Capitalist Entrepreneurs or Bureaucrats left to their own Devises?

The Role of Bureaucratic Entrepreneurs and the Rapid Growth of China's Telecom Sector

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ABSTRACT

This paper describes how China, instead of adopting the standard approach of transferring large public monopolies to the private sector, opted to change gradually the institutional rules and incentives for bureaucrats. This has allowed bureaucrats with long traditions in central planning, to overcome institutional rigidities and behave in a manner not unlike entrepreneurial capitalists. The rapid development of China's telecom sector is used to illustrate how significant growth can be achieved by realising the entrepreneurial spirit of bureaucrats, even in the absence of full privatisation, liberalisation and transparent regulation. It suggests that the immediate constraint to bureaucratic entrepreneurs is a limited familiarity with the market mechanism and competition.

Key Words: bureaucratic entrepreneurs, Telecom sector, China.

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Introduction

The orthodox approach to the privatisation of state enterprises intended to replace the monitoring function of bureaucrats with the "invisible hand" of competitive capitalism. Bureaucrats were assumed to be self-interested and a disruption to the efficient functioning of the market.[1] Privatisation programmes, particularly those in the former Soviet Union, illustrated a widespread belief among the transition orthodoxy that the bureaucracy needed to be destroyed as it lacked the necessary skills to bring the economy to the market (Nolan and Wang, 1999). Full privatisation and immediate market liberalisation were often taken as a "given" in successful reform. Little attention has been given to understanding how state enterprises with long traditions in central planning, overcome rigidities in the political system, and make the transition to profit-seeking corporations. Consequently the question is often whether bureaucrats offer a "grabbing" or "helping" hand to entrepreneurs (Frye and Shleifer, 1997).

In China, a more relevant question is how bureaucrats themselves have become the entrepreneurs. Political liberalisation in favour of democracy and the rule of law has been limited, and the one party monopoly still dominates (Li, 1998). Despite a growing convergence with international corporate practices, what separates China's listed enterprises from their international peers are the number of politically appointed bureaucrats that remain. Instead of adopting the standard approach of transferring large public monopolies to the private sector through privatisation, China opted to change gradually the institutional rules and incentives for bureaucrats. As a result, one of the striking features of enterprise reform is not the change in the corporate structure, but rather how it continues to be dominated by political appointees. Yet, the business practices of enterprise management often more resemble those of profit-seeking entrepreneurs than rent-seeking bureaucrats. [2] While there is a large body of research dealing with such issues as the relationship between enterprise ownership and performance,[3] less attention has been given to examining under what type of conditions politically appointed management might change.

This paper argues that in the case of China learning experiences, which date to the Cultural Revolution, have been important in fostering a culture of entrepreneurship in bureaucrats. By adopting a resource-based perspective, it is argued that bureaucrats possess an ability to innovate depending on past leaning experiences and proper external stimuli in the enterprise environment. However this type of entrepreneurship has traditionally been more geared to meeting political goals, than achieving real economic targets. Hence bureaucrats have an incentive to return to the habits of the past in dealing with increasingly intense competition in the market place. Weak monitoring, a deficit of managerial experience and a promotion system based on political reward, results in bureaucrats, particularly at local level, having a strong incentive to compete according to political criteria. When faced with intense competition, bureaucrats may opt for

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[1][1] This is based on the assumption that individuals are self-interested and act to maximise individual utility in the market place. Non-market activity is therefore considered to be inefficient and rent seeking.

[2] Judging from current efforts of Chinese Communist Party to target corruption, it is fair to assume that the bureaucracy is rent seeking.

[3] For example Xu and Wang (1999) and Qi et al (2000) examine the relationship between corporate structure and performance, Berkman et al (2002) look at stock returns and government share transfers, Tian (2002) examine corporate value and the government shareholding under China's shareholding system.

quantitative growth through excessive price discounting rather that focusing on higher revenue customers.

China's telecom sector is illustrative of this. Enterprise management freed from the constraints of central planning, have responded to market opportunities, behaving in a manner not unlike capitalist businessmen. Standard explanations including privatisation, market-liberalisation or transparent regulation, cannot fully account for this transition as none occurred to a sufficient extent. If anything, a combination of factors, including prohibitively high connection fees, political rent-seeking, undeveloped networks and anti-foreign ideologies kept capital investment low and restricted telecommunications access right up to the mid-1990s. Addressing these problems required a series of political and economic compromises, which centred on providing the incentives for bureaucrats to reform, through "partial privatisation" and encouraging competition.

Overall the paper suggests that successful enterprise reform may not necessarily depend on immediate full-privatisation, market liberalisation or transparent regulation. In transition economies such as China, where the market mechanism and rule of law have yet to be fully developed, much can be achieved during the early stages of development by simply creating the incentives for entrepreneurial behaviour. Section One of the paper describes the rapid growth that has been achieved in China's telecom sector. Yet, as described in Section Two, the sector remains unregulated and highly differentiated and fragmented by Western standards. This has not prevented bureaucrats from responding to market signals, as in each case ways were found to overcome institutional rigidities. Section Three outlines the politico-economic trade-off underpinning the transition from rent-seeking bureaucrats to profit-seeking businessmen. It illustrates how bureaucrats' past experiences, their intertwining with and loyalty to the party, and the integration of international practices and capital, have fostered a closer converge with international business practices. Convergence is however limited by a lack of familiarity with market mechanisms. As detailed in Section Four, competition often tends to be driven by political considerations. Consequently bureaucrats have an inclination to behave in a manner more consistent with bureaucratic entrepreneurs than profit maximising capitalists. The paper concludes by suggesting that a more immediate bottleneck for enterprise management is a lack of market experience, rather than an absence of regulation or liberalisation.

1. A Remarkable Growth Story

The telephone in China had long been regarded as a symbol of political status. Prior to economic reforms, the luxury of a residential phone was only made available to senior government and military officials as it represented a symbol of political status rather than as a commercial service (Xu and Pitt, 2002). Even in the 1980s and early 1990s owning a telephone still commanded luxury status. Almost a decade later, the landscape has changed dramatically. By 2003 China boasted of 500 million phone users compared with 100 million in 1998 and 10 million in 1982.[4] Growth has been most obvious for cellular phones, which by 2002 accounted for almost 50 percent of China's telecom subscribers. Despite these record growth figures, overall phone penetration remains low if compared with Europe and the US, suggesting that significant growth potential remains.[5]

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4 "What's behind 500m phone users: News Analysis" Peoples Daily 29th October 2003.

5 According to statistics from the International Telecom Union, in 2002 China had 16.09 phones per 100 inhabitants compared to 51.26 in Europe, and 29.9 in the Americas.

It was such a high level of growth that led China's telecommunications ministry to claim that it had taken China five years to complete what it took European countries a decade.[6] Indeed from a political perspective, the growth of the sector signified the achievement of important development goals. By its very nature telecommunications development goes far beyond economic concepts. Even if the associated costs and benefits undoubtedly carry economic implications, there is also highly important social dimension. This may help explain why in a phone-starved country experiencing rapid growth, citizens display a willingness to find the money, legitimately or otherwise, to obtain a phone (Ure, 1997). In the grand scheme of things, the direct economic benefit is smallest part of the contribution of telecommunications to an economy and a society (Bates, 1997). From a social and political perspective, telecommunications have the advantage of providing access to geographically remote areas, providing faster and more efficient means of communications, and expanding the range and accessibility of information services available to the public. Even from an economic perspective, achieving these objectives increases efficient communication and facilitates transmission and storage of data thereby removing significant bottlenecks to economic growth.[7] For a developing economy, these reasons put significant priority on access to telecommunications by the public.

One of the prime beneficiaries of this growth story has been the mobile telecom sector. There are a number of reasons specific to the development context that helps explain this growth. The prohibitively expensive cost of a landline and the practical difficulties of extending a fixed line based telecommunication services to large sections of rural China have made the mobile phones a more realistic option for many Chinese customers. During the early 1990s the cost of installing a fixed telephone line could reach around US$900 in Beijing and US$500 in Guangzhou (Ure, 1997). Despite such high prices Ure (1997) reported a remarkable and often surprising willingness of customers to pay these amounts. A high level of demand created ideal conditions for the growth of such cheaper substitutes as mobile phones.

Such pent up demand provided ideal conditions for enterprises to exploit. Both China Mobile and China Unicom, the two state-controlled mobile phone operators have competed vigorously to win new customers. Figure 1 suggests that both companies have engaged in heavy price discounting in order to increase subscriber numbers. In addition to mobile phones provided by the two licensed companies, China Telecom (the fixed line provider) has been attempting to break into the market by using a technology that effectively piggybacks on the networks of the existing two providers. China Telecom has enjoyed particular success with the Personal Handy Phone System (PHS), a fixed wireless service, which enjoys price advantages over mobile phones and as it is technically not a mobile service, it does not require a license.[8] Although operating in a regulatory grey area, PHS has proved particularly popular in lower income areas outside larger cities where mobile coverage is limited. The geographical dispersion of China's mobile market has also aided the growth of technologies such as PHS. This has put further pressure on the margins of mobile phone providers, despite they continue to compete on price in order to capitalise on the growth stage of the market.

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6 "Dialling the Markets: The Worlds Fastest Telecoms Restructuring" The Economist 17th October 2002.

77 Roller and Waverman (2001) found evidence of important network externalities leading to increasing returns on growth where universal service existed.

8 It is estimated that there were almost 16 million PHS subscribers in April 2003, a market almost twice the size of Unicom's CDMA service. "PHS Handsets in China" Duncan Clark, BDA China, 22nd April 2003.

2. The Missing Pieces

One of the remarkable if not puzzling aspects of the sector's growth is that it remains largely unreformed in the conventional sense. Mueller and Tan (1997: 30) observe that in terms of the development of China's telecom sector, the puzzle remains on the supply side. "The Ministry of Posts and Telegraphs (MPT) has all the characteristics of the sluggish state-owned monopolies that have hindered growth in many other parts of the world. How then has it been able to produce such a rapid rate of growth?" Despite international listings and accession to the WTO, the state still retains control and foreign competition is negligible. Telecom markets remain unregulated and highly differentiated and fragmented, both in terms of products and standards. Therefore the growth of the sector cannot be accounted for by such factors as liberalisation, privatisation or transparent regulation.

2.1 GROWTH WITHOUT REGULATION

Utility regulation is typically aimed at striking a balance between ensuring a fair return on corporate investment and protecting consumer interests. For countries at an early stage of development this takes on added significance, as regulatory policy must be designed to provide the incentive for rapid service diffusion to as much of the population as possible. The development of telecoms in the US is one example of how utility regulation works in the intended direction. Although telecom development in the US was largely left to the private sector, a legal system and pricing structure was put in place by the state that was supportive of innovation and competition. Price regulation and the agreement of AT&T, to become a private regulated monopolist ensured a pricing structure that better protected investment returns.[9] The pricing mechanism, which was based on both the historical and the fixed capital cost of operating a telephone system, meant private operators had a large incentive to expand the demand for their services (Bates, 1997).

Yet there is also a significant body of evidence suggesting that regulation is not always a necessary in achieving service diffusion. In fact, the early provision of public utilities was characterised by active and largely unregulated competition in economies such as the US. Behling (1938) noted that during the late 19th and early 20th centuries, competition among utility companies was plentiful at a time when regulation gained popularity.[10] "Producing competitors, not to mention unsuccessful bidders, were so plentiful that one begins to doubt that scale economies characterised the utility industry at a time when regulation replaced the market competition" (Demsetz, 1968:59). Market place access was enough to keep prices reasonably close to competitive levels. This contradicts the common assumption that regulation was necessary to correct market failure or the exploitative monopolist. Demsetz (1968) argues that market failure in utilities cannot be explained by unexploited economies of scale or the inclination of natural monopolies to exploit customers. In any event, there is little guarantee that the regulated "rate of return" monopolist will turn out to be an efficient producer.[11]

China's approach has been one of understanding the need for market regulation but also the practical problems associated with providing universal service under state

9 The Kingsbury Agreement (1913) was reached between AT&T, the private sector monopolist, and US government representatives. It specified that AT&T would become a regulated monopoly with a guaranteed return once it adhered to certain competitive restrictions. AT&T also undertook to allow other firms access to its network (see Bates, 1997:35).

10 Behling, B. Competition in Public Utility Industries, 19-20 (1938). Cited in Demsetz (1968).

11 For example Oum and Zhang (1995) suggest that competition in the US improved the allocative efficiency of incumbent firms that had previously been subject to rate of return regulation.

ownership. The separation in 1994, of the administrative and operational functions of the MPT was more about defining the state's role in China's telecom enterprises, than creating an independent and transparent regulator. It did however indicate that China's leadership understood the importance of moving towards a system of regulation that would strike a balance between the interests of enterprises and customers. Prior to this separation, state ministries tended to construct their own telecom networks, which grew so large that by the 1990s they created significant coordination problems for the MPT (Mueller and Tan 1997).[12] The development of what were largely non-integrated networks was a product of institutional conditions, most notably self-reliance and bureaucratic self-interest, no doubt facilitated by the reactive and often passive nature of the MPT and its failure to adequately finance a national network. In this regard the second significant event in 1994 was the State Council's decision to officially allow other ministries to enter the telecom market. This led to the establishment of Unicom by the Ministry of Electronics. Such a set up, involving complementary networks with the potential to develop into competing networks had obvious advantages for countries such as China that are short on transmission capacity (Ure, 1997).

The MPT itself also underwent important restructuring during this time. The operational side of the MPT, the Directorate General of Telecommunications officially registered itself as a corporation, which become known as China Telecom in 1995. The MPT was renamed as the Ministry of Information Industry (MII). Although an impressive restructuring, Xu and Pitt (2002) note that China Telecom remained an administrative agency as it did not provide any telecom services itself. Instead it was the provincial Posts and Telegraphs Agents (PTAs) who provided telephone services under the brand name of China Telecom.

The new regulatory arrangement in the telecom sector differed from the western understanding of market regulation. Early regulation focused on standardising the relationship between ministries and enterprises, often resulting in political "turf wars" between competing ministries. It did however create a market structure that was conducive to competition between state enterprises. In this manner it provided bureaucrats that already enjoyed significant autonomy, and the incentives to overcome the political and institutional bottlenecks. Although the MII appeared determined to retain its control over the telecom network, the emergence of competing state enterprises, particularly Unicom, made it harder for the MII to maintain the same level of political control. As market demand for telecommunications became more apparent, telecom companies became more entrepreneurial, further undermining the ability of the MII to function as a regulator. Ultimately an absence of impartial market regulation did not prevent bureaucrats responding to market signals.

2.2 FOREIGN INVESTMENT: THE WOLVES THAT DIDN'T ARRIVE

Despite creating incentives for innovation, regulatory reforms failed to address the finance constraint faced by enterprises. Development had to be financed from the connection fee. Foreign companies were not allowed to share in the connection fee, which was regarded as the property of the ministry. This obstacle to foreign investment had its roots in anti-foreign political ideologies. In the past the involvement of multinational companies has been likened to the arrival of the wolves.[13] The MII once remarked that it would be at least

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12 The Peoples Liberation Army, the Ministry of Electric Power, the Railway Ministry and organisations such as the Peoples Bank of China had all developed sizeable networks to serve their own political and business interests.

13 Alan Zhang (2001), Pricewaterhouse Coopers, *What's ahead for China's Telecom Market?*

20 years before the telecom sector would be open to foreigners.[14] Attempts by Unicom to finance its development through China-China-Foreign (CCF) investments floundered on this point.[15]

As the need for finance became more apparent, ideological constraints gave away to economic realities and it appeared that "the wolves" would arrive on China's invitation in the form of the WTO agreements. The WTO represented a new departure for a ministry such as the MPT that had a long tradition of bureaucratic organisation and control. It also reflected the general view that given the technological backwardness of telecom companies and their low-level of spend on research and development, foreign cooperation represented the most efficient way to modernise the telecom sector. Such agreements as the WTO were viewed as a necessary step towards reducing costs and improving the general quality of service, and also improving firm's access to financial and technological resources of foreign partners.[16] The official view was that WTO accession was in the long tem interests of China's development.[17] Competition would initially hurt state-owned telecom enterprises but would beef-up their infrastructure.

In any event, "the wolves" didn't arrive. Liberalisation occurred more on paper than in practice. Despite the acknowledgement of the need for foreign expertise and capital, the ownership conditions imposed by the WTO are likely to be viewed as a significant barrier to foreign investment.[18] For example, the agreement stipulated that foreign firms were allowed to take a maximum of a 25 per cent equity interest in fixed line ventures during the first three years after accession rising to 49 per cent after six years. A similar 49 per cent ownership cap exists for the mobile sector. Neither is the WTO completely clear-cut. The lengthy approval procedures required for foreign investors, as well as uncertainty over how agreements will be implemented in practice are also likely to help protect domestic firms from direct competition.[19]

Given these restrictions it is more likely that foreign firms would involve themselves through technical cooperation, advisory roles or assistance with research and development rather than ownership. Indeed long before WTO accession, China's telecom companies had been receiving technical assistance from foreign firms. Companies such as Ericson (in the South) and Motorola (in the east) dominated the construction of up-to-date mobile networks (Ure, 1997). However for foreign partners the obvious attraction of a growth market such as China is the access to revenue. Ownership restrictions meant that the WTO did not represent significant departure from China's reluctance to give foreign partners such access. As a result the scale of investment needed to finance network diffusion did not arrive as a result of the WTO.

2.3 "PRIVATISATION"

Given the economic, financial and technological importance of the telecom sector, its privatisation has not only been at the forefront of privatisation programs in many countries but has also attracted considerable controversy for many of the same reasons

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14 Wu Jichuan, Minister MII as reported in The Economist, 7th December 2000.

15 The agreements were abolished in 1999 after foreign companies had parted with US$1.4 billion in over 40 joint ventures. See Financial Times 18th September 2000.

16 Alan Zhang (2001), Pricewaterhouse Coopers, *What's ahead for China's Telecom Market?*

17 "Top law maker urges study of impact of China's WTO Entry" Peoples Daily 31st December 2001.

18 According to the State Council, these restrictions relate to concerns regarding safety and stability. "China Telecom industry to open wider" Hong Kong Trade Development Council, 21st October 2002.

19 The approval process is expected to take between six and nine months for value-added service and longer for basic services. *Info-Comms Perspective*, Price-Waterhouse Coopers, Hong Kong, September 2002.

(Li and Xu, 2002). The underlying assumption of privatisation is that it exposes state monopolies to the rigours and disciplines of market competition, thereby increasing efficiency and reducing prices. However the assumption that privatisation is a necessary part for achieving this goal is not a given as there are many variations of market structure that can prove effective in different environments (Ure, 2003).

For China, privatisation emerged as a more ideologically compatible way of financing investment using foreign funds, even before WTO accession. This involved the flotation of a minority shareholding on stock exchanges of Hong Kong and New York. This was not privatisation in the conventional sense as the state maintained a majority shareholding. At most it represented a further standardisation of the relationship between the enterprises and controlling ministry. From the state's perspective it allowed continued control over enterprise revenue. Foreign capital could be used to finance a reduction of the connection fee and hence a greater diffusion of cheaper telecom services. Foreign investors became shareholders rather than revenue sharing partners. Therefore the international flotation of telecom companies represented a politically convenient way of getting around the age-old ideological constraint on revenue sharing.

3. Reforming The Bureaucrats

An absence of full privatisation, liberalisation and transparent regulatory system, has not stopped the rapid growth of China's telecom sector. In each case, ways were found to overcome institutional constraints. Weak market regulation and strong linkages to the political system provided an incentive for bureaucrats to engage in what Yang (2002) describes as "double entrepreneurship". Managers possess the entrepreneurial skill to identify markets, but in order to exploit these markets they must necessarily be innovative with institutional rules and procedures. If bureaucrats have the capacity to lead enterprises to the market, then there has been a misconception of bureaucrats and how they might change. The following section explores the political and economic framework under which the Chinese state altered the incentives for bureaucrats, without threatening its own legitimacy.

3.1 MISCONCEPTION OF BUREAUCRATS

One of the problems with the orthodox approach is its perception of bureaucrats. The overwhelming body of evidence supports the view that bureaucracies would have little interest in promoting market reform, but says little about under what circumstances they might change (Duckett, 2001). Such issues as innovation and profit maximisation are often viewed as problematic for the state sector given its bureaucratic and hierarchical structures. Yet it is often overlooked that bureaucrats are also motivated by such factors as professionalism, power, prestige, material benefits, motivations that are not dissimilar from those in the private sector.[20] Therefore it might not be the public sector itself that is inimical to entrepreneurship, but the rigidities in its structures and practices (Sadler, 2000). Entrepreneurial skills may remain unused simply because the motivational state of the firm does not stimulate an adequate entrepreneurial response (Leibenstein, 1966).

In China this is made more complex by role of the Chinese Communist Party (CCP). Traditionally state enterprises provided the party with control over a wide range of economic activities including the welfare of workers. They also provided the party with a means to reward loyalty. The transition to a market economy created many difficulties

[20] See Kornai (1992) for a review of the factors that motivate bureaucrats.

as traditional values and beliefs installed by the communist system are replaced and modified by the market experience (Zhuplev and Shein, 2003). The transition towards a market-based system challenged the traditional power base of the party, forcing a shift in attitudes regarding the party's role in the economy. Bureaucrats had the option to adjust. While China's bureaucrats were often viewed as resistant to change, the intertwining of party and bureaucracy limited their discretion to resist change (Ma, 1990). Compliance with the leadership's long-term goal of creating a modern socialist economy and the ability to adjust to economic changes, were therefore instrumental in the survival of the bureaucracy.

Viewed from another perspective, China's bureaucrats were already well equipped to respond to changes in the market place. Despite the legacies and constraints of central planning, bureaucrats were in a unique position to exploit changes in the motivational state of their enterprises. The institutional and resource constraints imposed by central planning long had taught bureaucrats to be more innovative. Bureaucrats trained in the tradition of Maoist self-reliance were highly innovative when needs required. The chaos of the Cultural Revolution resulted in greater power being deployed to bureaucrats. Rawski (1975) notes that during the 1960's "only the unanticipated flowering of innovative capacity of older machinery producers" prevented China's industry from being unable to cope with demand shifts too great to be solved by foreign trade alone. The substantial shrinkage of foreign inputs during this period forced enterprises to pioneer techniques of their own invention, a move that contributed to the establishment of a substantial indigenous technological base (Chen, 1978). Paradoxically, enterprise management that survived the Cultural Revolution were in fact highly talented entrepreneurs. The improvements in economic performance achieved during this chaotic era are testimony to this.[21] As a result, self-reliance and the ability to solve complex tasks with limited resources became key features of economic management.

During the 1990s bureaucrats started to set up their own profit-seeking enterprises outside their departments, as a spontaneous and unintended response to the market opportunities that had emerged (Duckett, 2001). In the telecom sector, the early development of non-integrated networks by individual government departments was a product of institutional conditions that fostered a culture of self-reliance, which encouraged individual department heads to expand their own networks (Mueller and Tan, 1997).

These experiences point towards models of production that emphasise the accumulation of skills as well as fixed assets in advancing a country's production opportunities (Rawski, 1975). Tas (1994) attributed the ability of ex-cadres in Hungary to not only maintain their positions but also do well in more dynamic corporate roles to their ability to convert past political power into corporate advantage. This indicates that learning experiences and entrepreneurial skill are important in the socialist system. Taking account of political capital captures "a broader reality having to do with the relative capacity of state actors to introduce and implement policies" (Remmer, 1993:405).

The experiences of China's bureaucrats in the past and indeed those in other transition economies are consistent with the competency view of entrepreneurship where the firm's competencies are linked to previous learning opportunities. Managerial competencies can survive changes in product market conditions and be applied elsewhere.

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21 Wages were 7.2 percent lower in 1976 than they had been in 1965, the gross value of industrial output rose by an annual 15.7 percent in real terms and foreign trade expanded by 19.7 percent a year in US dollar terms (State Statistical Bureau, Statistical Yearbook of China 1983, pp. 17, 420, 455, 490).

The possession of a competency or resource will affect the costs/revenues of firms, thereby giving the firm a resource position barrier (Wererfelt, 1997). For China, such competencies stem from the experiences and resources of enterprise management. In this manner gradual market reforms were a mixed blessing for bureaucrats which allowed them to apply resource advantages to earn monopoly rents while gradually facing market competition. The resource-based explanation is therefore important as it helps explain long-lived differences between certain firms in transition economies that cannot be explained by market conditions alone. It further illustrates how by applying pre-transition resource advantages, bureaucrats can prosper under market liberalisation, even after the collapse of central planning.

3.2 THE POLITICAL TRADE-OFF

It is tempting to say that politically little has changed in China. The same authoritarian regime that waged a massive drive to promote industrial growth under the Great Leap Forward almost fifty years ago is still in power today. Yet, despite the absence of political liberalisation, there has been a noticeable shift in the state's management of the economy. What is remarkable is that the bureaucracy for all its corruption has proved to be loyal. It faithfully followed the Maoist ideology of self-reliance, and now under the same party it has embraced international capital markets. Reform implies a political cost, but China's success is evident in the relatively minimal bureaucratic objection.

The decision to restructure the economy in 1978 instituted important changes in how China's political institutions created the incentive for entrepreneurship in the state sector. Enterprise workers were offered the carrot of improved welfare on the basis of higher productivity.[22] This was in marked contrast to the Cultural Revolution where the emphasis was on voluntarism and self-reliance. Meeting the demands of large-scale production required a change in management structures and the manner in which the state administered enterprises. This was to be carried out under a system of *democratic management* under a *centralised leadership*. This type of structure has largely held, but has continually become more defined to suit changes in the economic environment. These reforms illustrated clearly that although the CCP was to remain in control of enterprises, many of the political ideologies associated with the past had to give way to those more suited to fostering the development of competitive market institutions.

Reforming the system of managerial appointments would have threatened the CCP's grip on economic activity and ultimately its political legitimacy. In this environment it could be argued that the CCP had little choice in how it dealt with bureaucrats. Rather than privatisation, it opted to change gradually the institutional rules and incentives for bureaucrats. The leadership are well aware of the catastrophic results of declaring war on the state bureaucracy when there are no alternative agencies to replace them (Steinfeld, 1999). Premier Zhu Rongji abandoned plans to cut 50 percent of state and party bureaucracies after fears that the Asian financial crisis would spread to China. Urban unemployment was seen as bad enough without swelling its ranks with dismissed cadres whose leadership skills could be ominous for political stability (Pye, 1999).

This method of reform was undoubtedly much more palatable to bureaucrats. In the first instance their discretion to object to reform was limited by the intertwining of the party and the bureaucracy (Ma, 1990). This promoted the prospects for positive adjustment. Ma suggests that bureaucrats will only go for positive adjustment if their own

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[22] Deng Xiaoping: "The working class should make outstanding contributions to the four modernisations" Speech at the Ninth National Congress of Chinese Trade Unions, 11th October 1978.

survival and that of the organisation are inseparable. The prospect of positive adjustment was further enhanced as many enterprises still retained a degree of market protection. This not only allowed bureaucrats to earn temporary monopoly rents, but also allowed them to behave in a more innovative manner. For the CCP, this lessened the political cost of dealing with disgruntled bureaucrats. Moreover it continued to maintain its rule through the control of leadership selection (Burns, 1999).

In any event the CCP had little option but to reform. Political survival under rapid economic growth requires a new type of legitimacy, usually based on achieving improvements in economic performance. Developing a team of large corporations with strong international competitiveness became a political priority in improving performance.[23] This required a complete housecleaning of underhand practices in these enterprises. Such poor business practices as arbitrary political intervention, window dressing and asset stripping, were a common feature of domestic state enterprises. The sanctioning of international listings indicated a political recognition that such practices were incompatible with fostering the development of a team of enterprises that could compete and attract investment on international markets. Delaying this "housecleaning" would have merely postponed the inevitably incurring longer-term cost. Moreover this approach to reform was not unlike what occurred in the UK and US in the late 19th and early 20th centuries where acts by the state to curb the market power of vested interests proved crucial in the development of competitive markets. The repeal of the Corn Laws in the UK and Anti-Trust Legislation in the US are two important examples where the state curbed the market power of vested interests to safeguard competitive business conditions (Lusztig, 1995; Young, 1915). In both cases, the curbing of monopoly power was a significant move in shifting the balance of market power, by exposing vested interests to the disciplines of the market. This type of reform was designed to remove obstacles to development imposed by the state in the first place (Gerschenkron, 1967).

3.3 ECONOMIC INCENTIVES

Political compromise in the telecom sector was important as it allowed telecom enterprises to raise capital on international stock exchanges without surrendering control over revenues. In a sense, this was a politically convenient method to overcome the ideological constraints towards foreign involvement. However, the basis for change was founded on more than just political convenience. Close analyses of the underlying motivations suggest that the long-term economic benefits outweigh the more immediate political costs. The decision to allow international shareholders invest in a previously strategically sensitive sector indicates the government's recognition of the benefits of international finance. These included access fresh capital and greater international exposure for enterprises inducing them to play more closely by international business rules.

From an economic perspective, one of the most important pay-offs from international finance is the fresh capital it introduces to the financial system. This reduces the pressure on domestic banking systems, which may already be burdened by a high proportion of non-performing loans. It also helps alleviate the problems associated with collective bailouts which have, in other transition economies, shown a tendency to fail to induce restructuring, and have ultimately led to a scarcity of external finance for new or restructured enterprises (Perotti and Versnaver, 2004). Raising this money on domestic

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23 "China to Foster large Enterprise Groups"- Li Rongrong, Minister, State Economic and Trade Commission, 16th May 2001.

capital markets basically involves recycling money from an already stressed banking system, without any commitment to repay. The glut of savings in the Chinese banking system and the novelty value of shares as a form of investment, made investing in domestic stock markets an attractive option for private Chinese investors. In this way, more money from the domestic banking system would have been channelled into state enterprises, carrying little incentive to restructure. It would make little sense to attempt to shore up China's banking problems with money "recycled" from domestic markets.

Equally important is the internationalisation factor. It has been almost quarter of a century since Deng Xiaoping emphasised the necessity of utilising western expertise and knowledge.[24] In fact the policy of involving where appropriate international technologies, raw materials and expertise has been a consistent feature of China's economic development since 1978. Technology transfer is vital for China's long-run economic performance and may prevent China becoming trapped in low technology, labour intensive industries. Borrowed technology was one of the primary factors contributing to a high speed of development in pre-industrial Europe (Gerschenkron, 1967). International finance facilitates this by not only giving the enterprises the finance to purchase technology but more importantly it provides much needed exposure to international business practices. International listings are particularly important in this regard as they impose external disciplines on management. Foreign investors are likely to be much more comfortable about forming partnerships with intentionally listed companies. Both China Unicom and China Mobile have engaged in strategic partnerships with Qualcomm and Vodafone respectively.

4. China's Entreprenurial Bureaucrats

Instead of pursuing full-privatisation or strict regulatory supervision, China's telecom policy has focused on creating the incentives for the bureaucrats that continue to control the sector. This has proved a successful telecommunications development policy, particularly if viewed in terms of domestic institutional constraints. Bureaucrats have proved remarkably responsive to the market mechanism, so much so, that the state now fears that competition may have gone too far.[25] If competition has gone too far, bureaucrats may need to become more than just entrepreneurs. Highly competitive markets require much greater skill in such areas as marketing, managerial coordination and profit maximisation, areas where bureaucrats have limited previous experience to draw upon. Moreover these need to be cascaded the whole way through the organisation. Achieving this is however limited, not just by limited market experience, but also by political concerns for the rapid development of an affordable nationwide telecommunications network.

4.1 DOING EVERYTHING RIGHT

The improvements achieved by both Unicom and China Mobile indicate that at face value, China's bureaucrats are doing things right. Both enterprises have continued to win new markets by increasing subscriber numbers and cutting costs. Figure 1 illustrates how both companies have had to lower average revenue per user (ARPU) in order to win more

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24 Deng Xiaoping: "Update Enterprises with Advanced Technology and Managerial Expertise" 18th September 1978.

25 In July 2004 the MII and National Development & Reform Commission (NDRC) issued a document entitled "Notice on Further Strengthening Telecom Price Supervision" (Doc. 204), which required future pricing promotions to be approved by the mobile companies' central office and registered with the NDRC.

subscribers. The entrance of Unicom has transformed the market structure from one of monopoly to competing oligopolies. Standard economic theory indicates that the public interest is better served when oligopolies are induced to compete rather than collude. Intense competition among oligopolies can lead price and output levels towards perfect competition. A comparison of prices (using Average Revenue as a proxy) and marginal returns for China Mobile and China Unicom indicates that competition is slowly pushing them closer to price levels more consistent with perfect competition (see Figure 2). Competition between different technologies may be beneficial to the sector. China Telecom entered the more lucrative mobile phone market using its PHS, without an official licence. Although such "bending the rules" suggests an absence of regulation,[26] from another perspective it represents an entrepreneurial response by management to a market demand for cheap telecom services. In the UK, early competition between the telegraphy and telephony sector worked to promote the diffusion of telecommunication services to large sections of the population (Bates, 1997).

Indeed competition from China Telecom's PHS technology has put further pressure on mobile operators to cut prices. Figures from China Mobile illustrate this. In 1998 its ARPU per contract customer was RMB 366. By 2002 this had fallen to RMB 176. Comparing this to an ARPU of RMB 63 for pre-paid customers in 2002, the scale of revenue reduction necessary becomes clear. The intense nature of competition is further evident in subscriber numbers. In 2000, China Mobile had 42 million higher value-added contract subscribers compared with 16 million prepaid subscribers. By 2002 the situation was reversed, and the company had 49 million contract subscribers compared with almost 69 million prepaid subscribers. A similar trend was evident at Unicom. In 2002 it had 18.7 million contract subscribers and 19.9 million pre-paid, compared to 16.5 million contract and 10.5 million pre-paid in 2001.

4.2 REGULATORY DILEMMAS

The MII has faced significant dilemmas in attempting to find the correct balance between developing a national telecom infrastructure and regulating the business practices of enterprises. On the one hand it has had to become more professional and impartial, while on the other hand it has to ensure that telecom services develop as rapidly as possible. These two goals do not always coincide, particularly in a developing economy where both enterprises and regulator are controlled by the state. In this situation, it is politically convenient not to intervene. The failure to solve this dilemma has however resulted in the MII presiding over a rapidly growing and innovative sector, characterised by high levels of product and standard differentiation. Unlike European markets where a single GSM standard has allowed manufacturers and phone companies to compete across borders, China has yet to settle on a single standard. China has in fact three different standards.[27] The geographical dispersion of China's market has also aided the growth of competing technologies such as PHS which proved popular in lower income areas outside larger cities where mobile coverage in limited. The ex-post regulation or closing down of such a popular service may prove politically sensitive.

Yet utility regulation may not be the best solution for China. Early utility regulation in the US emerged as a response to market developments and represented a crystallisation of public opinion against monopolists rather than a legal abstraction (Dillon, 1925). Utility companies themselves often sought regulation as a method of

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26 "China Telecom steps up mobile battle" *Financial Times*, 3rd February 2003.

27 "One Country, Three Systems" Duncan Clark, BDA China, 5th November 2002.

avoiding the "inconvenience" of market competition (Demsetz, 1968). There is little evidence of either of these pressures in China. In any event, to be successful, regulations need to be enforceable. The success of the "regulated monopolist" in the US was dependent on a legal system and pricing structure put in place by the state that was supportive of innovation and competition (Bates, 1997). Although Unicom has in the past been fined for breaking tariff rules when it implemented an over aggressive promotional package, aggressive price competition in the sector suggests that tariff violation is routine.[28] While not unusual for firms, even in regulated markets, to engage in some sort of tariff breaking, this will usually takes place when there is some strategic or commercial gain that cannot be repeated by its competitors. In China there is little competitive gain as both firms have been able to cut prices. Moreover a legal system where firms can enforce regulatory decisions has yet to be developed.

The latter indicates that the main problems for transition economies may not be one of price regulation but rather market experience. The market structure was effectively a product of political competition between government bureaucracies over economic turf (Mueller and Tan, 1997). Success in this type of structure depended more on political than business skill. The Tenth Five-Year Plan for MII acknowledges this problem by noting that although the current system of tariffs is too rigid for a growth market, the real imbalance appears to be in the human resource structure where there exists a surplus in general labour supply but a shortage in skilled management level executives.[29] This indicates that regulation is not unimportant, but of greater importance is fostering a greater understanding of the market mechanism among bureaucrats.

4.3 Capitalists Left to Their Own Devises

At a deeper level, the growth of China's telecom sector captures the relative inexperience of bureaucrats in dealing with market competition. The relative ease at which China's bureaucrats have adapted to running large internationally listed corporation suggests that operationally, it is not that dissimilar from running a large SOE and complying with the state plan. Bureaucrats are however much less familiar with survival in highly competitive markets. This is not helped by the close relationship with the political structure, as competition may not just be driven by economic factors, but also the desire of bureaucrats to enhance their political prestige. This is particularly true at local level where promotion is still largely based on political considerations. An absence of regulation and a shortage of experienced management result in there being little managerial oversight. In this situation, it becomes more difficult for enterprise management to make a complete transition to profit-seeking entrepreneurs as such practices as profit-maximisation and shareholder-value become of secondary concern.

One of the benefits of an international listing for state telecom enterprises is that it imposed a strong management overlay to install a set of economic benchmarks.[30] The problem is that prior to this, there existed little cooperation or oversight. Provincial level PTAs enjoyed a significant degree of autonomy in how they conducted their business. Their relationship with the central government was based on compliance with the political

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28 "Telecom regulators get tough on operators" China Daily 21st January 2003.

29 MII Tenth Five-Year Plan for the Information Industry (Section 2.3). See *China: China Summary of the Tenth Five-Year Plan (2001-2005)-Information Industry* (http://www.trp.hku.hk/infofile/china/2002/10-5-yr-plan.pdf (Accessed January 2005)).

30 Interview with Tim Storey, Senior Telecom Analyst, Hong Kong.

objectives of the central plan. One of the difficulties for management is that implementing a strategy in a market like China is not an easy task, as improvements need to be cascaded the whole way down the ranks [Interview: China Unicom]. This requires a higher level of managerial expertise at each level of the organisation. The level of price-based competition raises the suspicion that at provincial level, management remain ignorant of the new benchmarks, where such factors as ego and political promotion continue to take precedence. Indeed it does not help that promotion, even at senior director level, is still determined by mainly political factors. Consequently bureaucrats often have an incentive to achieve quantitative subscriber based targets that they are more familiar with, in preference to achieving value-added growth. One Hong Kong based China Business Manager reported that although her counterparts in China had definitely become more sophisticated and better rewarded, their emphasis on high value VIP customers is still not enough and definitely lags that of western companies.

The experiences of China's mobile telecom companies indicate that although bureaucrats are not afraid to engage in such market activities as international flotation, price competition, and international joint ventures, this may not be enough in itself to change their political mindset. Management are caught in an unenviable position, of which they have no previous experience. On the one hand, in a growth market it is natural to leverage on price. The market has developed so quickly that the easiest way to get market share is to cut price [Interview: Unicom]. On the other hand management know that tariff breaking and excessive discounting in a market with two competitors and significant barriers to entry should not be a necessity. One would expect some sort of duopoly. Despite this, entrepreneurial bureaucrats in the absence of market experience or regulatory oversight, behave as capitalists would, if left to their own devices.

5. Conclusion

China's approach to dismantling the state bureaucracy has differed markedly from that witnessed in many countries in the former Soviet Bloc. Rather than attempting to purge bureaucrats from their positions of power, China has instead opted to make use of the vast entrepreneurial skill of bureaucrats. More recently this has seen the increasing use of such mechanisms as the WTO and international stock markets to impose external disciplines on bureaucrats. Although not without cost, this type of reform has proved much more politically convenient and economically less disruptive than the lustration campaigns of other former centrally planned economies. This paper illustrated how such factors as the intertwining of party and bureaucracy, incentive structures which promoted positive adjustment and a new type of legitimacy based on achieving economic growth, allowed bureaucrats to overcome institutional constraints. This approach has enabled bureaucrats to identify areas they can pursue commercial goals, although there are areas where the ideological legacy of the past causes confusion. While mechanical compliance with the requirements of WTO and international stock exchanges lead to convergence with market economy practices, strong linkages with the political system mean that when forced to choose, bureaucrats may place political motivations ahead of real economic targets. The example of the telecom sector illustrated that although bureaucrats were quite comfortable with such business practices as technology transfer and engaging in strategic partnerships, when faced with weak regulatory enforcement, they exhibited the normal response of capitalists left to their own devices.

On a more general level, the experiences of China's bureaucrats imply that it is not state enterprises or their bureaucratic styled management that are inimical to entrepreneurship, but rather the political legacies of central planning and institutional arrangements that prevent the full realisation of entrepreneurial visions. Bureaucrats have shown the entrepreneurial capacity to overcome many of the constraints inherited from central planning. An absence of market institutions has not prevented bureaucrats from responding to market signals. The paper illustrated how self-reliance and the ability to solve complex tasks under limited recourses have been long-term features of state-enterprise management. The difficulty for China's bureaucrats is that even compliance with the institutions of developed stock markets, are not strong enough to break traditional political linkages. Good corporate practices are often non-statutory in nature, requiring more than mere compliance with regulations or listing requirements. China's telecom sector illustrates how the immediate problem for transition economies may not necessarily be one of price regulation, but rather management's lack of market experience. Consequently, bureaucrats are more likely to behave in a manner more consistent with bureaucratic entrepreneurs than profit-seeking businessmen.

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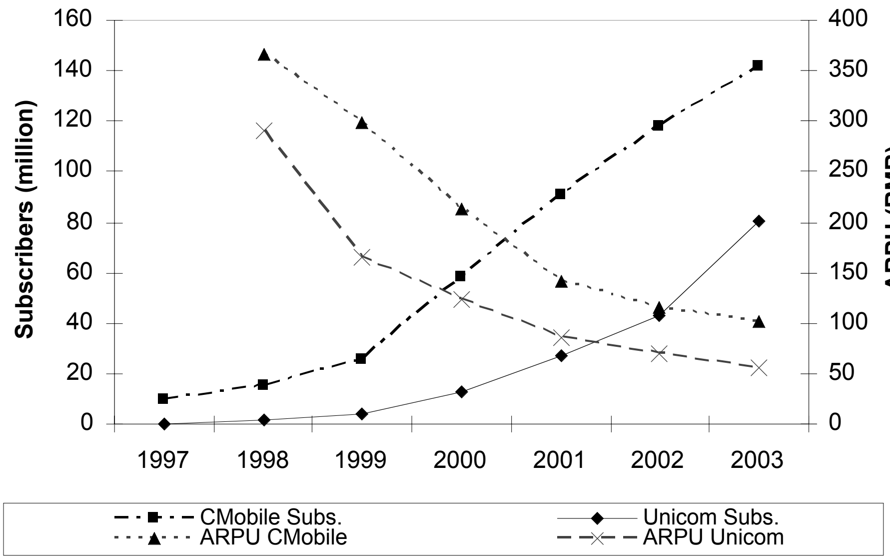
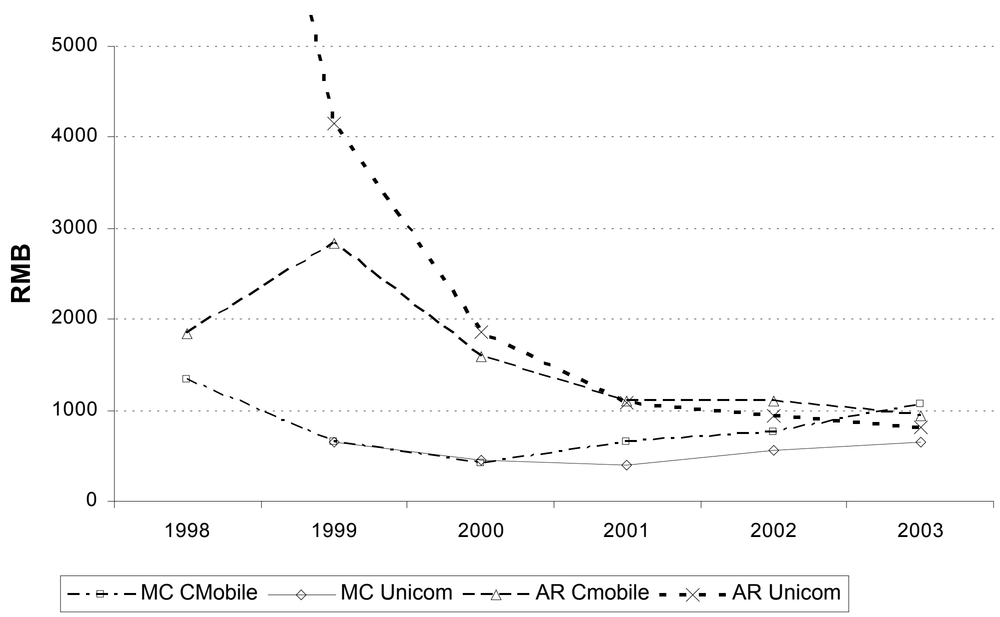
Figure 1: Mobile Subscribers vs. ARPU



Note: Mobile subscribers equal to the total number of prepaid and contract subscribers. ARPU is defined as the average revenue per user.

Source: Various Annual Reports China Mobile and China Unicom.

Figure 2: Marginal Cost (MC) vs. Average Revenue (AR) of China Mobile & China Unicom (RMB)



Note: Average Revenue is calculated as Total Revenue divided by Total Subscribers. Marginal Cost refers to the addition to Total Costs of adding an extra subscriber.

Source: Annual Reports China Mobile and China Unicom (2000-2003).