ORGANISATIONAL PATH-DEPENDENCE AND INSTITUTIONAL ENVIRONMENT:

THE CASE OF EAST ASIA'S CHINESE FAMILY BUSINESS GROUPS

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Abstract

Through a case study of Chinese Family Business Groups (FBGs) in East Asia, this paper examines the relationship between the strategic behaviour exhibited by an organisational form and it's administrative heritage. To do so, we trace the origins of the strategic behaviour which scholars commonly attribute to FBGs to the environmental conditions prevailing during their emergence in the turbulent post-Colonial era of East Asia. We explain how fundamental changes brought about by shifts in the post-Cold war environment of East Asia have confronted FBGs with new opportunities and organising imperatives which their administrative heritages have left them ill-equipped to deal with. In concluding, we explain how the lack of fit between a dominant organisational form and contemporaneous environmental conditions may have significant implications for the organisations themselves and the economies whose landscape's they dominate.

Keywords Path Dependence, Administrative Heritage, Family Business Groups, East Asia, Financial Crisis, Corporate Governance.

Introduction

The business behaviour of East Asian Chinese Family Business Groups (FBGs) is often linked to Confucian values that promote diligence, order, filial piety and familial responsibility (Fukuyama, 1995). Some analysts have argued that the modern day FBGs which are prominent features of the economic landscapes of Hong Kong, Taiwan, Singapore, Indonesia, Malaysia and the Philippines (Claessens, Djankov, Fan & Lang, 1999) are uniquely a product of their Confucian cultural heritage (Hall & Wu, 1990, Wong, 1985). Indeed, many of the business practices commonly ascribed to Chinese FBGs undoubtedly reflect the cultural values of their founding entrepreneurs (Koa, 1993, Fukuyama, 1995). On the other hand, since Confucian values have endured over many centuries (Fukuyama, 1995), but the capitalistic-entrepreneurial behaviour often attributed to FBGs has been notably absent through much of this period (Hodder, 1996), cultural factors alone cannot explain the ascendancy of this form of business enterprise in East Asia.

In this article we adopt an historical perspective in order to identify and describe the environmental conditions and pre-conditions which led to the emergence of Chinese FBGs as engine of economic development for much East Asia (Seagrave, 1996). In doing so, we illustrate how dominant organisational forms and the institutional arrangements that engender them evolve along path-dependent trajectories. Insights from organisation theory suggest that emergent firms adopt business practices and develop routines (Nelson & Winter, 1982) that strongly reflect their nascent institutional environments (Starbuck, 1965). Such an administrative heritage may leave firms ill-equipped to meet the environmental challenges of a subsequent era (Bartlett & Ghoshal, 1989). At the same time, organisations (particularly dominant ones) interact with, and shape their institutional environments (Pfeffer & Salancik, 1978) in both active and passive ways. As a consequence, institutional environments come to reflect the needs and demands of dominant organisations. Such a pattern of evolution has a number of significant firm and economy-level implications that are discussed in the concluding section.

The Nature of Path Dependency

Many scholars in strategic management see firm-level strategic behaviour as essentially a product of rational, goal directed adaptation to environmental conditions (Andrews, 1971). For example, resource allocation is often viewed from the perspective of Chandler's (1962) seminal structure-follows-strategy thesis. According to this view, firms adapt their strategies and structures to reflect their changing technological and market conditions. On the other hand, much of the evidence from the recent economic history of East-Asia is suggestive of strategic and structural persistence rather than firm-level adaptation in the face of technological and market change (Prowse, 1998, Claessens, 1998). Many East Asian businesses remain wedded to the same array of industries and employ many of the same organising principles that characterised the initial stages of East Asian industrialisation (Backman, 1999; Garran, 1998).

To explain such an emergence and persistence of firm strategy, institutional theories of organisations have identified a range of cognitive, bureaucratic and political processes that impede the smooth re-alignment of an organisation with its environment (Oliver, 1991; DiMaggio & Powell, 1991; Hamilton & Biggart, 1988). What North (1990) calls the *"institutional matrix"* refers to the legal, cultural and normative foundations of a firm's environment.

The importance of the institutional matrix lays in the way in which it shapes the choices and incentives facing economic agents. North (1990) suggests that institutional matrices develop and change in a path-dependent manner. This means that once a particular developmental path has been selected (or even unintentionally adopted) forces are set in motion that reinforces momentum along it. The adaptive expectations of economic and political agents act to orient behaviour toward the opportunities and incentives presented by an initial path. Following a course of least resistance, values, attitudes, behaviours and practices that are consistent with the initial path come to be reinforced, legitimated and institutionalised. At the same time values, attitudes, behaviours and practices that are inconsistent with a path will tend to wither or fail to develop. Practices, norms and beliefs that encounter high institutional resistance will not be widely diffused in society since energies can be more profitably directed toward more legitimate and institutionally sanctioned ends. Consequently business and regulatory institutions adapt to each other and produce strategic responses that strongly reflect their unique administrative heritages.

Contemporary institutional matrices have been shaped by distant, sometimes seemingly inconsequential, events that lock-in particular policy models and approaches to problems. Since the effectiveness of a particular strategic response is largely a function of the firm's environment (Andrews, 1971, Hofer, 1975), a strategy that is effective under one set of environmental conditions may be much less effective under a later, changed set of conditions. For instance, Bartlett & Ghoshal (1989) describe how many European multinational enterprises that emerged in the first half of the 20th century adopted highly decentralised organisational structures as a means on managing their foreign operations. Such federated operating structures had many virtues in the context of a global business environment characterised by nationalist economic policies and highly fragmented and localised product, factor and capital markets. On the other hand, such a legacy has left many European multinationals with path dependencies ill suited for the increasingly integrated product, factor and capital markets of the modern global economy.

Importantly, North (1990) points out that the path dependent character of an institutional matrix means that even well managed firms may have difficulty aligning themselves with new environmental conditions. North argues convincingly that changes to formal rules are often insufficient to bring about institutional change if they are inconsistent with the prevailing culture, beliefs, norms and interests in the institutional matrix.

In the sections below, we illustrate this phenomenon through a case study of Chinese FBGs in East Asia. We first describe the origins of these FBGs and highlight the environmental conditions which led to their ascendancy in the wake of WWII. Next, we explain how FBGs and their institutional environments evolved on path dependent trajectories. Finally, we describe how these path dependencies have left many firms and the economies they dominate out of synch with respect to the conditions they face today in the global economy.

The Emergence and Ascendance of Chinese FBGs

Emigrants from Mainland China founded a very large percentage of East Asia's FBGs (Sommers-Heidues, 1974; Wu & Wu, 1980; Suryadinata 1989). Overseas Chinese merchants were an important non-Colonial capitalist class in East Asia since the pre-colonial and European colonial era where immigrants from South China were employed as tax collectors and commercial intermediaries or *compradores* (Lim, 1996; McVey, 1992).

Today the overseas Chinese are the dominant commercial class in many East Asian economies including Hong Kong, Taiwan, Singapore, Malaysia, Indonesia, Thailand, and The Philippines (Hodder, 1996; Lim, 1996; Mackie, 1992). In Malaysia, Indonesia, Thailand, and The Philippines ethnic Chinese are demographic minorities, yet account for a disproportionate magnitude of economic activity. The importance of overseas Chinese in Indonesia is a particularly striking example of this phenomenon. While they total only 3% of Indonesia's population, firms controlled by overseas Chinese account for more than half of the country's trade and three quarters of its private domestic capital (Hodder, 1996, Lim, 1996).

East and Southeast Asian FBGs emerged during a period of extreme political turbulence (McVey, 1992). Colonial disengagement, communist insurgency and the establishment of nationalistic government characterised the post WWII period. In this environment FBGs emerged as the region’s major entrepreneurial force and their social status improved from that of *‘pariah to paragon’* (McVey, 1992). Such a description reflects the fact that in the colonial era and at the beginning of the nationalist era, now pre-eminent Chinese entrepreneurs were a marginal social group subject to discrimination, arbitrary state confiscation of their private property and popular violence. The appearance of the FBG owes much to these unfavourable founding conditions.

Social conditions in Mainland China produced a large and continuing Diaspora. The overseas Chinese in Southeast Asia are a product of turmoil in their home country. Acute social instability and recurrent civil war including the Taiping Rebellion in 1851-1864, the Boxer rebellion, the Republican Revolution, Civil war, and the Cultural revolution of 1966-1976 produced a steady migration from mainland China (Fairbank, 1994). The Chinese state's disdain for commercial activity did little to advance the interests of domestic entrepreneurs who were forced to emigrate (Redding, 1990). As such, overseas Chinese entrepreneurs emanated from an unstable, warring society that placed little value on commercial activity and had no entrepreneurial tradition.

In the late 19th and early 20th centuries migrant Chinese workers settled in predominantly agricultural colonial societies where alien Westerners occupied elite economic and political positions. Leading colonial industries of plantation agriculture, mining and oil extraction created a range of new intermediary economic roles in society, which recently landed Chinese immigrants, were encouraged to take up. New occupations such as tax collecting, retailing, and money-lending and other ancillary roles related to resource based industrialisation were filled by overseas Chinese who hitherto had no entrepreneurial experience (McVey, 1992). Within the colonial order, overseas Chinese *petit-entrepreneurs* developed contacts with domestic elites and learned commercial skills that later filled a vacuum left by departing colonial powers. First, as the *compradores* of Western colonial powers, Chinese entrepreneurs familiarised themselves with Western business practices. Many subsequently established businesses based on Western models (Chan, 1982). For example, Singapore's Overseas Chinese Banks founded in the 1920s were modelled on US banks by former Chinese employees of the New York City Bank (Yoshihara, 1988).

The skills and contacts developed by Chinese entrepreneurs during the colonial era increased in value subsequent to the widespread colonial retreat that took place after WWII because indigenous entrepreneurial skills were in short supply.

Chinese migration was widespread in the region and entrepreneurs maintained personal contacts among entrepreneurs from the same family or language group in many East Asian countries. Close-knit, spatially dispersed networks offer channels for mobilising assets and for sharing information about business opportunities (Koa, 1993; Hodder, 1996). In this manner, the

Diaspora produced an entrepreneurial class that was well placed to operate international networks and attuned to the behaviour of a diverse group of key actors.

The main concern for post WWII national governments was national security. There was a need to restore internal order or fend off external communist threats- a goal shared by US foreign policy. Consequently, many government officials in East Asia were drawn from military ranks and had little knowledge of business and economics. During this time, national economic agendas were commonly limited to managing strategic industries and rebuilding basic infrastructure. Strategic industries were managed by establishing state owned enterprises and infrastructure was created with the assistance of US aid. Prior to the late 1980s, there was little Japanese investment in East Asia- a function of both Japan's own nationalist economic agenda and a legacy of Japanese assets being confiscated and turned over to indigenous governments at the close of WWII. Much capital for investment came from local savings (Singh, 1998). Observing the success of post WWII Japanese industrial policy, beginning with Korea and Taiwan and spreading sequentially through Southeast Asia, governments adopted export oriented development models. These policies focused upon the provision of tax incentives and low interests loans to spur production and the utilisation of low cost labour to compete in textile and consumer durables. Such export oriented development (EOD) models provided many opportunities to cosmopolitan Chinese entrepreneurs.

Of particular note were Chinese entrepreneurs who cultivated relations with Japanese manufacturers. Seeking to re-establish entry into East Asian markets Japanese producers needed local partners to surmount tariff walls. Western colonial firms operating in the region already had strong relations with European sources and at that time did not perceive much potential in Japanese manufacturers (Yoshihara 1988). Chinese entrepreneurs were less established and willing to link up with Japanese partners. Whether due to a cultural affinity, social marginality or western hubris, circumstances put the Chinese into a series of minority joint-ventures, licensing agreement and technology sharing agreements with Japanese partners in product-markets such as textiles, food processing and cement production. Through these relationships, many FBGs were able to develop and acquire basic process engineering competencies.

Despite the fact that FBGs embodied an entrepreneurial drive and possessed competencies well suited for export oriented development models, they were owned by a highly visible ethnic minority in many countries and did not always enjoy the full protection of the state. In Thailand, Indonesia and The Philippines political corruption and bureaucratic *'rent-seeking'* (McVey, 1992) produced wariness of the state. Despite their economic success, and indeed possibly because of it, Chinese entrepreneurs encountered discrimination and asset expropriation. Recent violence against Chinese property in Indonesia indicates that this hostility is both grave and enduring. Overseas Chinese entrepreneurs suffered official discrimination in Malaysia and Indonesia from nationalist policies intended to secure greater participation in the economy for ethnic nationals (Lim, 1996). In Hong Kong FBG entrepreneurs enjoyed a relatively laissez faire relationship with the Colonial state, but they were nevertheless all but excluded from elite positions (Whitley, 1992). Fear of Chinese aggression in Taiwan and a return to Chinese sovereignty in Hong Kong did little to assuage age-old uncertainties about state expropriation.

Government connections offered the opportunity for many FBGs to use their personal network or *guanxi* to secure national production franchises and other licenses. However, the initial relationship between nationalist states and the entrepreneurial Chinese was at best one of indifference and mutual mistrust (Yoshihara, 1988). These relations have become more accommodating in recent times, but in the 1950s and 60s governments did not particularly favour the overseas Chinese, but they did need entrepreneurs and the Chinese filled that gap (McVey, 1992).

The Creation of an Administrative Heritage

The forces of Diaspora, national economic policy and hostile state bureaucracy described above created the conditions for the appearance of FBGs. This environment was simultaneously threatening and full of opportunity for FBGs. However, it was in this environment that FBGs forged a characteristic set of business routines and strategic behaviours that would best protect their economic interests and which would later become their hallmark. While culture, politics and historical events posed a number of constraints, FBGs responded to prevailing conditions in a manner that was fully consistent with the rationalities of a family business.

Regardless of context, the concentration of personal and family wealth in owner-managed firms normally creates a preference for income and for wealth preservation over other dimensions of enterprise performance such as growth (Dyers, 1986). As highlighted by agency theory other key differences in strategic goals stem from the risk bearing attributes of owner-managed enterprise (Fama and Jensen, 1983). Owner managed enterprises are not well equipped to bear risk. Owners are likely to have a large proportion of their wealth and income tied to the performance of their enterprises. Such a concentration of undiversified risk increases the firm's effective cost of capital (Fame & Jensen, 1983) and may result in risk-averse strategic behaviour.

While FBGs are motivated to accumulate wealth, family needs create pressures to extract capital from the business (Chandler, 1990). Such pressures reduce available capital for organisational growth. FBG ownership is ordinarily concentrated in the hands of a founding entrepreneur, the immediate family or ancestral trust depending upon the age of the firm (Wong, 1985). When the family firm's assets account for a significant proportion of that family's wealth significant risk can be reduced, and the preservation of wealth better assured by extracting capital from the business and allocating it to alternative sources. In the post war Southeast Asian political environment the risk of expropriation reinforced the prudential avoidance of capital concentration.

Other forces promote a near term focus on immediate earnings. To provide income for an extended family and inheritances for male offspring who may wish to establish their own patrilineal businesses there is additional pressure to extract income from the core business. Redding (1990:109) suggests the spirit of Chinese entrepreneurship is infused with values *which 'facilitate the initiating phase of entrepreneurship but which place barriers to the higher levels of* *co-ordination necessary for growth'.* Under these conditions goals related to patient capital and large scale or enterprise growth give way to a concern for near-term profitability and family wealth preservation. Equity market prices reflect both imputed short and long term firm values but unless the owners plan to reduce its holdings in the firm, equity market value will not be as important a goal as is accounting income.

FBGs and the Allocation of Capital

A defining element of a firm's strategy is its capital allocation routines (Chandler, 1962). In Asian FBGs capital allocation proved to be a pivotal influence on the establishment of their administrative heritage. We have noted the inefficient risk bearing properties of owner managed firms. One means of diversifying risk while maintaining family control is to diversify at the product-market level. FBGs are noted for wide diversification. A typical pattern is to establish a manufacturing business followed by diversification into trading activities followed by investments in property and financial services (Lassere & Schutte, 1995). The manufacturing opportunities offered by EOD policies provided the initial impetus to FBG growth. However, FBGs do not possess a particular affinity for manufacturing activities. The propensity for capital dispersion weighs against success in capital intensive manufacturing activity.

Many analysts have noted the overseas Chinese propensity for deal making, trading, and speculating (Chu & McMurray, 1993). Entrepreneurs favour, and excel, with opaque transactions based upon privileged information and personalised relations or *guanxi;* this Chinese word refers to the practice of drawing on connections to secure favours in personal or business relations. Lasserre & Schutte (1995) see FBG success as stemming from *guanxi* and the related ability to exploit market imperfections arising from access to privileged contacts and non-publicly available information. Capitalising upon such opportunities does not require a competence-based rationale. Many of these opportunities are self-limiting or temporary and do not require a major capital commitment. Therefore at the level of the business group the FBG tends to be widely diversified.

FBGs tend to disperse their assets into multiple separate public listings. Ultimate majority ownership is typically concentrated in a private enterprise registered in an offshore country of convenience. Breaking up large groups into smaller units reduces the enterprise's visibility, a basic defence mechanism for a firm in a hostile environment. However, fragmentation and the creation of multiple separately listed public units is a means of achieving monitoring and feedback on unit performance when subsidiary managers are not trusted, or when the organisation has inadequate capacity to perform a thorough internal auditing function (Carney, 1998). Daily market valuation of a business unit's performance is a valuable managerial decision tool, which is an advantage denied most diversified firms. Consequently, at the level of the firm, product market scope is narrowly focused.

Discrimination and local hostility encouraged FBGs to develop a highly liquid and generic asset regimes that could be rapidly deployed. Koa (1993) suggests the preference for liquid and tangible assets results from deeply held *'life-raft values'* stemming from generations of economic and political uncertainty. Liquid assets are mobile and moved under a perceived threat. Moreover, a guanxi driven diversification and the propensity to speculate also demands access to liquid assets if the firm is to profit from fleeting opportunities. Family wealth preservation goals and the capital allocation strategies that support those goals in turn influence the way FBGs compete in the market place.

FBG Product-Market Strategies

Establishing large enterprises and creating brand capital requires patient capital and also increase the visibility of an enterprise, something foreign entrepreneurs may wish to avoid. Resource commitments in dedicated assets or lock-in investments reduce the flexibility that is central to FBGs adaptive-entrepreneurial capabilities. Instead, capital investment is directed to generic assets that are readily deployed to respond to shifts in fashion and volume (Redding, 1990). Moreover, because FBGs appropriate residual returns and tend to focus upon accounting profits they have a strong incentive to reduce operating costs (Carney, 1998). The ready availability of low cost labour along with these incentives combined to provide FBGs with a competitive advantage based upon cost leadership. Rather than seeking to build competitive advantage through innovation or the creation of proprietary assets FBGs have typically focused upon the manufacture of products that were conceived and designed elsewhere (Hobday, 1995, 2000).

Relatedly, the international activities of the FBG are limited to labour seeking FDI and quasi-portfolio investment (Yoshihara, 1988). The success of the export led development policies in Southeast Asia eroded domestic firms labour cost advantages, especially in settings such as Taiwan, Singapore and Hong Kong. Faced with higher costs FBGs began to internationalise to seek cheaper labour (Lecraw, 1993). The first international investments by FBGs were manufacturing transplant activities, which were financed through internally generated funds. However, manufacturing investments are minor relative to a second wave of investments in service sectors, particularly in infrastructure, property development and financial services. Second wave investments were made possible by a flood of foreign portfolio investments and commercial bank lending (Henderson, 1998) that enabled FBGs to make many ill-fated asset purchases. Many assets acquired in this way have proven to be overpriced and are now non-performing.

FBG investments in services may be viewed as the exploitation of firm specific advantages in the management of labour intensive processes (for example, in construction and hotel management) and in trade and financing (Lecraw, 1993; Dunning, 1995). Alternatively, many of the international investments of FBGs may be driven by personal connections or *guanxi* and are project-specific investments aimed at generating fast returns. Investments based upon *guanxi* may be a fundamental cause of capital misallocation. While *guanxi* provides market access, it does little to contribute to a firm's technical or managerial capabilities. Indeed, *guanxi* may do the opposite. Because investments stem from personal connections they escape internal bureaucratic and market scrutiny leading to widespread allocation to inefficient or low return projects.

Eventually, decreasing investment yields cause exportation of capital. Indeed, Taiwan and Hong Kong are currently now net exporters of capital (UNCTAD, 1994). While some have heralded capital exports as evidence of the emergence FDI and the development of the Asian multinational, another possibility is that it is a form of disguised portfolio investment and a case of capital flight (Yoshihara, 1988). In the latter view, a significant portion of Asian FDI may be neither market nor asset seeking, rather it is wealth seeking. In this case FDI reflects attempts by entrepreneurs to internationally diversify their personal and familial wealth.

To sum up, post war Asian FBGs exhibited strategic behaviour aimed at wealth preservation and near term accounting profits. They pursued conglomerate diversification strategies and their balance sheets consisted of tended towards generic and liquid assets. International investments were first labour seeking, but later, fuelled by foreign portfolio inflows, investments were deal driven without any competence-based rationale. Widely practised, such strategies provided the entrepreneurial drive behind the export-led era of East and Southeast Asian industrialisation. Indeed, it is the great success of these strategies that constitute the lasting administrative heritage of the FBG as an organisational form. However, elements of this heritage are self-limiting over the long run. The currency devaluations that precipitated the 1997 financial crisis were based upon weak organisational fundamentals (Backman, 1999; Garran, 1998; Henderson, 1998). Nevertheless, broad environmental changes are bringing about conditions that may support new strategic behaviours, which may contribute to improved productivity and firm competitiveness.

Developments in the Modern Era

The end of the cold war and the rise of Japan as a global economic power represent two epochal developments that fundamentally changed East and Southeast Asia's political and economic environment. China’s adoption in 1978 of Deng Xiao Ping's four modernisation’s resulted in the gradual opening of China to foreign investment (Fairbank, 1994). This major policy shift signalled a reduction in cold war tensions and allowed states in the region to focus upon the economic agenda. Another crucial event was the Plaza Accord signed by the G5 countries in 1985, which led to a rapid appreciation of the Japanese Yen against other major currencies. The Plaza Accord signalled the beginning of the end of Japanese export oriented development and led to large outward Japanese investments into other East Asian economies (Stubbs, 1999). These two events accelerated the movement of capital into and within the region. In response to these capital movements many states initiated partial liberalisations in their capital markets and eased restrictions on the foreign ownership of domestic firms (World Bank, 1996). In turn, more liberal financial policies stimulated the flow of portfolio capital into local equity markets (Henderson, 1998).

Concerned with national security and internal stability the state bureaucracies of the nationalist era new little of business and did little to promote business interests, except when it concerned personal gain (McVey, 1992; Macintyre, 1994). Governments of Indonesia, Malaysia and Taiwan were preoccupied with the threat posed by internal or external communist parties. The colonial governments' of Singapore and Hong Kong were relatively indifferent to indigenous enterprise. With the subsidence of external threats and the ending of colonial rule, state bureaucracies have recognised the importance of economic development to their political legitimacy and national prosperity. In addition, rents secured by bureaucrats from office holding and cronyism are relatively fleeting and insecure. To assure a more secure revenue stream officials needed to acquire a greater knowledge of business, to enable the official to oversee the handling of his money, and effective legal guarantees for private property to ensure it could not be confiscated once out of office. In circumstances of perceived mutual interest and more balanced-power relations, state officials and entrepreneurs began to develop a measure of trust and mutual accommodation. A consequence of economic growth has been to convert state bureaucrats from *‘parasites to promoters’* of business (McVey, 1992:26).

Rapid post war growth and the colonial withdrawal created a managerial vacuum in the region that was left unfilled for a generation. In the past two decades several new sources of managers has emerged. First, is a new generation of university educated managers that are the product of recently established universities. New Asian managers are more likely than their parents to have received a university education. Secondly, in the post-war years, large numbers of students received graduate engineering and business education in Western universities. Importantly, after graduation many students remained in the west to work for several years before going home. Returning with technical qualifications and first hand experience many promoted professional management practices and the absorption of new technology in their firms (Vogel, 1991). Third, an increasing number of young managers are gaining experience in the local subsidiaries of the region's MNEs. Extensive Japanese investment has been accompanied by the transfer of management techniques, especially at the plant level (Thong, 1991). Finally, following de-colonialization many governments paid careful attention to managerial development programs in state and para-state organisations that are now coming to fruition (Schein, 1996). While many point to the continuing acute shortages, a pool of trained managers has been assembled that did not exist in the nationalist era. Moreover, these new managers have been exposed to educational and organisational influences different from their parents of a prior generation and do not necessarily embody parental values.

From several perspectives many East and Southeast Asian business environments have become increasingly munificent in the modern era. Risk and equity capital became more freely available. A managerial cadre is coming into being that could provide the co-ordinating and organising capacity needed for technologically complex businesses. State officials more readily facilitated new business projects. Indeed across the region state officials actively promoted technological upgrading in their domestic firms through a variety of industrial policies (Wade, 1990,Yeh & Ng, 1994, Noble, 1998, Hobday, 2000). However, despite an environment that is in many respects hospitable to the development of new industries and technological upgrading, powerful path dependencies have resulted in organisational and institutional inertia.

Path Dependence in Institutions and Organisations

At the time of the Asian Financial crisis, many FBGs suffered from sharp over-capacity in commodity manufacturing and were widely diversified into areas such as property development and commercial services (Henderson, 1998). Few firms had developed unique distinctive competencies (Garran, 1999). Despite encouragement by governments FBGs have typically failed to move into high technology areas (Hobday, 2000). High growth markets are concentrated in new-technology based industries such as telecommunications, software, and media. The intellectual property requirements, capital and risk-profiles and internationalism of these new industries pose a variety problems to the family-centric character of the FBG (McVey, 1992).

Capital intensive ventures in the region have normally been the domain of public enterprises (Wade, 1992; Mathews, 1997) but state-owned enterprises have not been dynamic in seizing opportunities in the new industries (Vogel, 1991; Zutshi & Gibbons, 1998). Using examples of intellectual property, capital markets and managerial development we offer three illustrations of path dependent processes which cut across organisations and institutional environments.

First, laws and enforceable regulations that allow firms to profit from their investments in intellectual property are generally believed to be an essential ingredient in developing an environment favourable to innovation (Teece, 1998). Now, consider the evolution of rules and business routines regarding the protection of intellectual property in Southeast and East Asia. In the early period of export oriented development many Asian economies focused upon the production of low-cost but high-quality imitations consumer goods such as toys, watches, garments and consumer electronics that were designed and developed by others. In these product areas intellectual property law (such as copyrights, trademarks and patents) afford little protection for owners, even when enforced, because the concepts and designs can be easily worked around (Teece, 1986). In the sectors that formed the basis of early industrialisation business routines that respected intellectual property did not take root. Indeed in some sectors flagrant counterfeiting and abuse of patents and copyright became common business practice (Glassmier, 1994). Backman finds that this legacy pervades modern day business practice and contends that, '*industrial producers in Asia often use pirated software, chemicals, production designs and pharmaceuticals-often without realising they are doing anything wrong'* (1998:26).

Importantly, the intellectual property protection problem is apparently not due to the absence of regulations. Policymakers now recognise the importance of a supportive home environment for innovation and more Asian states are paying attention to the protection of property rights. For example, Berger & Lester (1995) argue that property rights in Hong Kong now enjoy '*laws and an enforcement system that are international models, but nonetheless have an internationally unacceptable levels of violations*'. Policy changes, such as Hong Kong's attempts to strengthen its protection of intellectual property, do little to alter the underlying norms and business routines that are needed to make such policies work.

Lax attitudes toward intellectual property protection may have assisted the development of some export industries, however, these attitudes and routines became widespread and deeply embedded in what North (1990) calls the institutional matrix. Consequently, new and high value added industries whose revenues depend upon patent or copyright protection are now at a disadvantage. For example, software and film production both depend upon respect for copyrights for their revenues. In Asia, the development of both has been hampered by lax enforcement of property rights. Estimates suggest that between 65% and 75% of all PC software in Indonesia, Malaysia, Singapore and Taiwan are pirate copies (FEER, 1998). In the absence of revenues from local software sales, it is difficult to establish a software business from a domestic base. Similarly, production in Hong Kong's vibrant and internationally acclaimed, film industry has almost ceased in recent years due to the growth of the pirate videodisc industry. Local filmmakers cannot derive revenue from local markets so production funding has vanished. Many of Hong Kong's most talented filmmakers and actors have migrated to Hollywood to make films (The Economist, 1999).

In the wake of the Asian financial crisis, a number of analyses have pointed to systematic problems in the region's financial systems (Claessens, 1998; Goldstein, 1998). At the centre of many analyses are problems stemming from the dominance of bank financing (Prowse, 1996; Huang & Xu, 1999) and the comparative underdevelopment of public and private equity markets. The dominant role of banks can be seen as a path dependency stemming from Asia's rapid industrialisation. In the early phases of the region's post WWII growth period, infrastructure building and support for export led manufacturing were fuelled by capital from international aid organisations and development banks (World Bank, 1993). State owned banks in particular were oriented toward funding developmental and infrastructural projects (Singh, 1998). As these economies grew rapidly, banks consolidated their dominant position as the major form of financial intermediary. Moreover, states that attempted to influence industrial policy and direct investment to government priorities could better accomplish their goals through a tightly regulated banking sector (Noble, 1998; Rajan & Zingales, 1998) than through diffuse actors in equity markets. To better control the allocation of capital governments in the region actively and passively suppressed non-bank sources of financing (Prowse, 1996; 1998). Furthermore, FBGs tended to remain private and to finance their growth through internally generated cash flows (Akyuz & Gore, 1996; Singh, 1998) so as to retain control in the hands of a single family. Government policy and firm financing preferences combined to leave public equity markets relatively underdeveloped.

Banks are structurally suited to provide long term debt and working capital to manufacturing firms or to firms who can back their loans with liquid or marketable assets as collateral (Miller, 1998; Rajan & Zingales, 1998). However, due to prudential lending requirements, banks are not well structured to provide risk capital or to lend to businesses whose assets cannot be backed by marketable or collateralised assets. For example, bank debt is rarely used to support R&D projects that have risky cash flow outcomes and little residual value in the event of failure. Therefore, in bank dominated financial systems that have underdeveloped equity markets, firms with innovative but risky projects and firms whose assets are intellectual property or intangibles can face severe capital constraints (Prowse, 1996, UNCTAD, 1998). Along with weak protection for intellectual property, the lack of risk capital can also inhibit the development of new industries.

Path dependencies have also created a managerial capacity constraint in many East Asian economies. Although a pool of trained managers has emerged in the region in recent years, the development of that cadre at very senior levels of organisation has been limited by FBG preferences for selecting top management on the basis of family ties, rather than on the basis of professional expertise. Many researchers have described and documented this tendency among Chinese FBGs in particular (Wong, 1988; Fukuyama, 1995; Weidenbaum & Hughes, 1996). Redding (1990) notes that while mangers are hired for technical positions they are frequently excluded from strategic decisions. Consequently, experienced professional managers are relatively rare in the region since FBGs did not make extensive use of them (Carney, 1998).

A consequence of selecting top management from a narrow circle of kin or close business associates is that the top management team is often quite homogenous and lacking in the diversity of skills needed to grow the organisation. Other manifestations of this self-imposed managerial capacity constraint are evident when one considers the conspicuous difficulty Chinese East Asian FBGs have encountered in entering overseas and especially Western markets (Pangarker, 1998), and markets where they confront political and social conditions different from their domestic markets (Hu, 1995). Consequently the Asian Multinational organisation tends to be focused within the Asian region (Lecraw, 1993; Yeung, 1994)

As latecomer industrialisers (Hobday, 1995) Asian FBGs began a path dependent development pattern that initially focused their activities as imitators at the mature stage of various product-market life cycles. Surrounding elements in the institutional environment, including intellectual property norms, capital markets, and managerial recruitment practises became adapted to imperatives of cost-based competition in mature commodity markets. Asian

FBGs have pushed this strategy to the limit and now confront competition from ever-lower cost rivals located in Mainland China and elsewhere. As such, FBGs face pressures to upgrade their competencies and to enter the initiating stage of the product life cycle. In meeting these pressures, however, FBGs must seek to re-orient business routines that were perfected for the conditions and challenges of a very different historical era. Moreover, they must accomplish this re-orientation from an institutional base which they played a major role in creating, but which now impedes, rather than supports the major changes which are required.

Note(s)

[1]Taiwanese and Indonesian colonial government ended abruptly in 1945 and 1949 respectively. Self-government in Malaya (Singapore and Malaysia) was introduced more gradually and later, and much later in the case of Hong Kong. Except briefly during the brief Japanese occupation of World War II the Philippines and Thailand did not experience full colonial administration. Nevertheless economic activity in both countries was largely in the hands of organisations we call foreign and colonial agents. Following World War II both were characterised by a more assertive self-government than had obtained in prior era.

References

Andrews K.A. (1971), *The concept of corporate strategy*. Homewood, IL: Richard D. Irwin Inc.

Akyuz, Y. & Gore, C. (1996), The investment-profits nexus in East Asian industrialisation. W*orld Development*, Volume 24, pp. 461-470.

Backman, M. 1999, Asian Eclipse: Exposing the Darkside of Business in Asia, Singapore: Wiley.

Bartlett, C.A. & Ghoshal, S. (1989), Managing *Across Borders: The Transnational Solution.* Boston: Harvard University Press.

Berger, S. & Lester, R.K. (1997), *Made by Hong Kong*. Hong Kong: Oxford University Press.

Carney, M (1998) "A management capacity constraint? Barriers to the development of the China family business", *Asia-Pacific Journal of Management,* Volume 15 Number 2, pp. 137-162.

Chan, Wellington, K. K. (1982), "The Organisational structure of the traditional Chinese firm and its Modern Reform", *Business History Review,* Volume 56, pp. 218-235.

Chandler, A.D. (1962), *Strategy and structure.* Cambridge, MA: The M.I.T. Press.

Chandler, A.D. (1990), *Scale and Scope: The Dynamics of Industrial Capitalism.* Cambridge, Mass: Harvard University Press.

Chu, T.C. & MacMurray, T. (1993), "The road ahead for Asia's leading conglomerates", *McKinsey Quarterly*, Volume 3, pp. 117-126.

Claessens, S., Djankov, S., Fan, J. & Lang, L. (1999). *Expropriation of minority shareholders: Evidence from East Asia,* Washington: World Bank.

Claessens, S. (1998), *Systematic Bank and Corporate Restructuring: Experience and Lessons for East-Asia,* Washington: World Bank.

Di Maggio, Paul J. & Powell, W.W. (1991), "Introduction" in Di Maggio P.J & W. W. Powell (Eds.) *The new institutionalism in organisational analysis* Chicago: University of Chicago Press.

Dunning, J.H. (1995), "Re-appraising the eclectic paradigm in an age of alliance capitalism", *Journal of International Business Studies*, Volume 26, pp. 461-491.

Dyers, G.W. (1986), *Cultural change in family firms: Anticipating and managing business and family transitions.* San Francisco: Josey-Bass.

Fairbank, J.K. (1994), *China: A new history*. Cambridge, Mass: Belknap Harvard University Press.

Fama, E.F. & Jensen, M. (1983), "Agency problems and residual claims", *Journal of Law and Economics*, Volume 26, pp. 301-25.

Fukuyama, F. (1995), *Trust: The Social Virtues and the Creation of Prosperity*. London: Penguin Books.

Hall R.H., & Xu, W. (1990), "Run silent, run deep: A note on the ever pervasive influence of cultural differences on organisations in the Far East." *Organisation Studies,* Volume 11, pp 596-616.

Hamilton, G.G. & Biggart, N.W. (1988), "Market culture and authority: A comparative analysis of management in the Far East", *American Journal of Sociology*, Volume 94, pp. S52-S94.

Henderson, C. (1998), *Asia falling: Making sense of the Asian crisis and its aftermath,* New York: Business Week Books.

Hobday, M. (1995), "East Asian latecomer firms: Learning the technology of electronics" *World Development*, Volume, 23, pp. 1171-1193.
Hobday, M. (2000). "East vs South East Asian Innovation Systems: Comparing OEM and TNC-led growth in electronics", In *Technological learning and economic development: the experience of the Asian NIEs,* Cambridge: Cambridge University Press.

Hodder, R. (1996). *Merchant Princes of the East: Cultural Delusions, Economic Success and the Overseas Chinese in Southeast Asia,* New York: Wiley.

Hu, Y.S. (1995), 'The international transferability of the firm's advantages' *California Management Review, Volume* 73-88.

Huang H. Z. & Xu, C.G. (1999), "Financial institutions and the financial crisis in Asia", E*uropean Economic Review,* Volume 43 Number 4, pp. 903-914.

Garran, R. 1998. *Tigers Tamed: The End of the Asian Miracle.* Honolulu: University of Hawaii Press.

Ghemawat, P., & Khanna, T. (1998), "The nature of diversified business groups. A research design and two case studies", *Journal of Industrial Economics*, Volume 46, pp. 35-61.

Glasmeir, A. (1994), "Flexibility and adjustment: the Hong Kong watch industry and global change", *Growth and Change,* Volume 25, pp. 223-246.

Goldstein, M. (1998), *The Asian financial crisis: causes, cures, and systemic implications.* Washington: Institute for International Economics.

Hall R.H., & Xu, W. 1990. Run silent, run deep: A note on the ever pervasive influence of cultural differences on organizations in the Far East. Organization Studies, 11: 596-616.

Hobday, M. 1995. East Asian latecomer firms: Learning the technology of electronics. *World Development*, Vol. 23 No. 7, pp. 1171-1193.

Hobday, M. (2000) East vs South East Asian Innovation Systems: Comparing OEM and TNC-led growth in electronics. In *Technological learning and economic development: the experience of the Asian NIEs* Cambridge: Cambridge University Press.

Hodder, R. (1996), *Merchant Princes of the East Cultural Delusions, Economic Success and the Overseas Chinese in Southeast Asia,* New York: Wiley.

Hofer, C. (1975), "Toward a contingency theory of business strategy", *Academy of Management Journal*, Volume 18, pp. 784-810.

International Monetary Fund, (1998), "The Asian crisis and the region's long-term growth performance", *World Economic Outlook,* pp. 82-106.

Kao, J. (1993), "The worldwide web of Chinese business", *Harvard Business Review*, Volume 71 Number 2, pp. 24-36.

Lasserre P. & Schutte, H. (1995), *Strategies for Asia-Pacific* , London: Macmillan.

Lecraw, D.J. (1993), "Outward investment by Indonesian firms: Motivation and effects", *Journal of International Business Studies,* Volume 24, pp. 589-600.

Lim, L. (1996), "Southeast Asian business systems: The dynamics of diversity", in Safarian A.E. & Dobson, W. (Eds.) *East Asian capitalism: Diversity and dynamism.* Toronto: University of Toronto Press

Mackie, J. (1992), "Changing patterns of big business in Southeast Asia", In R. McVey (Ed.), *Southeast Asian capitalism,* New York: Cornell University Southeast Asia program, pp. 161-190.

McVey, R. (1992), "The materialization of the Southeast Asian entrepreneur." In R. McVey (Ed.), *Southeast Asian capitalism*, New York: Cornell University Southeast Asia program, pp. 7-34.

Miller, M.H. (1998), "Financial markets and economic growth", *Journal of Applied Corporate Finance*, Volume 11, pp. 8-14.

Noble, G. W. (1998), *Collective Action in East Asia: How Ruling Parties Shape Industrial Policy*, Ithaca: Cornell University Press.

North, D.C. (1990), *Insitutions, Insitutional Change and Economic Performance,* Cambridge: Cambridge University Press.

Oliver, C. (1991), "Strategic responses to Institutional Processes", *Academy of Management Review*, Volume 16 Number 1, pp. 145-179.

Orru, M., Biggart, N.W. & Hamilton, G. (1991), "Organizational isomorphism in East Asia", in *The new institutionalism in organizational analysis.* Powell, W.W. & DiMaggio, P.J. (Eds), Chicago: Chicago University Press, pp. 361-389.

Prowse, S. (1996), "Corporate finance in international perspective: Legal and regulatory influences on Financial system development", *Federal Reserve Bank of Dallas Economic Review,* Third Quarter, pp. 2-16.

Prowse, S. (1998), *Corporate Governance: Emerging Issues and Lessons from East Asia.* Washington: World Bank.

Radelet, S. & Sachs, J. (1998), *The onset of the East Asian financial crisis.* Cambridge: Harvard Institute for International Development.

Rajan R.G. & Zingales, L. (1998), "Which capitalism? Lessons from the East Asian crisis", *Journal of Applied Corporate Finance*, Volume 11, Number 3, pp. 40-48.

Redding, S.G. (1990), *The spirit of Chinese capitalism,* New York: De Gruyter.

Seagrave, S. (1995), *Lords of the rim: The invisible empire of the overseas Chinese*, London: Bantam.

Singh, A. (1998). "Savings, investment and the corporation in the East Asian miracle", *The Journal of Development Studies,* Volume 34 Number 6, pp. 112-138.

Stubbs, R. 1999, "War and Economic Development: Export Oriented Industrialisation in East and Southeast Asia", *Comparative Politics,* Volume 31 Number 3, pp. 337-355.

Sommers-Heidues, M.F. (1974), *Southeast Asia's Chinese Minorities,* Longman Australia: Hawthorn Victoria.

Starbuck, W.H. (1965), "Organizational Growth and Development," in J.G. March, (Ed), *Handbook of Organizations,* Chicago: Rand McNally. Pp. 451-533.

Suryadinata, Leo. (1989). *The Ethnic Chinese in the Asean states: Bibliographical essays,* Singapore: Institute of Southeast Asian Studies.

Teece, D. (1986), "Profiting from Technological Innovation: Implications for Integration, Collaboration, Licensing, and Public Policy", *Research Policy*, Volume 15, pp. 285-305.

Teece, D. (1998), "Capturing value from knowledge assets: The new economy, markets for know-how and intangible assets." *California Management Review*, Volume 40 Number 3, pp. 55-79.

Thong, G.T.S. (1991), "Foundations of human resource management practise in Japanese companies in Malaysia." In Yamashita, S. (Ed.*). Transfer of Japanese Technology and Management to the ASEAN Countries.* Tokyo: University of Tokyo Press.

UNCTAD, (1994), *World Investment Report: Transnational corporations, employment and the workplace* New York: United Nations Commission on Trade and Development.

UNCTAD, (1998), *The growth of domestic capital markets, particularly in developing countries, and its relationship with foreign portfolio investment.* New York: United Nations Commission on Trade and Development.

Vogel, E. (1991), *The four little dragons: The spread of industrialisation in East Asia*, Cambridge: Harvard University Press.

Weidenbaum, M. & Hughes, S. (1996), *The Bamboo Network: How Expatriate Chinese Entrepreneurs Are Creating a New Economic Superpower in Asia,* New York: Free Press.

Whitley, R. (1992), *Business Systems in East Asia: Firms, Markets and Societies,* London, Sage.

Wong, S.L. (1985), "The Chinese family firm: A model", *British Journal of Sociology,* Volume 36, pp. 58-72.

Wu, Yuan Li & Wu, C. (1980), *Economic development in Southeast Asia: The Chinese Dimension,* Stanford: Hoover Institution Press.

Yeung W.C.H. (1994), "Hong Kong Firms in the Asean region; transnational corporations and foreign direct investment", *Environment and Planning*, Volume 26, pp. 1931-1956.

Yoshihara, K. (1988), *The rise of ersatz capitalism in South-East Asia,* Oxford: Oxford University Press.

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