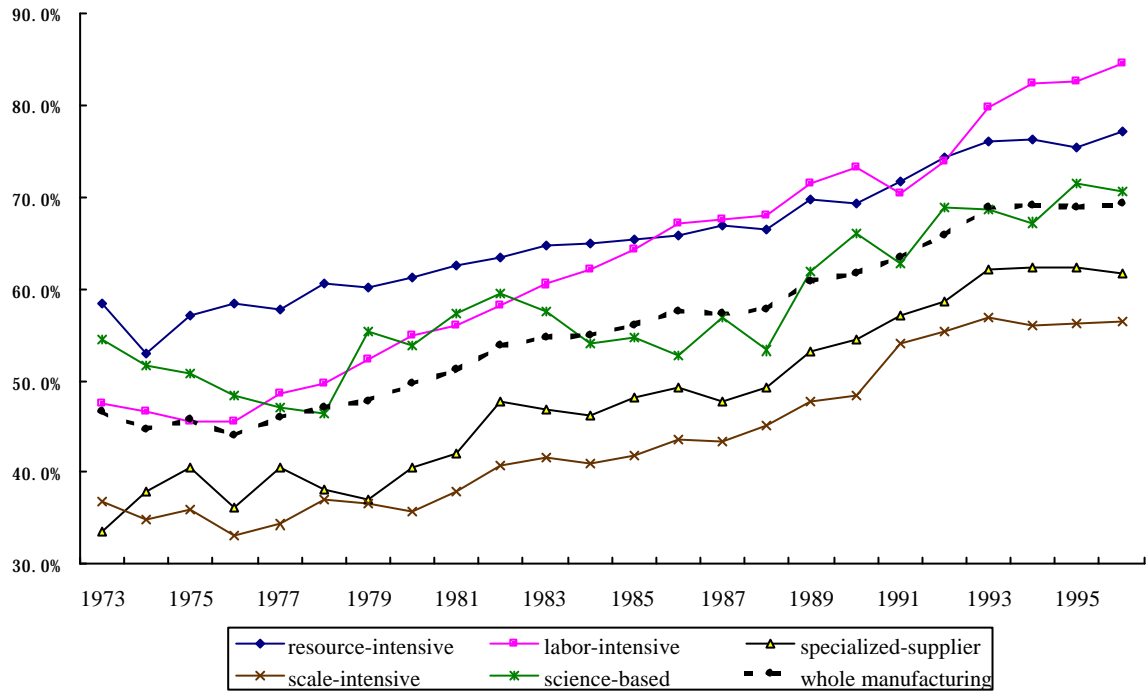
<Figure 2> The Trends in Proportion of SMEs' Employment Under Four Different Aggregation Schemes For Manufacturing Sector

(1) By Technology

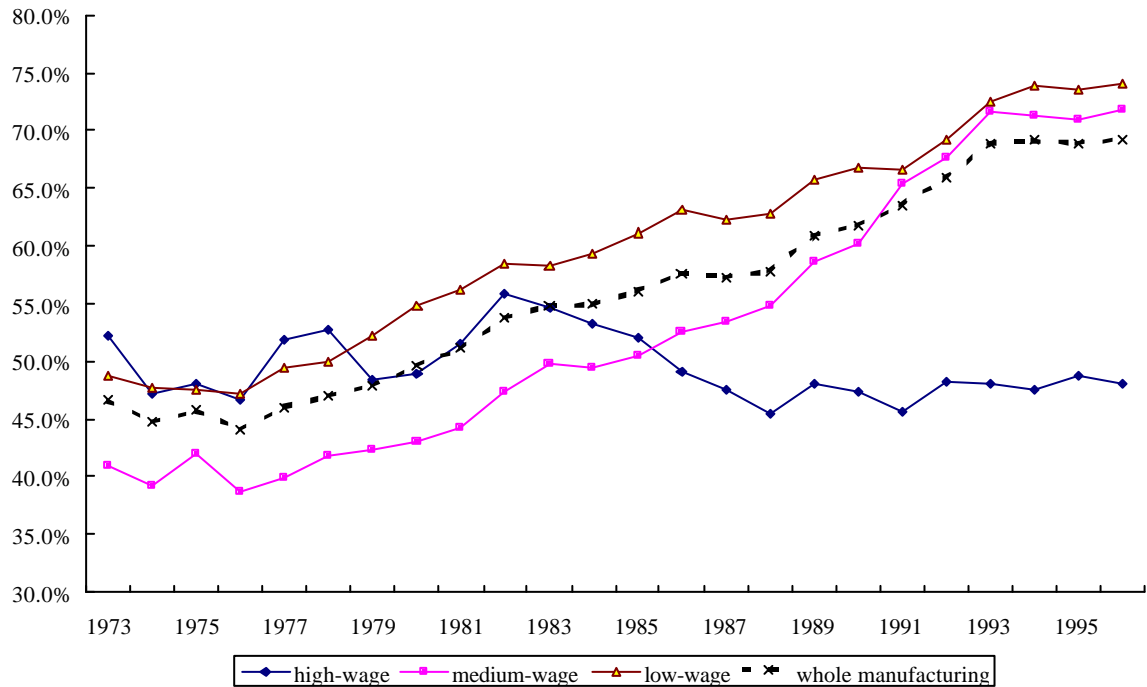


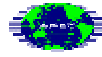


(2) By Orientation

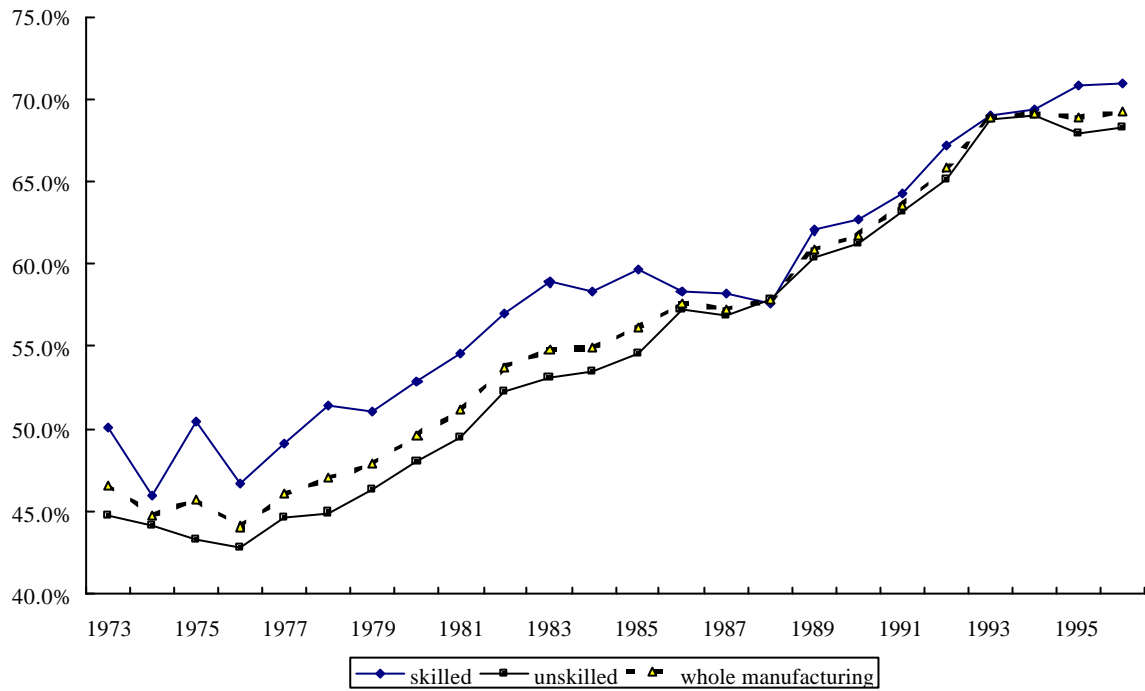


(3) By Wage





(4) By Skills





According to classification by technology, the proportion of SMEs' employment grew most rapidly in low-technology segment of manufacturing sector. As of 1996, the proportion of SMEs' employment is 54 per cent in high-technology segment, 66.2 per cent in medium-technology segment and 76.6 per cent in low-technology segment. From 1973 to 1996, the employment of SMEs in low technology segment increased at an annual rate of 4.6 per cent whereas the employment of large firms in the same segment decreased at an annual rate of 0.6 per cent.

Classifying manufacturing industries in terms of orientation shows also divergent path for large firms and SMEs in employment growth. For example, in labor-intensive industries, SMEs' employment grew at an annual rate of 4.5 per cent for the period between 1973 and 1996. The large firms' employment in labor-intensive industries for the same periods, however, declined at an annual rate of 3.4 per cent. In consequence, the proportion of SMEs' employment in labor-intensive sectors increased from 47.5 per cent in 1973 to 84.5 per cent in 1996. The speed of SMEs' employment growth was fastest in specialized-supplier industries. In this segment, the SMEs' employment grew at an annual rate of 10.6 per cent. However, the proportion of SMEs' employment in specialized-supplier segment as of 1996 recorded 61.6 per cent, which was lower than proportion of SMEs' employment in whole manufacturing industries, 69.2 per cent for the same year.

A similar divergent trends of SMEs' and large firms' employment growth can be found when manufacturing industries are classified on the basis of wages. In low-wage segment, SMEs' employment had grown 1.6 per cent annually. The large firm's employment in low-wage segment, however, declined at an annual rate of 0.5 per cent. In the high-wage segment, large firm's employment grew at an annual rate of 7.0 per cent and SMEs' employment grew at an annual rate of 6.2 per cent. As a consequence, the proportion of SMEs' employment in low-wage segment increased from 48.8 per cent in 1973 to 74.1 per cent in 1996, and the proportion of SMEs' employment in high-wage segment declined from 52.2 per cent to 48.1 per cent for the same period.

Classifying industries in terms of skills does not show divergent path for SMEs' and large firms' employment. Although employment growth rate of unskilled segment turned out to be somewhat higher than that of skilled segment for SMEs and the opposite is true for large firms, there's no real difference in employment growth of skilled segment and unskilled segment. This is mainly because even large firms in Korea failed to make a transition from production worker intensively using sectors to knowledge worker intensively using sectors. The proportion of SMEs' employment in skilled segment had been greater than the proportion of SMEs' employment in whole manufacturing industries for the whole periods under investigation, from 1973 to 1996. In other words, large firms' employment in skilled segment had been smaller than the proportions of large firms' employment in whole manufacturing industries.

The demand for production workers has been strong regardless of the firm size. Combined with absolute reduction of the labor force and the decline of labor force participation rate caused by increasing enrollment in higher education, this strong



demand led to severe shortage of the production workers. The SMEs faced more severe shortage problems, because large firms usually offered higher wage for production workers. Some large firms offered higher wage for production workers because of union threat. Other large firms offered higher wage, simply because they belong to high wage segment of the industries.

It is shown that the employment growth of SMEs and large firms in manufacturing industries followed divergent path. The SMEs' employment growth in low value-added sector, i.e., low-technology, labor-intensive, low-wage and unskilled sectors, have risen faster than SMEs' employment high value-added sectors. Large firms' employment has been mainly increased in high value-added sectors. However, the employment growth of both large and small firms has been concentrated on an unskilled sector, a production worker-intensively using sector. This widened the wage differentials of production workers by firm size and concurrently led to severe shortage of production workers for SMEs, which has little ability to pay high wage to production workers because they usually belong to low-wage sectors. Korea needs to push SMEs forward to high value-added sector. Pulling large firms out of production worker intensively using sectors would greatly help to facilitate this process.

GOVERNMENT POLICIES FOR SMEs' HUMAN RESOURCE DEVELOPMENT

It's been for a while since government recognized the importance of innovative SMEs. In February 1996, the Small and Medium Business Administration(SMBA) was established as a ministry level for better formulation and implementation of SME policies. Government has implemented various measures for human resource development of SMEs.

The rapid expansion of university enrollment in 1980s led to substantial reduction of vocational education. Vocational education institutions had been degraded into second rate schools chosen only by students who had failed to qualify for universities. Furthermore, obsolete curriculum failed to meet rapidly changing industrial needs. Quantitative and qualitative degradation of vocational education resulted in shortage of skilled manpower. Confronted with this problem, the government focused more attention on vocational education in the 1990s. The proportion of vocational high school enrollment to total high school enrollment returned to 42 per cent in 1995 from 45 per cent in 1980 and 35 per cent in 1990. To cope with the difference between vocational curriculum and industrial skill requirements, the "2+1 system for technical high schools" was adopted to upgrade vocational training adaptability by packaging two years of academic study with one year of on-site training in industry.

Before financial crisis, labor market had been relatively tight and government focused on reducing the shortage rate of SMEs. Women, the elderly and foreign workers were induced into the labor force with various incentives.⁴ The current immigration law does not allow entry of unskilled laborers except as trainees. The trainee system was originally designed to upgrade skills of foreign workers employed overseas by Korean firms, but it has evolved be used as a means of easing labor



shortage in small manufacturing firms(Y. Park, 1996). Trainees are protected under major articles of the Labor Standards Act, Minimum Wage Act, Industrial Safety and Health Act, Industrial Accident Compensation Insurance Act and Medical Insurance Act. Illegal workers are not protected under these laws. A lion's share of foreign workers are illegal workers. This produces some negative side effects. Illegal workers experience inferior working conditions and are paid much less than legal workers. Some non-governmental organizations have tried to establish equal treatment for illegal foreign workers in vain.

With government incentives, more employers adopted labor-saving automated technology. 5 Government adopts various tools to induce more workers to SMEs. Career counseling services were introduced for general high school graduate, and job information service were introduced for the unemployed (PECC, 1994). Tax incentives were also offered to reduce the shortage. Income tax for foreign technicians is exempted for the first five years. For SMEs, 15/100 of expenses disbursed for technology and manpower development is given as a tax credit, while for large firms the rate is 5/100. The technical manpower of SMEs in capital goods industry gets taxable income deduction according to the number of years of work in capital goods industry. For workers with working experience of more than 3 years and below 7 years, 10/100 of wage is deducted. For workers with working experience of more than 7 years and below 12 years, 20/100 of wage is deducted. The rate is 30/100 for workers who have worked in the capital goods industry more than 12 years.

Government has been implementing military service exemption program for research personnel and technicians. The research personnel can be exempt from military service, when he works at the designated private corporate research institutes or public research institute for five years. To be eligible for exemption, the recruit should have at least master's degree. For those who apply for SMEs, however, the candidates with bachelors' degree are also eligible. To be selected as a designated research institute for this program, the institute has to secure at least five personnel responsible for research activities who hold at least master's degree(for SMEs, two research personnel with master's degree would suffice). Technicians with national certificate for skills can be exempt from military services, when he works at designated enterprises for three years.

<Table 9> Evaluation on government's HRM policies for SMEs

Human Resource Management Policies	Rank	Grade
Military service exemptions for technician	1	79.4
Trainee system for foreign workers	2	73.4
Vocational training of MOL(Ministry of Labor)	5	54.6
Tax credit for technology and manpower development	3	63.4
Taxable income deductions for workers in capital good industries	4	62.1
Military service exemptions for research personnel	6	53.9

Source: KFSB, Report on technology and manpower development of SMEs, 1997



In 1997, Korea Federation of Small Business(KFSB) conducted employer survey on the effectiveness of government's human resource management policies for SMEs. <Table 9> summarizes the results of this survey. Interestingly, employer regarded the military service exemption for technicians most helpful and the exemption for research personnel least helpful. This manifests that SMEs' labor demand concentrated on technician level rather than on researcher level.

In the wake of economic crisis, the unemployment rate soared from 2.6% in 1997 to 6.8% in 1998. The maximization of job creating potential of SMEs became an urgent policy priority under the high unemployment conditions. In consequence, the policy instruments for innovative SME's start-up has been emphasized. Most of policies are centered on providing essential resources for start-up of innovative SMEs. Financial support is available through Korea Technology Credit Guarantee Fund for technologically superior SMEs. Various technological guidance program and management training program are offered by SMIPC (Small and Medium Size Industry Promotion Corporation), an affiliated agency of SMBA. Technology business incubators have been established in regional universities with government support.

With the entry of competitive SMEs into the market, rents generated by the monopoly in a particular product market will diminish and the wage differential between large conglomerates and SMEs will be narrowed down. The mobilization of redundant workforce of large firms to SMEs will be facilitated by the start-up of the technology intensive SMEs. The segregation of the labor market by firm size will be mitigated in every aspect. The SMEs in the future will have higher wage levels and more skilled workers. The degree of this transition largely depends on the proper development of the human resource management practices of the SMEs.



REFERENCES

- Kim, Dae Il and Ju-Ho Lee, 1997. Laobr Reforms in Korea. Paper presented for EWC-KDI Joint Conference on Restructuring the National Economy, Hawaii
- Kim, Linsu. 1997. Imitation to Innovation: Dynamics of Capability Building in Korea. Boston: Harvard University Press.
- Kim, Sookon and Ju-Ho Lee. 1997. Industrial Relation and Human Resource Development. In Dongse Cha, Kwangsuk Kim and Dwight Perkins(Ed.), The Korean Economy 1945-1995: Performance and Vision for the 21st Century: 587-622. KDI. Seoul : KDI Press
- Ko, Sangwon. 1996. Issues in S&T Human Resource Development in Korea, Journal of Technology Innovation: 185-207. Vol. 4. No.1. Seoul
- Ko, Sangwon. 1997. Technological Change and Employment. Seoul: Science and Technology Policy Institute(in Korean).
- Ko, Sangwon. 1998. Human Resource Management Profile of Korea. Seoul: Science and Technology Policy Institute.
- Krugman, Paul. 1999. The Return of Depression Economics. New York: W.W. Norton & Company
- Lee, Ju-Ho and Dae-il Kim. 1997. Labor Market Developments and Reforms in Korea. Working Paper No. 9703. Seoul: KDI
- Nanto, Dick and Vivian Jones. 1997. South Korea's Economy and 1997 Financial Crisis. Washington: Congressional Research Service
- OECD. 1987. Structural Adjustment and Economic Performance. Paris
- OECD. 1992. Industrial Policy in OECD Countries: Annual Review 1992. Paris
- OECD. 1996. The OECD Jobs Strategy: Technology, Productivity and Job Creation Vol. 2 Analytical Report. Paris
- Papaconstantinou, George. 1995. Globalization, Technology, and Employment: Characteristics and Trends. STI Review: 177-235. No. 15. Paris: OECD
- Park, Young-bum. 1996. Labor Market Developments and Foreign Worker Policy in the Republic of Korea. Migration and the Labor Market in Asia: Prospects to the year 2000: 169-181. Paris: OECD
- PECC(Pacific Economic Cooperation Council). 1993. Human Resource Development Outlook 1994-1995. Singapore: Times Academic Press



- Rodgers, Ronald. 1993. *Industrial Relations in Transition: Recent Development and Prospects*. In L. Krause & Fun-koo Park (Ed.), *Social Issues in Korea: Korean and American Perspective*: 67-108. Seoul: KDI Press
- Yoo, Seong Min and Sung Soon Lee. 1997. *Evolution of Industrial Organization and Policy Response in Korea: 1945-1995*. In Dongse Cha, Kwangsuk Kim and Dwight Perkins (Ed.), *The Korean Economy 1945-1995: Performance and Vision for the 21st Century*: 426-467. KDI. Seoul: KDI Press

Notes

- ¹ Many sees excessive diversification of chaebols as a major factor undermining chaebols', consequently Korea's competitiveness. However, some studies have produced partial evidence on the efficiency-neutrality of chaebols' diversification. One study sees the diversification of chaebols as a logical response to changing market fundamentals and the government business relationship (Yoo and Lee, 1997).
- ² Cut-off levels are 300 employees for manufacturing sector with a few exceptions, 20 employees for electricity, gas and water supply industry, 20 employees for wholesale & retail trade and other service industry, for example.
- ³ The June 29th Declaration of 1987 is the declaration of political liberalization. However, it greatly affected the labor market rather than politics. The government changed its position in the labor market from strong intervention to laissez-faire. This led to rapid unionization, and consequently substantial increase in wages.
- ⁴ Employment Equality Act was enacted in 1987 to ensure equal opportunity and treatment of men and women in employment. The Aged Employment Promotion Act was enacted in 1991 and became effective in 1992. The aged is defined as being a person fifty-five years of age and older. According to this law, the Minister of Labor recommends and employer to meet standard employment rate for age workers in proportion to regular workers. For example, employers hiring over 300 workers are recommended to have 3 per cent of its workers in this age category.
- ⁵ In the case of investment in productivity improvement facilities, 5/100 of investments is given as a tax credit.

**THE ROLE OF SMES IN THE CURRENT SITUATION &
PROBLEMS OF ASEAN CORPORATE MANAGEMENT**

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THE ROLE OF SMES IN THE CURRENT SITUATION & PROBLEMS OF ASEAN CORPORATE MANAGEMENT

INTRODUCTION

It is true that our region is facing great challenges because of the financial crisis that started in Thailand. The bubble economy of Thailand burst on July 2, 1997 and quickly spread to other Asean countries.

In effort to solve the present economic crisis and to enter the next century with a promising future, Asian countries need to tackle severe structural problems in the real sector as well as the financial one. Lack of competitiveness and sustainability are identified as the key problems of the real sector, the solution to both of which requires innovation as the key variable. Innovation, including both restructuring and upgrading of production and exchange, allows the real sector to emerge from stagnant, unproductive and incompetent activities, which no longer serve the interests of Asian countries in the global economy. Three key policy instruments are identified continuing education and retraining in order to increase the human and social capital, and allowing the innovation which is needed in two other key policy instruments, namely technology development and management development. Application of these instruments to production, exchange and environmental conservation will lead to both technological and economic efficiency, in turn leading to competitiveness and sustainability.

At present, there are four countries in the East Asia to face with economic crisis, namely Thailand, Indonesia, South Korea, and Malaysia. However, Thailand, Indonesia, and Malaysia are the member of the ASEAN. They have the same economic structure especially in manufacturing sector, while South Korea is the NICS. Therefore, this paper would like to emphasis on the ASEAN's country and with the same economic structure, Thailand will be more emphasis.

Context of crisis

The economic crisis in Thailand is a complex phenomenon with many causes. There are two key and interrelated factors. The first is excessive private sector borrowing. The second is panic and the subsequent collapse of investor confidence.

Private sector borrowing took place in the context of an economic boom that started in the second half of the 1980s. Much of this borrowing went into real estate and stock markets, ending in a "bubble" economy that has burst. Companies borrowed foreign currency on short-term loans and banks increased their lending too easily and rapidly for use in unproductive investments. Lending was based not on feasibility of the projects, but on personal relations. Many Thai companies and banks has borrowed offshore in foreign currencies short-term at lower international interest rate, and used the money for long-term investment. With the opening of Bangkok International Banking Facilities (BIBF) in 1993 and with an interest rate differential of several percentage points, companies and banks took advantage of this option and believed that the exchange rate regime would be maintained, large, unhedged positions. At the same time, governments had liberalised their financial markets without strengthening their loose financial and banking regulatory and supervisory systems.



They also did not change their inflexible exchange rate system that tied their currencies to the US dollar during a period when the US dollar was growing stronger against all currencies since 1995.

These widen current account deficit to 8 percent of Gross Domestic Product(GDP), On 2nd July 1997, the Thai government decided to float the Thai baht. Now, companies and banks which had borrowed US dollar with the rate of 25 bahts per US dollar will need 52 bahts to buy one US dollar to repay. The total external debt is us dollar 93 billion, or about 97 percent of GDP at current exchange rate.

Thailand's experience highlights that high rates of investment are not sufficient to sustain a large current account deficit and growing domestic credit. While most of the new funds went to investment and not consumption, the investment was often in the "wrong capital stock". Few investments were in activities that would earn foreign exchange; rather they went into updating facilities geared for domestic production or into non-productive assets. With the relative price of non-tradables rising, this was a rational response, but it has consequences for the ability of firms to increase exports now that the asset bubble and the baht has depreciated so drastically.

Once lost confidence in Thailand, fund managers in foreign countries sold out their assets. Their selling brought down the stock market. By converting baht into US dollar, they caused a further fall in the exchange rate. This crisis is a crisis of confidence.

THE EFFECT ON SMALL AND MEDIUM ENTERPRISES (SMEs)

One of the current impacts of the economic crisis on manufactures is finance crisis. Certainly regarding the financial structure of SMEs there is a heavy reliance on short term borrowing. The average bank debt-to-equity ratio is about 150 percent with almost all of the debt short term. Now, banks are increasingly refusing to roll over credit. Entrepreneurs fear that the crisis may lead to the prolonged weak macroeconomic policies and persistent cost-push inflation and managing the uncertainty of the real devaluation. Faced with three major problems for doing businesses, Thai entrepreneurs have suffered badly in the hostile environment. It urgently needs to be solved in order to gain clear solutions and advices to businesses. The three major problems are as follows:

1. Financial liquidity management

The financial liquidity problems is the most important problem foe doing business nowdays. There are several kinds of financial liquidity problems such as (1) insufficient cash for clearing checks; (2) reduced credit term from production firm to distributors; (3) suppliers have liquidity problems in purchasing raw materials, bringing problems to production firms which cannot produce goods; (4) reduced credit lines from financial institutions; (5) lack of liquidity stemming from the suspension of 58 financial companies' operation; (6) insufficient cash for the monthly payroll of the workers and staffs; (7) reduced salary; (8) cut fringe benefits and bonuses; (9) lay off workers and staffs; and (10) terminate the services of the workers and staff.

2. Managing cost-push inflation and baht devaluation



According to financial liquidity problems, firms currently face management problems due the baht devaluation which has also affected the cost of funds, production and management. The cost of raw and supporting materials quite high forced management to increase prices, while purchasing power of people is decreasing. Thai entrepreneurs lack confidence in managing the operations including decision regarding appropriated product pricing levels.

3. Regaining consumer confidence

After baht float on July 2, 1997 both entrepreneurs and consumers at all levels receives widely affect by economic recession, while the government did not provide clear measurment and strategies to tackle these problems. These have generated more confusion and lack of confidence in investment including consumers' delay of consumption. Many of them are shifting their consumption pattern tertiary or secondary into primary or basic needs.

4. Market capabilities

The export sectors growth rate had already showed down. This was due to the fierce competition poised by South Asian, Chinese and Vietnamese companies. The show down in the industrial sector combined with the current financial crisis has resulted in either a tempory cutback or cease of operation, including reduction or bermination workers. Why did Thailand lose in the fierce competition? The answer is simple. The competitiveness of the industrial sector itself has weakened.

Firstly, enterprises are still using outdated technologies that resulted in low productivity and low product quality. Product development was lacking particularly in coming out with high value added items.

Secondly, entrepreneurs lack management and marketing knowledge.

Thirdly, the basic skills of the labor force is low.

Fourthly, many export items have high import contents, particularly the raw material. In addition, most export items are destined for the middle and low-end market brackets.

Lastly, Thai exporters have limited access to markets.

There is not much choice left for most of the country's small and medium entrepreneurs (SMEs). Eighter they downsize, freeze or even worse, close their business.

STRUCTURE OF SMALL AND MEDIUM ENTERPRISES IN THAILAND

Small and medium enterprises have varied in Thailand. The Ministry of Industry uses employment and equity to define small and medium industries (SMI) and refers to legally registered factories. The employment criterion to define small scale industries (SSI) places a ceiling of 50 employees, and between 50-200 workers for medium scale industries (MSI). In terms of equity, SSIs have an invested capital not exceeding 10 million baht (about



USD355,000), and MSIs from over 10 million baht to 100 million baht (about USD3.55 million)

The bank of Thailand, the Small Industry Finance Corporation (SIFC), and the Industrial Finance Corporation of Thailand (IFCT) adopt a common definition for SSIs by using net fixed assets, that is, not more than 20 million baht (about USD710,000).

The member of enterprises throughout the country was estimated at 239,678 in 1993 of which 69,856 or 29 percent belong to the manufacturing sector. The manufacturing enterprises registered a growth rate of 4.9 percent over the 1992 figure of 66,566. Out of the total number of establishments, 224,695 or 93.7 percent are considered small enterprises employing between 1-49 employees. Total number of employees in the small enterprises sector was 1,478,000 or 30 percent of total enterprise employment of 4,911,787. Total manufacturing enterprises accounted for 58 percent (2,576,000) of total enterprise employment.

The number of industries (excluding rice mills) throughout the country as of 1991, was 64,107 of which 63,230 (98.6 percent) were considered SMIs, broken down into 51,232 SSIs (90.7percent) and 4,322 MSIs (7.6 percent). In terms of geographical distribution, it is estimated that about 45 percent of the industries are located in the Bangkok Metropolitan Area and the surrounding provinces (Samut Prakan, Samut Sakhon, Pathum Thani, Nonthaburi, and Nakon Pathom). SMIs' share of employment in the industrial sector was estimated at a high of 73.8 percent, 47.4 percent of value added, and 50.5 percent of export value.

The role of SMEs

The socio-economic contributions of SMEs encompass employment, value added, capital formation, foreign exchange earnings and savings, income generation, rural industrialization, savings mobilization, and human resource development. Small enterprises, therefore, perform a vital role in our economy a sides from being the seedbed of entrepreneurship. The SMEs concept, extending out to the people in the rural area. And that is the one of the very effective methods to stop domestic migration. And that is one way to stop the people from the upcountry from trying to come down to the central plain, looking for jobs. SMEs is the answer to that problem.

SMEs play an important role in this conventional view of the engines of asian growth. Although evidence is a little slim, SMEs appears to contribute in the following ways:

- 40% to 60% of Capital investment comes from SMEs,
- About half of productivity growth comes from SMEs,
- SMEs employ about half the workforce,
- About 35% or more of exports are generated by SMEs.



However there is some reason to believe that SMEs play a much more important role than is conventionally thought. SMEs are responsible for 70% or more of net job creation and economic growth (Chris Hall).

SME support agencies need to address these issues systematically. Programmes of assistance should be aimed at providing the entrepreneurs with more information and knowledge so as to stimulate change and innovation and increase the attractiveness of various growth options. Emphasis should also be placed on enhancing the competitiveness, productivity and profitability of the enterprises, thereby increasing the prospects for long-term survival and growth, and in the process improving employment security for those engaged in the SME sector. Agencies can also promote international enterprise alliances, between SMEs, between SMEs and large-scale enterprises, in the form of joint ventures, sub-contracting arrangements, technology and skills transfer, and various trading partnerships. It is important that entrepreneurs have access to best practices, improved and modernised technologies, and useable market information. Support agencies have have a key role to play in fostering and facilitating these developments.

In order to facilitate and enhance the process of trade liberalization, governments, in dynamic partnership with the private sector, hope to formulate guidelines, incentives and support so as to create an environment even more conducive to enterprise. We know that small and medium scale enterprises or SMEs play a very important role in the production and trade of goods and services in most economies, including APEC's. We know that by equipping entrepreneurs and their staff with advanced knowledge of production techniques, good business practices and management, these SMEs can significantly improve their competitiveness, productivity, and profitability in a much wider globalizes market.

GUIDELINES TO SOLVE PROBLEMS

1. Liquidity management and restoring the domestic credit system

* Entrepreneurs have to increase their own efficient in managing liquidity by the following measures:

- (1)Reduce investment in inefficient projects and projects with no future market;
- (2)Reduce production to match demand for products and reduce inventory as low as possible;
- (3)Implement efficient inventory and accounts receivable management systems;
- (4)Be strict when grant the credit to clients and increase the credit lines of good clients;
- (5)Increase the channels of distributions to retailers directly;
- (6)Establish an appropriate debt structure by using long term debt to finance long term projects; and
- (7)Extend credit term from oversea suppliers.



- Promoting the collaboration among trading partners including financial institutions by the following measures:

- (1) Manufacturers extend credit terms to prime customers; and
- (2) Commercial banks increase credit lines and extend payment term for their clients who need money for their main business by introducing the Domestic Letter of Credit (DLC).

2. Managing cost-push inflation and the baht devaluation

* Entrepreneurs must try to lower costs as much as possible without decrease quality and/or human resources development by using the following measures:

- (1) Implementing production processes efficiently and effectively as well as eliminating waste and non-value-added activities as much as possible;
- (2) Producing high quality products to meet consumer needs;
- (3) Replacing imported assembly parts, import products, and raw materials with local content;
- (4) Upgrading standardized products and industrial equipments such as pallet etc.;
- (5) Modifying salary and wage structures to appropriate levels.

* Using technology and new concepts to lower costs and increase productivity.

- Business must promote and encourage financial management in this uncertain environment as the following measures:

- (1) Managing foreign exchange exposure gradually by taking short-term or fixed positions;
- (2) Using one fixed exchange rate throughout the company to set product costing and for management, revising periodically when appropriate;
- (3) Restructuring debt such as using long-term debt to finance assets and loans should be hedged.

- Restructuring the organization to increase management efficiently

- (1) Reducing the workforce and flattening the organization structure;
- (2) Most entrepreneurs should try keeping employment as much as possible together with having plans to recruit the workers.

3. Regaining consumer's confidence

- Entrepreneurs must have good faith and positive attitudes toward the situation in Thailand. Even though the current economic situation still creates uncertainty and troubles in the future, they must have firm belief in their existing markets as well as



potential markets. It is important to be aware that the economic recession at present is only a normal business cycle.

- Entrepreneurs should concentrate in the business that they are keen for and produce what consumers want. Selling good quality product with fair price seems to be the best solution at the moment.
- Entrepreneurs must improve the administrative system in their organizations. The focus should be placed on the operational efficiency in all business functions as well as the improvement of the business discipline in their organizations. Those internal operations which should be more connected in terms of efficiency and effectiveness are accounting, finance, production, selling, marketing, personnel management, etc., . All of these business functions must integrate a good system of information flow internally and externally to establish a better coordination and better integration within organization. However, it is very crucial that Entrepreneurs must consider to keep the long-term competence of their companies, though they have to reduce some costs if a company needs to downsize, this must be done with a good plan and good measurement which must be development in order to maintain morale and motivation of their employees.
- Entrepreneurs must build up the new economy value system within their business organizations. This value must start at the top executives.

POLICY DIRECTIONS FOR SME DEVELOPMENT IN THAILAND

The policies of the Thai government for SME development are embodied and articulated in various forms. These include Acts of Parliament, National Economic and Social Development Plan, and Cabinet resolutions. These, in turn, are translated into objectives, targets, strategies and action plans by the various ministries. The various instrumentalities of the government operationalise these plans, strategies and action plans into programmes, projects and activities.

In terms of business survival and growth, various specialised government agencies provide technical, technological, financial, managerial and marketing assistance to SMEs through training, consultancy, extension service, information dissemination, study missions, trade fairs and exhibits, and research. These services are either free or subsidised. As a result of the baht flotation, several industries particularly the export-oriented industries with low import content, are benefiting, while others are unfortunately adversely affected. However, the government has taken steps and has come up with measures to cushion the impact of the baht flotation. These include, among others, a review of the targets of the Eighth National Plan, formulation of long-term plans to strengthen Thailand's competitiveness and restore investor confidence, including measures to generate savings in the public and private sector, restructuring of the country's agriculture and industry, retraining programme on new skills including technical and business management skills for retrenched workers, duty free importation of capital machinery, reduction in time for collecting tax rebate for exporters from 3-6 months to 45 days, as well as the setting aside of 20 billion baht for low interest-loans to strategic business that have been hurt by the flotation.



DEPARTMENT OF INDUSTRIAL PROMOTION

The Department of Industrial Promotion (DIP) under the Ministry of Industry acts as the lead agency of government for SME promotion and development and follows the guidelines set by the Ministry of Industry and the National Plan in elaborating its own policies to support the sector. These policies include:

1). Encouraging the dispersal of urban industries to rural areas by:

- preparing industrial feasibility studies
- stimulating, guiding and providing advice to investors
- providing industrial information and incubator service for new entrepreneurs

2). Encouraging investment in SMEs by:

- transferring knowledge to rural entrepreneurs
- providing advice and incubator service to both existing and new entrepreneurs
- promotion the use of the Consultancy Fund for developing SMEs in the rural areas
- carrying out career training on cottage and handicraft industries for local people
- providing investment loans for cottage and handicraft industries

3). Establishing industrial networks by:

- promoting rural industries in the form of community industries
- promoting linkages between large industries and SMIs
- coordinating with government financial institutions on loan policies
- promoting rural development

4). Promoting investments in highly potential industrial sectors and enhance the competitiveness of Thai industries by:

- encouraging investment in and developing technological capabilities of SME supporting industries
- undertaking activities according to the master plan for the development of supporting industries

5). Enhancing the competitiveness of export-oriented industries by:

- developing skilled workers for the gem and jewelry industry
- promoting textile industry by modernising its manufacturing technologies



- developing the skill of entrepreneurs in business negotiation and joint venture

A study report on Industrial Sector Development of Supporting Industries in Thailand (March 1995) prepared by UNICO International Corporation for DIP and the Japan International Cooperation Agency (JICA) included a proposed master plan for the development of supporting industries but which also affect SMIs in general. The proposal covers six elements, viz.:

- * Policy and Legislation
- * Market Development
- * Technology Upgrading
- * Financial Support
- * Upgrading of Management
- * Investment Promotion

For many years now, there have been persistent recommendations from many quarters—from donor agencies to development practitioners and industry associations, for a basic law on SMEs which would provide comprehensive and clear guidelines for the promotion and development of SMEs. A draft has long been prepared by DIP, but the proposal did not take off the ground as some key government officials did not perceive the need for such a law, considered it premature or even redundant to existing laws.

The proposed law on subcontracting promotion would have the objectives of providing measures for the efficient promotion of subcontracting arrangements between SMEs and large industries, including international sub-contracting, as well as of upgrading and strengthening the institutions promoting subcontracting.

EXISTING INSTITUTIONAL INFRASTRUCTURE MANDATED BY GOVERNMENT POLICY

Besides the Department of Industrial Promotion and the Ministry which were dealt with separately earlier, there are several Acts of Parliaments which directly relate to SME development. These refer to the setting up of the following institutions and regulations.

- **Small Industry Finance Corporation (SIFC)**

The Small Industry Finance Corporation (SIFC) was established by Act of Parliament in 1991 in order to increase the capacity of small industries in playing an important role in the economic and social development of the country through extension of long-term credit for the establishment of new business, expansion of existing business and for business improvement. It currently operates 2 provincial branches.

- **Small Industry Credit Guarantee Corporation (SICGC)**



The Small Industry Credit Guarantee Corporation Act of 1991 established the corporation to enable collateral-short but viable small industries to obtain more loans from financial institutions, to increase credit extensions from financial institutions to small-scale industries (SSIs), strengthen the confidence of financial institutions in providing to small industries, and to accelerate the dispersal of loans to SSIs.

- **Industrial Finance Corporation of Thailand (IFCT)**

The Industrial Finance Corporation of Thailand (IFCT) was established in 1959 as a development financing institution with shares from government and the private sector who control the majority shares. IFCT's main objectives are to promote and finance the development of private sector industrial enterprises and the domestic capital market. It maintains branches in 4 regions and 10 provinces.

- **Industrial Estate Authority of Thailand (IEAT)**

The Industrial Estate Authority of Thailand (IEAT) was established in 1979 by virtue of Act of Parliament as a state enterprise attached to the Ministry of Industry with and managing industrial estates throughout the the main purpose of planning, developing country. The Act was amended to cover private industrial zones so that owners of factories located in private industrial zones may be given fair protection. Th IEAT has two types of zones which require specific privileges: the General Industrial Zone and the Export Processing Zone. Altogether, there are about 45 industrial estates in the country.

- **Board of Investment (BOI)**

The Board of Investment is an agency under the Office of the Prime Minister established in 1977 under the Investment promotion Act as a tool to help promote foreign and domestic investment in Thailand and to provide assistance in such as areas as guarantees, taxes and monetary incentives. The BOI divides the country into three economic promotion zones with varying investment privileges. The BOI cooperates with DIP and privates sector business groups as well as specialised government agencies in developing supporting industries through the National Supplier Development Programme with the objective of developing SMI parts manufacturers. The BOI has set up a unit for industrial linkage development called BUILD to implement its subcontracting development programme.

- **Factory Act**

Three Factory Acts have been enacted (1969, 1975 and 1979). Among the salient features are the requirement of a permit from the Ministry of Industry before a factory can be operated or before a factory can be expanded or altered.

Other laws also apply for specific industries such as the Foods Acts, Drugs Act, Poisonous Substances Act, etc. Other relevant laws are the Machinery Registration Act, the Industrial Product Standards Act , Labour Protection Law , Tax Rebate for Export Goods Produced in Thailand Law , Building Construction Control Act, etc. These laws are enforced to safeguard the health and safety of the workers and the community, protect the environment, and to ensure a conducive working environment.



• Institute For Sme Development (Ismed)

More than 400,000 small-and medium-sized enterprises (SMEs) nationwide have been adversely affected by the impacts of the current economic crisis. To help them overcome these difficulties and to equip them for challenges of the third millennium, the Ministry of Industry, through the Department of Industrial Promotion, Thammasat University, and seven leading Thai universities establish the Institute for SMEs Development (ISMED). The institute funded under the Government's economic stimulus package intends to strengthen the competitiveness of Thai SMEs. The institute will introduce business opportunities for new entrepreneurs and offer training programs for current entrepreneurs to help them improve their business skills.

TRENDS IN POLICY FORMULATION

As already articulated in the past National Plan, the following directions affecting SMEs and SMIs will become distinctly more transparent and gain momentum in the years ahead. These include:

1. Less Government

Due to the budgetary discipline imposed by the government, the number of government officers will decrease so that eventually there will be a leaner but more efficient government staff. There is an ongoing pilot efficiency enhancement programme in selected government agencies which will be expanded to cover the entire public sector. With less government personnel there will be a corresponding move to limit government service to facilitation in the delivery of service, to institution building and network development to support and strengthen a network of SMI service providers, to coordination of the network so that in the end government personnel will no longer provide direct assistance to SMEs.

2. Private Sector Empowerment

Corollary to the trend towards less government will be the natural devolution to empower the private sector to take over some functions of the state, to be source of specialised and to regulate its own rank. Prime Minister Chavalit stated that:

“ Private individuals would be encouraged to establish organizations to control themselves so state supervision could be done away with. The role of the public sector should be limited to only servicing and facilitating. Such things as construction and building control should be handled by professional organizations from the private sector.”

The Seventh National Plan had already advocated the following:

- support for private sector role to relieve some public responsibilities, such as examination of industrial plant, machinery and equipment, as well as examination of laboratories to promote a greater speed and convince.



- budgetary support to private non-profit organizations to encourage training programmes and support activities for SMIs.
- encouraging the private sector to expend joint venture agreements in foreign countries.

The Department of Industrial Promotion (DIP) has supported this policy in various ways through:

- sponsoring the establishment of the Productivity Institute as a private body with government support to provide consultancy service to private industry in the areas of productivity and quality management. This meant turning over the consultancy function of DIP's former Industrial Productivity Division to the new institute.
- sponsoring the establishment of the Textile Institute as a private body similar to the above. This meant turning over some responsibilities of DIP's Textile Industry Division to the new institute.
- setting up of a Consultancy Fund so that SMI clients can access private and non-DIP consultants through government subsidy.
- subcontracting studies and surveys to private sector institutions.
- sourcing outside DIP for resource persons of training programmes and projects such as the Belgian Government-assisted Off-Farm Job Creation Project which is subcontracted to CARE.
- sponsoring the formation of industry associations such as the Thai Mold and Die Association and the Textile Industry Association so that they can conduct seminars and other activities on their own.

As a natural consequence of the twin factors above- less government and more private sector involvement, there will be a more dynamic public-private sector partnership insofar as sharing of decision making and responsibility for planning, implementing, monitoring and evaluating programmes and activities affecting SMEs as part of a work sharing, cost sharing concert.

More active involvement could be expected from the private sector as an advocacy body, as a consultative advisory group, as joint sponsor and as member of joint public-private sector body such as the Joint Private and Private Sector Consultative Committee (JPPCC) which is the highest public-private sector joint body chaired by the Prime Minister and having its equivalent setup in the provinces. The Thai Chambers of Commerce, the Federation of Thai Industries and the Thai Bankers Association are represented in this body. The various committees of the Board of Trade are actively involved in government consultation. Industry and trade associations are also active as a lobby group, in regulating their own ranks and in providing service to their members in terms of training, information, consultancy, business matching, joint marketing, transfer of technology and organising trade fairs, exhibitions and study missions abroad.



3. Passage of Laws and Regulations 3.

Due to the ever growing importance of SMEs as an economic and political force and the real need to strengthen the competitiveness of the sector, there will be increasing pressure in Thailand to emulate the example of the United States, Japan, Korea, Philippines and Chinese Taipei in formulating specific laws that directly affect SMEs. These new laws could revolve around:

A basic law on SME promotion (as previously mentioned) containing such provisions as:

- creation of a centralised policymaking or coordinating body responsible for SMI development and to be composed of relevant ministries and specialised agencies with strong private sector representation.
- establishment of a SME enterprise agency which evolve from a revamped DIP
- incentives for efficient and priority industries as well as industry clusters
- comprehensive package of measure to promote the sector
- * subcontracting promotion
- * modernisation promotion
- * rural industrialisation promotion
- * bankruptcy
- * structural adjustments and stabilisation measures
- * innovative financing schemes
- * technology promotion
- * private sector promotion and participation

It would also mean that private organizations would become more involve in SME promotion and economic development in general. With the passage of a proposed basic law on SMEs, it is expected that there will be mushrooming of non-governmental organizations, private organizations and even small enterprise associations, foundations or institutes which will be attached to leading universities, large companies and non-profit organizations. These will cater to the needs of SMEs in terms of training, research, consultancy, etc. This would mean an enhanced role for existing private organizations such as the FTI, Chambers of Commerce, Board of Trade, Institute for Management Education of Thailand (IMET), Population and Community Development Association (PDA), and the Thailand Development Research Institute (TDRI), industry and trade associations, among others. This would also mean more autonomy on the part of government corporations whose operations directly affect SMEs, such as the Small Industry Finance Corporation (SIFC), Industrial Finance Corporation of



Thailand (IFCT), Small Industry Credit Guarantee Corporation (SICGC), including the Industrial Estate Authority of Thailand (IEAT), among others.

4. Standardization and Simplification

As part of the basic law, there will be a uniform definition of cottage, small, medium and large industries using the following criterion or a combination of the following factors: employment, total assets, fixed assets, and equity. At present, the ministry of Industry defines a small-scale industry as having employment not exceeding 50 workers and having invested capital (equity) not exceeding 10 million baht. A medium-scale industry is defined as having employment ranging from 50 to 200 workers and invested capital from more than 10 million baht but not exceeding 100 million baht. The Bank of Thailand, the Board of Investment, the Statistics Office, as well as SIFC and IFCT adopt different definitions.

There will be standardisation and simplification of regulations, forms, training, operating systems, etc. so that these will become more customer oriented and user friendly and can readily be replicated on a mass scale for greater access by the people without sacrificing quality. These moves will definitely benefit SMIs especially in the rural areas.

5. Massive Use of Information Technology

Recognising the benefits and advances in information technology, Thailand realised that knowledge is power, but that proper use and mastery of technology are also important. Office and factory automation and communication equipment have revolutionised the manner of doing business both locally and internationally – faxes, cellular phones, Internet, E-mail, Intranet, etc. The application and accessibility of modern information technology in Thailand will be widespread and will be less costly as economies of scale are achieved. Investment by both public and private sectors in Thailand in information technology both software and hardware will expand significantly as the country joins the information cyberspace mania prevailing in other parts of the world. It is expected that a comprehensive, clear-cut policy on this subject will be formulated by the government soon. This trend will force SMIs to apply modern information technology to maintain their competitiveness and enhance their efficiency.

6. Research and Development (R&D)

Thailand's current investment in R&D on science and technology (S&T) is relatively low compared to the newly industrialising countries in Asia and developed countries. However, there is now a growing consciousness to increase R&D in S&T as a result of mass media exposure and the fruits of the dynamic efforts of various specialised government agencies. We will see dramatic increase in R&D investment by both public and private sectors to reach one percent of GDP by the year 2005. Equally important is the successful commercialisation and protection of R&D results so that attractive returns on their investment can be achieved as an incentive for further investment. This would mean that S&T agencies of the government and the private sector will become increasingly more important and prominent. Comprehensive policies in stimulating investment in R&D are expected to be announced soon. This trend should benefit SMIs.

7. Environment consciousness



As even now already pronounced, environmental consciousness by government and society with significantly increase to protect the country from the adverse effects of environmental degradation. More local and international pressure groups will make their presence felt in the way the ecological environment in Thailand should be managed insofar as renewable, non-renewable sources of energy, forest, marine and land resources, polluting and hazardous industries are concerned. Stricter measures on ecological conservation and strict compliance of existing regulations would be imposed by the government, while more cooperation among government, private sector and non-governmental, organizations would be expected. As part of their social responsibility and under external pressure, SMIs will be bound to invest in environmental protection measures, however, this should be seen as a necessary social overhead for the common good.

8. Internationalisation of Business Facilities

There will be a strong trend towards the establishment of strategic alliances by both government and private sector in different countries and towards international subcontracting to take advantage of each country's comparative advantage. Already visible are the agreement under the Asean Free Trade Agreement (AFTA), Asia-Pacific Economic Cooperation (APEC), the Asean Industrial Complementation Scheme (AICO), under the Indonesia-Malaysia-Thailand Growth Triangle (ITM-GT), Mekong River Project, and recently the partnership in economic cooperation between Thailand and Singapore in jointly developing an industrial park in the Eastern Seaboard of Thailand. These strategic moves would facilitate the movement of goods and services and their production within the agreeing countries. This trend highlights a dichotomy of countries competing in some aspects and complementing in other aspects so that the net result would be positive synergies for all. The implication for SMIs is that they have to enhance their competitiveness to reach out to international market niches and at the same time protect their domestic turf's through more efficient operations.

The ultimate goal of the inclusion of SMEs is to promote efficient, productive and self-reliant SMEs that would further contribute to the growth and development of the region and enhance the growing economic interlinkages of the regional economy.

Although SMEs are important in terms of numbers and domestic employment creation, currently they play a minor role in terms of regional trade investment. The Asia Pacific region's export markets and foreign investment flows are dominated by large companies. Hence, there need to be explicit to promote and assists SMEs as regional players.

SMEs face a number of constraints in the regional market, including limited access to market intelligence relating to business opportunities; limited access to production inputs, such as finance; difficulty in meeting product standard specifications; inadequate track records and experience; and the social and cultural mores which discourage the participation of certain groups, for example women, in business activities.

Responsibility in assisting SMEs is could be undertaken both by the public and business/private sectors. In particular, the large enterprises can, through subcontracts and



procurements, assist SMEs to upgrade their technological and managerial capabilities, such as standards quality control.

With their vast marketing, large enterprises can also be of valuable assistance to SMEs in their search for new business opportunities. Strategic alliance including franchising and new forms of dealerships benefic both large enterprises and SMEs alike.

One area where SMEs development is clearly beneficial is the development of a thriving local supporting industry. From the economy's point of view, it serves to attract foreign direct investment; reduce imports of intermediate goods; conserve foreign exchange and hence improve the balance of payments; and assist in employment creation and general economic development.

Despite meticulous forecasting and careful planning, no country can completely escape from the vagaries of economics, social and political uncertainties both from within and outside the country. Thailand is currently facing an economic crisis. But with strong faith in the resilience of SMEs against all odds, in the leadership of our government to handle their crisis, and in the common resolve of our people to improve their economic lot, we are certain we will weather this economic prosperity for all Thai people.

Big Business Linkages Business- SMEs

- Forging win-win symbiotic relations through: franchising, subcontracting, new form of dealerships, and using SME on an "as-needed" basis
- Strategic Alliances within and across national boundaries
- Business networking and information exchange

CONCLUSION

In Thailand, dynamic changes are occurring due to various internal and external factors. Those changes are affecting both public and private sectors. Among the internal factors include the flotation of the baht last July 2,1997 the current economic downturn, government budgetary cuts as part of fiscal discipline, the rise in inflation and labour cost, lack of liquidity in the banking system, etc. Among the external factors are trade liberalisation, competition with other developing countries for foreign capital and markets, negative publicity abroad, etc. All these developments are affecting Thailand's economic progress, hence there is a need to review our targets and strategies. This is now being done by all government instrumentalities headed by the National Economic and Social Development Board (NESDB).

Despite these difficulties. Thailand's economy grow in 1997 – lower than the annual growth in the past decade but still commanding a respectable accomplishment. Thailand's economy has strong fundamentals and its prospects for growth are very bright, hence we expect a short-term economic discomfort. During this time of crisis, we have learned to realise our interdependence and our need to put our act together as demonstrated by the backlash that the baht flotation has impinged on the economies of the Philippines, Indonesia, Malaysia and Singapore.



We have established in this paper some irreversible trends that have to be considered in formulating policy directions for SMEs and SMIs. In fact, many of them would be treated as urgent under this economic situation to put our economy back on course. The policy implications resulting from these dynamic changes both positive and negative, are manifold and they have to be studied carefully.

Thailand's ability to retain its SME. Advantages or create new ones will depend on its ability to formulate a vision and create development plan designed to raise Thai SME to global standard excellence.