

**Coordination and Industrial Organization:  
South Korea's Chaebols versus Taiwan's Small Enterprises**

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This paper compares South Korea's chaebols and Taiwan's small family firms in the evolutionary perspective. Given that all firms exist in order to solve coordination problems, this paper attempts to examine how these two types of latecomer firms deal with uncertainty and knowledge problems. This paper shall argue that in rapidly changing conditions, vertical integration enables Korean chaebols to facilitate communications between departments and to reduce uncertainty by fixing a focal point or by arranging preplay communications. In horizontal diversification, Korean chaebols behave as professional learners and are able to transfer 'overhead' capabilities to unrelated businesses, thus rapidly exploiting economies of scale in mature industries. On the contrary, firms in Taiwan use their small size and hence flexibility to deal with uncertainty. Moreover, being small family establishments, these firms are able to manipulate family trust so to reduce transaction costs. It is concluded that, despite some weaknesses, chaebols are able to promote learning and foster growth in a very short time through its flagship collectivism. On the other hand, small family firms in Taiwan, using guerrilla strategies, together with flexible organisational and industrial structures, are in better position to cope with external shocks such as the Asian financial turmoil.

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## 1. INTRODUCTION

Since Coase's (1937) paper, transaction costs economics as applied to organisations has increasingly emphasised moral hazard and monitoring problems.<sup>1)</sup> The issues of coordination in production 'have been overshadowed by a dominant interest in issues of incentive compatibility' (Langlois and Foss 1997).

In recent years, the capabilities theorists have attempted to refocus their interests on coordination problems. Coordination problems have been consistently regarded as the central economic problem by the Austrian school of economics. As some scholars (for example, see Langlois and Robertson 1995; Yu 1999) in new institutional economics argue, firms exist to solve coordination problems. The purpose of this paper is to compare the two types of latecomer firms, Korean chaebols and Taiwan's small family firms in the coordination perspective. More specifically, given structural uncertainty and knowledge problems, this study attempts to analyse how economic organizations in these two latecomer countries coordinate economic activities and learn to catch up with economically advanced nations.

It will be argued that in rapidly changing conditions, vertical integration allowed Korean chaebols to facilitate communications between departments and to reduce uncertainty through the fixing of a focal point or the arrangement of preplay communications. In horizontal diversification, Korean chaebols, as professional learners, were able to transfer 'overhead' capabilities to unrelated businesses, thus rapidly exploiting economies of scale in mature industries. On the contrary, small firms in Taiwan focused on flexibility in dealing with uncertainty. Moreover, being family enterprises, these small firms were able to manipulate trust in order to reduce transaction costs. It is

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1) However, Langlois and Robertson (1995, p.36) argue that the problem of hold-up or opportunism is neither a sufficient nor a necessary condition for vertical integration.

concluded that, despite certain shortcomings, chaebols were able to promote learning and coordination during market penetration and fostered growth in a very short time through their 'flagship' collectivism. On the other hand, small family firms in Taiwan, adopting guerrilla strategies, together with flexible organisational and industrial structures, were in better position to cope with sudden external shocks. In what follows, a coordinating view of the firm is presented (section 2). The organizations of industry in South Korea and Taiwan will be outlined in section 3. A comparative analysis of Korea's chaebols and Taiwan's small businesses in the coordination perspective will be presented in sections 4 and 5. Section 6 draws conclusion.

## **2. FIRMS AS COORDINATION ORGANISATIONS**

Human action is always oriented toward other individuals (Weber, 1964; Mises, 1949). Furthermore, action is forward looking and extended into the future. Uncertainty arising from the actions of others generates economic problems. Expressed differently, the success of a plan depends on the extent to which the plan is adapted to the external world and more specifically, to the actions of other human agents (Langlois, 1986, p.173). As Hayek (1945, p.523) argues, all economic problems are knowledge problems, arising out of uncertainty. Human agents in daily life find at any given point of time a stock of knowledge at hand that serves them as a scheme of interpretation of their past and present experiences, and also determines their anticipation of things to come. The stock of knowledge at hand is by no means homogeneous. Human agents, because of diverse experiences, will respond differently to the same objectively defined stimulus (O'Driscoll and Rizzo, 1985, pp.38-39; Yu, 1999, p.27). In Lachmann's words (1970, p.36), "different men in identical situations may act differently because of their different expectations of the future." In short, economic problems – the problems of coordination during the market process – are associated with understanding the meanings of other individuals' actions.

In rapidly changing conditions, agents' abilities to coordinate their plans deteriorate (Langlois, 1986, p.179). Human agents are always eager to reduce uneasiness arising from uncertainty (Mises, 1949). Such uncertainty can be attenuated by means of institutions in which actors share a similar stock of knowledge and attach the same meaning to their actions. The firm, as a concrete institution, provides a means of orientation to a large number of actors. By reducing the volatility in the plans of others, the firm enables actors to coordinate their actions, thus reducing costs of communications. The firm, when viewed in Lachmann's concept of institution (1970, pp.49-50), "enables ... coordinating the actions of millions whom they relieve of the need to acquire and digest detailed knowledge about others and form detailed expectations about their future action".

In production, there are two ways for firms to tackle uncertainty and knowledge problems. One way is to forward integrate so that, within the one organisation, knowledge can be shared and decisions can be internalised. This can be regarded as an offensive strategy. Alternatively, the firm can keep its size small, maintain high degree of flexibility so that it can respond to external shocks rapidly and effectively, thus reducing loss. This is a defensive strategy. This paper argues that Korean Chaebols took the first route while Taiwan's manufacturing firms opted for the second. Moreover, chaebols' strategies enhanced collective learning and promoted growth in a very short time period while small family firms in Taiwan were in better positions to cope with business cycles.

### **3. THE ORGANISATION OF INDUSTRY IN SOUTH KOREA AND TAIWAN**

The economic successes of South Korea and Taiwan between early 1960s to early 1990s are well documented (for example, see Amsden 1989; Wade 1990; Redding 1990; Hamilton 1991). The growth performances of these two economies during this period are impressive. In 1996, the year before the Asian financial turmoil, Taiwan achieved a real (gross domestic product)

growth rate of 5.7 per cent while South Korea, of 7.1 per cent. During the last two decades, ie. 1984-1996, South Korea and Taiwan achieved an average real growth rate of 8.6 per cent and 7.7 per cent respectively.<sup>2)</sup> Interestingly, despite high growth performance of these two economies during this period, their industrial organisations drastically differ. Korea's industry has been organised into large gigantic corporations called chaebols while Taiwan's industry has been dominated by a large number of small firms. This phenomenon clearly indicates that there is more than one path to growth.

### **3.1. Business Environments**

There are some similarities in business environments in South Korea and Taiwan: Firstly, both economies have faced external threats from the communists and hence volatile political and economic situations. Secondly, both economies have their cultures deeply rooted in the Chinese Confucian teaching.<sup>3)</sup> Thirdly, the developments of both economies were guided by the government (Wade, 1990; Yu, 1997). Yet, unlike chaebols which were created, maintained, and promoted by the Korean state (Kim, 1991, p.273), Taiwan's industrial policy did not discriminate against smaller firms: any firm, irrespective of size, could participate in industrial promotion programs, including concessionary credit (Ernst, 1998b, p.42). Whereas the Guomindang government of Chiang Kai-Shek did not want to foster large companies that would one day become competitors to the party, the South Korean government under Park Chung-Hee sought to create large national champions that it hoped would revive the Japanese Keiretsu in world markets. Park wanted to create millionaires who promoted the reform of the economy (Fukuyama, 1995, p.138). Fourthly, the economic successes of South Korea and Taiwan were principally attributed to private entrepreneurship and family

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2) calculated from data provided by International Financial Statistics Yearbook 2000 and Taiwan Statistical Databook 2000.

3) For a discussion of the Confucian ethics in South Korea, see Chang and Chang (1994).

business (Jones and Sakong 1980; Redding 1990; Greenhalgh 1995; Numazaki, 1997; Yu, 1997). They looked for profit opportunities in the market and pursued imitative strategies.<sup>4)</sup> Like other Asian latecomer economies, catching-up in South Korea and Taiwan focused on capacity and international market share expansion for mature and low value added standard products (Ernst, 1998a; 1998b).

### 3.2. Structure of Industry

As mentioned, the South Korean government under Park Chung-Hee wanted to create millionaires who promoted the reform of the economy. In particular, he sought to create large national champions that it hoped would revive the Japanese Keiretsu in world markets. Hence the Park government aimed at heavy industries such as chemicals, machineries, automotive and steel which require significant economies of scale. As a result, South Korea's industry is dominated by large chaebols<sup>5)</sup> which accounted for nearly 52 per

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4) One major difficulty of latecomer firms faced is a high level of uncertainty from the emergence of innovative new products or processes in international markets. The best way to tackle this kind of uncertainty is to be an imitator (Bolton, 1993, p.37). Imitation can be a clever competitive strategy involving investment, creativity, and insight. Imitative firms exploit the success of others. Although they have not invented a product or a service, they have perfected and positioned it. Imitators do not aspire to leapfrog their competitors, but are content to follow the innovators at a distance. In other words, imitation is strategic followership (Bolton, 1993, p. 32). On many occasions, imitators even purposely delay adopting a new product or practice (Yu, 1997, p.41). For instance, that Matsushita's low-cost strategy in the consumer electronics business was built upon being a second-mover. The company deliberately arrived late in the marketplace, waited and watched until consumers accepted a rival's new product, and only then started to produce a large volume of standard improved products which it sold at lower prices.

5) According to the Fair Trade Commission in 1992, any enterprise can be considered as a chaebol when the total assets of the enterprise amount to 400 billion won. Hence, chaebol groups are giant conglomerates by the South Korean standard (see Amsden, 1989).

cent of South Korea's gross national product in 1991 (Chang and Chang, 1994, pp.60-61). Chaebols grew at a phenomenal rate during the Park Chung Hee regime (1961-1979). Specifically, Hyundai, one of the major chaebols, grew at an average rate of 32.1 per cent every year between 1971-1983 (Kim, 1991, p.272). In 1992, the top five chaebols in terms of sales are Hyundai, Samsung, Lucky-Goldstar, Daewoo and Sunkyong. Totally, they held 188 companies, with sales up to US\$94.3 billion. In the manufacturing and mining sectors, in 1995, the top five chaebols accounted for nearly 26 per cent of the total shipments, 11.4 per cent of the employment and 27 per cent of the total value added of the Korean economy. In the same year, the proportion of the top 30 Chaebols was 40.7 per cent of the total shipments, 18 per cent of the employment and 40.2 per cent of the total value added output of the Korean economy (Yoo, 1998, p.2). In 1996, the top five and top 30 chaebols accounted for nearly 8.6 and 15 per cent of Korea's gross domestic product respectively (Yoo, 1998). Despite the collapse of Daewoo during the Asian financial turmoil, total assets of 16 chaebols were still valued at 310.8 trillion won at the end of 1999, with combined sales total 263.7 trillion won. Under the corporate reform, the number of subsidiaries of the top 30 chaebols fell to 575 in September 2000 (Bridge Information System Inc., September 26, 2000).

With the assistance of the government, Taiwan's manufacturing industry has also developed into some giant corporations. Contrary to South Korea, the degree of industrial concentration in Taiwan's industry has reduced over time. As of the mid-1960s, Taiwan's large firms of over 500 workers had accounted for a higher percentage of manufacturing employment than in South Korea (35 per cent to 26 per cent). However, by 1976, when South Korea's large firms share peaked at 45 per cent, the figure in Taiwan was actually down to 26 per cent. Furthermore, in early 1990s, large firms accounted for almost 90 per cent of the total value added in South Korea as against only 20 per cent in Taiwan (Berry and Mazumdar, 1991, p.43). Instead, Taiwan's economy has been dominated by the 'army of ants' – small and medium-sized enterprises (Amsden, 1989, p.9; Ernst, 1998a, p.53). In 1992, the proportion of small and medium enterprises in Taiwan reached over 96 per cent of the total number of

enterprises. Small and medium enterprises accounted for over 60 per cent of exports, as well as creating over 78 per cent of employment opportunities (Liao and Kao, 1995, p.97).

#### **4. KOREAN CHAEBOLS AND THE 'FLAGSHIP' APPROACH**

##### **4.1. Korean Chaebols**

Korean Chaebols consist of many subsidiaries usually owned and controlled by a single family (Yoo, 1998, p.1). The word 'chaebol' comes from the Chinese word 'caifa', meaning the rule of the family. According to Chang and Chang (1994, p.62), the family relationship is crucial in the Korean management system. In almost all the chaebol corporations, the family members of the founders play essential roles in the management of chaebol groups. In most cases, children of the founders hold the key positions in their organisations and the elder sons usually succeed his father empire.

The chaebol is a business empire, owned and managed by the founders and their family members. The flagship of the company – the core power of the Chaebols – is directly under the control of the owners. The empire founders act as commanders in chief of the fleet. Around the flagship (holding company) are subsidiary firms following the owners' direction. The flagship is responsible for identifying profit opportunities, mobilising resources, seeking external relationship with government officials, acquiring external funds with banks etc. The market expansion and growth of chaebols rely on trained professional managers under the instructions of the flagship.

As will be mentioned below, though Chaebols, as a gigantic organisation, have exhibited some weaknesses such as high transaction (monitoring) costs, rent seeking activities via their involvements with the government, lack of flexibility and economic calculation,<sup>6)</sup> they do possess certain advantages.

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6) For a discussion of chaebols' problems in light of the recent Asian financial

Specifically, by reducing uncertainty through vertical integration and enhancing learning in horizontal diversifications, Chaebols were able to penetrate markets and exploit economies of scale in a very short period.

## **4.2. Coordination and Learning in Chaebols**

When South Korea began to enter the international markets in the late 1960s, it attempted to master as quickly as possible the types of production technology that would enable it to capitalise on its low labour costs while, at the same time, reaping economies of scale (Ernst, 1998b, p.11). One of the most striking features of chaebols had been their extraordinary growth in a short period (Kim, 1991, p.282). There are two kinds of expansion involved, namely vertical integration and horizontal diversification.

### **4.2.1. Vertical Integration and Coordination**

From 1981 to 1986, there were 1136 reported case of chaebol beginning to own new businesses. Among these, 215 cases belonged to vertical integration (19.9 per cent of the total) (Amdsen, 1989, p.125). For example, the Hyundai group branched out vertically from construction to cement manufacture and shipping, and from shipbuilding to shipping and steel structures. The Hanjin group included tourism industry business – an airline, a bus line and a travel agency. Vertical integration enables Chaebols to tackle uncertainty<sup>7)</sup> and

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upheaval, see Ernst (1998b) and Khan (1999).

7) According to the mimetic isomorphism argument (Kim, 1991, p.275), chaebols exist as an attempt to respond to uncertainties in its environment by mimicking existing organisational structures that have weathered the uncertainties. In any time period since Korea's liberation from the colonial power, the uncertainties of the Korean economy have far outweighed the stability and certainties; In 1945, when Korea had its first opportunity to develop its own industrial organisation, the economic outlook was very bleak. Hence, it was inevitable that Korean businesses would adopt many features of the zaibatsu in their industrial organisation.

facilitate communication by fixing a focal point, arranging preplay communication as well as reducing dynamic transaction costs.

(i) Focal point and preplay communications to tackle uncertainty

Uncertainty gives rise to economic problems. George Richardson, in his seminal work, "Information and Investment" (1960), argues that because of knowledge problems, firms may either over or under investment in capacity. Suppose that entrepreneurs perceive a profit opportunity in the market. If each of them believes that it is in a position to take full advantage of a probable increase in demand, all of them will invest in new capacity, resulting in an overall excessive expansion. However, if all producers assume that their competitors are likely to invest, then none will expand.

Coordination failure often occurs in the situation where there is mutual interdependence among related industries. The traditional example related to the development of downstream and upstream industries mainly focus on economies of scale (for example, see Stiglitz, 1996, p.160) or externalities (for example, see Itoh *et al.*, 1991, pp.50-55). Insufficient attention is put on the difficulty of making a decision under uncertainty (Nelson and Winter, 1982). Suppose that a Korean firm considers construction of a large-scale blast furnace to reduce production costs.<sup>8)</sup> The high fixed costs involved means that the project will be unprofitable in the absence of a huge demand for steel. Yet, if the blast furnace is built and steel is supplied at lower prices, demand for steel may increase substantially. Firstly, a fall in steel prices makes the existing industries, like shipbuilding, more competitive in international markets, raising derived demand for steel. The increased demand for steel results not only from higher demand by the shipbuilding industry due to improved cost conditions but also from additional demand generated by an increase in the number of firms in the industry due to new entry. Secondly, declining steel prices can create new industries, like the automotive industry, which were previously unprofitable due to cost considerations. Thus, the automotive industry provides a new source of derived demand for steel and such demand

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8) This case is taken from Itoh *et al.*(1991, p.65).

further increases with the development of industries auxiliary to the production of vehicles. Thirdly, a fall in steel prices can result in lower transport costs as industries like shipbuilding, automotive and other related industries expand and develop, thereby reducing the raw material cost for the steel industry itself. Hence, changes in industry *X* alter the environmental set up for industry *Y*, resulting in changes in price and demand for that industry's products. This in turn affects the environment surrounding industry *Z*, resulting in a change in prices and demand in this industry as well. The chain effects are ultimately reflected in the change in demand and supply conditions for the steel industry.

Given that the decision of one firm depends on others, there may be no incentive for a firm to initiate a project that involves high fixed costs. However, if there is a central agent to conduct the exchange of information and coordination of expectations among various firms, then the industries can be possible (Itoh *et al.*, 1991, p.71). Vertical integration enables a central agent to be formed to fulfil the coordination function. Specific solutions include setting a focal point and preplay communication.

Itoh *et al.* (1991, pp.70-71) use game theory to show that the existence of "focal point" (Schelling, 1960) or "preplay communications" can solve the dilemma. By setting a "focal point" in the form of one piece of information, it can help to coordinate the expectations of various economic agents (Itoh *et al.*, 1991, p.73). Such an argument explains the need of vertical integration. Given that individual projects in the upstream and downstream are mutually dependent, vertical integration enables chaebols to internalise the decisions of several independent units. Once a focal point, say, a project in the upstream, is fixed, then the benefits of the downstream industries can be exploited.

Alternatively, if the involved parties can meet in advance and agree to execute their plans, then more projects will be realised. Thus, Chaebols with its highly integrated relationship can facilitate the exchange of information among industries with vertical firms. Wade (1990, p.307) reports that, in South Korea, cooperation of integrated chaebols is achieved through "innumerable, continuously operating forums for coordinating views and investment plans, sharing international commercial intelligence, making adjustments to conform to the business cycle or other changes in the economic environment, deciding

on the new industries needed in order to maintain international competitive ability.<sup>9)</sup> Interactions among several vertical departments are the economic foundations for industrial strategies of Korean chaebols.

(ii) Reducing dynamic transaction costs<sup>10)</sup>

As mentioned, firms exist as a coordinator of economic activities. Applying Silver's (1984) arguments, we can explain how chaebols' vertical integration can reduce dynamic transaction costs. The original Silver's argument is associated with Schumpeterian coordination – that is, radical technological breakthrough. His insights can be extended to include all situations where changes are rapid and unexpected. Hence, Schumpeterian innovation can be regarded as one of the cases of rapid economic change. Suppose that an entrepreneur perceives a new opportunity and wants to move into this industry as soon as possible to exploit profit margins as an early imitator. The success of such a move often requires inputs to be delivered in a very short notice. This also means a rapid adaptation of complementary activities for the suppliers. The problem for the entrepreneur is to convince suppliers of inputs to adapt from time to time new production rates. However, in the market, these supplying firms are accustomed to the 'normal' pace of doing things. In other words, experiences tell these suppliers to keep the same rate of production as before. Therefore, it is very costly for the entrepreneur to inform and persuade<sup>11)</sup> the contracting parties to change their paces of production and to adjust quickly their specialised assets to meet the new requirements. In many cases, suppliers may simply refuse to supply the complementary goods. Owing to this difficulty, it may be less costly for the

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9) For a further discussion of interactions between chaebols, government organisations and industrial associations, see Jones and Sakong (1980), Amsden (1989).

10) Dynamic transaction costs include the costs of teaching, learning and persuading other market participants. See Langlois and Robertson (1995).

11) The role of persuasion in economic life has received attention in recent years. McCloskey (1994:76-79) shows that, in the United States, about a quarter of the labour force or national income in 1988 devoted to persuasion activities.

entrepreneur to integrate the co-specialised activities and to employ those parties with the relevant skills than to contract them out (Langlois and Robertson, 1995, p.38). After integration, the entrepreneur can adjust the production rates at his or her own discretion. Applying the original Silver's argument, General Motors in the 1920s subcontracted little because it was an innovator and at that time, few outside firms were familiar with the parts that it required (Amsden, 1989, p.179). However, automotive manufacturing that Hyundai nowadays involves in is no longer innovative industries. Yet, vertical integration allowed Hyundai, during its aggressive expansion and hence rapidly changing conditions, to obtain a fluent supply of parts.<sup>12)</sup> In short, vertical integration helps chaebols to attenuate the threat of input shortage; In addition, it also provides a differentiation advantage through access to internally developed high-performance components; and it can strengthen the position of downstream divisions that are users of these components<sup>13)</sup> (Ernst, 1998b, p.46).

#### **4.2.2. Horizontal Diversification: Learning, Capabilities and Exploitation of Scale Economies**

Coase (1972, p.67) once asked "why General Motors was not a dominant factor in the coal industry, and why A&P did not manufacture aeroplanes". In the resource-base perspective, the answer is that capabilities have their limits. There are diminishing returns to spreading one's capabilities over more activities. The more the firm diversifies, the greater the extent of dissimilarity of activities the firm will be involved and hence requires skills which is different from the firm's core capabilities. Richardson (1972, p.895) concludes that firms would find it desirable to concentrate on similar activities when

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12) To be sure, Hyundai today has subcontracted to a far greater degree than General Motors did in the 1920s (Amsden, 1989, p.180).

13) Excessive vertical integration leads to very high fixed capital cost burdens and limited flexibility. As long as components are only for in-house consumption, the less chances that they will correspond to the international standards (Ernst, 1998b, p.37).

choosing a strategy. Note that the new activity needs not to be linked technologically to what the firm previously been doing. The new activity only requires a similar set of capabilities. In Richardson's terms, the activities need not be complementary, but must be similar. For example, the manufacture of silicon wafers requires capabilities quite different from the fabrication of the semiconductors. Therefore, the wafers are supplied by chemical companies rather than by electronic firms (Langlois and Robertson, 1995).

The growth strategies of Korean chaebols seem to contradict the capabilities view. Chaebols' growth had occurred through octopus-like diversification into many different and unrelated industries (Ernst 1998b, p.25). Diversified business groups in Korea's industry are unique in the sense that it is more diversified in unrelated products than the modern industrial enterprise on the one hand, and more centrally coordinated than the conglomerate on the other (Amsden, 1989, p.151). A fully diversified chaebol engages in a broad range of unrelated businesses such as sugar, flour, textiles, toys, department stores, automobiles, shipbuilding, construction, insurance, computers, televisions and other consumer durable goods. From 1981 to 1986, there were 1136 reported case of chaebols beginning to own new businesses. Among these, the number of horizontal integration (intra-industry) was 324 (28.5 per cent of the total) and diversifications into other industries (inter-industry) was 597 (52.6 per cent of the total). Because of the diversification, the top five chaebols are in an average of 140 different sectors each (Ernst, 1998b, p.52). According to the capabilities view, horizontal expansion has its limits. Due to capabilities constraints, it may not be worth for firms to diversify into industries that are not similar. How can chaebols' handle the capabilities problems during their aggressive diversification?

An examination of chaebols' investment and learning strategies may reveal some clues to the answer. Firstly, given a lack of technical expertise to build upon in related products or in high quality product niches, chaebols diversify as much as they can (Amsden, 1989, p.126). Each time a chaebol had reached the limits of easy capacity and market share expansion for a particular product, it moved on to a new product group that promises rapid market expansion. Rather than deepening their involvement in a particular sector or a group of

related products, chaebols had typically used diversification as a short cut to rapid market share expansion.

Secondly, technological capabilities can be classified into three areas: (1) production capabilities, the skills involved in optimising the operation of established plants, (2) investment capability, the skills involved in executing new projects and (3) innovation capability, the skills necessary to create new products or process (Amsden, 1989, p.175). Chaebols have been able to accumulate increasingly sophisticated production and investment capabilities, both in typical mass production industries like automotive and consumer durables and in resource-intensive process industries like the steel industry. These industries are mature and standard types which exhibit significant economies of scale and their technologies can be relatively easy to be acquired in the markets. By getting the right product to the highest volume segment of the market on time, chaebols can heap huge profits. For example, in the electronics industry, Ernst (1998b, p.26) reports that almost without exception, chaebols had targeted those segments of the industry that require huge investment outlays and sophisticated mass production techniques for fairly standard mature products like microwave ovens, TV sets, VCRs, computer monitors, computer memories. Overtime, an economy of scope arose in the form of the capability to diversify: entering industries at minimum cost and at lightning speed raised the firm's ability to compete in many markets (Amsden, 1989, p.151). Ernst (1998b, p.15) concludes that chaebols in general possess "the capacity to carry out at short notice and at low cost investments in the capacity expansion and/or modernisation of existing plants and in the establishment of new production lines".

Thirdly, Chaebols were able to mobilise resources, transfer capabilities among the member groups, and facilitate learning. This organisational flexibility can be regarded as internal capabilities. Within chaebols, the leaders specialised in opportunities discovery while the family members specialised in administration and learning. Using their experience in learning, leaders transferred professional staffs (family members) to the branch manager for exploitation of market opportunities. When a target industry was identified, a new subsidiary was established by a task force typically formed at the group

level and comprising qualified managers, engineers and supervisor from existing companies within the group. Internal transfer of resource was facilitated, based on the ease of mobilising and exchanging capital, technology, and personnel among the companies. It was not unusual for top executives to be transferred from one company to another; those known for their management skills may be transferred to companies that are in trouble or that are rapidly expanding. For example, in Hyundai's expansion, managers from its construction arm were transferred to its shipbuilding arm and later to its automotive affiliate. Such transfers increased the capability to diversify and were facilitated by the core family owners in the flagship. Furthermore, although the ownership of companies within a chaebol group is maintained separately, immediate cash funds were often arranged through financial-service and insurance companies and loans can be arranged between companies without the complicated bureaucracy involved in acquiring bank loans (Kim, 1991, pp.277-8). Thus, within a very short time, Hyundai was able to develop into multi-product firms and yet still under the family management, with salaried managers in command at the industry level and with a capability to enter new industries quickly. Over time, the group was able to accumulate experience in the areas of feasibility studies, task force formation, purchase of foreign technical assistance, training, equipment purchase, new plant design and construction, and operation start-up. This experience became a valuable asset which allowed Chaebols to move into many industries and exploit economies of scale of the target industries (Amsden, 1989, p.128). In summary, vertical integration allows chaebols to deal with uncertainty by arranging focal points and preplay communication. Moreover, in rapid changing conditions, by facilitating communications among various departments, dynamic transaction cost can be reduced. In horizontal diversifications, though not without costs, chaebols were able to effectively transfer their 'overhead' capabilities to unrelated businesses.

The above analysis should not be construed that chaebols had achieved optimal diversification. On the contrary, it is generally agreed that chaebols had been over-expanded. As the firm grows and external corporate finance becomes important, a potential conflict arises due to the separation between

dominant owner-manager and the external financiers. Severe problems can arise from the adverse selection and moral hazard. With little incentive for self-monitoring, the monitoring by outside financiers became the crucial requirement for good corporate governance. Unfortunately, banks were not in a good position to effectively monitor the chaebols they had financed. One of the reasons is that chaebols are largely protected by the government. As a result, more risky investments are made (Khan, 1999). This can be reflected partly from the following message from the chairman of the Daewoo Groups:

"I have succeed to a certain degree, in building new businesses and increasing employment opportunities... I believe that these accomplishments demonstrated to the Korean people the possibility of succeeding with almost any business in Korea. Looking back, however, I feel I could have concentrated on developing a Korea company which produced the best quality product in the world, rather than diversifying to various fields" (cited in Amdsen, 1989, p.127).

Daewoo had sacrificed profit for growth and lost sense of focus. Over-expanded strategies eventually got the firm into financial troubles and went bankrupt. With the rescue package from the International Monetary Fund, other remaining chaebols have subsequently shed unprofitable businesses and concentrated on core industries, thereby effectively reducing the average debt-to equity ratio (Clifford, 1997, pp.18-21).

## **5. SMALL BUSINESS AND GUERRILLA INDUSTRIALISM IN TAIWAN**

Korean Chaebols have developed into giant family empires, either through vertical integration or horizontal diversification, to promote learning, tackle uncertainty and boost growth. Unlike Korea Chaebols, most firms in Taiwan tackle uncertainty, not by forward integration, but by means of flexible small

establishments. Furthermore, by manipulating family trust and focusing on mature products, these small firms are able, to certain extent, to reduce transaction costs.

A method to deal with uncertainty and volatile external situations was to maintain a high degree of flexibility in production so that firms can adapt quickly to the changes in external conditions beyond their control. Jacobson (1992) argues that flexibility is a critical strategic factor in the market process. Flexibility of a small firm lies in the small amount of capital structure and each capital goods are not so specialised such that re-structuring is often possible. Even if re-structuring is impossible, entrepreneurs can simply close down the whole business and re-establish another new business again without rendering high costs (Yu, 1999).

Small Chinese family firms in Taiwan are generally regarded as highly flexible organisations (Lam and Lee 1992; Wang 1996; Ernst, 1998a). They are capable of accepting orders subject to widely differing requirements with respect to amount, date of delivery and special specifications and there is a constant attempt to develop new lines of products in response to change in the world market. Commenting on the Asian economic success, Sung (1987, pp. 47-48) concludes that flexibility contributes to its competitiveness and the small-scale family enterprise segment of the economy plays an almost indispensable part in this regard. Furthermore, these small manufacturing firms have adopted a short-term view of production and are able to respond quickly to changing market requirements (Ernst, 1998b, p.44). Referring to this feature as guerrilla capitalism, Lam and Lee (1992, p.109) rightly conclude that Chinese small family firms in Taiwan succeed by exploiting market opportunities using the strategy of a guerrilla force. They seek out an opportunity for high profit margins in a particular good, develop a formula, and exploit it by rapidly flooding the market before the established firms can respond. They make profits over the short term, and then leave the market for another before competition forces prices down to the point where they are no longer profitable without large-scale investments in technology or infrastructure.

### **5.1. Internal Organisation, Flexibility and Transaction Costs**

Though Korean Chaebols are family owned, they have developed into gigantic corporations that they have to rely on outsiders or professional managers. As a result, these firms lose organisational advantages of a small family firm, manifested in flexibility and family trust.

The ability of a small Chinese family firm in Taiwan to maintain flexibility in production is partly attributed to its unique organisational structures and communication methods.

Regarding the internal structure, Chinese family firms in Taiwan exploit family trust as a source of flexibility. Wong (1991, pp.21-22) remarks that 'in the range of personal relations used by Chinese entrepreneurs to maintain business trust, family ties are particularly important'. In his view, trust among family members can facilitate quick decision making so that the family unit is able to adapt to rapidly changing situations. Such advantages can also be found in human resources and capital financing. Specifically, in the peak season, hiring additional staff may be extremely difficult. Furthermore, it is not easy to lay off workers in the non-peak season due to the contractual agreements. Willingness to working overtime, family members become a reliable source of manpower and provide firms with flexibility. Similarly, in capital financing, Chinese entrepreneurs often rely on their family members who are willing to contribute to the collective advancement.

In terms of internal communication, members of a small Chinese family firm traditionally believe that what is not said is more important than what is said. Though this style of communication requires some guessing and thus increases transaction costs, it does have advantages, notably flexibility, because it allows the senior person in a firm the luxury of unaccountability for changes of direction and other forms of interference (Redding, 1990, p.163). Furthermore, this mode of communication has important implications for competition. Interactions between employees and employers in the form of a paternal relationship enhance mutual understanding and expectation, thereby facilitating the learning process. As Eriksen and Mikkelsen (1996, p.68) point out, codified knowledge can be easily transferred to others with very little

training, but tacit knowledge, characterised as know-how, is often difficult to transfer. In this view, tacit knowledge can only be transferred by long periods of interaction in a group. The communication process within the Chinese family has the advantage, therefore, of facilitating the transmission of tacit knowledge. Moreover, such patterns of communication are difficult to imitate, particularly by overseas competitors, and thus contribute to the sustainable competitive advantage of Chinese firms in Taiwan.

## **5.2. Flexible Subcontracting Networks and Transaction Costs**

The integration of small family firms into large-scale industrial networks accomplished through subcontracting has been significant for the economic development of Asian latecomer economies such as Taiwan. In latecomer economies, laws and contracts have not yet developed to the point where the traditional modes of regulation can be abandoned. As Hamilton (1977, p.339) argues, in the absence of state institutions, adopting networks can provide a regulation of business. Klein (1977, p.179) notes that subcontracting has important advantages 'not only for static efficiency, but also for dynamic efficiency. The smaller the units in which competition can take place, the easier it is to enter an industry; and with easier entry, competition is more likely to thrive'. Teece *et al.* (1997, p.521) once notes, "change is costly and so firms must develop process to minimise low pay-off change. The ability to calibrate the requirements for change and to effectuate the necessary adjustments would appear to depend on the ability to scan the environment, to evaluate markets and competitors and to quickly accomplish re-configuration and transformation ahead of competition". Decentralisation (subcontracting) assists these processes. Firms that have honed these capabilities are sometimes referred to as 'high-flex' as opposed to high-tech.

Contrary to the Korean industry, Taiwan's industry is characterised by a large number of small family firms, integrated through subcontracting networks. Subcontracting has been extensively practised in the manufacturing sectors of Taiwan. Most of the family firms used subcontracting to tackle labour shortages, insufficient capacity, and seasonal fluctuations.

When engaged in subcontracting, small family firms in Taiwan utilise personal networks to acquire orders.<sup>14)</sup> Little use of impersonal channels like advertising or sales promotion has been recorded. Hence, small firms manoeuvre within a small circle of business friends, rather than needing to reach out to a larger market. Moreover, their business practices reveal a high degree of goodwill trust. Agreements between trading parties are mostly made verbally on an informal basis. By using personal networks, these small family firms have been able to handle small orders, meet seasonal demands, and deliver goods in a very short period. As a result, small family firms in Taiwan gain 'competence trust' (Sako, 1992) by revealing to overseas buyers that they can efficiently produce unsophisticated labour intensive commodities.

### **5.3. Family Trust, Non-innovative Activities and Transaction Costs**

Taiwan's manufacturing firms are latecomers which produce mature standard products for foreign multinationals. Langlois and Robertson (1995) argue that for non-innovative activities, which require little coordination among departments, subcontracting is preferred. As technology matures, previously tacit knowledge spreads and transaction costs decline. Both of these trends reduce the advantages that firms have in producing their own inputs and encourage increased use of markets. The attractiveness of outsourcing is therefore likely to be greater for imitative firms, which, by definition, employ relatively mature technologies, than for innovative ones.

Robertson and Yu (1997) extend this argument to analyse small family enterprises. In their view, small family firms can effectively reduce transaction cost by manipulating trust in the family if they engage in non-innovative activities. Family firms are an appropriate form of organisation for newcomers when market uncertainty is high but technologies are relatively stable. Two qualities distinguish small family firms. One, the level of transaction costs is largely a function of the presence or absence of trustworthy behaviour in

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14) According to Foss and Eriksen (1995, p.45), shared behavioural norms are among the industry capabilities which may yield rents.

market transactions. The second quality is the availability of certain types of capabilities that form the basis of the operating knowledge of the firm. The relative importance of these two qualities depends on whether the firm's activities are based on knowledge available in the marketplace or on knowledge that is held tacitly within a given firm. Although trust and knowledge are required by all firms, the importance of trust is relatively greater for firms that rely on available knowledge, while innovative firms must place a higher degree of emphasis on the use of tacit knowledge that may not be available through market transactions. Therefore, Taiwan's small family firms focusing on mature standard products can reduce transaction cost by manipulating family trust relationships.

In summary, the guerrilla strategies enable small Chinese family firms in Taiwan to tackle uncertainty by maintaining high level of internal and external flexibilities. This is achieved largely through the unique organisational structure of and communication methods in Chinese family business, as well as the use of subcontracting networks. Furthermore, focusing on the mature standard products, they are able to manipulate family trust to reduce transaction costs.

## **6. CONCLUDING REMARKS**

This paper compares Korean chaebols and Taiwan's small family firms in the coordination and learning perspective. Specifically, given that all firms exist to solve coordination problems, this paper attempts to examine how these two types of firms deal with uncertainty and knowledge problems. It argues that in rapid changing conditions, vertical integration allowed Korean chaebols to facilitate communications between departments and to reduce uncertainty by fixing a focal point or by arranging preplay communications.

In horizontal diversification, Korean chaebols, as professional learners, were able to transfer 'overhead' capabilities to unrelated businesses, thus facilitating expansion. On the contrary, firms in Taiwan used their small size and hence flexible capabilities to deal with uncertainty. Moreover, being small family establishments, these firms were able to manipulate family trust so to tackle

uncertainty arising out of rapid changing conditions as well as reducing transaction costs. It is concluded that, despite certain shortcomings, chaebols were able to promote learning in the production of the mature standard products and foster growth at a very short time through its flagship collectivism. On the other hand, small family firms in Taiwan, using guerrilla strategies, together with flexible organisational and industrial structure, were in better position to cope with sudden shocks such as the Asian financial turmoil.

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