

# TELECOMMUNICATIONS POLICY-MAKING IN CHINA: A TWO-TIER BARGAINING MODEL

Peter Lovelock and John Ure<sup>1</sup>

Telecommunications has become one of the anointed ‘pillar industries’ of China’s economic reform program. That this policy emphasis has been successful was illustrated in 1993 when the governor of Hebei, officiating at an opening ceremony, remarked that the “old wisdom” that China’s provinces would get rich by building roads first and then putting in telephones no longer applied. The reverse had become true, he suggested, with the key to economic growth being the installation of phone lines.<sup>2</sup> Telecommunications policy success has also been demonstrated through the fastest, largest telecommunications build-out program the world has seen. Yet despite this and despite a development program which touches upon almost every other major industry sector – from agriculture to finance and banking; from education to aerospace<sup>3</sup> – very little scholarly work has yet been done in coming to terms with the *policy* processes of the industry. This is surprising given the studies that exist on almost all other high-growth sectors in China. It is also surprising given the scholarly interest the telecommunications industry has generated elsewhere in the world, as it has been seen as an increasingly fundamental aspect of the world trading system.<sup>4</sup> This paper is an initial attempt to begin to fill the vacuum.

Existing studies of the Chinese telecommunications sector (while largely neglecting the process of policy-making) have broadly fallen into one of three categories: technical, industrial studies; descriptive (‘state of play’) accounts; or prospects for industry liberalisation analyses. The vast majority of the existing literature both English and Chinese is to be found in the first group, largely a product of the engineering underpinnings of the industry.<sup>5</sup> Indeed, until the early-1990s, telecoms studies in Chinese

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<sup>1</sup> John Ure and Peter Lovelock are respectively director and deputy director of the Telecommunications Research Project, Centre of Asian Studies, The University of Hong Kong. This paper was written in 1998, and posted on this website April 1999.

<sup>2</sup> Cited in Andrew Adonis and Simon Bernard, “Firms hear loud ringing of money as phones go into China,” *South China Morning Post*, 12 August, p. B12.

<sup>3</sup> See Peter Lovelock, Theodore Clark and Ben A. Petrazzini, “The ‘Golden Projects’: China’s national networking initiative,” *Information, Infrastructure and Policy*, forthcoming.

<sup>4</sup> According to the International Telecommunications Union, information and communications industries are growing at twice the rate of the rest of the global economy. Investments in information goods and services are key sources of productivity improvements and economic growth. See International Telecommunications Union, *World Telecommunications Development Report: Information Infrastructures* (Geneva: ITU, 1995). Also, Ben A. Petrazzini, *Global Telecom Talks: A Trillion Dollar Deal* (Washington D.C.: Institute for International Economics, 1996).

<sup>5</sup> Ji Fusheng, “Zhongshi Xinxu Jichu Sheshede Jianshe (The Importance of the Information Infrastructure Construction Program)” in *Xinxu gaosu gonglu mian mianguan - baokan wenzhang xuanbian*, (Beijing: Renmin Youdian Chubanshe, 1994); Li Yuanpeng, “Information superhighway, optical fibre cable and copper cable,” *China Telecommunications Construction*, Vol. 7, No.3 (1995), pp. 26-30; Wu Jichuan, “To Deepen Reform, Speed Up Development, and Provide China with Better Communications Services,” *China Telecommunications Construction*, Vol.6, No. 5 (1994), pp. 6-10; Xiong Bingqun, “Telecoms Development in China and New Target of the Year 2000,” *China Telecommunications Construction*, Vol.7, No. 2 (1995), p. 10; Zhong Yixin, “Luelun Zhongguo Gaoxu Xinxu Wangluo Jihua - CHINA

were almost the exclusive domain of engineers and scientists. The last several years have seen Chinese studies from research institutes such as the Chinese Academy of Social Sciences (CASS),<sup>6</sup> the National Research Centre for Science and Technology for Development, State Science and Technology Commission (SSTC),<sup>7</sup> and the Beijing University of Posts and Telecommunications (BUPT)<sup>8</sup> which fall into the second camp. These have been generated by the rapid growth of the industry and its relatively sudden emphasis in national policy-making and the concomitant need of policymakers to have basic economic and institutional information. The final group of studies, predominantly English-language (although comprised heavily of mainland scholars who have been trained overseas) adopt frameworks of industry liberalisation/deregulation used in the West over the last 15 years (and developing countries to a much more limited extent over the last 4-5 years), and apply them to China, only to find that China seems to be marching to a different beat.<sup>9</sup> It is our contention that much of the confusion surrounding developments in the Chinese telecommunications industry result from a lack of understanding of the policy process.

As has been the case broadly across the Chinese industrial administration, policy-making in the telecommunications sector has been driven by a number of different – and, at times, apparently contradictory – concerns through the reform era. These concerns have principally included:

- the development of the basic telecommunications infrastructure;
- deriving the capital necessary to build this infrastructure and the expertise necessary to operate it;
- national security issues (from control of the ‘airwaves’ to control of the national Internet<sup>10</sup>);
- co-ordinated regional development (whether expressed as a universal service obligation

(Outline China’s High-speed Information Plan - CHINA),” in *Xinxi gaosu gonglu mian mianguan - baokan wenzhang xuanbian*, (Beijing: Renmin Youdian Chubanshe, 1994).

<sup>6</sup> Li Jingwen, Dale W. Jorgenson, Zheng Youjing and Masahiro Kuroda, *Shengchanlu ji ZhongMeiRi jingji zengchang yanjiu* (Productivity and economic growth in China, USA and Japan), (Beijing: Chinese Academy of Social Sciences, 1993); Wang Xiangdong, “Zhongguo Xinxihuade Mubiao yu Dianxinde Fazhan (Chinese Informatization Objectives and Telecommunications Development),” *Xinxihua yu Jingji Fazhan* Vol. 2, No. 1 (1996), pp. 35-42.

<sup>7</sup> Di Ang Zhao and Liu Junjia, “Telecommunications development and economic growth in China,” *Telecommunications Policy*, Vol. 18, No. 3 (1994), pp. 211-215.

<sup>8</sup> Liang Xiongjiang, *Zhongguo Dianxin (China Telecommunications)* (Beijing: Zhongguo Renmin Youdian Chubanshe, 1995).

<sup>9</sup> Milton Mueller and Zixiang Tan, *China in the Information Age: Telecommunications and the Dilemmas of Reform*, (Washington D.C.: Center for Strategic and International Studies, 1997); Xing Fan, *China Telecommunications: Constituencies and Challenges*, (Harvard University: Harvard University Press, 1996); Douglas C. Pitt, Niall Levine and Xu Yan, “Touching Stones to Cross the River: evolving telecommunication policy priorities in contemporary China,” *Journal of Contemporary China*, Vol. 5, No. 13 (1996), pp. 347-365.

<sup>10</sup> ‘national Internet’ is not an oxymoron, at least not in this context, given the way that the Chinese authorities have conceived and pursued the development of a ‘Chinese Intranet’ or national firewall. See Paul Triolo and Peter Lovelock, “Up, Up, and Away - With Strings Attached: Internet in China,” *China Business Review*, Vol. 23, No. 6, (1996), pp. 18-29.

(telecommunications-specific) or as Beijing's desire to subsidise interior provincial development to avoid exacerbating wealth discrepancies (China-specific));

- the development of a competitive domestic industry; and,
- administrative 'turf' battles involving a uniquely large number of ministries, commissions and state corporations.<sup>11</sup>

The problem that many observers – both Western and Chinese – have with the complexity of the policy-making process is separating out the various strands to understand each aspect and then re-integrating them into an overall policy perspective. Instead they choose one aspect of the industry's development and extrapolate to a logically-flawed conclusion, ignoring the realities of the Chinese administrative processes. Thus, Andrew Harrington was able to assert in 1993, with unflinching clarity, that the Chinese telecommunications administration would *have* to open up to foreign direct investment if they were to successfully pursue their build-out targets.<sup>12</sup> However, not only have the annual telecommunications development targets been met *without* the introduction of foreign direct investment into the sector, the growth targets have been increased almost every year (Table 1). From similarly flawed logic, focusing instead on the need for a transparent regulatory regime to accommodate Western business interests, Ante Xu was able to state in 1994 that the long-awaited Telecommunications Law would be introduced in 1995 ("the year of change").<sup>13</sup> It was not. (By late-1997 it was still not apparent.<sup>14</sup>) Finally, in

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<sup>11</sup> When the Leading Group on Informatization (*Xinxihua Lingdao Xiaozu*) was formed in May 1996 to oversee developments across the relevant sectors it included representatives from: the Ministry of Posts and Telecommunications (MPT), the Ministry of Electronics Industry (MEI), the Ministry of Radio, Film and Television (MRFT), the Ministry of Railways (MOR), the Ministry of Electric Power (MEP), the Ministry of Foreign Trade and Economic Cooperation (MOFTEC), the Ministry of Finance, the Ministry of Public Security, the State Planning Commission (SPC), the State Economic and Trade Commission (SETC), the State Science and Technology Commission (SSTC), the State Commission for Reforming the Economy (SCRE), the State Education Commission (SEC), the People's Bank of China, the Chinese Academy of Sciences, China Aerospace, Xinhua, and the People's Liberation Army (PLA), see Figure 4 (below).

<sup>12</sup> See Andrew Harrington, "The modernization of Asia-Pacific telecommunications," paper delivered to IIR conference on New Opportunities in Privatizing and Financing Telecommunications, Hong Kong, 28-30 June 1993. In 1993/94 a number of financial houses were able to make great mileage out of China's apparent investment dilemma. Their argument ran along the following lines: the network increase by the MPT was in the order of 75-80 million lines; the average cost per line was assumed to be US\$1000-\$1200; giving a total development cost of approximately US\$100 billion for the basic infrastructure. The MPT had issued no financing plan and supplier credits were estimated to cover a maximum US\$25 billion. Competing infrastructure projects in China required a minimum of an additional US\$100 billion (although there were estimates from groups such as Peregrine which ran much higher), and China only had foreign currency reserves of US\$20 billion. According to this line of reasoning the "numbers don't add up" and therefore, in the eyes of the foreign bankers, China's plans would either have to be scaled back drastically, or the whole sector was on the verge of opening to foreign equity participation. For a rebuttal of this financial speculative frenzy, see John Ure, 1994: 'China's Telecommunications: The Price of Reform' paper delivered to AIC China Telecoms Conference, 10th-11th March, Hong Kong, and John Ure, 1994, 'Financing China's Telecoms' paper delivered to the Asia-Pacific Telecommunications Forum, China Telecoms Seminar (AIC), Shangri-La Hotel, 24th-26th October, Beijing, China.

<sup>13</sup> Ante Xu, "Perspectives and Issues on China's Telecommunications Institutional Reform," paper delivered to the Korean Telecommunications Authority, June 13 1994. See also Ante Xu, "Zhongguo Dianxin Zhidu Gaigede Qianying yu Wenti," *Shuliang Jingji Jishu Jingji Yanjiu*, 9-15 December, pp. 72-

early 1996 a range of international publications declared that China's experiment with public access to the Internet was over as a result of the Chinese leadership's hostility to unfettered information flows.<sup>15</sup> Yet, by mid-1997 the International Telecommunications Union (ITU) was declaring that China was "experiencing an Internet boom" with 19,739 hosts – a growth of 820 percent over the previous year.<sup>16</sup>

**Table 1: Original and revised Chinese telecommunications targets for 1995 and 2000**

		1991	1995	2000
Telephones	-- original	15 million	23.8 million	31 million
	-- 1992 revision		31 million	65 million
	-- 1993 revision		36 million	78 million
	-- 1994 revision		na	na
	-- 1995 revision			123 million
Exchange Capacity	-- original	10 million	35.45 million	48 million
	-- 1992 revision		48 million	96 million
	-- 1993 revision		50 million	100 million
	-- 1994 revision		75 million	140 million
	-- 1995 revision			170 million
Telephone density	-- original	1.20%	2%	3%
	-- 1992 revision		2.50%	5%
	-- 1993 revision		3%	5-6%
	-- 1994 revision		4%	7-8%
	-- 1995 revision			10%
Toll trunk lines	-- original	152000	258000	520000
	-- 1992 revision		520000	1.4 million
	-- 1993 revision		520000	1.4 million

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<sup>14</sup> By mid-1997 the MPT was circulating a draft Law for other ministries to comment upon. This was the 5<sup>th</sup> or 6<sup>th</sup> such draft to do the rounds since 1986. Ministry officials did not expect there was much chance that the Law could be introduced before 1998 – and were sceptical that it would even happen that early. See interview with (Director General) Liu Cai in *Asia Pacific Telecoms Analyst* June 30, 1997.

<sup>15</sup> In early 1996, the *Asian Wall Street Journal* (January 22) and *Time* (January 29: 15) (among others) were able to assert that a moratorium on new Internet subscribers and a requirement for financial information providers to work through Xinhua represented an end to China's experiment with public access to the information superhighway and an end to real-time information access. (The *Asian Wall Street Journal* all too quickly linked the intervention to rumours about the death of Deng Xiaoping in late-1994, when widely reported rumours wrought havoc in China's two stockmarkets and angered the government. *Time* went on to speculate that Xinhua's intervention would result in a block on real-time information under which "China cannot hope to sustain a thriving economy.") But as the Economist Intelligence Unit's *Business China* (February 5 1996: 1-3) noted, the case with the Internet was "pretty straightforward. Suppliers of Internet accounts have been ordered to halt sales because capacity is jammed .... as many as 70,000 people are trying to access the Internet through 7,000 accounts only half a year after public access became available." Meanwhile, Xinhua executives, aware that Indonesian press agency Antara and Malaysian press agency Bernama have long demanded a cut or revenues from financial information providers, saw an opportunity to increase their revenues, and moved.

<sup>16</sup> International Telecommunications Union, *Challenges to the Network: Telecoms and the Internet*, (Geneva: ITU, 1997).

-- 1994 revision	na	na
-- 1995 revision		6 million

Source: adapted from John Ure, "Options and Opportunities in China's Telecommunications," speech prepared for the IIR Telecommunications Deregulation conference in Hong Kong, 29-30 April, 1993.

Such confusion among industry analysts over apparently contradictory demands has occurred repetitively through the 1990s as China has undertaken the largest, fastest telecommunications development program the world has seen. And yet, at a time of on-going financial pressures, a desire to enter the World Trade Organisation (WTO),<sup>17</sup> and worldwide industry liberalisation, China has maintained one of the most closed telecommunications services markets in the world. How have they managed this and why?

In this paper we employ a *two-tier* bargaining model to explain policy developments in the sector and, in so doing, explain how the government has successfully avoided a credit problem in rolling out its telecoms development program. The two-tier bargaining framework is a co-ordinated approach on the part of the government. From the macro-policy perspective, the government has set forth a strategic initiative built around facilitating economic reform without being bound to a single set strategy ('crossing the river by touching the stones'); it has attempted to regulate the process without being restrictive, by refusing to define exactly where the boundary lines are; and it has tried to encompass and co-ordinate participation. In this paper we show how this strategy applies to the telecommunications sector and provides a coherent framework for viewing the overall directions in which the industry is moving.

The first section of the paper very briefly reviews the recent bargaining literature as it has been applied to China policy-making. A bargaining perspective essentially means that the various interested parties bring their resources to the bargaining table. This suggests that authority is 'fragmented' among different power, or resource, holders. However, central control in China's telecommunications policy-making has remained impressively consistent (and the long expected liberalisation to allow foreign capital has yet to occur). The second section of the paper introduces a two-tier bargaining model wherein there are a recognised set of international policy objectives and a recognised set of domestic policy objectives. Interested actors can bargain to achieve their objectives at either level, but the government's position as the arbiter between the two tiers is what has allowed it to maintain a coordinating role. In section three we use this two-tier framework to re-examine the development issues facing the government in its telecommunications program and revisit the flawed assumptions which have underlay more pessimistic appraisals of China's development objectives. In section four we briefly outline what is *actually* being bargained over and how the bargaining matrix has driven overall policy development. It is our hypothesis that the policy process has been a fairly consistent and iterative one.

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<sup>17</sup> ... within which telecoms was the first of the four key services sectors to have reached a negotiated outcome. See the Negotiating Group on Basic Telecommunications documents issued by the WTO. For background analysis see Ben A. Petrazzini, *Global Telecom Talks: A Trillion Dollar Deal* (Washington D.C.: Institute for International Economics, 1996).

*China Policy-Making: A Bargaining Perspective*

As recently as 1992 David Lampton was remarking that insufficient appreciation had been given to the role that bargaining and negotiation play in the domestic Chinese decision-making process.<sup>18</sup> Indeed, while analysts had long realised that bargaining and negotiating processes were central to Chinese interactions with foreigners, Lampton saw a “curious and conspicuous disjuncture” in the absence of similar analysis of the domestic processes.<sup>19</sup> Due in large part to the work of Lampton himself, a good deal of attention has now been given to domestic bargaining interactions.

Through the early- to mid-1990s this theme was picked up and developed as the various layers of Chinese politics became more accessible to investigative research. A bureaucratic, institutional political analysis of decision-making and policy *implementation* was pursued by Lampton and Lieberthal, and further developed by analysts such as Shirk and Huang.<sup>20</sup> Chao further developed the picture of the ‘*tiaotiao-kuaikuai*’ administrative structure (a sophisticated extension of much earlier work on the *xitong* administrative demarcation), while authors from Wong to Goodman to Jia and Lin focused on issues of centre-periphery negotiation.<sup>21</sup> The picture that emerged was of a complex bargaining process where policy implementation is slow and incremental. The top-level of this institutional framework was further – and more systematically – developed by Halpern, and Hamrin and Zhao. The latter were able to note that while key concepts from the bureaucratic model of Chinese decision-making remain valid, and the “Leninist centre [has] maintained its monopoly on policy-making authority . . . . [the centre has] found itself ‘persuading’, ‘consulting’ or ‘bargaining’ with a multitude of lower-level actors over the implementation of its policies”.<sup>22</sup>

<sup>18</sup> David Lampton, “A plum for a peach: bargaining, interest and bureaucratic politics in China” in Kenneth Lieberthal and David Lampton (eds), *Bureaucracy, Politics and Decision Making in Post-Mao China* (Berkeley: University of California Press, 1992), pp. 35-6.

<sup>19</sup> Lampton cites an oft-quoted passage from **Richard Solomon’s 1985 RAND Corporation monograph, *Chinese Political Negotiating Behaviour***: “Chinese officials sometimes give the impression that agreements are never quite final. They will seek modifications of understandings when it serves their purposes, and the conclusion of one agreement is only the occasion for pressing an interlocutor for new concessions.” (**Solomon 1985: viii**)

<sup>20</sup> Kenneth Lieberthal and David Lampton (eds.), *Bureaucracy, Politics and Decision Making in Post-Mao China* (Berkeley: University of California Press, 1992); Susan Susan, *The Political Logic of Economic Reform in China* (Berkeley: University of California Press, 1993); Yasheng Huang, *Inflation and Investment Controls in China: The Political Economy of Central-Local Relations During the Reform Era* (New York: Cambridge University Press, 1996)

<sup>21</sup> Chao Chien-min, “*T’iao-t’iao* vs. *K’uai-k’uai*: A Perennial Dispute Between the Central and Local Governments in Mainland China,” *Issues and Studies*, August 1991, pp. 31-46; A. Doak Barnett, *Cadres, Bureaucracy, and Political Power in Communist China* (New York: Columbia University Press, 1967); David S.G. Goodman, “The Political Economy of Regionalism in China: Economic Development and the Prospects for Political Disintegration,” (Perth: Asia Research Centre, 1993), Working Paper No.2; Jia Hao and Lin Zhimin (eds.), *Changing Central-Local Relations in China* (Boulder and London: Westview, 1994).

<sup>22</sup> Carol Lee Hamrin and Suisheng Zhao, “Introduction: Core Issues in Understanding the Decision Process,” in Hamrin and Zhao (eds.), *Decision-Making in Deng’s China: Perspectives from Insiders* (New

However, by this time there was a problem for scholars and analysts in synthesising the state's 'hardness' (Leninist centrality) with its flexibility (centre to periphery decentralisation) and its overall *apparent* bargaining success (economic reform without political reform). This confusion was compounded by Beijing's responses to the demands of globalisation: through the 1990s an increasingly liberal business environment was created, but at the same time the development of a transparent regulatory regime was stalled. Why has this been difficult to explain?

Effectively Lampton's disjuncture remains in that within the literature there now exist not one, but two, bargaining genres: the domestic (largely administrative and focused very much on centre-local conflict) and the foreign (largely economic, and focused very much on foreign direct investment) bargaining frameworks. Surprisingly, almost no work has been done to integrate the two, or to examine how the bargains on one level may affect policy on the other, or even whether the objectives of the respective players are in fact the same at both levels.

#### *Adapting The Framework: A Two-Tier Bargaining Model*

Thus, we are back at Lampton's query: why the disjuncture? Why have these two layers not been combined when implicitly we *know* that each sphere can profoundly alter the other? This separation is, of course, not unique to China. An examination of the international bargaining literature reveals the common perception of a monolithic stance pitting the host country as a whole against multinational corporations (MNCs) and international organisations (IOs, such as the World Bank) collectively.<sup>23</sup> But, bargaining is not limited to the 'foreign side' and the 'home side', or in the case of China, the 'foreign side' and the 'Chinese side.' In fact, as certain industry-specific analyses have found, foreign and Chinese joint venture representatives often work together to bargain with local authorities over the implementation of rules and regulations that affect the joint venture

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York and London: M.E. Sharpe, 1995), p. xxv. See also, Nina P. Halpern, "Information Flows and Policy Coordination in the Chinese Bureaucracy," in Kenneth Lieberthal and David Lampton (eds.), *Bureaucracy, Politics and Decision Making in Post-Mao China* (Berkeley: University of California Press, 1992); and Carol Lee Hamrin, "The Party Leadership System," *ibid.*

<sup>23</sup> Gabriel A. Almond, "The international-national connection," in Gabriel A. Almond (ed.), *A Discipline Divided: Schools and Sects in Political Science* (Newbury Park: Sage Publications, 1990); Peter A. Gourevitch, "The Pacific rim: current debates," *The Annals of the American Academy of Political and Social Science* Vol. 505 (1989), pp. 8-23; Teng Weizao and N.T. Wang (eds.), *Transnational Corporations and China's Open Door Policy* (Toronto: Levington, 1988); Stephen J. Kobrin, "Testing the Bargaining Hypothesis in the Manufacturing Sector in Developing Countries," *International Organization* Vol. 41, No. 4 (1987), pp. 611-31; Dennis J. Encarnation and Louis T. Wells Jr., "Sovereignty en Garde: Negotiating with Foreign Investors," *International Organization* Vol. 39, No. 1 (1985), pp. 47-78; Robert Gilpin, "International politics in the Pacific rim era," *The Annals of the American Academy of Political and Social Science*, Vol. 505 (1989), pp. 56-67; Joseph M. Grieco, "Between Dependency and Autonomy: India's Experience with the International Computer Industry," *International Organization* Vol. 36, No. 3 (1982), pp. 609-632.

from the outside.<sup>24</sup> The joint venture partners will then often engage in bargaining among themselves over the rules *within* the joint venture itself.<sup>25</sup>

To lay this process out: the MNC bargains with Chinese state authorities for market access. The same MNC will then negotiate – often in competition with other MNCs – for a Chinese partner. In the first case the negotiation is usually about what the foreign partner brings to China, in the second it will be about financial remuneration. The MNC and its Chinese partner will then *jointly* bargain with local authorities over the regulations which bind the venture itself. In telecommunications this process has become institutionalised to a degree over recent years with the so-called ‘foreign-Chinese-Chinese (FCC)’ financial arrangement for arms-length involvement in the services market.

It is our contention that it is this two-stage bargaining process which has caused many of the problems for foreign telecommunications ventures in China because they often fail to recognise that the objectives of their Chinese bargaining opposites may be different at the state and local levels. Indeed, there often appears to be the implicit assumption in foreign telecoms companies that the objectives of the Chinese at each level will be the same. In terms of *policy-making* our premise is that Beijing has, through the 1990s, used this two-level bargaining approach to co-ordinate developments. Beijing has become particularly apt at switching negotiations from one tier to another in order to play vested interests off against each other. Thus, although foreign partners specifically bring much needed capital to the Chinese telecommunications development program, they do not negotiate over capital at the state level – where such concessions (as to foreign *direct* investment) must be made. Rather they negotiate over market access, market share, technology transfer, etc. Financial issues are negotiated at the locality – as part of specific domestic projects – where the defining regulation is that foreigners can neither own nor operate telecommunications networks. Yet, as Lampton et al. have shown, the bargaining that has characterised China’s interaction with the outside world in gaining access to high technology and industrial finance has been replicated domestically between contending bureaucratic and entrepreneurial interests. While these two tiers are linked – indeed, increasingly so – they remain distinct. For foreigners to assume they will be bargaining over the same issues or same resources at both levels seems surprising.

The ‘upper tier’ of the model (representing China’s relation with the outside world) is

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<sup>24</sup> M. Roehrig, *Foreign Joint Ventures in Contemporary China* (London: Macmillan, 1994); *Beijing Jeep*, Kenneth Lieberthal and Michel Oksenberg, *Policy Making in China: Leaders, Structures, and Processes* (Princeton: Princeton University Press, 1988); Eric Harwitt, “Growth and Development of China’s Telecommunications Industry,” International Conference on Coordinated Development Among Regions in China’s Economic Reform and Social Development, December 11-12 1996, Hong Kong.

<sup>25</sup> For a summation of this point see Roehrig’s critique of Margaret Pearson’s 1991 study, *Joint Ventures in the People’s Republic of China: The Control of Foreign Direct Investment Under Socialism* (Princeton: Princeton University Press). According to Roehrig, “A part of the problem has been that this bargaining is not always explicit; bargaining results from legal ambiguities, foreign and Chinese legal ignorance, and cultural nuances that lead parties constantly to ‘feel each other out’ to see what actions they can take and benefits they can extract without undermining business operations.” Roehrig, *Foreign Joint Ventures*, p. 4.

determined – in Beijing’s case – by a set of outward- (export-) oriented growth objectives and inward-oriented development requirements.<sup>26</sup> There is nothing overtly new in this observation; this same assessment has been made with regards to China’s foreign policy,<sup>27</sup> foreign trade,<sup>28</sup> foreign investment,<sup>29</sup> and joint venture laws,<sup>30</sup> among others. China’s actions internationally and its interactions with other international actors are governed by international norms and the ‘rules of the game’ to which China must adhere if it is to attract foreign investment, high technology, and international participation.<sup>31</sup> Equally, however, China is not a passive recipient of these criteria in that it brings its own ‘bargaining chips’ to any negotiation. As an accepted means of international economic interaction, bargaining allows China to use its assets and power to attract foreign capital on favourable terms. It is within this context that we find a protectionist, albeit aggressive, Chinese government bartering with multinational corporations (MNCs) over market access, and with international organizations (IOs) over trade restrictions and responsibilities.

Policy at the ‘lower tier’ – or domestic level – is dominated by the government and/or Party technocrats, virtually unconstrained by independent law or institutions. Below this elite layer is a highly complex organisation of power that ‘fragments’ authority along vertical/functional and horizontal/territorial lines.<sup>32</sup> The net result is incessant bargaining and consensus-building among officials at all levels of the national hierarchy.<sup>33</sup> However, given that one of China’s principal ‘bargaining chips’ is the Chinese domestic market itself, negotiations can often be redefined from one tier to the other.

China’s WTO negotiations for telecommunications, for example, illustrate this trait. Ostensibly the Chinese authorities have been working to frame an overall offer of trade liberalisation within the context of state-dominated development that is acceptable. Within telecommunications, understandably, neither the Chinese authorities nor the MPT wish to

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<sup>26</sup> One factor that is often neglected in Chinese policy-making analyses is that the Chinese government’s need to enter into a bargaining relationship with foreign investors creates a crucial exogenous source of pressure upon policymakers. Increasingly this is as true for provincial and municipal level units as it is for the central government.

<sup>27</sup> Zhao Quansheng, *Interpreting Chinese Foreign Policy: The Micro-Macro Linkage Approach* (Oxford and New York: Oxford University Press, 1996); S. Breslin, “The Foreign Policy Bureaucracy,” in G. Segal (ed.), *Chinese Politics and Foreign Policy Reform*

<sup>28</sup> Nicholas Lardy, *Foreign Trade and Economic Reform in China, 1978-1990* (Cambridge: Cambridge University Press, 1992).

<sup>29</sup> Pearson, *Joint Ventures*; Roehrig, *Foreign Joint Ventures*; C. Schive, *The Foreign Factor: The Multinational Corporation’s Contribution to the Economic Modernisation of the Republic of China* (Stanford: Hoover Institute, 1990).

<sup>30</sup> Robert Kleinburg, *China’s Opening to the Outside World: The Experiment with Foreign Capitalism* (Boulder: Westview Press, 1990).

<sup>31</sup> Pearson, *Joint Ventures*, p. 8.

<sup>32</sup> Chao, “T’iao-t’iao vs. K’uai-k’uai”

<sup>33</sup> Lieberthal, *Governing China*, p. 208, points out that in some areas, especially those dealing with the economy, bargaining is especially clear and prevalent. In others, such as those dealing with the propaganda or education systems, the exchanges may be more subtle and deal somewhat less in tangible resources.

give away anything more than is necessary. Given that the framework of WTO is built on consensus, all members must agree to accept the offer of a late entrant. To get around this, the Chinese have been attempting to systematically strike deals country-by-country on the basis of China market access. In other words, the international 'rules of the game' to which China should be expected to abide are being avoided by substituting domestic market access arrangements. As regards negotiations with MNCs, in 1993 Northern Telecom finally concluded a memorandum of understanding (MoU) with the State Council which Nortel believed guaranteed them eight percent of the Chinese switch market. At face value this should have been a very profitable agreement. However, having 'entered' the China market Nortel then had to again compete to gain access to the more attractive provinces. At this level they were required to compete on price. The result was, that by 1996/97 they had indeed secured 7-8 percent of the market. However, an accompanying 42 percent fall in switch prices coupled with the concessions they felt compelled to make to provincial authorities meant that profits were negligible. A final example concerns Hongkong Telecom. In 1995 an agreement was reached between Hongkong Telecom and the MPT for the former to supply both a mobile telecoms network to Beijing and to build a fibre optic line down the eastern seaboard from Beijing to Hong Kong. Despite the international nature of the transaction this was essentially a 'domestic' deal: the MPT needed the equipment and the expertise and they were prepared to bend the rule on no foreign ownership or management of domestic networks – quietly – to get the job done. In September, Cable & Wireless (C&W), Hongkong Telecom's parent company held its first ever annual board meeting in China at which Lord Young used the opportunity to announce that C&W, via Hongkong Telecom, had essentially managed to circumvent the Chinese telecommunications restrictions on ownership and management. According to Lord Young, the deals were, for all intent and purpose, equity deals. This effectively made the deal an international one: Lord Young had hoped to positively influence C&W's share price with his 'China play.' MPT officials responded in kind: if C&W wanted an international negotiation this, naturally, raised the price substantially, since other telcos would begin to clamor for similar concessions. Public knowledge of the arrangement also threatened China's WTO position, since it would appear they had granted Hongkong Telecom unequal access. The result was that, by late-1997, both projects were still on hold.

With respect to the telecommunications and information industries, the Chinese government has become quite adept at switching negotiations from the international to the domestic level (or vice versa) as they feel that it suits their bargaining objectives. To put it somewhat simplistically: on the international level we find the Chinese government bargaining with MNCs and IOs but, on the domestic level, MNCs and IOs bargaining with the Chinese government. The way the international and the domestic aspects of China's development strategy affect each other is of fundamental importance in understanding the decision-making choices with which the policymakers are confronted. Our purpose in adopting a bargaining framework here is to question just how fragmented authority is in telecommunications policy-making in China. Our hypothesis is, in fact, that the 'fragmented authority' structure is strategic – a variation on the 'governed market' model

of East Asian development<sup>34</sup> – and that central authority has not been undermined. The policy-making structure has been made substantially more complex certainly, but not necessarily undermined.

### *Telecommunications: The Numbers*

In August 1997 a remarkable landmark was passed when the Ministry of Posts and Telecommunications (MPT) plugged in the digital switch to its 100 millionth telephone line.<sup>35</sup> By this time only the United States had more exchange circuits and, by 2000, China is expected to top the world league table. The rate of growth, as indicated above (Table 1) has been quite extraordinary.

Over the period of the Eighth Five Year Plan (1991-95), national telecommunications targets were consistently revised upwards culminating in an additional 65 million circuits to be added to national telephone exchange capacity (up from 10 million in 1991) – a target that was met. That it was accomplished with loans constituting no more than one-third of total investment (of which foreign capital accounted for less than fifty percent) should have alerted China telecommunications analysts to the fact that the costs and revenues involved offered China far greater leeway in meeting targets than was commonly supposed.

According to MPT figures, almost 250 billion yuan (approximately US\$30 billion) was invested in the network between 1990 and 1995 (Table 2). This was roughly equal to US\$460 per exchange line – significantly less than recent general industry estimates of US\$690 per exchange line for a digital local loop network,<sup>36</sup> and very much less than the old rule-of-thumb figure of US\$1,000-1,500 per fixed wireline (a cost estimate still used by many telecom analysts<sup>37</sup>). Additional evidence for the low cost structure of China's telecoms sector has come from personal interviews with Ministry officials and industry participants which suggest that by 1993 the cost of a single switch circuit in China was

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<sup>34</sup> Robert Wade, "The role of government in overcoming market failure: Taiwan, Republic of Korea and Japan," in Helen Hughes (ed.), *Achieving Industrialisation in East Asia* (Cambridge: Cambridge University Press, 1988); Robert Wade, *Governing the Market: Economic Theory and the Role of Government in East Asian Industrialisation* (Princeton, N.J.: Princeton University Press, 1990); Chalmers Johnson, *MITI and the Japanese Miracle: The Growth of Industrial Policy, 1925-1975* (Stanford: Stanford University Press, 1982); Chalmers Johnson, "The developmental state: odyssey of a concept," in Meredith Woo-Cumings (ed.) *The Developmental State in Historical Perspective* (Stanford: Stanford University Press, 1995); Linda Weiss, "Governed interdependence: rethinking the government-business relationship in East Asia," *The Pacific Review*, Vol. 8, No. 4 (1995), pp. 589-616.

<sup>35</sup> *Asian Wall Street Journal*, 29-30 August 1997, p.1

<sup>36</sup> David P.Reed, *Residential Fiber Optical Networks: An Engineering and Economic Analysis* (Artech House, 1992), pp. 288-89 (Quoted in Leland L. Johnson, *Toward Competition in Cable Television*, (The MIT Press, 1994), p.33.)

<sup>37</sup> 'All current forms of wireline residential access technology, if installed new, cost about \$1,000 per home passed...' *The Unpredictable Certainty: Information Infrastructure Through 2000* (Washington D.C.: Computer Science and Telecommunications Board, National Research Council, National Academy Press, 1996), pp. 9-10.

already as low as US\$100 and US\$120, for Chinese and foreign switches respectively. Moreover, both had fallen to below US\$80 by 1996 such was the expansion in local switch production capacity and the pressure upon foreign joint ventures to remain competitive.

To go one step further: by 1995 fifty-three percent of total exchange line capacity was connected to subscriber premises. This meant that roughly 35 million of the additional 65 million lines were connected. If we take an average figure for the cost of a switch circuit, then the costs of connecting each circuit to a subscribers' premises can be seen to have been well below US\$800 – even on a conservative estimate. Allowing for numerous hidden subsidies, such as subsuming some of the costs of exchange equipment research and development under the military's budget and the use of local government and PLA labour to duct transmission wires, it is clear that during the Eighth Five Year Plan the cost structure of China's telecommunications industry was already favourably low by international standards. Additionally, the rapid expansion of local production capacity was not only keeping it that way but also lessening the pressure for purchases of equipment in foreign currency.

**Table 2: China's Telecommunications Investment & Revenue statistics**

Year	lines (mill.)	growth	Telecoms (bn yuan)	revenue growth	Telecoms (bn yuan)	invest. growth	Investment as % revenue	Investment as % of GDP
1978	1.70		0.73		0.26		35.6%	
1983	2.51		1.6	14.3%	0.34	25.9%	21.3%	
1984	2.91	16%	1.9	18.8%	0.55	61.8%	28.9%	
1985	3.27	12%	2.5	31.6%	0.84	52.7%	33.6%	0.09%
1986	3.65	12%	2.9	16.0%	0.90	7.1%	31.0%	0.09%
1987	4.08	12%	3.9	34.5%	1.1	22.2%	28.2%	0.09%
1988	4.96	22%	5.7	46.2%	2.7	146%	47.4%	0.18%
1989	5.89	19%	7.4	29.8%	5.0	85.2%	67.6%	0.30%
1990	6.85	16%	10.9	47.2%	6.0	20.0%	55.0%	0.30%
1991	8.45	23%	15.1	38.5%	8.6	43.3%	56.9%	0.39%
1992	11.47	36%	22.6	49.6%	16.3	89.5%	72.1%	0.60%
1993	17.33	51%	38.2	69.0%	40.4	148%	105.7%	1.04%
1994	27.28	53%	59.2	54.9%	77.6	92.1%	131.0%	1.38%
1995	40.70	49%	87.33	47.4%	98.5	26.9%	112.8%	1.71%
1996	54.99	35%	120.8	38.3%	103.6	5.1%	85.8%	

**Source:** MPT Annual Reports and China Statistical Yearbook (annual). **Note:** (i) revenue figures refer to total telecoms turnover; in 1996 operating revenues were 95% of turnover; (ii) investment includes postal services, which accounted for 5.4% investment in 1996, and shared investments which in 1995 accounted for 9.4% of the total.

The major exception to this trend was the exponential growth in cellular mobile and paging systems. Companies such as Ericsson, Motorola, Nokia and Siemens, were paid in cash for turnkey cellular networks as the wealthier coastal provinces of Guangdong, Fujian, Zhejiang, Jiangsu, Shandong and Hebei and the major cities discovered the benefits of rapid payback from selling mobile handsets and offering cellular and paging services as

an effective substitute for PSTN access. Mobile telephone subscribers leapt from less than 200,000 in 1990 to over 6 million by 1996. The national target for 2000 under the Ninth Five Year Plan has already been increased three times, from 18 million to 25 million and then to 30 million.<sup>38</sup> By 1996, there were 25 million pager subscribers in China and this number was increasing by over 30 per cent annually. This expansive growth has rapidly become a major contributor to turnover and operating revenues of the PTAs, both of which grew at compound annual growth rates of almost 50 percent from 1990 to 1996.

Let us bring each of the above sub-categories together into a holistic view of the Chinese telecommunications cost structure. In 1996 public telecommunications services had a turnover of 121 billion yuan, an operating revenue of 110 billion yuan and a profit of 17 billion yuan (of which 7 billion yuan was siphoned off to cover the losses of the postal services).<sup>39</sup> One-third of MPT revenues still come from the very high installation fees, averaging 1,500 - 3,000 yuan. This contrasts with very low usage charges at the local level, a pattern which is typical of the early stages of telecommunications network development when price-rationed access serves to limit network congestion. Traditionally, as network capacity increases, access charges can be rebalanced against usage charges. In 1996, local access and usage charges together constituted 39 percent of total revenues, domestic long-distance registrations and usage generated a further 38 percent, international traffic contributed 13 percent, with mobile revenues providing 10 percent. These figures highlight the opportunities China has for tariff rebalancing by reducing access charges and increasing local call charges in line with the growing value subscribers place upon usage. Long-distance tariffs can then also be lowered to promote traffic growth.<sup>40</sup> In this regard China's late development in telecommunications reverses the familiar revenue structure. Usually international call revenues are dominant and the trend towards lower long-distance tariffs imposes painful adjustments upon national carriers. In the case of China's MPT, by contrast, late development promises rapid volume growth in long-distance telecoms traffic driven by China's economic growth and the transition to a market economy. Together these factors will serve to mask the effects of tariff cuts, as will the continuing rapid growth in the high-value mobile markets.

Thus, the relatively low cost structure, a growing ability to procure digital exchange and line equipment domestically, and the rapid growth of revenues, along with the favourable revenue structure, combine to explain why China has not yet had a problem financing what is expected to soon be the world's largest telecommunications network for basic voice services. According to Ni Yifun, deputy director of China Telecom, annual network

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<sup>38</sup> *China Daily*, 12 August 1997 p. 5.

<sup>39</sup> "Interview with Minister Wu Jichuan," *South China Morning Post*, China Business Review supplement, p. 2, 28 August 1997.

<sup>40</sup> IDD call charges, which had been raised during 1995 to counter the fall in the value of the yuan, were lowered by 30 percent twice during 1997, a cumulative cut of 51 percent. Net international revenues in 1996 were 16 billion yuan, so even if the short-run price elasticity of IDD is  $< -1$  the risk of major revenue loss is slight, while the longer-term prospects for growth are good. Moreover, by cutting international tariffs now, the MPT is also undermining one of the potential sources of revenues for its rival Unicom and thereby one of the bargaining opportunities for foreign companies intent upon breaking into the China market.

investment by 1997 was approximately 100 billion yuan (US\$12 billion), of which “80 per cent is self financed.”<sup>41</sup> US\$5 billion of this is derived from revenues alone, with a further US\$4 billion from depreciation allowances. (Depreciation allowances are due to rise annually to between US\$7-8 billion.) Foreign investment contributed about 15 percent of expenditure and “it is planned for those proportions to stay the same until 2000.” Outside observers are correct when they see an ongoing need to raise investment from beyond internally generated funds. But as the above evidence demonstrates, there is also ample opportunity to do so given the structure and growth of the revenue-base. This has greatly reduced (if not removing altogether from the bargaining process) the scarcity of capital and finance so far as the MPT is concerned. In other words, the credit crunch has simply not happened. It has been the failure of analysts to recognise this that has led to so much wilful illusion on the part of foreign telecoms companies in their efforts to enter the China market. If capital is not the key bargaining dimension, what is driving policy development in China’s telecommunications? It is to the bargaining matrix that we now turn.

### *The Bargaining Matrix: Telecommunications*

#### Dimension 1: Growth

The pent-up and growing demand for telecommunications services in China has come as no surprise. Indeed, there is a train of thought within the bureaucracy that China’s ability to sustain its boom economic growth rates is contingent upon its capacity to develop and upgrade the country’s infrastructure: a sturdy telecommunications network is vital to China’s socio-cultural, political and economic development.<sup>42</sup> Failure to adequately develop the telecommunications infrastructure will result in bottlenecks to commercial and business operations. This perceived relation has precipitated an interesting phenomena. From the perspective of the Chinese technocrats the growth of the economy fuelled the demand for telecommunications in the first place, but the growth of telecoms then propelled the expansion of the Chinese economy.<sup>43</sup> According to a comparative econometric modelling exercise conducted by the MPT, data collected from 29 countries showed that the marginal contribution to the national economy from investing in information and communications resources was 15.8 times greater than the contribution from investing in other forms of resources.<sup>44</sup> Similarly, a report by a State Council research unit indicated that a 100 million yuan investment in telecommunications (in the early 1990s) would serve to increase the national income by 1.38 billion yuan within ten years.<sup>45</sup>

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<sup>41</sup> *South China Morning Post*, 10 August 1997, p. B10.

<sup>42</sup> Wu Jichuan, the MPT Minister, said in April 1995 that “insufficiency in telecommunications capacity and shortage of services have been a major factor affecting China’s opening up to the outside world and restricting China’s economic growth.” *Financial Times*, October 3 1995, p. 27.

<sup>43</sup> Wang Shaoshen, “The significant social and economic benefits of posts and telecommunications,” *Research on Telecommunications Technology Policy*, Vol. 2 (1991).

<sup>44</sup> Yang Peifang, “On the goals and ways of a harmonic development of telecommunication,” *P&T Economy*, Vol. 16, No. 3 (1991), p. 4.

<sup>45</sup> Di and Liu, “Telecommunications development,” p. 215. There is a report used within the MPT that

In attempting to build a ‘socialist market economy,’ the Chinese administration began using its telecommunications infrastructure as both an engine of growth and as the wheels for growth within other sectors of the economy. Thus, in early 1994, when signs of overheating and inflation in the economy led the Chinese government to place limits on new capital programs, the telecommunications sector was specifically exempted from the growth freeze.<sup>46</sup> As a result, the number of installed telephone lines increased from 17 million to more than 27 million in 1994 (Table 2). As an International Telecommunications Union (ITU) report notes, “this level of growth has rarely ever been achieved by other countries, even in the early stages of network development, and has certainly never been sustained.”<sup>47</sup> And yet, China did indeed manage to sustain exceptionally high growth rates over an extended period.

There are several features of this growth that require elaboration. First, that the demand itself was not at all unexpected. The government believed that growth of the telecommunications infrastructure (in its broadest sense) and growth of the economy would be mutually reinforcing. A government-driven ‘build-out,’ whereby teledensity numbers (the number of main lines per 100 persons) go through a period of rapid increase, such as China embarked upon, is not new. Most countries which have focused upon their telecommunications infrastructure have gone through periods of rapid density growth. Indeed, there is a rich vein of research in the telecommunications literature built around the concept of ‘sustainable development,’ essentially suggesting that as the network expands, average costs fall and subscriber utility rises until a critical mass is reached when, in principle, the network can become self-financing.<sup>48</sup> Therefore, at the core of the development plan for telecommunications, China’s policymakers were doing nothing unique.

To this standard presentation there are four exceptional points to note which do indeed make the Chinese experience unique. The first is, of course, the sheer size, scale and speed of network development. China’s Eighth Five Year Plan (1991-95), for example, set forth extremely ambitious goals for the telecommunications sector. The total exchange capacity was expected to increase from 10 million to 35.5 million, and the number of telephone sets to 23.8 million. This would have made for a national teledensity of two percent (2 telephones per 100 persons) by 1995, with 10 percent density in provincial capitals. If maintained, it was predicted that this would give China the third largest telecommunications network in the world by the turn of the century. As we noted earlier, these targets, already ambitious, were revised upwards every year (Table 1). By 1994, the

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Deng Xiaoping is said to have agreed that the modernisation of communications should be put before the four modernisations, see Gao Yangzhi, “Shanghai’s telephone network: status quo and development strategy,” *P&T Economy*, Vol. 16, No. 3 (1991).

<sup>46</sup> “Minister Wu’s Report,” *Reuters Asia Pacific Business Report* June 2, 1994; Wu Jichuan, “To Deepen Reform, Speed Up Development, and Provide China with Better Communications Services,” *China Telecommunications Construction*, Vol. 6, No. 5 (1994), pp. 6-10.

<sup>47</sup> International Telecommunications Union (ITU), *World Telecommunication Development Report*. (Geneva: ITU, 1995), p. 15.

<sup>48</sup> **Noam 1994; Sharkey 1982**

exchange capacity target for year-end 1995 had become 75 million lines (originally 35.45 million) and the teledensity target was 4 percent (originally 2 percent). (By the end of 1995 the actual achieved total exchange capacity was 85.1 million lines and teledensity was already 4.7 percent.)

By the time of the Ninth Five Year Plan (1996-2000), targets included increasing the local switching capacity to 150 million lines, and total capacity to a staggering 170 million lines.<sup>49</sup> The capacity of long-distance switching systems would be 6 million lines, and the total telecommunications revenue of China's public networks was expected to be 300 billion yuan, an increase of 25 percent annually. The number of telephone subscribers would be 123 million, among which *at least* 18 million would be mobile phone users. (Again as noted above, this target has subsequently been increased twice to 25 million and, by August 1997, to 30 million.) At that stage it was expected that national teledensity would rise to 10 percent, with urban areas jumping to 30-40 percent.

The second point to note is this difference in metropolitan, urban and rural penetration rates: the locational *focus* of network development. By 1996 China's teledensity index nationwide was still only around four percent, in spite of the strong sustained growth rates. However, teledensity in major metropolitan centres was significantly higher, with Beijing, Fuzhou, Guangzhou, Haikou, Hangzhou, Nanjing, Shanghai, Shantou, Shenzhen, Xiamen and Zhuhai all registering in excess of 15 percent (Table 3, see also Figure 1). By the year 2000, all were anticipated to be registering above 40 percent teledensity – or roughly on par with the 1995 teledensity levels in the neighbouring newly industrialised economies (NIEs). If achieved this would satisfy the first major objective of the sectoral policy development program: to bring the coastal urban areas in line with China's major regional trading partners and competitors.<sup>50</sup> It would also mean that China had done so remarkably fast.

**Table 3:**  
**Comparative teledensity rates between**  
**selected Chinese cities and Asian NIEs, 1995 and 2000.**

<i>Chinese cities</i>	1995	2000 (est.)	<i>Asian NIEs</i>	1995	2000 (est.)
Beijing	16.3	40.0	Taiwan	43	59
Shanghai	19.95	40.0	Singapore	48	52
Guangzhou	25.5	47.0	South Korea	41	55
Nanjing	17.0	40.0	Hong Kong	53	49
Hangzhou	27.1	na	Japan	49	55
Fuzhou	19.8	43.0	Malaysia	17	34

**Source:** Su Weichou, "Introduction," paper delivered to the China Telecom 2000 conference, April 21, Hyatt Hotel, Arlington VA.; **ITC 1997**; International Telecommunications Union, *World Telecommunications Indicators* (Geneva: ITU, 1996).

The second major objective for Chinese policymakers – nationwide development – is often expected to be at odds with the first (high growth rates). This is because high growth rates

<sup>49</sup> Ministry of Posts and Telecommunications (MPT), *Annual Report, 1996*, (Beijing: Renmin Youdian Chubanshe), p. 42.

<sup>50</sup> Li et al., *Shengchanlu ji...*; Wang, "Zhongguo Xinxihua".

will usually occur in dense urban areas, but drag slowly out into rural regions. Yet, since 1990, the government has managed to achieve impressively high network growth rates across almost the entire country (Table 4). Admittedly, wide disparities remain and, to some extent, can be expected to increase. Nevertheless, through the Eighth Five Year Plan the government managed to spread network development rates extensively through its co-ordinated growth program, with the growth in rural lines matching that of urban lines, and many of the interior provinces equalling or exceeding the network growth of the coastal provinces. Therefore, while provinces such as Jiangsu and Zhejiang posted consistently high network growth rates, as would be expected, neighbouring Anhui also developed its telecommunications network rapidly. Moreover, the southwestern provinces, Guangxi, Yunnan and Hunan also grew rapidly as did the northwestern border province Ningxia. The pattern that emerges is of a flow-on from high-growth coastal provinces to neighbouring inland provinces (Guangdong and Fujian to Hunan and Guangxi; Jiangsu, Shanghai and Zhejiang to Anhui), and from the coastal provinces to border provinces with a strategic trade focus (Guangxi, Yunnan, Jilin, Heilongjiang, Ningxia). It should be noted that one of the reasons for the boost in telecoms growth rates in these provinces was the emphasis given to open port cities ('economic co-operative border zones'), special economic zones or economic and technological development zones. In many of these localities a significant push was given to the telecommunications infrastructure to facilitate trade and commercial activities (Figure 1).

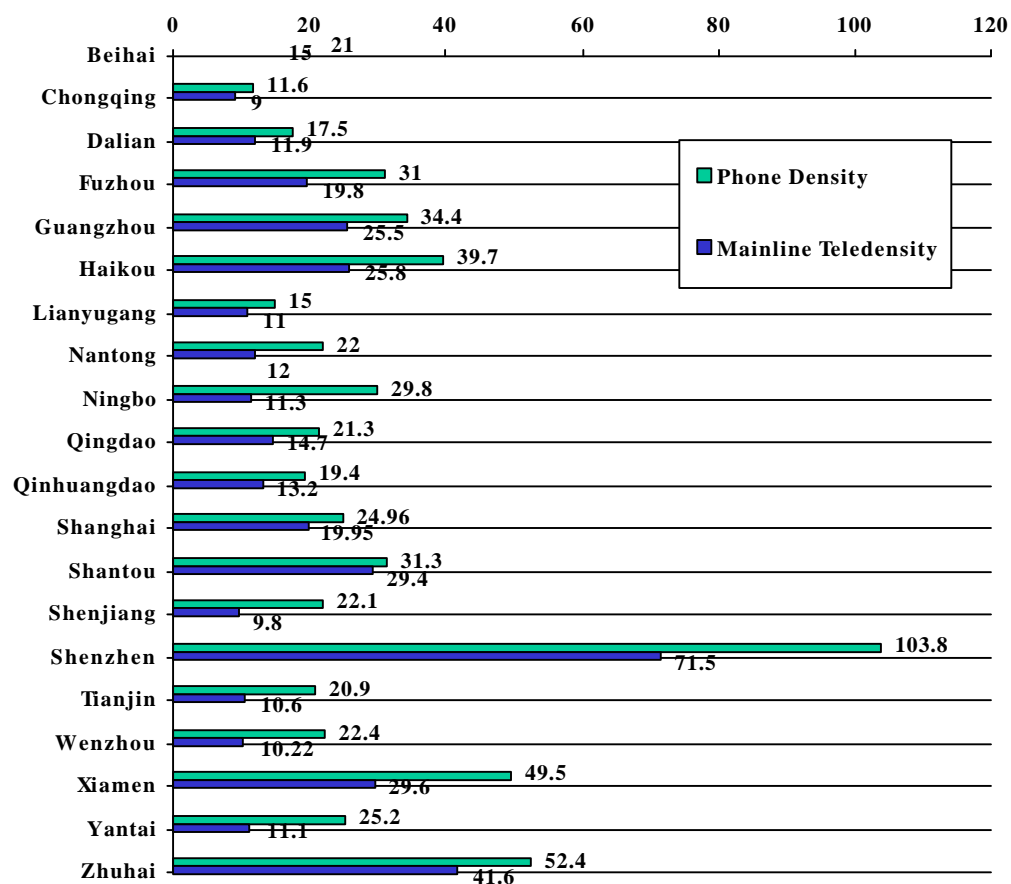
**Table 4: Growth of telephone subscription, 1991-1994.**

	Total			Rural		
	1991	1994	growth	1991	1994	growth
Beijing				//////////	//////////	//////////
Tianjin	351281	645264	84%	//////////	//////////	//////////
Hebei	624457	1141124	83%	106214	191022	80%
Shanxi	363962	435211	20%	na	na	
Inner Mongolia	329689	440206	34%	na	na	
Liaoning	878908	1547172	76%	121950	190244	56%
Jilin	491839	878540	79%	92245	116051	26%
Heilongjiang	594727	1065978	79%	70637	94088	33%
Shanghai	925854	1543017	67%	//////////	//////////	//////////
Jiangsu	1081331	2773644	157%	306745	826622	169%
Zhejiang	803674	2111081	163%	279261	785479	181%
Anhui	348935	844961	143%	57198	116145	103%
Fujian	396060	1321104	234%	63539	295181	365%
Jiangxi	259165	454141	75%	56802	56844	2%
Shandong	843741	1448690	72%	185201	363430	96%
Henan	511537	874038	71%	68113	114937	69%
Hubei	518922	1027396	98%	108463	179894	66%
Hunan	402061	1055547	163%	113746	166285	46%
Guangdong	2014435	4757287	136%	622701	1798788	189%
Guangxi	244204	483839	98%	49094	71305	45%
Hainan	85573	237594	178%	12939	20828	61%
Sichuan	647295	1000213	55%	104347	118117	13%
Guizhou	146391	189975	30%	na	na	
Yunnan	200572	454917	127%	53590	62112	16%

Tibet	16214	20702	28%	na	na	
Shaanxi	352472	427704	21%	na	na	
Gansu	207881	292357	41%	21043	23571	12%
Qinghai	na	na		na	na	
Ningxia	58935	100202	70%	3952	5546	40%
Xinjiang	204649	271895	33%	na	na	
TOTAL	14989787	28874424	93%	2833005	5767720	104%

Source: China State Statistical Yearbook 1992, 1995.

**Figure 1: China's Coastal Open Cities' and Special Economic Zones' Phone Density and Mainline Teledensity**



The final point to note here is that these aggressive growth rates were not limited to the traditional telecommunications infrastructure. Through the first half of the 1990s, cable television networks and computer (or data) networks began to experience the same development push. From 13 million households in 1990 (out of a potential television-owning population of 250 million households), cable television subscriptions had increased to 45 million by mid-1996 and were forecast to reach 80 million households by the year

2000, making China easily the largest cable TV market in the world.<sup>51</sup> There were also estimated to be more than 100,000 Internet users in China by late-1996 – commercial Internet access was only begun in mid-1995 – and almost every ministry and large state enterprise was in the process of building or planning intranets.<sup>52</sup>

The Chinese administration's primary focus in telecommunications and information infrastructure development by the 1990s was to spur network development while coordinating the whole process. Therefore, to become involved in the telecommunications sector in China by the 1990s players had to demonstrate that they could aid the state's mobilisation of resources to build the network; they also had to be prepared to leave *ultimate* control (ownership and management) in the hands of the state. Thus, the first bargaining nexus by the 1990s was: If you could not fulfil either of these criteria you were not allowed into the telecommunications development process.

#### Dimension 2: Finance and Investment

Given the ITU's assessment that the Chinese level of telecommunications growth had never previously been achieved and sustained, what were the key elements to China's network success? The first and necessary condition was investment.<sup>53</sup> In the mid-1980s, China's investment in its telecommunications infrastructure averaged around US\$250-300 million per year, or around 30 percent of revenue (Table 2). This was sufficient to sustain a net growth rate of around 13-14 percent, or a little less than twice the level of growth in the economy as a whole. In 1988 and 1989, China doubled its investment in successive years. The rate of main line growth increased accordingly. Then during 1992 and 1993, investment was doubled again, this time achieving growth rates of 36 percent and 51 percent respectively.

Yet if this relation between network growth and investment seems a rather straightforward formula, it was also the scene of the most intense bargaining dynamics between the various players and amongst the policymakers themselves. As we have reviewed above, the absolute size of China's network build-out agenda suggested to many that acquiring the requisite investment capital was where China would run into problems. As a result, there was a sustained expectation through the 1990s that China would be forced to open its telecommunications market to greater foreign and domestic access.

In the first half of the 1990s, foreign investment accounted for around 20-25 percent of the MPT's total telecoms investment. The main sources being supplier credits, commercial investment, international loans from the World Bank and Asian Development Bank, and government soft loans. (Japanese, European and Canadian government loans being the most significant source of the latter.) However, a multilateral agreement among OECD countries was reached in 1993 to significantly cut government soft loans to

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<sup>51</sup> *Ibid.*

<sup>52</sup> Triolo and Lovelock, "Internet in China." Intranets are intra-corporate communications networks. Essentially these are virtual private networks run off the public network and increasingly accessed through a browser facility (similar to accessing the World Wide Web).

<sup>53</sup> According to the ITU, investment was the *entire* answer. ITU, *World Development Report*, p. 15.

telecommunications projects in China.<sup>54</sup> The World Bank and Asian Development Bank also announced their intention to gradually eliminate loans to telecoms projects in China.<sup>55</sup> To many analysts it appeared therefore as though, with international and government soft loans gone, only supplier credits and commercial investment remained.<sup>56</sup> If this were the case then the bargaining leverage could logically be expected to swing back to those extending the credit.

Again however, there are several points to note. The first is that on a comparative basis the Chinese telecommunications investment breakdown, by the early-1990s, looked rather similar to investment patterns elsewhere. The chart on the left hand side of Figure 2 (below) shows Bjorn Wellenius' generic breakdown for telecommunications financing in developing nations during the 1980s by the main source of funds. According to Wellenius, approximately 60 percent of investments were financed by the operating entities themselves through internally generated cash (mainly retained earnings and provisions for depreciation). The figure on the right – China's MPT investment funding sources – shows that, by 1991, 68 percent of Chinese funds were generated this way. (In 1978 only 8 percent was generated internally, with the government accounting for 90 percent of capital investment.) Wellenius, one of the World Bank's telecommunications experts, concluded that, "despite the large capital investments required for telecommunications operations and expansion, a lack of local currency should not be a constraint on this process for developing countries .... monopoly telecommunications entities can easily generate large financial surpluses in the local currency."<sup>57</sup> The World Bank also noted that through the early-1980s developing countries invested about 0.3 percent of GDP in telecommunications; by the late-1980s, 0.6 percent of GDP and, by the mid-1990s, the recommended investment level was about 1.5 percent of GDP.<sup>58</sup> These investment patterns were seen to be the level necessary to generate an adequate rate of return on the network development. Table 2 (previous) shows that China has simply brought its investment patterns up to these recommended levels, increasing from 0.3 percent of GDP

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<sup>54</sup> While the OECD agreement was taken in 1993, it had not had any noticeable effect by 1996. With the exception of US firms, foreign telecoms companies were still employing government soft loans to leverage their way into favourable positions with PTAs. (Personal interviews, General Affairs and Planning Departments, Guangxi PTA, Nanning, February 22 1995; Finance office, Guiyang PTA, January 22, 1995.) Xinhua reported on October 28 1994 that China had used credit loans (also called interest discount credits) provided by Japan, Sweden, Spain, Canada, Belgium, France, Australia, Germany, Norway, Finland, the Asian Development Bank, and the World Bank for construction of 18 million-line local telephone switchboards, 1.6 million long-distance telephone lines, 25,000 km of optical cable trunks, 15,000 km of microwave telecoms trunk lines, and 18 satellite ground stations.

<sup>55</sup> The World Bank announced in 1994 that they viewed the telecommunications sector as being profitable enough to attract private investment. A number of new transitional programs were initiated to cover the gap, such as the Information Development ('InfoDev') Fund.

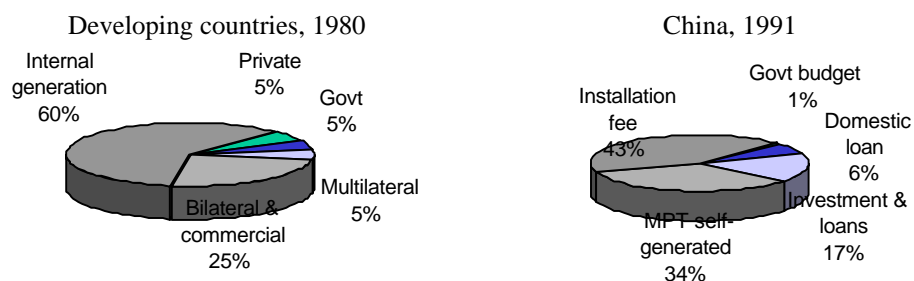
<sup>56</sup> Harrington, "Asia-Pacific Telecommunications"; Mueller and Tan, *China in the Information Age*; Xing *China Telecommunications*. See also, Ante Xu and Sophie Richardson, "The Great Wall begins to crumble: Politics, economics and the telecom industry in China," (Washington D.C.: Asia Telecom Bridge Project, CSIS International Communications Studies Program, 1995).

<sup>57</sup> Cited in Robert J. Saunders, Jeremy J. Warford and Bjorn Wellenius, *Telecommunications and Economic Development* (2nd ed.) (Baltimore and London: Johns Hopkins University Press, 1994), p. 74.

<sup>58</sup> *Ibid.*. Also, ITU, *World Development Report*, 1995.

in 1989 to 1.5 percent by 1994. In other words, as China accelerated its development program through the 1990s, the MPT was successfully meeting its financing requirements. Moreover, on a *relative* (rather than absolute) basis it was doing so in a very standard development pattern.

Figure 2: Telecommunications Investment Breakdown



Source: Bjorn Wellenius, “Telecommunications in the Developing World: Current Trends and New Issues,” paper presented at a symposium to honor Professor Kenneth Cattermole, University of Essex, Colchester, Eng., September 1990; Su, “Introduction”.

Beyond the issue of attracting enough capital to the sector, financial analyses of China’s telecommunications development program usually focus upon the rapidly declining levels of government budgeted investment, falling from 90 percent in 1978 to 1 percent by the mid-1990s (Table 5).<sup>59</sup> This statistic, however, disguises the shifting financial relationship between the centre and the provinces (‘financial devolution’). In place of centrally-allocated funds there has been an increasing emphasis upon self-raised funds to finance construction and development.<sup>60</sup> This entails an understanding of the financial responsibility system within the national telecommunications hierarchy.

**Table 5: Investment Structure of China’s Telecommunications**

	Total investment (Rmb100m)	State input	budgeted %	Locally raised funds	raised %	Domestic loans	%	Foreign capital	%
1978	2.6	2.34	90	0.21	8	0.01	0.5	--	--
1982	2.7	1.05	39	1.62	60	0.01	0.4	0.02	0.6
1990	59.8	4.76	8	40.17	67	3.95	7	10.21	17
1992	162.5	4.88	3	121.88	75	11.38	7	21.13	13

<sup>59</sup> Mueller and Tan, *China in the Information Age*; Su, “Introduction”; Xu and Richardson “The Great Wall begins to crumble”; You Gong, “Analysis of Investment”.

<sup>60</sup> China’s locally raised funds mainly come from installation fees (telephone installation fees have been extremely high, ranging from Rmb3000-5000), telephone service revenues (consisting of locally collected income and the MPT redistributed profits, approximately 20 percent of the total network investment through the first half of the 1990s), equipment depreciation and yearly allocated innovation and development funding from PTAs and local governments.

1993	404.1	8.08	2	299.03	74	52.53	13	40.41	10
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Source: Adapted from You Gong, "Analysis of China Telecommunications Investment Since the Country's Economic Reform and Opening to the Outside World," *Post & Telecommunications Enterprise Management*, (September, 1994), p. 15-16.

During the eighth Five Year Plan (1991-95) self-raised funds accounted for an average of 70 percent of the total capital used for telecommunications construction. The main driver for the increase in self-raised funds was, firstly, the rapid expansion of the customer base and, subsequently, the growth in telecoms traffic over the network. As a result, many of the PTAs (the provincial administrations) began to finance investment through service revenues. This had both practical and symbolic significance in that the financial relationship between the centre and the province and, later, between the centre and foreigners and between the provinces and foreigners changed.<sup>61</sup> Naturally, this changed the bargaining dynamics.<sup>62</sup> It was also a watershed in the mindset of the PTAs.

The turning point came in 1990 when total *revenues* became the currency of local-provincial and provincial-central bargaining. Up to that point, bargaining had focused upon the ratio between investment and income. From 1990, provinces and localities which were able to bring large revenues to the table were rewarded. This shift to a focus on revenue meant that PTBs and PTEs were allowed<sup>63</sup> to incur debt to expand. Simply put, after 1990, the books didn't have to balance as long as the province could demonstrate growth. Prior to the shift, the PTAs went to Beijing to "beg for handouts." The onus was on the PTA to show why it needed assistance from the centre, and to prove that it was financially responsible by having investments come as close as possible to equalling spending. After the shift, the PTAs went to Beijing to "boast of success," so that they would be 'given' resources – or, more importantly, latitude – to do even better. To maintain broad macro-control of this process the MPT issued recommended debt guidelines for local PTAs based on the type of network in place and the pace of network growth. Major cities like Beijing, Shanghai, Tianjin and Guangzhou were able to accumulate debt of up to 40 percent of total investment due to their huge subscriber base and potential earning ability; coastal provinces were required to keep their debt ratio below 30 percent; and less developed regions with rudimentary telecommunications systems were to have their debt ratio below 10 percent as their ability to generate profit was considered limited.<sup>64</sup> The result was a *150 percent* increase in reported revenues

<sup>61</sup> In September 1994, the MPT internally issued Directive No.571 (published in November) admitting that PTTs at all levels were suffering "severe shortages of financing." The Directive allowed for joint investment in local and long distance telecommunications networks, except at the prefectural level. This could be done by non-MPT domestic and/or foreign investors, who could invest either with capital or fixed assets, but without participation in operation and management. Returns on investment could be in the form of fixed revenue or profit-sharing over an agreed-upon timeframe.

<sup>62</sup> Previously foreign firms had to go through Beijing. Now they could go straight to the provincial administrations. What they quickly discovered, however, was that they now had to go through a two-step process: the provinces and Beijing. Much to their horror they soon began to discover that it was often the case that the specific objectives of Beijing and the provincial administrations clashed.

<sup>63</sup> Interviews suggested that it was "allowed" in the perspective of some; "encouraged" in the perspective of others.

<sup>64</sup> Sun Lin, "Funding telecom expansion," *China Business Review*, (March, 1993), p. 32.

between 1990 and 1991. Subsequently, investment in telecommunications construction began to soar as large increases in locally-raised funds were reinvested.

Beyond the issue of sufficient investment capital per se, developing countries' investment programs usually have large foreign exchange requirements because of insufficient local manufacturing capacity.<sup>65</sup> To begin – and sustain – a large build-out program the state must purchase, or make, significant quantities of basic telecommunications equipment (lines, switches, routers, etc.). In the absence of a domestic manufacturing capability, purchasing the equipment requires hard currency (and/or supplier credits, soft loans, etc.). One estimate suggested that “foreign exchange costs (direct and indirect) comprise about half of the MPT's investment costs.”<sup>66</sup> Both of these issues, however – domestic manufacturing and foreign exchange – have been continuously targeted by Chinese policymakers. A range of measures were adopted to attract foreign exchange earnings, from extraordinarily high international call tariffs, to increasing levels of foreign investment.<sup>67</sup> Simultaneously, a bargaining game was played by authorities to attach (successfully) key manufacturing requirements to all foreign access contracts in the late-1980s and early-1990s.

To place each of these issues in context, the stated purpose of China's economic reforms, including its open door policy, is to develop the domestic market and indigenous manufacturing capabilities. Foreign investment is perceived as one of the means to reach these goals. Therefore, it is this framework which also sets the environment for China's policy and regulation of foreign investment in the telecommunications industry. That telecoms was designated a ‘strategic’ industry, meant that the objective was for manufacturing and services to be dominated by domestic groups. It should be recognised that there have been mistakes as well as victories for the Chinese policymakers in pursuing this agenda.

In the earliest stages of its reforms, China tried to lure foreign investment in exchange for market share. At the time China required foreign equipment in order to begin the process of upgrading its networks, and in order to develop local manufacturing capabilities. Foreign telecoms companies however were wary of investing in China. Direct investment and technology transfer could lead to the emergence of local competitors and the reduction of future sales. This was compounded by COCOM restrictions on the transfer of most telecoms technology to China by European, Japanese and North American producers,<sup>68</sup> and by the less than transparent regulatory and business environment in

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<sup>65</sup> Saunders, Warford & Wellenius, *Telecommunications and Economic Development*, p. 74.

<sup>66</sup> Su, “Introduction,” p. 11.

<sup>67</sup> China has been particularly successful in luring foreign bank loans and government concessionary loans, with the combined incentives of future market share and booming telecoms growth rates. By the end of June 1994, China had signed telecommunications purchasing contracts with foreign companies worth US\$4.9 billion. In 1994, foreign investment in the telecoms sector was 16.8 percent of total foreign investment in China, or US\$1.28 billion out of US\$7.62 billion.

<sup>68</sup> COCOM was a Cold-War era multilateral regime charged with controlling the export of military-related technologies from member countries, including most NATO countries and Japan. Prior to disbanding as an organisation on March 31 1994, COCOM agreed to end controlled sales of most high-

prevalent in China.

To counter foreign hesitation to invest in China, policymakers launched the strategic policy known as, “combining direct import with technology acquisition.”<sup>69</sup> Under this policy the Chinese administration offered to make extremely large purchases of foreign vendors’ equipment if the foreign company attached a specific kind of technology transfer to the deal. (Technology transfer could take the form of acquiring technological know-how, the selling of production technology and production lines, or the establishment of joint ventures.) As Mueller and Tan note, “the terms and conditions of technology transfer were often as important, if not more so, than the prices of the equipment in the negotiation.”<sup>70</sup>

As regards the switching market however, this late-1980s policy meant that by the early 1990s, China had imported eight types of switches from seven countries causing problems with national network integration and the development of the domestic manufacturing industry.

A combination of unrelenting lobbying from foreign companies and international agencies combined with divided lines of authority inside the administration had undermined the broad criteria set for China’s national industrial policy. The government responded in two ways. First it encouraged the financial devolution referred to above. In other words, the government gave the provinces responsibility to strike and renegotiate profitable deals with the foreign vendors. This meant that while the foreigners had gained access to the market through negotiation with Beijing and had, in certain cases, gained market share agreements, the 30-provincial level entities were encouraged to play the foreigners off against each other in striking the most profitable purchase deals they could.<sup>71</sup> The price for switching equipment in China fell dramatically as the switch companies battled to get into each of the provincial markets (Figure 3). By 1995, China was enjoying the cheapest switching vendor prices in the world.<sup>72</sup>

The government also moved to reassert control over the provision of access by bringing all contending lines of authority back under central mandate. As authorities realised that technological convergence meant that this included potential network providers such as the MRFT, the Ministry of Electric Power (MEP), the Ministry of Railways (MOR) and the MEI, the need to involve an elite ‘pilot agency’ spawned the ‘Joint Committee for National Economic Informatisation’ – an ad hoc group chaired by Vice-Premier Zou Jiahua, which in April 1996 was formally upgraded to a State Council ‘Leading Group’

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technology equipment to China.

<sup>69</sup> Mueller and Tan, *China in the Information Age*, p. 102.

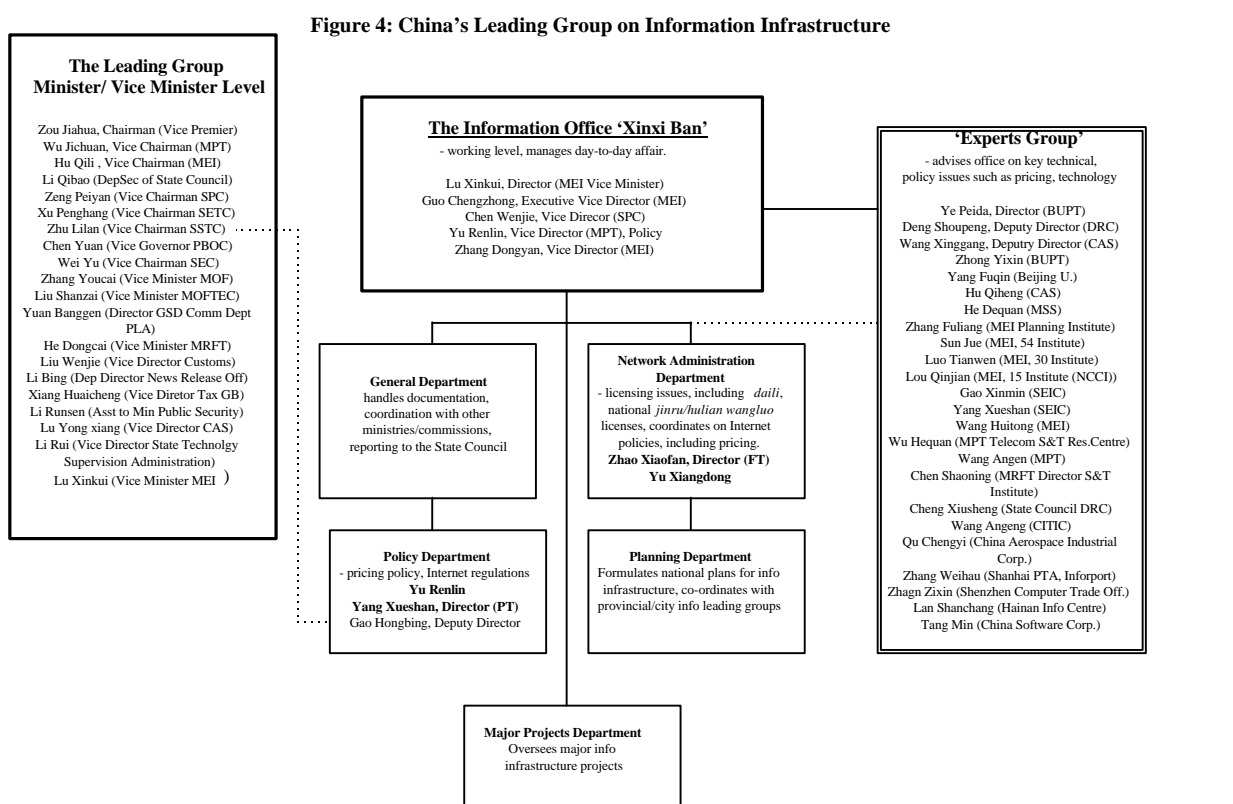
<sup>70</sup> *Ibid.*

<sup>71</sup> By 1995/96, deals included PTAs promising to bring all of the PTBs and PTEs from across the respective into the sale if the equipment vendor dropped the price per switch. 1995 interviews in Guizhou, Hunan and Sichuan; 1996 interviews in Beijing and Shanghai.

<sup>72</sup> “The competition is much more severe than in other countries. Some of our prices are now only a third of what you see in other countries.” Xu Shiqun, assistant to the President of Shanghai Bell, *The Hongkong Standard*, 8 November 1996.

(Figure 4).

**Figure 3: Price per switch circuit in China**



Thus, while the second bargaining nexus revolved around resource allocation, this was essentially a redistributive function. Being at the centre of the redistribution process rather than necessarily 'owning' the resources was the key. The MPT's revised strategy had become one of encouraging industry participants to develop joint schemes with the MPT rather than attempting to marginalise its competition – this included other ministries and foreign companies. This meant also finding a way of encompassing competition without compromising the integrity of the basic network development which is where most of the revenue still lay. Thus, beginning in 1993, value-added services (VAS), such as radio-based mobile communications and satellite telecoms were selectively and conditionally opened to non-MPT actors for competition. This provided the scope for *institutionalising* a flexible (or 'grey') participatory (rather than regulatory) regime and a mechanism for coordinating, or encompassing, the bargaining process.

### Dimension 3: Value-Added Services

The government has used value-added services (VAS) to be able to constantly shift the regulatory/restrictive boundary. There is a similarity in these developments to the process through which other countries have passed. Typically, as countries have approached the liberalisation side of the telecoms reform equation, the first areas to be loosened are in equipment supply, followed – on the services side of the business – by certain value-added segments. Initially, these have tended to be messaging services, store-and-forward fax

services, and so on<sup>73</sup>. As a result, a number of countries, such as Japan, have entered the reform route by categorising telecoms services into categories of basic services and value-added services, and then liberalising the latter while maintaining fairly strong government discretion (or control) of the former. Indeed, most countries have formalised some sort of regulatory distinction between basic and value-added telecommunications services. The problem lies in where the line is drawn between basic and value-added services.

By definition this is an arbitrary distinction and, while largely accepted as a matter of course through the late-1980s, recent developments such as the rapid growth of the Internet and multi-media convergence have made this an increasingly difficult distinction to enforce. For example, many administrations argued through the early-1990s that Integrated Services Digital Network (ISDN) services were value-added services, while in some countries, companies which offered packet-switched data communications services were considered value-added network operators. More recently, the push for intra-corporate communication services (requiring a distinction between public and private – or virtual private networks), and the increasing viability of offering voice telephony over the Internet have further challenged such arbitrary divisions. As a result, different telecommunications authorities maintain different views of what to classify as a value-added telecommunications service.

By the early-1990s the distinction between value-added and basic services had become a focal trade issue across much of Asia, with most administrations reluctant to allow foreign companies close access to the heart of their country's information industry. State policy-makers found themselves in a dilemma: on the one hand, they were well-aware that foreign companies, especially American and Japanese, were regularly backed by their governments. This, and the pursuit of bilateral arrangements, led many to question the credibility of the free trade position. For this reason, a number of regional governments attempted to distinguish between telecommunications value-added services (VAS) and value-added *network* services (VANS). This was meant to distinguish between the use (by MNCs) of IVANS to provide their businesses with international services, as against the use of IVANS as a vehicle for investing in domestic network developments. (Prominent examples of this 'fine line' were Japan and South Korea, where international resale of real-time voice services was prohibited, but the provision of enhanced voice services was acceptable.<sup>74</sup>

In China, developments have played out along a similar path with, of course, a set of unique twists, or 'Chinese characteristics.' The main contradiction is that the administration has, since the early-1990s (with mobile telephony) and since 1993 specifically (with more general value-added services), used VAS to determine policy liberalisation, while simultaneously refusing to formalise a given position on where VAS

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<sup>73</sup> **Frieden 1997; Hollister & Cadawallader 1996;** Peter Cowhey, and Jonathan Aronson, *When Countries Talk: International Trade in Telecommunications Services* (Lexington: Ballinger, 1988).

<sup>74</sup> Peter Lovelock, "Information highways and the trade in telecommunications services," in John Ure (ed.), *Telecommunications in Asia: Policy, Planning and Development* (Hong Kong: Hong Kong University Press, 1995), pp. 139-42.

begin and end.<sup>75</sup> As a result, by far most of the existing regulations concerning telecoms services in China by 1995 were specifically about VAS, and yet this was *the* increasingly liberalised aspect of the sector, with more than 2000 non-MPT companies and “units” having received licenses. Indeed, the main path into the Chinese telecommunications services market for non-MPT players (and this included rival ministries such as MEI, MRFT and the PLA) was to be defined as a value-added services provider of one ilk or another.

The major distinction between China and other reforming administrations has been the lack of urgency in defining what is and isn't a value-added service, and where foreign contributors can or cannot participate. For example, mobile telephony is, in most areas of the world, defined as a value-added service – as it is also in China, and therefore open to degrees of competition. Since 1993, however, there has been a retrospective re-evaluation of teledensity statistics in China so that teledensity has included the number of mobile subscribers, despite the MPT's vehement preservation of the integrity and separation of the basic network. As shown above, network growth has been the number one objective for the telecommunications sector (and hence for the MPT), and therefore the more impressive the MPT's growth figures, the greater their bargaining leverage. Therefore, since 1993, the MPT publishes overall telephone subscription statistics rather than the usual measure of main (fixed) line teledensity (Table 6) – a very fine definitional blurring of whether mobile telephony in China constitutes a part of the *basic* infrastructure or is a *value-added* service.

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<sup>75</sup> In the context of VAS being a fairly arbitrary determination this makes sense; for a business hoping to provide some form of VAS, on the other hand, it does not.

**Table 6: Teledensity vs. Telephone Penetration in China**

Year	Mainline Teledensity	Telephone Penetration
1990	0.6	1.1
1991	0.73	1.3
1992	0.98	1.61
1993	1.5	2.2
1994	2.17	3.2
1995	3.36	4.66

**Source:** MPT

More broadly, this failure to adequately define a set of distinguishing regulations has meant that the central government has been able to entertain a multitude of different types of services in different areas – in direct contrast to the conventional wisdom that China’s telecommunications administration is a monolithic central entity with a set of central parameters which can be passed down to lower levels intact. While China by the mid-1990s remained a classic monopolistic telecommunications regime, certain provincial administrations (e.g., Guangdong, Shanghai) were actively encouraging competitive service provision; some (e.g., Beijing) had witnessed an explosion in the number of Internet service providers; some (e.g., Hunan) had managed to encompass foreign cable TV providers; some (e.g., Tianjin) were simultaneously rolling out GSM and CDMA mobile telecoms networks; some (e.g., Chongqing, Shenzhen) had installed CT-2 systems; and some (e.g., Suzhou) were allowing foreigners to build and run their own LANs.<sup>76</sup>

The point to be made here is that these regulatory pressures were coming up pragmatically from the localities, not being dogmatically handed down by the centre. This regulatory/legal flexibility formed the third bargaining nexus with the centre essentially acting to formalise the situation where and when it was seen to be working. By the mid-1990s, the structure had settled into a pattern which had a certain inherent logic and consistency based on the relational bargaining mechanism.

### *Conclusion*

A number of mistaken assumptions frame analyses of China’s telecommunications policy developments. On the one hand, the Chinese administration is seen to be facing the same economic and technological pressures that other countries are facing and is therefore expected to move in a similar reform path and open the industry in a similar fashion. Yet, they have not. On the other hand, they are assumed to be doing something altogether different: a Leninist administration overseeing a socialist economy and undertaking Stalinist construction programs to maintain the hegemony of the state. Yet in telecommunications and in its NII initiative, the state has categorically stepped back from shouldering the investment burden, has encouraged entrepreneurial initiative and has encompassed a breathtaking diversity of technological initiatives and services in a short

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<sup>76</sup> Peter Lovelock, “China’s telecommunications policy in Hong Kong, 1997: bargaining positions,” *Telecommunications Policy*, Vol. 20, No. 9 (1996), p. 689-690.

period of time. It has also managed to conduct the largest, fastest build-out of a communications infrastructure that the world has seen. The answer to the apparent contradictions lies in understanding the objectives of the government and objectives of the various players involved.

Given our argument is that institutional bargaining has been the mechanism through which the government has allowed the realisation of commercial objectives, the sharp distinction between commercialisation and marketisation needs to be borne in mind. As David Lampton has pointed out with respect to China,

A bargaining perspective does not mean that China is on the road to free enterprise - indeed, bargaining can be one means by which established hierarchies endeavour to prevent the further erosion of their power, a way to avoid the increased use of market forces. Moreover, bargaining does not mean that established hierarchies are being dismantled; on the contrary, bargaining is one reflection of the fact that there are large, competitive bureaucracies and territorial administrations that are absolutely central to the functioning of both society and the polity. Bargaining does not necessarily result in more coherent policies or more efficient governance. Bargaining is more akin to protracted guerrilla warfare within and between large-scale organisations.<sup>77</sup>

The entry of an increasing number of players into China's telecoms market certainly intensified and extended competition, but it did not do so unchecked. Domestically, the MPT and local PTAs became involved in a battle with non-MPT players, represented by government ministries, China Unicom, Ji Tong, the military, and other local enterprises. The domestic competitors bargained for financial resources, market share, technological advantage, and overseas collaboration. Foreign players in the China market meantime were faced with the competition from rival MNCs jockeying to gain competitive advantage through product manufacture, marketing, price cutting, technology standard and specifications related issues, and the heated contest to establish joint ventures or alliances with Chinese partners at different levels of the political and geographical hierarchy. As a result, MNCs were forced to compete with the Chinese government over access to the market, with Chinese incumbents for market share, with Chinese partners and local governments for profits and financial repatriation, and with one another for joint venture counterparts.

Decentralisation of management – horizontally or vertically – does not *necessarily* lead to deregulation, nor does it *necessarily* mean a waning of national leadership. Indeed, decentralisation appears to have made the administration more effective at achieving its objectives, not less. Opening up for competition in network equipment supplies, mobile communications and value-added services does not of itself indicate a change in the long-held political and ideological notion that telecommunications perform a role “as critical to a nation as that of a nervous system to a living creature.”<sup>78</sup> Thus it would be a mistake to simply assume that the leadership’s decision to build and operate a nationwide information

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<sup>77</sup> Lampton, “A peach for a pear,” p. 37.

<sup>78</sup> Cited in Xing, p. 6.

infrastructure will lead the Chinese high-technology industries down a well-trodden path of liberalisation, deregulation and privatisation. Instead, we need to: *identify* the administration's objectives; examine *what* the administration requires to fulfil its objectives, and *who* is able to provide those resource(s). We then need to be able to examine how well these resource holders are able to bargain with the Chinese administration and vice versa.