

Evolution of *Minying* High-tech Enterprises in China: Legitimizing Private Ownership

BENNIS WAI-YIP SO

This article addresses the nature of ownership of a unique sort of enterprise in China—the minying (民營) high-tech enterprises, which emerged in the mid-1980s and are increasingly contributing to China's economic growth. The first section reviews the background of this type of enterprise while the second investigates three typical cases, comparing them with formal private enterprises. The main argument is that minying high-tech enterprises—which are often considered "public" in academic papers—have never been part of the "classical socialist sector" in János Kornai's sense and instead share most of the features of the capitalist private sector. Although not necessarily purely privately owned, these enterprises are not publicly owned. Thus, the recent transformation of minying high-tech enterprises into joint-stock companies does not necessarily suggest privatization but rather represents a struggle by business operators to make more legally secure their rights over enterprise property. Hence the growth of minying high-tech enterprises attests to the strength of private rather than public ownership. Most minying high-tech enterprises are not, however, likely to simply transform themselves into purely private enterprises in the near future.

KEYWORDS: *minying*; high-tech industry; private sector; privatization; shareholding transformation

Bennis Wai-yip So (蘇偉業) recently received his Ph.D. in political science from the Research School of Pacific and Asian Studies, the Australian National University. His current research interest focuses on the development of the private economy and its socioeconomic impact, as well as high-tech industrial policy in China. Dr. So can be reached at <bennisso@hotmail.com>.

* * *

An important conceptual issue in the study of private enterprises in China regards which enterprises should belong in the category of the private sector. Are, for instance, the many enterprises popularly known as *minying* (民營) enterprises equivalent to private (*siying* 私營) ones? Upon consideration of the background of these enterprises, however, labeling them either "private" or "public" seems simplistic.

The term "*minying*" can literally be translated as "people-managed or civilian-managed." The term is often associated with high-tech enterprises that spin off from state research institutions or universities. Many pioneers that were founded in the 1980s are now high-tech spearheads of China's economic growth. In 1999, the *minying* high-tech sector earned a combined income of 1.05 trillion *yuan* from scientific and technological development, production, and trade—a 35-fold increase compared with 1992.¹ Today, "*minying*" has become an alternative term for "*siying*" (private), covering both the spin-offs and officially registered privately owned enterprises. Despite this, the ownership status of these spin-off enterprises is not as clear-cut as the formal privately owned enterprises. Some scholarly studies consider them "private" while others prefer the term "public."² The rise of this discrepancy is due to two mutually contradictory facts: while these spin-offs were usually initially registered as either state-owned or collective enterprises, they are still officially placed in the category of the non-state sector.

The issue of ownership has been a bone of scholarly contention among those concerned with China's economic reforms. The dominance of

¹*Zhonghua gongshang shibao* (China Business Times), July 5, 2001, 7.

²Ricky Tung considers the spin-offs to be private enterprises. However, Scott Kennedy, Corinna-Barbara Francis, and Qiwen Lu see them as public enterprises. See Ricky Tung, "The Chungkuantsun New Technology Development Zone: Mainland China's Silicon Valley," *Issues & Studies* 24, no. 12 (December 1988): 48-69; Scott Kennedy, "The Stone Group: State Client or Market Pathbreaker?" *The China Quarterly*, no. 152 (December 1997): 747-77; Corinna-Barbara Francis, "Bargained Property Rights: The Case of China's High-Technology Sector," in *Property Rights and Economic Reform in China*, ed. Jean C. Oi and Andrew G. Walder (Stanford, Calif.: Stanford University Press, 1999), 226-47; and Qiwen Lu, *China's Leap into the Information Age: Innovation and Organization in the Computer Industry* (Oxford: Oxford University Press, 2000).



public ownership in a thriving Chinese economy is a puzzle for Western economic analysts. The outstanding performance of rural township and village enterprises (TVEs 鄉鎮企業) is a case in point. The anomaly of the often ambiguous ownership of TVEs seems to challenge the advocates of neo-classical economics who presume that only clearly defined private ownership and privatization can provide a solution for the formerly communist countries undergoing economic reforms. Cui Zhiyuan (崔之元), Wu Yu-shan (吳玉山), and Edward Steinfeld have riposted that, while the aim of privatization was to impose hard budget constraints on enterprises, this goal was not necessarily achieved by privatization. Furthermore, they argue that the assumptions of the classical economists are not necessarily true, given the experience of TVEs and certain well-performing state-owned enterprises.³ Steinfeld has further suggested that the linchpin of the reform was to create appropriate mechanisms of corporate governance in order to tighten the budget constraints. Wang Xiaoqiang (王小強) contends that the achievements of the Chinese enterprise reforms did not derive from any ownership changeover but rather from market competition and an increase in the managerial autonomy of enterprises.⁴ Jean Oi and Andrew Walder further argue that the direct association of collective and local government-owned TVEs with local governments benefited the growth of these rural enterprises by providing better access to a huge pool of resources controlled by the local administrations. These scholars also note that, with appropriate institutional incentives, local cadres performed as well as the profit-motivated entrepreneurs of the private sector.⁵

The above viewpoints are extended to apply to the urban non-state

³Cui Zhiyuan, "The Challenge of Chinese Practice to the Neo-classical Political Economy" (in Chinese), *Xianggang shehui kexue xuebao* (Hong Kong Journal of Social Sciences), Special Issue (July 1995): 1-33; Yu-Shan Wu, "A Review of Property Rights Reform in Mainland China," *ibid.*, no. 14 (Summer 1999): 175-99; and Edward S. Steinfeld, *Forging Reform in China: The Fate of State-Owned Industry* (Cambridge: Cambridge University Press, 1998).

⁴Wang Xiaoqiang, *Mozhe shitou guohe: Zhongguo gaige zhilu* (Crossing the river by groping for stones: The path of China's reform) (Hong Kong: Oxford University Press, 1996).

⁵Jean C. Oi, *Rural China Takes Off: Institutional Foundation of Economic Reform* (Berkeley: University of California Press, 1999); and Andrew G. Walder, "Local Governments as Industrial Firms: An Organizational Analysis of China's Transitional Economy," *American Journal of Sociology* 101, no. 2 (September 1995): 263-301.

high-tech sector. Qiwen Lu, in a newly published book, studied four successful high-tech conglomerates in China, three of which are *minying* high-tech enterprises that are not registered as private enterprises.⁶ Lu probes why these publicly owned enterprises are innovative. He, too, notes that the success of these new high-tech enterprises should not be credited to clearly defined private ownership; managerial autonomy, appropriate corporate governance, and enterprise connections with state research institutions have been the three main ways helping enterprises to tap into the research resources that accumulated during the period of state planning.

The growing trend of privatization of TVEs since the mid-1990s, however, belies the irrelevancy of private ownership.⁷ As Ray Yep (葉健民) observes, rural local officials lack the sophistication and professional knowledge to operate a larger scale of production in a more marketized environment. While having well-defined property rights in the germinal stage of development is not crucial, imperative is for rural local governments to yield enterprise ownership to professional managers in order to enhance the motivation of the latter to strive for long-term development.⁸ Indeterminate property rights have become a bottleneck in the later stage of TVE development. In light of these findings, are types of ownership not relevant to managerial autonomy and budget constraints, as Cui, Wang, and others suppose? For instance, Örjan Sjöberg and Gang Zhang substantiate that collective rural enterprises face softer budget constraints than private ones.⁹

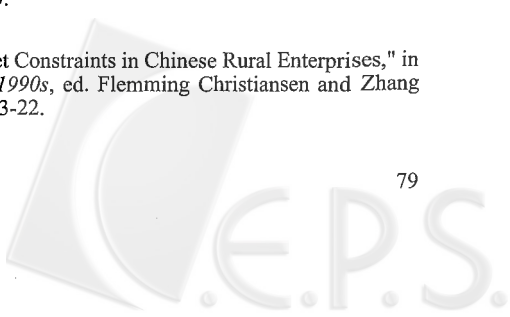
In regard to the non-state high-tech sector, this author takes issue with Lu's treatment of whether these non-state high-tech firms are essentially

⁶The four enterprises Lu studies are Stone, Legend, Founder, and Great Wall. The former three are considered *minying* enterprises. See Lu, *China's Leap into the Information Age*.

⁷For details of this new trend, see Oi, *Rural China Takes Off*; Hongyi Chen, *The Institutional Transition of China's Township and Village Enterprises: Market Liberalization, Contractual Form Innovation, and Privatization* (Aldershot: Ashgate, 2000); and Ray Yep, "Bringing the Managers In: A Case of Rising Influence of Enterprise Managers in Rural China," *Issues & Studies* 36, no. 4 (July/August 2000): 132-65.

⁸Yep, "Bringing the Managers In," 133.

⁹Örjan Sjöberg and Gang Zhang, "Soft Budget Constraints in Chinese Rural Enterprises," in *Village Inc.: Chinese Rural Society in the 1990s*, ed. Flemming Christiansen and Zhang Junzuo (Richmond: Curzon Press, 1998), 103-22.



"publicly owned."¹⁰ Lu has not scrutinized the substance behind the official registration, simply reducing the indeterminate property rights of these enterprises to "public ownership." Enterprise registration and clarity of property rights are not sufficient to define the nature of these enterprises. Even though the property rights of these firms were ill-defined at their outset, one cannot argue that these enterprises are non-privately owned; this is because elsewhere there are many so-called "disguised" collective enterprises (i.e., referring to private enterprises falsely registered as collective enterprises) whose property rights were not well-defined at the very beginning. By the same token, these high-tech firms have been trying to clarify their property rights via shareholding transformation since the mid-1990s, a strategy adopted by their rural counterparts.

The author will argue in this paper that *minying* high-tech enterprises have never been part of the "classical socialist sector" in János Kornai's sense, and that, in ways not found in the TVE sector, *minying* high-tech enterprises already share most of the features of the capitalist private sector. While not purely privately owned, these enterprises are definitely not publicly owned. The lack of state investment in such companies accounts for the harder budget constraints imposed on them and their high degree of managerial autonomy. The transformation of these *minying* high-tech enterprises into joint-stock companies does not necessarily suggest privatization (unlike what is occurring in the traditional state-owned sector)¹¹ but rather represents a struggle by business operators to make more legally secure their rights over enterprise property. Hence the growth of *minying* high-tech enterprises attests to the strength of private rather than public ownership. Most *minying* high-tech enterprises are not, however, likely to simply transform themselves into purely private enterprises in the near future.

This paper first reviews the emergence of this type of enterprises, then examines three *minying* high-tech enterprises—Legend (*Lianxiang* 聯想), Stone (*Sitong* 四通), and Start (*Shida* 實達), comparing them to formally

¹⁰See my review of the book in *The China Journal*, no. 46 (July 2001): 175-77.

¹¹Shu-yun Ma, "Shareholding System Reform: The Chinese Way of Privatization," *Communist Economies and Economic Transformation* 7, no. 2 (1995): 159-74.

private enterprises. All these three enterprises are well-known information technology (IT) companies founded in the 1980s. They represent three different types of ostensible ownership: state-owned, collective, and joint-stock.

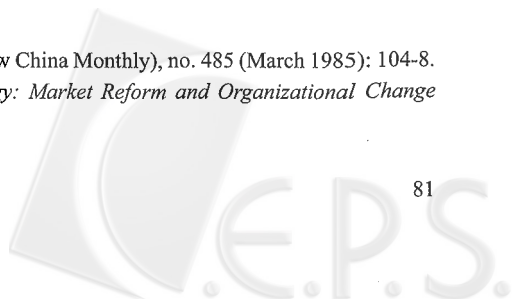
Origins and Emergence of *Minying* High-tech Enterprises

Minying high-tech enterprises originated from the reform of the science and technology management system in 1985. Before the reform, scientific research units under the state research institutions and universities were purely academic organizations that operated with state budgetary funding and were under the state's administrative plan and control. Driven by market reforms in the Deng era, the Chinese government in the mid-1980s began to encourage scientific research to enter the commercial market. On March 13, 1985, the Chinese Communist Party (CCP) Central Committee promulgated a "Decision on Reform of the Science and Technology Management System" (關於科學技術體制改革的決定).¹² The decision launched an attempt to create a "technology market" to link scientific research with industrial production, encouraging voluntary collaboration between research units and existing enterprises in order to hasten the commercialization of research products and improve the technological innovation of the enterprises. At the same time, universities, research institutions, and their personnel were given permission to set up their own profit-seeking organizations.

Although the collaboration between research units and existing enterprises was not fruitful,¹³ those spin-offs from universities and research institutions performed well in adapting themselves to marketization. In the 1980s, this sort of business unit was commonly called a "*minban* enterprise" (民辦企業), rephrased as "*minying*" in the 1990s. Ever since their

¹²See the "Decision" in *Xinhua yuebao* (New China Monthly), no. 485 (March 1985): 104-8.

¹³Shulin Gu, *China's Industrial Technology: Market Reform and Organizational Change* (London: Routledge, 1999), 29-32.



inception, *minying* enterprises have been mushrooming in the vicinity of universities and research institutions, imitating the model of Silicon Valley in the United States. Among these hubs, the most outstanding is the Zhongguancun (中關村) district in Beijing, dubbed China's Silicon Valley. Zhongguancun offers a successful model in the development of high-tech non-state enterprises, i.e., *minying* enterprises. Given the experience of Zhongguancun, the government bolstered the high-tech sector by sponsoring the development of spin-off enterprises in 1988 through the "Torch Program" (火炬計劃), under which fifty-three national-level "New and High Technology Development Zones" (高新技術開發區) have thus far been established.¹⁴

These *minying* high-tech enterprises fall within the category of the non-state sector because they are fundamentally different from "traditional" state-owned enterprises. According to an official definition, these ventures were founded and operated on the basis of four criteria.¹⁵ First, they must be financially self-reliant; the government does not allocate any budgetary funds into the enterprises. Second, the businesses are established entirely at the initiative of the business founders; there is no state administrative participation or intervention. Third, as a result, the management in *minying* enterprises enjoys a high degree of autonomy, not subject to administrative control by any of the economic ministries. Fourth, the enterprises are responsible for their own profits and losses. These four factors are mutually reinforcing and shape the companies as independent economic entities. According to Kornai, *minying* enterprises are different from state-owned enterprises in that the latter are subject to state hierarchical bureaucratic controls.¹⁶

Although considered as non-state enterprises, *minying* enterprises are not necessarily non-state-owned firms. According to the official definition, *minying* enterprises consist of collectives, cooperatives, joint-stock ventures, household businesses (*getihu* 個體戶), larger privately owned firms,

¹⁴ *Beijing Review* 42, no. 40 (October 4, 1999): 12-15.

¹⁵ *Xinhua yuebao*, no. 584 (June 1993): 42.

¹⁶ János Kornai, *The Socialist System: The Political Economy of Communism* (Princeton, N.J.: Princeton University Press, 1992), 71-83.

and "state-owned, people-managed" (*guoyou minying* 國有民營) enterprises. The category solely excludes the "state-owned, state-run" (*guoyou guoying* 國有國營) enterprises. In theory, any state-owned enterprises that separate operation rights from state ownership rights should be considered *minying* enterprises. The state-owned enterprises in question, however, are different from the traditional state-owned companies that are now being transformed into "state-owned, people-managed" enterprises under the enterprise reform launched in 1993. The firms in question never experienced the controls of a state plan. Their operating rights had been separate from state ownership rights from the outset. The state's investors are usually passive owners of these enterprises. The particular term "*minying*" marks "private management" nature of these firms rather than their ownership.

Important is to note that the funding from the state agents is not equivalent to direct funding from the government. *Minying* enterprises usually receive money from extrabudgetary sources or from the retained capital of the state agents that accumulated under financial decentralization in the post-Mao era. Even so, the capital input of the state agents is usually very small and, as a matter of course, the initiation of the spin-offs stems from the budget crisis of the state agents caused by the reform. Regardless of how little the state agents invest, the spin-offs are entitled to register themselves as state-owned enterprises. According to a source, there were about 70,000 *minying* high-tech enterprises by the end of 1998, among which the state, collective, *getihu*/private, and joint-stock/joint-stock-cooperative firms respectively accounted for 21, 47, 13, and 9 percent.¹⁷

According to the above figures, more than two-thirds of the *minying* enterprises (68 percent) were listed as being publicly owned (i.e., state or collective). This does not, however, reflect the real attributes of the enterprises. To a large extent, public ownership served as a protective "symbol" and a firm's ties to state agents were a favored choice for enterprise founders when they set up their own businesses. This strategy both helped them to avoid the official barriers erected to restrict the entry of private enterprises and legitimized their access to resources—such as land, tax re-

¹⁷*Zhonghua gongshang shibao*, October 23, 1999, 1.

ductions, and bank loans—that were more readily made available to public firms.

Three Typical Cases

The following three cases are now IT conglomerates with sprawling subsidiaries and joint ventures in China and overseas. These firms (or one of their subsidiaries) are now listed on either the Hong Kong or Shanghai stock market. Hence, the capital sources of the enterprises have become diverse. In fact, these companies were not necessarily founded entirely as publicly owned enterprises and thus have always relied on other sources of capital or expertise (although they are registered as enterprises in public ownership in the classical socialist sense). Their *minyng* identity implies that public ownership has not accounted for the underlying attributes of the enterprises.

At the very outset, the Beijing-based Legend was a state-owned company spun off from the Institute of Computing Technology of the Chinese Academy of Sciences (CAS) (中國科學院計算研究所). It was initially named New Technology Development Company (新技術發展公司). The Stone computer company was registered as a collective township enterprise under the jurisdiction of Sijiqing Township in Haidian District, Beijing (北京市海淀區四季青鄉). The Fuzhou (福州)-based Start firm was, from inception, a joint-stock company, with both private and state-agent investment. Legend and Stone were established in 1984 and Start was founded in 1988.¹⁸

Despite the variations in their corporate integument, the above three companies have certain common features. First, the three enterprises were

¹⁸The backgrounds of these three enterprises are widely covered and studied. For the background of Legend, see Lu, *China's Leap into the Information Age*; Francis, "Bargained Property Rights"; *Zhonghua gongshang shibao*, December 9, 1999, 2; and *Beijing Review* 42, no. 46 (November 15, 1999): 21-24. For the background of Stone, also see Lu, Francis, and *Beijing Review* cited here, as well as Kennedy, "The Stone Group." For the background of Start, see Liu Yong, *Lanse tongdao* (A blue corridor) (Beijing: Zhongguo jingji chubanshe, 1998) and the company's website: <<http://www.start.com.cn>>.

founded by a group of scientific researchers from state research institutions. The founders of Legend were eleven specialists from the CAS Institute of Computing Technology. Stone was founded by a group of Qinghua University (清華大學) alumni who had variously worked in CAS, research institutions of major industrial ministries, or state-owned computer manufacturing enterprises. Start was set up by sixteen specialists who came from computing and optical research institutions in Fujian (福建). By contrast, their private counterparts were usually set up by one or two people or by family members.¹⁹ For example, the top financial software group, Ufsoft (用友), was founded in 1988 by two young junior officials who had originally worked in the State Council and was registered as a household firm (i.e., *getihu*) at the outset.²⁰ A big software group specializing in education software, CSC (Clever Software Company 科利華), was founded by a young university teacher, Song Chaodi (宋朝弟), with his brother-in-law in 1991.²¹

The initiation of the three case study enterprises stemmed from a collective effort of collegial groups rather than an individual decision, although individual figures in the groups played leading roles in the start-up process. This collegial origin legitimized the claims of collective/public ownership. Such cooperation was a common feature because individuals alone were rarely able to set up a scientific and technology firm. A concerted effort to form a high-tech start-up is not only common in China but also in other countries, due to the high degree of intellectual input required by such industries. For another, individuals were not allowed to set up enterprises (*qiye* 企業) claiming sole proprietorship in the mid-1980s other than in the form of tiny *getihu*, an undesirable corporate format in terms of business image. Even though the Chinese government legitimized private enterprises in 1988, there was only a relatively slow increase in the number of registered private firms at the end of the 1980s due to the enduring dis-

¹⁹ Author's interviews with private high-tech firms in Beijing and Guangzhou in 1999.

²⁰ For the founding of Ufsoft, see Zhang Guohua, ed., *Zouxiang tizhiwai de guanyuanmen* (Officials who are off the state system) (Beijing: Zhongguo jingji chubanshe, 1999), 402-4.

²¹ *Zhongguo qiyejia* (China Entrepreneur) (Beijing), no. 169 (May 1999): 12-23.

crimination against private ownership. The success story of Ufsoft, originally a *getihu* company, is a rare occurrence among the successful high-tech firms founded in the 1980s.

Second, the formation of enterprises was, to a significant degree, sponsored by universities and research institutions as a means to finance themselves and to provide job placement for surplus personnel. Legend obviously belonged to this category from the very beginning. Note that any enterprise established by such a group and based on share capital can count as privately, not necessarily collectively, owned. However, the concept of a joint-stock company barely existed in the mid-1980s. Furthermore, scientists and engineers lacked seed capital to set up their own companies, and institutional input was a major source of funding. Stone relied on a loan of 20,000 *yuan* from Sijiqing Township as initial capital. Legend's 200,000 *yuan* of initial capital was in the form of a loan from the CAS Institute of Computing Technology. Stone and Legend were not so-called "disguised" collective or state enterprises that were de facto funded and owned by individuals from their outset.

Relying on loans for their start-up, quantifying the initial contribution of the founders to the enterprises is difficult, and the property rights among the founders thus could not easily be defined. This state of affairs subsequently caused disputes when the founders realized and attempted to claim their rights to the company's assets. Note, however, that private businesspeople commonly launched their business with loans.²² Ufsoft was founded with a loan of 50,000 *yuan*. A creditor could not, however, claim the property of the private firm as long as the loan has been repaid, which is not the case with the spin-offs. The CAS Institute of Computing Technology's loan to Legend provided a rationale for CAS to claim rights to Legend, with the unsecured loan of 200,000 *yuan* regarded as an initial investment by CAS, even though the loan was paid back in 1986.²³ According to another account, the money was not the Institute's own funds, but

²²Bennis Wai-yip So, "China's Private Enterprises at the Close of the 1990s: Their Growth and Legal Protection," in *China Review 2000*, ed. Lau Chung-ming and Jianfa Shen (Hong Kong: Chinese University Press, 2000), 315.

²³Lu, *China's Leap into the Information Age*, 70.

rather was a bank loan that was secured by the founders who marked the transaction on the Institute's balance sheet, and the Institute in turn formally loaned the money to the enterprise.²⁴ The loan from Sijiqing Township was also considered by certain people in the township as the foundation of Stone's success, but in this case the seed capital was unambiguously regarded as a loan, not an investment, and was returned as soon as Stone had made a profit. Otherwise, the township might be entitled to claim ownership rights over Stone.²⁵

Start was an exceptional case. The founders contributed various amounts of capital to the enterprise. Each share was valued at 500 *yuan*, and the sixteen founders possessed a total of 150 shares at the outset of the enterprise. Even though some of the founders quit during the company's development, this did not provoke any property rights disputes, unlike what occurred at Legend and Stone. To be sure, the founders of Start also needed to secure capital in addition to the shares they themselves purchased,²⁶ as the registered initial capital that was needed totaled 250,000 *yuan*. The majority of this amount was invested by three state-owned organizations—Fumin Trading Company (富閩貿易公司), the Office for the Development of Electronics Industry (電子振興辦公室) of Fujian Province, and the Electronics Research Institute of Fujian Province.²⁷ In view of a majority share held by state agents, the company was considered a state-holding company; even though holding the controlling stake, these state agents were passive owners of the company, however, granting the private management full autonomy. Start was a pioneer in the creation of a joint-stock company at a time when an official corporate regime had not yet been established. Important is to note that this state-private ownership exemplified an early case of mixed ownership that became increasingly common in subsequent years.

Although all three of these enterprises belong to the category of *min-*

²⁴Ibid., 65.

²⁵Ibid., 27.

²⁶Liu, *Lanse tongdao*, 9-10.

²⁷From Start's website <<http://www.start.com.cn/about/event/1988/htm>>.



ying enterprises, their underlying property rights structures were different at the very beginning. Even though the rights of control rested on the hands of the business founders in these three cases, the founders of Legend surrendered ultimate ownership to CAS and claimed Legend as a "state-owned, people-managed" enterprise. Legend kept a close relationship with CAS and tapped CAS's tangible and intangible resources in the founding years; and Legend's business operators have struggled to claim separate property rights from its parent institution in CAS.

Stone claimed to be a "people-owned, people-managed" (*minyong minban* 民有民辦) enterprise. The company differed from a formal private enterprise only in that property rights were ill-defined among the business founders, inasmuch as Stone was not established by means of share capital. The same held true for Legend, where property rights among the business founders also were not clarified at the outset. Unlike Legend, however, Stone's businesspeople primarily struggled for a clarification of property rights among personnel within the company.

The third company, Start, claimed to be a "state-holding" company, but from the beginning all of the parties involved in Start recognized the private input in the company and clarified ownership rights among the business founders and state agents through a joint-stock setting. A distribution of shares would similarly be the most feasible way for Legend and Stone to remedy their prior negligence regarding property-rights problems. To be sure, an initial motivation behind launching a business for most of these technicians-turned-businesspeople was to retain their careers or pursue their own independent career path rather than to engage in large-scale entrepreneurship. Hence, at the outset the founders tended to disregard whether they were de jure owners or how much they owned of the enterprises. This was parallel to the experience of TVEs, where the peasant investors also had not sensed the importance of property rights until their enterprises became large and profitable.²⁸

²⁸For example, see Wang Xiaoyi and Zhu Chengbao, *Zhongguo xiangcun de minying qiye yu jiazhu jingji* (Private enterprises and family economy in the Chinese countryside) (Taiyuan: Shanxi jingji chubanshe, 1996), 99-102.

Business Take-offs

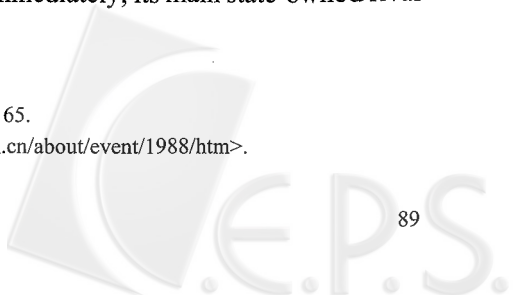
Owing to their weak financial basis, the three enterprises were unable to embark upon high-tech production at their inception. Sharing the same strategy as many other small high-tech firms, the three companies simply accumulated capital for reinvestment at the outset. A common way to do this was to open a trading business to import high-tech commodities and provide after-sales services—businesses requiring low capital investment but high levels of technical knowledge (the strength of these technicians). Owing to a high demand for high-tech products and low competition in the 1980s, these start-ups rapidly accumulated a huge amount of capital for their subsequent development. The first critical deal for Legend was to provide technical services for five hundred new imported personal computers of CAS, through which Legend made a profit of 700,000 *yuan*.²⁹ Start earned 85,000 *yuan* by assembling IBM-PCs in its first year.³⁰

Above all, the cutting-edge high-tech enterprises relied on taking advantage of their own technological niches. The phenomenal growth of these three companies came from a company strategy of taking the lead in specific technological areas. Stone gained a cutting edge by developing an integrated Chinese word processor. Legend laid its business foundation by successfully developing an add-on Chinese processing card. Start's leading area was computer terminal instruments. In this regard, one should note that in the high-tech sector technological advances rely on the intellectual input of the scientific and technical staff, which is subsequently used to justify the staff's claim to the property rights of "their" companies.

Their ability to embark upon technological innovation was driven by the companies' managerial autonomy, which accelerated the decision-making process and enhanced their responsiveness to an ever-changing market situation. These advantages were absent among the traditional state-owned enterprises. For example, Stone took advantage of its autonomy to rapidly develop a package of Chinese processing software in a few days and to put this into the market immediately; its main state-owned rival

²⁹Lu, *China's Leap into the Information Age*, 65.

³⁰From Start's website <<http://www.start.com.cn/about/event/1988/htm>>.



started the same project three months earlier but became bogged down in cumbersome bureaucratic procedures.³¹

In addition to managerial autonomy, we should take account of their connections with their parent institutions. In order to argue for the relevancy of public ownership, Lu highlighted the fact that the success of these spin-offs relied to a large extent on their close relations with state research institutions—utilizing state facilities and tapping into the scientific resources accumulated during the planning era. Note, however, that the relationship between the spin-offs and their parent institutions was not simply one of bureaucratic hierarchy, but rather one of reciprocity. The spin-offs did not utilize state facilities free of charge. Legend paid for office space, scientific instruments, as well as the cost of utilities, and submitted a huge amount of profits to CAS.³²

Tapping into state scientific resources did not necessarily require reliance on institutional connections. Stone, which as Lu noted was not affiliated with any research institution, could tap into scientific resources through personal connections with CAS personnel.³³ In fact, scientific researchers in the research institutions and universities also provided freelance services for private high-tech enterprises. The state's scientific resources were not monopolized by public enterprises, and therefore Lu's arguments are not tenable. However, one must recognize that parent institutions, usually acting as guarantors, do help the spin-offs in securing access to bank loans. Moreover, their identity as publicly owned enterprises facilitated their enjoyment of preferential policies that were only granted to publicly owned enterprises in the early reform era. The parent institutions sometimes continue to play this indispensable role. Note, however, that many formal private enterprises were also affiliated with a supervisory unit (*guakao danwei* 掛靠單位) or maintained association with a state agent in

³¹See Kennedy, "The Stone Group," 753-54.

³²In a separate development, the Chinese government has also established start-up incubators in various high-tech development zones, in which free offices and facilities are provided for infant private high-tech firms. Ironically, this was not necessarily a privilege enjoyed by these initially publicly owned enterprises.

³³Lu, *China's Leap into the Information Age*, 29.

some other fashion so as to facilitate their access to loans and preferential treatment.

Struggles for Rights over Enterprises and Shareholding Transformation

After the enterprises had taken off and become profitable, conflicts of interest came to the fore between the enterprises and their parent institutions, and among the business operators themselves. These conflicts led to the first stage of claims by the business operators to property rights. As a subsidiary of the CAS Institute of Computing Technology, Legend was required to turn profits over to the Institute. During the first three years of existence, the company handed over 3,650,000 *yuan*.³⁴ Owing to a lack of substantial resource inputs from the parent institution, the profit-sharing demand from the Institute caused discontent among the business founders, who thought the enterprise's success depended on their own efforts. The management of Legend began to resist the parent institution's demands for profits. Owing to the close correlation between the competence of the business operators and the performance of Legend, the management had a strong bargaining position from which to negotiate with CAS on the profit-sharing arrangement. The resulting agreement was that the company would retain a greater portion of the profits.³⁵

Still, Legend suffered from indeterminate property rights. Even though the management was now shielded from interventions by CAS, personnel disputes within the company became a thorny problem because the property rights among the business operators had not been clearly defined. The dispute between the top executive of Legend, Liu Chuanzhi (柳傳志), and the company's chief engineer, Ni Guangnan (倪光南), is exemplary. Liu Chuanzhi was one of the eleven founders of Legend. While not enjoying such a leadership position, Ni was the engineer who had developed the add-on Chinese processing card, a major reason behind the take-off of Legend. Liu and Ni enjoyed the same rank in Legend, and even Liu needed

³⁴Ibid., 70.

³⁵Francis, "Bargained Property Rights," 238-39.



Ni's consent in order to select a development strategy. Ni opted for a technology-oriented approach. In 1994, after the failure of a series of Ni's research projects, Liu was determined to switch to a more market-oriented approach. After Ni objected, Liu appealed to CAS and received a sympathetic hearing. Ni was dismissed from his position as chief engineer by the CAS Party Committee. He maintained his employee status in Legend but in 1999 was at last fired, receiving 5 million *yuan* in compensation.³⁶

The dismissal of Ni, while removing a hurdle to the further development of Legend, also exposed the problem of the company's indeterminate property rights. The business decisions of the company could not be made in the manner of a normal corporation because the authority of the business operators was not determined in accordance with the shares held in the firm. As a consequence, the board of directors had failed to function in the dispute and intervention of CAS was needed, a development which provided a bad example in terms of enterprise reform.

Stone, as noted, similarly needed to share profits with Sijiqing Township in the company's early years. However, the township's influence over the company diminished soon after Stone's founding. Initially, the chairman of the company was the head of the township government. After the central government's order to separate government from direct involvement in commercial activities in 1985, the officials from the township all resigned from the company. One of the major founders was Wan Runnan (萬潤南), who had already become the general manager. Wan concurrently took up the position of chairman of the board of directors. Although Stone was also put under the jurisdiction of the Haidian District government, the company became an independent economic entity, albeit remaining a collective enterprise.

The significance of clarifying the property rights of *minying* high-tech enterprises was in fact realized in the 1980s. Stone was one of the first to experiment with a system of shareholdings. As early as 1986, the company experimented with the issuing of 4,000 shares to its staff with a face

³⁶For the details of this dispute, see *Zhonghua gongshang shibao*, September 3, 1999, 1; September 8, 1999, 3; and September 9, 1999, 2; *Zhongguo jingyingbao* (China Business) (Beijing), October 19, 1999, 6.

value of 100 *yuan* per share. In 1988, the company took the further step of proposing to form a new joint-stock company with public stock offerings. Given that Stone was deeply implicated in the 1989 Tiananmen student demonstrations (and as a result Wan Runnan fled to the United States), the proposal was suspended. While the government did not take control over Stone, an ownership problem did in fact ensue. Wan still claimed 50 percent of the ownership of Stone.³⁷ His claim was dismissed on its own terms, however, as the company was not established according to capital shares. Duan Yongji (段永基), who had joined the company weeks after Stone was formed, became the new executive president. This new appointment did not satisfy all of the top staff at Stone, however, and led to the resignation of many top executives in 1992 (after a failed bid to secure control over the company). In short, the indeterminate property rights of Stone led to thorny disputes among the top staff. Even though the top executives of Stone had realized the need to clarify property rights, the government restricted and discouraged the attempts of "privatization" before the mid-1990s in light of socialist ideology and the celebrity of Stone.³⁸

Start has never faced problems with property rights. Nor did the company need to settle its relationship with a parent institution—unlike the cases of Legend and Stone. The stakes of the state agents were soon withdrawn from the company under the central government policy of "separation of government from enterprises." Fujian Province's Office for the Development of Electronics Industry withdrew its shares from Start in 1989, although the Electronics Research Institute of Fujian Province still held 25 percent of the shares. In 1991, all shares were already held by legal business entities and the staff of Start—60 percent by Fumin Trading Company, 10 percent by Fuzhou Construction and Development Company of the Fuzhou Economic and Technology Development Zone, and 30 percent by the staff of Start.³⁹

After Deng Xiaoping's southern tour in early 1992, the Chinese gov-

³⁷*Beijing jingji bao* (Beijing Economic Daily), July 11, 1999, 2.

³⁸*Ibid.*

³⁹From Start's website <<http://www.start.com.cn/about/event/1989/htm>> and <<http://www.start.com.cn/about/event/1991/htm>>.

ernment gradually recognized the need to better clarify property rights in order to promote enterprise development and finally promulgated the Company Law at the end of 1993. The conversion of Legend into a joint-stock company occurred along with the implementation of the Company Law in 1994. In 1995 Legend converted the core company into shareholdings by dividing the equity into three parts—20 percent owned by CAS, 45 percent by the CAS Institute of Computing Technology, and 35 percent by the staff of Legend. However, the equity was not tradable, and the shareholders were only entitled to receive dividends.⁴⁰

Meanwhile, although the state in this sense restricted the division of the property of these "non-private" *minying* enterprises, Stone and Legend managed to diversify ownership by going public in Hong Kong. Having failed to list on the Chinese stock market in the 1980s, Stone's management, for instance, switched to an outside market to claim its rights. Instead of simply listing the entire Stone Group on the Hong Kong Stock Exchange, the management set up another joint-stock company, Stone Electronic Technology Limited, in Hong Kong and listed it on the market in 1993. The company employees could buy up to 10 percent of the publicly issued shares. The company used its past undistributed employee bonus fund to purchase 10 percent of the shares and distribute them among the employees. The Stone Group, as a holding company, held another 58 percent. However, this 58 percent equity remained a non-dividable collective asset—a condition imposed by the Chinese government in order to approve Stone's going public.⁴¹

Legend also went public through a subsidiary joint venture, Hong Kong Legend, which was founded in 1988. In 1993, Hong Kong Legend was renamed as Legend Holding Limited and in 1994 was converted into a public company. Twenty-five percent of all shares were issued to the public, and Beijing Legend (Beijing) kept the controlling stake by holding 38.8 percent of the shares.⁴² While no stocks were distributed among the

⁴⁰*Zhonghua gongshang shibao*, December 9, 1999, 2.

⁴¹Lu, *China's Leap into the Information Age*, 56-57.

⁴²*Ibid.*, 92-93.



business founders and operators, making the equity tradable was an essential step in order to realize rights of transfer.

The status of Start's joint-stock company was legally recognized with the implementation of the Company Law. Start was re-registered as a company with capital assets of 50 million *yuan* in 1994. Before that, the share composition changed several times, as noted above, because of various share transfers between state legal entities and because of alterations in the composition of the individual private shareholders. For one thing, the first president of Start, Hu Gang (胡鋼), quit the company in 1993.⁴³ For another, the new staff members were allowed to buy employee shares. Hence, the ownership structure of Start became quite diverse. In August 1996, the conglomerate became public, listing the whole group on the Shanghai Stock Exchange. After the listing, Fumin Trading Company remained the biggest shareholder (with 23.87 percent of the equity). The Start Labor Union (i.e., an organization representing employee shareholders) held 17.55 percent of the equity, and was thus the second biggest shareholder.⁴⁴ The founders personally held stocks and still dominated the company management given that they represented the Start Labor Union.

A final hurdle was removed when the CCP's Fifteenth National Congress further legitimized the shareholding system in 1997. In July 1999 the Stone Group therefore was able to make a breakthrough in the clarification of the property rights of management. The company made use of the "manager buy out" method. Six hundred and sixteen top staff—forming an employee shareholding congress—and the Group, as two legal entities, offered 51 percent and 49 percent of the capital, respectively, to form a new business venture so that the staff could exercise control over the Group indirectly.⁴⁵ At the end of 1999, the Legend Group also loosened its system of shareholdings, and the 35 percent staff equity became tradable. The equity was divided into three parts: 35 percent of the staff equity was distributed to the first fifteen founders of Legend; 20 percent went to the staff

⁴³See *Zhongguo qiyejia*, no. 195 (July 2001): 22.

⁴⁴See the share composition at the end of 1997 from <http://www.cnlist.com/search/company_zygd.asp>.

⁴⁵See note 37 above.

who joined Legend before June 1, 1988; and the remaining 45 percent was distributed to the "backbone" staff.⁴⁶

Conclusion

This article has shown that *minying* high-tech enterprises should—since inception—be considered as lying within the category of private or state-private mixed ownership. Even though these enterprises may be registered as state-owned or collective enterprises, they are essentially different from classical socialist enterprises. The fundamental difference is that most *minying* enterprises are initiated by individuals who founded and operate the enterprises and have invested much of their own intellectual property into them. Despite the existence of parent institutions or supervisory units above the enterprises, there was never the principal-agent relationship between the two sides that exists in the traditional state sector. The business founders or operators do not perform as an agent of the parent institutions but rather run their own business. Note also that many formally registered private enterprises in China also have supervisory units above them, but this does not alter their ownership nature. The business operators of the spin-offs command a range of property rights over the enterprises, including rights to residual income and rights of control, although these rights are not absolute and are secured by bargaining with the parent institutions. What the business operators could not control at the beginning were the rights of transfer, which at their infant stage seemed insignificant. All told, the popular "private" image of *minying* enterprises is justifiable.

One must note that the strength of the bargaining power of the spin-off business operators hinges on the degree to which the parent institutions put substantial resources into the enterprises. In many cases, the parent institutions had not put any significant investment into the spin-offs, especially in terms of capital. The association with the parent institutions usually aids the spin-offs via preferential policies and sharing in the repu-

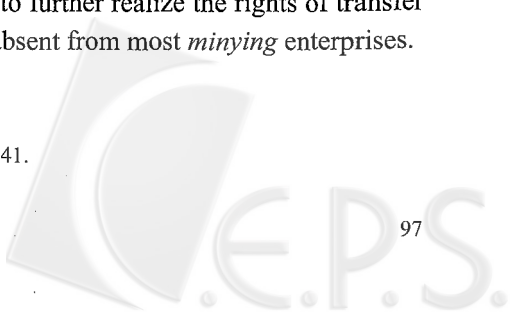
⁴⁶*Zhonghua gongshang shibao*, July 20, 1999, 1.

tation of the institutions. Legend was able to boast such an association with CAS. The lack of input from parent institutions accounts for the *minying* enterprises subsequently securing a high degree of autonomy. To be sure, the amount of autonomy varies from case to case. For instance, Founder (方正), a spin-off from Beijing University, has received a higher level of resources from the university, and so the influence exercised by the university is much stronger. In contrast, by being more self-reliant, Legend has enjoyed a higher degree of autonomy.⁴⁷ All in all, when the parent institution relies on a spin-off to generate income for the institution, the leadership of the institution is apt to understand that a high degree of managerial autonomy is a necessary condition for the enterprise's success.

While the *minying* high-tech enterprises that were categorized as state-owned embrace most of the features of private enterprises, the collective ones are absolutely private. The difference lies in the indeterminate property rights among the business founders and operators of the former type of enterprise. To a certain extent, the businesspeople attempted to blur the question of ownership in exchange for managerial autonomy because the Chinese government did not allow or discriminated against private enterprises before the mid-1990s. The cost of this blurring has been disputes over property rights that hamper a company's later stage of development. This fact accounts for why collective enterprises rapidly converted into joint-stock companies in the 1990s, not only in the high-tech sector but also among TVEs.

This conversion of the state-owned *minying* enterprises does not necessarily mark the privatization of these companies, but only signals the clarification of property rights between the state agents and the business founders and operators who independently built up and developed the enterprises. Despite the conversion of Legend into a joint-stock company, the parent institution still holds 65 percent of Legend equity. This arrangement recognizes and confirms both the property rights of the state agents and the business operators. To go public is to further realize the rights of transfer of the business operators that were absent from most *minying* enterprises.

⁴⁷Francis, "Bargained Property Rights," 240-41.



Private ownership matters. Managerial autonomy, budget constraints, and ownership nature are interrelated. One should note that the hardness of budget constraints and the degree of managerial autonomy are in proportion to the degree of entrepreneur risk-bearing. The degree of risk-taking of entrepreneurs is also in proportion to their rights to residual income. Only a private entrepreneur is a better-qualified risk-bearer or risk-taker. Hence, the success of the *minying* high-tech firms is closely related to their "private" nature, although this has been hidden and has evolved from an imperfect format. Their accomplishments mark a special path in the evolution of private ownership within the particular context of post-socialist China.

Implications

Despite a growing trend in the direction of shareholding transformation, one should not expect that the *minying* high-tech spin-offs would simply transform into purely private enterprises in the near future. For one thing, universities and research institutions increasingly need to fend for themselves financially due to cuts in government funding and thus cannot afford to lose a lucrative business. For another, the government is encouraging the establishment of state-private mixed ownership as a part of the "modern corporate system"—the goal of enterprise reform stipulated in 1993. In fact, small private entrepreneurs in China today try to lure state investment and form joint ventures with state corporations or agents so that their enterprises can expand their scale rapidly and share in some of the resources held by the state sector.⁴⁸

Some Western scholars consider this sort of hybrid ownership as an anomaly and antithetical to the Western liberal economic system.⁴⁹ However, they ignore the fact that this sort of hybrid ownership also exists in developed non-socialist countries—in terms of listed public utilities, for

⁴⁸Author's interviews.

⁴⁹See David L. Wank, *Commodifying Communism: Business, Trust, and Politics in a Chinese City* (Cambridge: Cambridge University Press, 1999) and Corinna-Barbara Francis, "Quasi-Public, Quasi-Private Trend in Emerging Market: The Case of China," *Comparative Politics* 33, no. 3 (April 2001): 275-94.

example. Spin-offs from universities are also common outside China as a way to commercialize new technologies and to finance universities. In fact, as noted above, the development of the spin-offs in China mirrored the process in the United States. Some scholars also criticize hybrid ownership as blurring the state-private distinction, but state-private ownership does not necessarily induce a blurred property rights structure, as long as the distribution of company shares between the public and private shareholders is clearly stipulated in accordance with the company law. The solution of a joint-stock company is to clarify the property rights of these enterprises.

The contribution of "public ownership" to the impressive economic growth of post-Mao China seems an anomaly in the recent global trend of economic development. The considerable contribution made by so-called public ownership, however, in fact derived largely from the non-state sector that was established in the reform era,⁵⁰ of which one important type—the *minying* enterprise—has been observed in these pages.

⁵⁰Fan Gang. "Special Approaches to Special Problems: A Theoretical Analysis of Some Characteristics in China's Reforms," *Zhongguo yanjiu* (China Studies) 1 (Autumn 1995): 37.

