

01/03/08

Global Internet Economy – Japan Chapter

Between Bit Valley and Silicon Valley: Hybrid Forms of Business Governance in the Japanese Internet Economy¹

7 March 2001 Draft

To appear in Bruce Kogut (ed) *Global Internet Economy*

COMMENTS WELCOME – DO NOT QUOTE

Mari Sako
Said Business School
University of Oxford
59 George Street
Oxford OX1 2BE, UK
Mari.sako@sbs.ox.ac.uk

After nearly a decade of sluggish growth, Japan appears to be experiencing the beginning of a take-off in its Internet economy. Business enterprises enthusiastically endorsed the Internet, as the usage rate went up from 12% in 1995 to 88.6% in 1999 (MPT 2000, p.9). In early 2000, around 20% of Japan's population, or 27 million users, were connected to the Internet, up from 6.4% in 1997 and 11% in 1998. This take-up rate is not high compared to the US or Scandinavian countries with 40+% penetration rates, but NTT DoCoMo's highly successful i-mode is expected to further accelerate the pace of wireless access to the Internet. In fact, in March 2000, the number of mobile telephones (56.85 million) overtook the number of fixed line users (55.45 million) (JIPDEC 2000 p.138). Japan is also likely to be the first country in the world with third generation (3G) mobile services that DoCoMo plans to launch in 2001. To meet this surge in demand for mobile Internet, i-mode boasts 5761 websites (February 2000) (MPT 2000 p.17).

What explains such growth in Internet-related business activities in Japan? And what is the impact of the Internet on the Japanese business system? These are the questions that this paper addresses. The Internet phenomenon gives rise to two extreme predictions about the future of the Japanese industrial economy, illustrated nicely by the positions taken by two recent articles in *Foreign Affairs* (Mulgan 2000, Helweg 2000). The first, the embedded capitalism view, predicts that Japan will continue to be a laggard in launching the Internet economy because of the relative absence of venture capital and entrepreneurial labour that discourages Internet start-ups. Japan excels in assembly-based just-in-time manufacturing that requires teamwork by lifetime employed workers, 'patient capital' enabling long-term investment, and stable supplier relations. The stakeholder model of corporate governance conduces large Japanese firms to engage in incremental innovation. Up to the 1980s, these features accounted for much of the sources of Japanese competitive advantage (e.g. Aoki and Dore 1994, Dore 2000). But the world has moved on fast, and Japan is left behind with an inhospitable institutional climate for entrepreneurship, radical innovation, and high risk-taking associated with the US-style New Economy. By emphasising the embeddedness of firms in national institutions, this analytical perspective focuses on the resilient nature of national business systems, with path dependency, complementarity of different elements of the system, and high switching costs (Kogut 1993).

¹ The author acknowledges helpful research assistance by Shahin Mansuri and Emma Rosvall.

An alternative view, at the other end of the spectrum, predicts that the Internet, together with the globalisation of financial markets, is a powerful trigger to dislodge the Japanese economy out of recession and its traditional institutional rut. According to this perspective, the Internet, regardless of geographic location, facilitates efficiency improvements in the form of reduced transaction costs, increased transparency in transactional content and better customer satisfaction. The market forces will ensure that the Japanese business system will be transformed in one best way towards more flexible market exchanges, leading to the breakdown of *keiretsu* trading and of long-term commitments in finance and labour. This perspective is predicated on technological determinism and a belief in convergence towards a single form of global capitalism.

Between the two extreme views of universal convergence and complete institutional resistance to change is a series of more nuanced middle positions, that may be categorised as the adaptive hybridisation perspective. The perspective starts from observing an historical fact that despite institutional complementarities and distinct national trajectories, hybrids – combining elements from more than one model – have occurred not least in firms' attempts to transfer practices across national borders (Boyer et al 1997, Zeitlin and Herrigel 2000). A notion that the process of imitation necessarily involves innovation is not new (Westney 1987). But recently, greater attention is being paid to the extent to which actors, be they firms or regulators, can work towards triggering a dynamic change in the national business system in which they operate. Firms are strategic actors that do not passively embed in national institutions, but negotiate between the existing institutions and new opportunities by devising a new corporate strategy. In this sense, firms treat national institutions as a tool kit to influence the 'governance costs' that they face. Therefore, apart from a national or an industry level analysis, a micro-level analysis of corporate actions must be studied in order to explain dynamic changes (Hall and Soskice forthcoming).

So far, however, this sort of analysis, linking micro-level actions to national institutions, is easier said than done. This is in part due to disciplinary segmentation in academic study. Political scientists and industrial relations scholars may see more embedded resistance to change than others simply because their studies of corporatist and other forms of governance tend to stop at either national or sectoral levels. By contrast, business historians with detailed knowledge of the trajectory of a particular multinational corporation may observe more instances of innovative adaptation at the firm level, but tend to stop short of exploring the impact of corporate action on national institutions.

Moreover, the concept of hybridisation is underdeveloped. Hybrid forms of governance are everywhere, but the trick is in being able to distinguish between viable and unstable hybrids at the corporate level. In particular, it might be possible for a firm to combine equity-based financial markets with long-term employment relations for a while, but this combination is not likely to perform as well as a package of equity-based finance and flexible labour. The resolution of this sub-optimal combination might be a new form of governance, but whether it works or not appears to be a matter of ex-post discovery through trial and error rather than strategic choice by the firm. Here lies the problem with attributing too much intentionality in the process of arriving at hybrid solutions. If it is known that the use of the Internet can realise its full benefits only if accompanied by more fluid product, financial and labour

markets, a firm might not go for a hybrid but attempt to create a local pocket of new practices. That is to say, a firm or a set of firms might simultaneously exploit equity finance and flexible entrepreneurial labour in a sea of bank finance and life-long employment in Japan. The ability of firms to mobilise resources in this way would appear to be high either if they are confined to a certain sector or geographical location, or if a firm is large enough and well connected to international financial and labour markets.

This paper is structured as follows. The first section outlines when and how the Internet economy began to take off in Japan. The second section focuses more closely on Internet start-ups, in order to investigate the extent of hybridisation of Japanese and Silicon Valley models of business. The third section turns to the analysis of the interaction between the 'new economy' and the 'old economy' with specific reference to Softbank Group, arguably the most significant corporate player in transforming the Japanese business system.

1. The Japanese Take-off: When, How and Why?

The origin of the Internet in Japan may be traced back to 1984 when JUNET (Japan University/Unix NETwork) was launched to facilitate electronic links for research collaboration among three Tokyo-based universities, University of Tokyo, Keio University, and Tokyo University of Industry (Tokyo Kogyo Daigaku). From 1988, private sector enterprises participated in a government-led WIDE project (Widely Integrated Distributed Environment) to improve network technologies, but their use for commercial purposes was prohibited. It was only in 1993 that the Japanese government lifted this restriction, following the US decision in 1990 to open internet subscription to private users beyond government agencies and research organisations. Thus, the public and research roots of the Internet are common in Japan and the US.

Since then, the use of the Internet by households and businesses has grown considerably in the latter half of the 1990s (see Exhibit 1). At the end of 1999, there were some 27 million Internet users aged 15-69 in Japan, of whom one in five were connected using mobile telecommunications. But the rate of diffusion among large businesses has been much more rapid than that among households.

The purpose of this section is to account for when and how the Internet took off in the Japanese economy. The discussion begins with an examination of the patterns of consumer demand, followed by an investigation of the 'Internet industry' and the regulatory changes facing the infrastructural telecommunication providers. There will be a critical evaluation of the timing of indigenous activities and of foreign entry (esp. of US Internet companies) in stimulating the demand for, and supply of, Internet-related activities.

Exhibit 1: Trends in Internet Penetration in Japan

(About here)

Consumer Demand: Mobile Triggers a Take-off

In Japan, the relatively late timing in the spread of the Internet among individual consumers is commonly attributed to the low diffusion of personal computers (PCs) at home. As Exhibit 2 shows, only 16.3% of households owned a PC in 1995, and

the ownership rate, at 37.7% in 1999, is not much higher than that of facsimile machines, a popular equipment since the time when complex Japanese scripts were more easily hand-written and faxed than typed using word processors. In this climate, a diverse range of alternative on-line networked terminals emerged in the late 1990s, especially in the form of game gadgets (e.g. SEGA's Dreamcast, NINTENDO64, and Sony's PlayStation2 that can be linked to CATV).

But by far the most significant platform for triggering Internet connection in Japan is the mobile phone. As shown in Exhibit 2, the ownership rate of cellular phones has shot up to 64.2% of households in 1999, having overtaken the rate for PCs in 1996. The number of mobile telephones has increased rapidly to 60.88 million by August 2000, larger than the number of fixed line telephone subscribers. It therefore took a mere six years (from April 1994 that marked the switch from rental to the introduction of COAM (customer owned and maintained) system for mobile phones in Japan) to catch up with a 110 year record of the fixed line telephone service (Yoshimura 2000. P.19). What account for this rapid diffusion of mobile telephones in Japan?

Exhibit 2: Ownership of Info-Communications Equipment in Japan
(About here)

Mobile telephones at an affordable price in Japan started with the introduction of PHS (Personal Handy phone System) in 1995. From the latter half of 1997, non-voice services began to be offered by mobile communications carriers, first short messaging service, then electronic mail exchanges using the Internet. Once this habit of reading short messages on a small compact screen on the mobile phone was inculcated, NTT DoCoMo launched its i-mode in February 1999, with 'killer contents' in on-line banking and Internet shopping. I-mode refers to Internet services using mobile telephones. The popularity of this 'browser phone' is manifested in the explosion in its use, overshooting 1 million users in the initial six months after its launch, and reaching 5 million users by March 2000. When i-mode was started, it was considered a stop gap before PC-based Internet would really take off. It seems that this was not a correct assumption, as i-mode is more likely to accelerate the use of mobile phones for Internet access than to diffuse the use of PCs (Yoshimura 2000 p.71). Moreover, an early setback in choosing PDC as a standard incompatible with the US or European 2G mobile standard seems to explain NTT's wish to push for 3G mobile services quickly.

The i-mode was intended to be a lifestyle gadget; nowhere is there a notion that it be used as a work or business tool. On fashionable street corners in Tokyo, young 'yamanba' women, sun-tanned, with bleached blonde hair, primary colour clothes and high platform shoes, must have their thumb busily tapping a translucent i-mode phone. For them, i-mode is all about expressing individuality, as manifested by the downloading of their favourite comic characters for a screen saver, or of a tune that would play when messages are received. This is just the tip of the iceberg of all Japanese Internet users, who tend to surf the Internet more to obtain information about hobby or travel than business data (JIPDEC 2000 p.505). The Internet culture is led by the youth all over the world, but Japanese Internet consumers in particular are distinctively young – in their teens -- and female (Yoshimura 2000) (76% of Internet users are in their teens, 20s or 30s (MPT 2000, p.13).) A 'mobile culture' is fashionable, out there on the streets, and affecting language as well as lifestyle.

Internet Industry

This sub-section follows the definition by the Ministry of Posts and Telecommunications (MPT) to capture all businesses that are involved in commercial transactions using the computer network based on TCP/IP. Two broad areas of business are identified: (a) Internet commerce (involving both B2B and B2C), and (b) Internet-related businesses involving markets for Internet connection, and the production of hardware and software used for Internet connection. According to the MPT's estimate, the total value of the Internet industry in 1999 was 21,175.6 billion yen (\$188.4 billion) (MPT 2000, p.18). This sum consists of 350 billion yen (\$3.1 billion) for B2C commerce, 14,429.8 billion yen (\$128.4 billion) for B2B commerce, and 6,395.8 billion yen (\$56.9 billion) for Internet-related businesses (an exchange rate of \$=112.4 yen was used). Between 1998 and 1999, B2C commerce grew two-fold, whilst B2B commerce grew six-fold. As in other countries, the size and growth of B2B are much higher than that for B2C.

One indication of the rise of B2C commerce is the number of retail shops (including 'virtual shops') that operate transactions on Internet sites. According to one estimate, only 216 such shops existed in 1995, but the number grew to 2264 in 1996, and grew a further ten-fold to 17279 by May 2000 (JIPDEC 2000 p.111) (www.ccci.or.jp). This acceleration of on-line shopping has some universal drivers, not least the example of the success of US companies entering the Japanese market in Internet auctions (e.g. eBay, Onsale), car sales (e.g. Autobytel, CarPoint) and Internet banking (e.g. E*Trade, DLJdirect). (TIMING OF THESE ENTRIES?). Nevertheless, local successes also exist, for example Rakuten Ichiba.

At the same time, the retailing revolution is taking a distinctively Japanese turn, based on pre-existing patterns of trade and consumption. In particular, mobile phones rather than personal computers have pulled the demand for Internet shopping. Moreover, convenience stores, such as Seven Eleven and Lawson, with a national network of 50,000 outlets in total (Andersen 2000, p.58), are rapidly emerging as part of the e-commerce infrastructure. Multimedia terminals placed in these 7 days a week 24 hour a day convenience stores are used to settle payments more securely for orders placed on-line, while the stores are also pick-up points for goods ordered on-line. With refrigerated delivery services, on-line shopping of perishable local speciality food and drink is also on the rise.

Another Japanese institution that may influence the way the Internet is used by businesses is the so-called *keiretsu* form of distribution and supply. In distribution, the Dell Direct model of BTO (build-to-order) is beginning to be adopted by some Japanese PC manufacturers, but there is resistance from the national network of exclusive retail shops for each electronics manufacturer.

The way in which B2B e-commerce, especially for component procurement, is implemented is also likely to be affected by the long-term committed supplier relationships that have characterised Japanese automobile and electronics industries. At the moment, many Japanese manufacturing companies place a higher priority on security within a closed network than the advantages of open market exchanges (MPT 1999 p.20). There is often an unquestioned presumption that B2B e-commerce lowers transaction costs not only by standardising hardware/software across companies but also by increasing the transparency of transactional contents (e.g. cost breakdown). But in fact, the sort of improved transparency in transactions sought via an on-line exchange already exists between a customer and a supplier

within a traditional Japanese obligational trading relationship (Sako 1992). It is precisely because of this that further advantages in the use of Internet-mediated transactions can be sought only if trading cuts across *keiretsu* boundaries. At the same time, it is possible that the existing emphasis on long-term committed relationships would bias future use of the Internet by Japanese manufacturers away from auctions, towards enhancing the sharing of confidential information for product development among suppliers and between the assembler and suppliers.

Infrastructural Investment and Regulatory Changes

In 1985, Japan became the third country in the world to liberalise its telecommunications sector, after the US and UK. Before 1985, the telecommunications industry in Japan was highly regulated, consisting of Nippon Telegraph and Telephone Public Corporation which had a monopoly over domestic operations and Kokusai Denshin Denwa Co. Ltd. (KDD) that had a monopoly for international operations. In April 1985 all legally approved monopolies in telecommunications were abolished in Japan, and the Nippon Telegraph and Telephone Public Corporation was gradually privatised as NTT (KDD's legal status has been a private company from the beginning) (Nakamura 1997). The main objectives of liberalisation and privatisation were to introduce competition into the market with a view to reducing customer charges and to improve the business performance of NTT and KDD.

With the regulatory reform, the MPT introduced a distinction between Type I carriers that offer telecommunications services over their own networks, and Type II carriers that provide services over networks and facilities leased from Type I carriers. As Exhibit 3 shows, there has been a rapid increase in new entrants for both Types in the fifteen years since the regulatory change in 1985. By September 2000, there were 301 Type I carriers and 8273 Type II carriers. Of the latter, 3320 (Feb 1999 figure, get Sept 2000 figure if possible) were Internet Service Providers, according to the MPT's ISP Survey; 27% of ISPs had Internet Service Provision as their main business, whilst the rest had something other than ISP as their core business (MPT 1999, p.24).

Exhibit 3: Number of Telecommunications Carriers in Japan (About here)

Competition began initially in separate segments of the market, namely domestic local, domestic long distance, domestic mobile, and international. The MPT, through its administrative guidance, encouraged new common carriers (NCCs) to enter one of the market segments in the belief that segmentation would safeguard NCCs against undue competition from NTT or KDD. But the segmentation of markets eventually became infeasible with subsequent alliances and mergers. Main investors in the new carriers are regional electric power companies, trading companies, car manufacturers (esp. Toyota), and foreign telecommunication companies. In domestic long-distance services, NTT initially faced competition with the entry of DDI in 1988, and subsequently Japan Telecom (established by the Japanese National Railways) and Teleway Japan (established by Toyota and the Japanese Highway Public Corporation). Similarly, in international Type I business, KDD was challenged by the entry of ITJ and IDC. But in December 1998, KDD merged with Teleway Japan. Then DDI announced its merger with KDD and IDO to form KDDI in October 1999. Also, 1999 saw the UK's Cable & Wireless triumph over NTT in its acquisition

of IDC. Thus in 2001, the major players are NTT, KDDI, Japan Telecom, and C&W IDC.

In the mobile phone market, NTT DoCoMo competed with J-Phone, DDI Cellular, IDO (owned by Toyota Motor, Tokyo Electric Power Co. and Chubu Electric Power Co.), and Tu-Ka (majority owned by Nissan). Of these, DDI and IDO were merged as KDDI, as mentioned above, and Tu-Ka was absorbed by J-Phone in 1999. By August 2000, of the 55 million cellular subscribers, 32.1m were with NTT DoCoMo, 13.9m with KDDI, and 8.9% with J-Phone. J-Phone, originally created by Japan Telecom, is now 26% owned by Vodafone and 20% by BT, two rival companies that are likely to treat Japan as a battleground and a source of learning in competition for 3G mobile markets.

Reflecting the Ministry of Posts and Telecommunication (MPT)'s focus on market segmentation, NTT divestiture became a policy focus. First, in 1987, MPT ordered NTT to separate its data communications arm into a subsidiary as NTT Data Corporation. In 1992, it also requested the separation of the mobile communications portion, and NTT DoCoMo was established. NTT DoCoMo has a holding company structure, with the holding company offering services in metropolitan areas directly while controlling regional mobile companies. But it was not until July 1999 that, with the passing of the revised NTT Corporation Law in June 1997, a new structure was finally imposed on the core part of NTT. NTT is now reorganised into a company that deals with the trunk network (NTT Communications Corp.) and two regional companies that deal with local telephone services (NTT East Corp. and NTT West Corp.), under the ownership of a pure holding company.

Perhaps more significant than the structural separation of NTT in introducing competition to the telecommunications industry is NTT's announcement of Open Computer Network (OCN) service dedicated to Internet connection in 1997. Before this service, NTT could easily delay negotiations in the installation of new subscriber lines for new common carriers. After OCN however, carrier interconnections became available at various levels, so that local new common carriers can choose either to install their own lines or to interconnect with NTT's network at the local level. Similarly, long-distance new common carriers can choose where to interconnect with NTT's network, depending on the population density of the area to be covered. Thus, the dichotomy between long distance and local, between facility-based Type I and leased-circuit Type II carriers, is becoming obsolete (Yoyama et al. 2000, p.143).

Taken as a whole, capital investment in the telecommunications and broadcasting industries took off after 1994, while investment in all other industries continued to be sluggish. By 1996, investment in telecoms and broadcasting, amounting to 4,900 billion yen, was nearly double the level in 1989, whilst the investment in all industries remained at a level no higher than that in 1989. However, since 1996, the telecoms and broadcasting sector also suffered a decline in its capital expenditure, down to 4,000 billion yen by 1999 (See Exhibit 4). Thus, according to this indicator, it looks as though the ICT-led economic recovery is not assured.

Exhibit 4: Capital Investment by Telecoms Industry
(about here)

Is There a New Economy in Japan?

The New Economy is said to exist when ICT brings about growth without inflation (US Department of Commerce 199?). Some evidence of this New Economy phenomenon exists in Japan also. In particular, the real gross domestic output of the info-communications industry in 1998 was 112.9 trillion yen, accounting for 12.5% of real GDP, up from 7.7% in 1985 and 9.3% in 1990 (MPT 2000, p.38). Not surprisingly, the fastest growing segment of this sector was software, achieving an annual real output growth of 15.9% during 1980 and 1997 (MPT 1999 p.89). Employment in the sector also rose, at an annual rate of 2.1% during 1980-1998, as compared to 1.6% for all industries, so that by 1998, some 3.8 million people, or 6.7% of all industrial workforce, were employed in this sector. Labour productivity (as measured by real gross domestic output divided by total employed) in the info-communications industry amounted to 29.48 million yen in 1998, nearly 2.5 times the level in 1980, or an annual increase of 5.1% during 1980-1998. Lastly, about 10.4 trillion yen was invested in info-communications equipment by all industries in 1998, accounting for 2.2% of GDP, and 1.7 times the level in 1990. Thus, despite the prolonged recession in the 1990s, the impact of ICT industries on economic growth, employment and business investment has been positive.

What is different from the US is not so much the timing of the take-off, in the mid-1990s, as the slower pace at which ICT investment is increasing (see Exhibit 5). Moreover, the figures indicate that the impetus may be running out of steam in Japan already by the late 1990s. Although the relation of ICT industries to the health of the overall economy is likely to continue to be debated, one possible interpretation of the Japanese phenomenon is that ICT investment in itself is necessary but not sufficient to bring about a New Economy. In particular, 'the benefits of ICT investment is realised only if accompanied by dynamic restructuring, especially towards profit-oriented management, the adoption of cash-flow accounting, flexible labour markets, the outsourcing of indirect functions, the destruction of pre-existing business norms, and deregulation.' (JIPDEC 2000 p.35).

Exhibit 5: IT Investment by Industry
(About here)

SUMMARY

To summarise the state of the Internet economy in Japan, it is evident from the discussion above that telecommunications investment started to accelerate in 1995, preceding the consumer demand take-off in 1999 with the launch of the i-mode. The Internet economy was relatively slow to take off due to (a) lack of diffusion of PCs in Japanese households, and (b) a decline in private investment in information technology after the bursting of the 1980s bubble. However, the take-off in the late 1990s has been facilitated by cheap wireless access to the Internet. One might even argue that Japan as a 'late developer' has benefited from skipping the PC stage of Internet access, with the prospect of going straight into 3G mobile services. Nevertheless, the sustainability of the new economy is by no means assured as the pace of capital investment by the telecoms sector started to dip, and investment in information technology by the private sector started to level off, in the late 1990s.

2. Is the Silicon Valley Model Relevant in Japan?

Journalistic accounts of the Internet economy in Japan zoom right into Bit Valley – a literal rendition of Shibuya (Bitter Valley) – in Tokyo. Networking among entrepreneurs and venture capitalists, either through all night parties or through more sober meetings organised by the Bit Valley Association (established in spring 1999), and of incubators founded by individuals with strong links to Silicon Valley, give a reassuring picture of the buzz of the New Economy. According to a recent survey conducted by the Fujitsu Research Institute (FRI 2000), approximately 1300 new media companies are located within Tokyo's 23 wards. Of those, one in four companies are clustered in Minato and Shibuya wards, the geographical area identified as Bit Valley. Companies in the survey are generally small (39% employed 30 workers or less) and relatively new (49% were founded after 1994). But how does this Bit Valley phenomenon compare with the Silicon Valley model? The Silicon Valley model is here understood to be a form of corporate governance that results in radical innovation and geographical agglomeration. Benchmarking against Silicon Valley is useful in so far as we can gauge the extent to which the governance of Japanese start-ups approaches, or diverges from, the US model.

Japanese industry, in the last 50 years, has been funded mainly by committed creditors through the main bank system and committed shareholders often in a cross-shareholding arrangement (Aoki and Patrick 1994). While stock market capitalisation, at 63% of GDP in 1995, is not as low as in Germany (27%), around a quarter has been accounted for by such 'patient' industrial capital. The relative absence of equity capital to finance small entrepreneurial companies led the Japanese government to devise various measures to encourage the growth of venture capital and initial public offerings. As early as in 1983, JASDAQ was created as an OTC (over the counter) market for small and medium sized venture companies. By 1999, with a total 868 listings, JASDAQ's market capitalisation grew to be twice the size of the Second Section of Tokyo Stock Exchange. Investors in this market tend to be individuals rather than institutional; in fact over 70% of traded volume is accounted for by individuals ([http:// www.jasdaq.co.jp](http://www.jasdaq.co.jp)).

More recently, in December 1999, the Tokyo Stock Exchange launched its Market for High Growth and Emerging Stocks (MOTHERS) to provide easier funding for emerging companies with high growth potential. This was in anticipation of the opening in June 2000 of Nasdaq Japan at the Osaka Stock Exchange, a joint venture between Softbank Corp. and the National Association of Securities Dealers (NASD). Thus, there is horizontal competition among the three marketplaces, each with slightly different listing criteria. For instance, while Mothers Market's listing criteria are more lenient than those of the First and Second Sections of the Tokyo Stock Exchange, the former still requires delisting of stocks whose liabilities have exceeded assets for three consecutive years. This latter requirement is absent in Nasdaq Japan which is therefore considered a market favoured by technology-intensive start-ups. Nasdaq Japan, however, requires disclosure of information that is stricter than in the other markets.

In the face of such 'financial reform', there exist two alternative hypotheses about the future of corporate governance for start-ups in Japan. One possibility is that the 'open, fair and global' marketplaces in Japan will be sufficient to bring about a major transformation in corporate finance, and that they would effectively remove the only

barrier to the development of high tech high growth industries in Japan. In this view, the shortage of early stage venture capital would be solved by offering an easy 'exit' option for harvesting investments through IPOs. An alternative possibility derives from noting that the reform of the financial system in itself is not sufficient to bring about fundamental changes to corporate governance. Japanese start-ups would, in this view, be still constrained by existing institutional complexes including the types of venture capital as well as labour and career incentives. This paper gives some evidence in favour of the second hypothesis by examining the characteristics of the IPO companies listed on the three markets.

Characteristics of IPOs in High Growth Stock Markets

Following Vitols (2000), the Silicon Valley model of company governance is operationalised along the following dimensions: (a) a young company in high growth, high risk markets; (b) the significant role of private venture capital as a major shareholder, often represented on the company board; (c) stock options as a key to motivating and rewarding employees; and (d) pronounced regional agglomeration. These dimensions will be discussed for the population of IPO companies at the end of calendar year 2000, namely 30 firms in Nasdaq Japan, 19 in TSE Mothers Market, and 38 in JASDAQ. (JASDAQ as a whole is a much bigger market, but we counted only those IPOs that took place during the calendar year 2000 to provide a fair comparison with the other two marketplaces). In many respects, Mothers Market and JASDAQ Japan are both very young markets, too young to make any definitive statements about their likely achievements in the future. The results drawn below are therefore tentative.

The basic parameters of the IPO firms, including the market capitalisation value and the average number of employees, are shown in Exhibit 6. What is notable is that not many IPOs are start-ups as such; the average time period elapsed between the establishment of the firm and the IPO date was 8 years in the Mothers Market, 15 years in Nasdaq Japan, and 27 years in JASDAQ.

Exhibit 6: Characteristics of IPO Companies in Three Markets in Japan (About here)

The sectoral distribution of IPO companies in Exhibit 7 indicates a different pattern in each market. In both the Mothers and Nasdaq Japan markets, the Internet and IT sectors predominate, although Nasdaq Japan has attracted IPOs in other sectors also (but not in biotechnology). By contrast, the predominance of the retail sector and a complete absence of IPOs in the Internet sector are notable in JASDAQ. Thus, although the total number ($30+19+38 = 87$) is quite small, there appears to be a degree of self selection in different markets. There is also evidence of regional agglomeration among the IPO firms, although Nasdaq Japan and Mothers Market have attracted a higher proportion of firms which are headquartered in Tokyo than JASDAQ; this may be highly correlated with the sectoral distribution of firms. Tokyo is the HQ location for 22 out of 30 firms in Nasdaq Japan, 14 out of 19 for Mothers Market, but only 17 out of 38 in JASDAQ.

Exhibit 7: Sectoral Distribution of IPOs in Three Markets in Japan (About here)

OWNERSHIP STRUCTURE & STOCK OPTIONS

To be completed later when information is received

Characteristics of Venture Capital in Japan

Another sign of why the Japanese Internet economy would not replicate the Silicon Valley model, despite the greater availability of IPOs as an exit strategy, lies in a different mix of venture capital funds available in Japan. There are 4 types of venture capital and private equity investment firms in Japan today: (a) old-style VCs, (b) enterprise-sponsor VCs, (c) large, mostly foreign, private equity investment firms, and (d) Western-style Japanese and foreign venture capital firms². Each type has a varying degree of expertise in providing financial and incubating services.

There are some 200 venture capital funds in Japan, all looking for good places to invest. Most of them are under the umbrella of big Japanese banks and securities firms that do not take an interest in startups, and many of these consider high-tech investments too risky. But a growing number of venture capital and private equity investment firms are turning to high-tech, especially IT, as the best place to invest. First, there are the "old-style VCs," like Jafco, the largest venture capital firm in Japan. Firms like Jafco take small positions in an investee and then they (or the investees) invite other Japanese VC firms to take similar positions "convoy style." The old-style VCs don't provide much in the way of incubation services; instead, they provide "legitimacy" to attract follow-on investors. Second, there are "enterprise-sponsor" VCs like Softbank and Hikari Tsushin, which have their own business operations but invest directly in other companies, seeking to create value through the stock appreciation of their investments. These companies have tended to focus on high-tech investments, often related to their own enterprise specialty. Softbank has actually gone further, creating a huge venture fund for startup investments. Third, there are large, mostly foreign, private equity investment firms like Prudential Asset Management Asia (PAMA) and Warburg Pincus. These firms do not provide management assistance, but they provide some supervision and financial advice, more than do old-style Japanese VCs like Jafco. Some of the larger of these firms, once interested in leveraged buyout and merger opportunities, are turning their attention to startups. Fourth, there are "Western-style" Japanese and foreign venture capital firms, large and small, that provide management oversight. These companies are now active in Japan, but the question is whether their Japanese investees will want their "hands-on" incubating services or merely their capital and industry connections.

Although they have been around for nearly 40 years, incubators are the rage in America today. Together with venture capitalists, they sit at the heart of the dot-com phenomenon. To date, however, Japan has few incubators. Some provide primarily office space and equipment, but no start-up capital and little mentoring. Others are more like the American model, run by young entrepreneurs and backed by American venture funds looking to mirror-image their success in the United States. They believe that Japan's New Economy will develop the same way as America's. Incubators may come to play a major role in creating and developing new businesses in Japan, but the patterns are likely to be different. In particular, Japan's entrepreneurs will have an interest in creating new companies across the full spectrum of the economy -- not just the Internet and information technology, but also retailing, financial services, and health care. (Investment in the US in communications, software, and data processing accounts for more than 50% of total

² "Bit valley fever" - Upside; Foster City; Jun 2000 - By David James

venture capital investment, but the proportion of investment in communications, software and information processing in Japan is less than 10% (MPT 2000, p.40)).

But the biggest difference with the US model is that in the future the most successful Japanese incubators will not be affiliated with free-wheeling venture capital funds. Instead, they are likely to be backed by the most forward-looking members of Japan's old mainstream economy: trading companies and banks, manufacturers and consumer companies. In Japan, potential business partners are far less willing to give a chance to a new company or an unknown entrepreneur. So in a country of relational contracting, the support of an established Japanese firm will lower risk, speed up the launch time, and increase the success rate. Establishing an incubator in partnership with a Japanese trading corporation or bank, for example, will provide access to the personnel, knowledge, resources, and business networks that cross dozens of industries and hundreds of companies throughout Japan. Softbank, as discussed in the following section, has exploited this resource from the old economy to its maximum advantage.

3. Softbank: Transformation of, or Reversion to, the Old Economy?

The nature of the Internet economy in Japan is incomprehensible without identifying the strategy and structure of Softbank Group. With businesses in e-commerce, e-finance, media and marketing, broadcasting, and Internet technology, Softbank Group has an all pervasive presence in the Internet economy in Japan and increasingly in the US, Asia (South Korea and China), and Europe. But is it a venture capital fund, or an Internet company, or both? The difficulty in characterising Softbank's business begets the question of what its sources of competitive advantage are. In analysing Softbank's 'business model' – to use a hacked term – this section treats Softbank as a means of gauging the extent to which firm-level actions are overturning the existing business system in Japan. In other words, Softbank in action is an ideal case to investigate the process of hybridisation, as it takes on the task of fundamentally transforming Japanese business for the digital age whilst working within the confines of existing financial and labour market institutions.

Softbank Corp. was founded in 1981 as a distributor of pre-packaged software. The founder, Masayoshi Son, grew up a second-generation Korean Japanese in a country that has traditionally had little tolerance for immigrants, least of all Koreans. Son began taking initiative early in life and at the age of sixteen moved from Japan to California. He went to the University of California, Berkeley and graduated with a BA in economics. While at the University, Son earned his first million by importing second-hand arcade games from Japan for the US market. His entrepreneurial drive led him further to commission a patent for a multilingual pocket translator that he sold to Sharp Corporation.

Back in Japan, Son's business diversification took on an unprecedented momentum from the late 1980s into the 1990s, the 'lost decade' of post-bubble recession in Japan. In 1988, the company began multinational activities by establishing Softbank America, which co-ordinated Softbank's business in North America. Then on, Softbank expanded into international markets through a series of joint ventures, partnerships, and acquisitions. A prime example is the world-renowned portal site Yahoo!. Softbank provided early stage financing of Yahoo!,

thus emerging as a primary shareholder with a 37% equity stake in 1996. Thereafter, an earlier acquisition of Ziff Davis, the US publishing business, financed Softbank's replication of the Yahoo! business model to Japan, South Korea, Germany, France and the UK in partnership with Yahoo! Inc. of the US. Other subsequent examples include CarPoint K.K. (a joint venture with Microsoft), E*TRADE Japan, Morningstar Japan, GeoCities Japan, broadcast.com Japan, and ONSALE JAPAN, all of which are joint ventures with the founding companies in the United States. Moreover, Softbank has invested in around 400 start-ups of which 100 or so are located in Japan.

What strategy underlines this rapid expansion by Softbank? It appears that whilst assisting Yahoo! in its globalisation process, Softbank decided to adopt Yahoo!'s business model. It consists of (a) financing the operations out of advertisements to provide free service to users; (b) a good classification system for the search engine; and (c) a strong brand image. With this model, the opportunities for sales growth initially appear endless, because the overhead can be kept low and constant while geographical coverage can be spread by giving autonomy to local companies to choose their own contents but using the same standardised classification system.

Softbank has labelled its own strategy 'time machine management', a strategy to 'foster the global incubation of superior business models found through its venture capital operations in the United States.' (Softbank Annual Report 2000 p.4). Thus, Softbank's entrepreneurial drive, and its source of profit, has focused around the importation and adaptation of US business models into Japan and elsewhere. But there are at least two respects in which Softbank's own business model differs from that of US venture capitalists. First, profit is generated by the stock appreciation of acquired and joint venture businesses, that in turn finance further acquisitions and joint ventures. But instead of looking for 'exit options' in the form of IPOs, Softbank has engaged in an expansionary 'empire building' by retaining many companies in the Group's portfolio. Second, Softbank is not renowned for close incubation, although incubation programmes (another joint venture, this time with IFC) have been in place since the late 1990s. This, in part, arises from Softbank's origins in distribution and services rather than hardware or technology. Softbank certainly prides itself in promoting the idea that profit opportunities exist without new technology. But the focus on information services also led to some recent ventures whose sole purpose was to generate cash flow for further acquisitions; both Kingston Technology Company and Ziff-Davis Inc., acquired then disposed of by April 2000, may fall into this category.

The empire building has necessitated putting in place an elaborate organisation structure. In 1996, within Japan, there was only Softbank Inc, the software distribution business, and Yahoo! Japan. By 2000, there were more than 100 operating companies within the Softbank Group. As shown in Exhibit 8, Softbank adopted in October 1999 a three-tier organisation structure within a holding company structure, after the 1998 revision to the Anti-Monopoly Law re-legalised pure holding companies in Japan. At the apex is a slim pure holding company employing only 60 workers. It focuses on establishing a strategy for the Group as a whole, developing new business areas, and utilising the tiered structure to manage and align the direction of each Group company. The middle-tier consists of seven key consolidated divisions, namely e-Finance, e-Commerce, Media & Marketing, Technology Services, Internet Infrastructure, Broadmedia, and Internet Culture, apart from global operations. At first, the middle-tier was intended to be no more than a

divisionalisation of operations, each division establishing strategy for its respective business domains, assisting operating companies within the division, and facilitating intra-divisional coordination to exploit synergies. Nevertheless, by May 2000, Softbank decided to develop five of the seven divisions into 'operational holding companies' publicly quoted in their own right: they are namely Softbank Finance, Softbank E-Commerce, Softbank Media & Marketing, Softbank Networks, and Softbank Broadmedia. This structure of a pure holding company overseeing a group of operational holding companies is a unique pattern of corporate control. By making operational holding companies responsible for partly raising their own finance, the pure holding company intends to benefit from even more rapid business expansion (*Nikkei* 26 May 2000). Lastly, many of the operating companies, particularly in the e-Finance and e-commerce areas, are joint ventures with domestic or foreign partners. As intended, around XX out of the total of YY operating companies are now publicly quoted on one of the stock markets.

Exhibit 8: Softbank Group Organisation Chart
(About here)

Softbank Group is often described as a Cyber Keiretsu (Whittington 2000) or an Internet Zaibatsu (Asahi Shimbun Weekly 2000). The adoption of a holding company structure makes the label of Zaibatsu (a pre-1945 corporate structure before holding companies were made illegal) most apt. Softbank Group is keen to promote an image for the Softbank Group of agile strategy and open corporate networks that is diametrically opposed to that of the traditional Keiretsu: 'Because companies in the Softbank Group are not affiliated with any existing Japanese *keiretsu* (corporate group), they can share a vision of creating open cross-industry alliances with any enterprise' (Softbank Annual Report 2000 p.11). Certainly, Softbank Group does not have cross-shareholding among the group's operating companies, criticised for being a closed and non-transparent ownership structure that makes takeovers by outsiders difficult. But ironically, it is precisely the web of joint ventures and partnerships in the creation of operating companies that make Softbank Group's own finances appear 'convoluted and opaque' (*Financial Times* 7 June 2000). This point can be illustrated with reference to financial markets and labour markets in turn.

So far, Softbank has taken two major initiatives that would potentially transform the workings of the financial markets in Japan. The first is the aforementioned creation of Nasdaq Japan, jointly with NASD, at the Osaka Stock Exchange. Although it is still early days, this market should provide better access to equity capital for emerging Japanese firms, give Japanese investors an opportunity to invest in high-tech/high-growth stocks, and enhance venture capitalists' willingness to finance Japanese start-ups now that the IPO exit option is more easily available. With the Nasdaq brand name and the favourable listing requirement for high-tech/high-growth firms, this market is expected to expand, and Softbank is in a position to benefit both as the owner of the market, a venture capital fund that finances start-ups with IPO plans, and shareholder of operating companies that would list on the market.

Softbank's second move to transform Japanese financial markets is through the sale of the failed Nippon Credit Bank (NCB) by the Japanese government to a consortium led by Softbank. This marks an important step in the Japanese government's efforts to clean up its troubled banking sector, but it is also the first time that a non-financial group has been allowed to buy a Japanese bank. Since none of

the consortium members (including Orix and Tokio Marin and Fire) have experience in managing loan portfolios, Softbank appointed a former bank of Japan official as president to deal with the immediate task of minimising losses from existing loans estimated to total 6000 billion yen (56 billion dollars). Softbank bought NCB, however, to exploit new business opportunities by creating a new type of bank in Japan. This involves developing two new lines of business. The first is in retail banking, linked to the Internet, and combining Softbank's own expertise in online finance businesses such as E*Trade with other consortium members' interest in online sales of insurance products. The second is more controversial, involving lending to cash starved small and medium sized companies (SMEs). This is badly needed given the shortage of venture capital and the unwillingness of commercial banks traditionally to lend to SMEs. Nevertheless, this plan begets the question why a commercial bank should take the risk of using depositors' money to lend to internet firms when venture capital funds should be available to finance them. Softbank, if it goes ahead with this plan, would be potentially advancing loans to start-ups for which it is also a venture capitalist. Due to the conflict of interest in simultaneously playing multiple roles, strict monitoring by an outsider, such as non-executive directors, might develop as a functional equivalent to effective shareholder pressures. Nevertheless, it is equally possible that NCB would develop into a traditional 'main bank' for the growing Softbank Group.

Lastly, the long tail of joint venture firms within the Softbank Group necessitates building an open architecture for the management of employees. In mid-2000, Softbank Group probably employed around 2000 workers. But it was only in August 2000 that the pure holding company instituted a system for the middle tier operational holding companies to report their workforce size. Such reporting is, however, not straightforward for the following reasons. At the operating company level, there are a variety of forms of employment, including the use of agency labour. Moreover, in joint venture companies, the employment status of joint venture managers, as to which of the JV partner is the employer, may be left undefined. Typically, it is the middle-tier operational holding companies that provide some managerial labour for new ventures. Essential expertise in financing and substantive business operations for Softbank Group ultimately comes from mid-career hiring from existing established businesses. In particular, the middle-tier holding companies hire mid-career employees for their management team, employ them for no more than 3 months, and send them out to manage newly established operating companies. In the case of Softbank e-Finance, its CEO Kitao, originally headhunted from Nomura Securities, attracted his ex-colleagues from Nomura to establish Softbank's financial expertise. Softbank originally came across Nomura Securities as a funder of SkyPerfect Communications, a Softbank operating company. Although headhunting for individuals is not unknown, an important source of talent for Softbank Group more commonly comes in connection with business deals involving partner companies from the old economy of Japan.

Conclusions

This paper discussed three inter-related topics. First, through an examination of economy-wide government statistics, it was established that the Internet economy began to take off in Japan in mid- to late 1990s particularly with the launch of NTT DoCoMo's mobile internet access. There are signs of a nascent New Economy in Japan, but its sustainability depends on whether the 'late development effect' (i.e.

Japan's push towards 3G mobile services skipping the fixed line personal computer stage of Internet access) can outdo the persistently recessionary climate of the Japanese economy.

Second, characteristics of the IPO companies on JASDAQ, TSE's Mothers Market, and Nasdaq Japan, as representative of the Bit Valley phenomenon, were compared against the Silicon Valley model. It was found that Japanese IPO companies were generally older, more spread out in sectoral coverage, and benefited from different types of venture capital funds some of which with close connection to the old economy in Japan.

Third, Softbank Group was taken up as a case study to gauge the extent to which firm-level actions can lead to hybridisation of institutions. Softbank Group has had a direct hand in transforming national institutions in financial markets by creating Nasdaq Japan and buying the failed Nippon Credit Bank. Within the corporation, Softbank Group certainly has some characteristics of the new economy, with close links to the US venture capital industry and flexible labour, but also those of the old economy, having an elaborate holding company structure with a large number of operating companies within its umbrella. It was argued in the paper that it is precisely the tight links between the new and the old economies that Softbank Group exploited to its advantage, to secure access to personnel and resources at the heart of Softbank's core competence.

References

- Aoki, M. and Dore, R.P. (eds) (1994) *The Japanese Firm: The Sources of Competitive Strength* Oxford: Oxford University Press.
- Aoki, M. and Patrick, H. (eds) (1994) *The Japanese Main Bank System* Oxford: Clarendon Press.
- Arthur Andersen (2000) *E-Business* (in Japanese) Tokyo: Toyo Keizai Shinposha.
- Asahi Shimbun Weekly (2000) Series on Softbank
- Boyer, Robert, Charron, E., Jurgens, U. and Tolliday, S. (eds) (1998) *Between Imitation and Innovation The Transfer and Hybridization of Productive Models in the International Automobile Industry* New York: Oxford University Press.
- Casper, Steve and Kettler, Hannah (2000) *National Institutional Frameworks and the Hybridization of Entrepreneurial Business Models within the German and UK Biotechnology Sectors*, mimeo, the Judge Institute, Cambridge University.
- Dore, Ronald (2000) *Stock Market Capitalism: Welfare Capitalism Japan and Germany versus the Anglo-Saxons* Oxford: Oxford University Press.
- FRI (Fujitsu Research Institute) (2000) *The Cluster of New Media Companies in Tokyo* (<http://www.bitvalley.org/bva-eng.doc>)
- Hall, Peter and Soskice, David (forthcoming) *Varieties of Capitalism*

Hamao, Yasushi, Packer, Frank and Ritter, Jay R. (1999) *Institutional Affiliation and the Role of Venture Capital: Evidence from Initial Public Offerings in Japan* mimeo, University of Southern California.

Hollingsworth, J. Rogers and Boyer, Robert (1997) *Contemporary Capitalism: The Embeddedness of Institutions* Cambridge: Cambridge University Press.

Jenkinson, Tim J. (1990) 'Initial Public Offerings in the United Kingdom, the United States, and Japan' *Journal of the Japanese and International Economies* Vol.4, pp.428-499.

Katz, Harry P. (ed) (1997) *Telecommunications: Restructuring Work and Employment Relations Worldwide* Ithaca: ILR Press.

Katz, Harry and Darbishire, Owen (2000) *Converging Divergences*

Kogut, Bruce (ed) (1993) *Country Competitiveness* New York: Oxford University Press.

JIPDEC (2000) *Johoka Hakusho 2000* (Informatization White Paper) Tokyo: Computer Age.

MPT (1999) *Tsushin Hakusho* (White Paper on Telecommunications) Tokyo: Ministry of Post and Telecommunications.

MPT (2000) *Communications in Japan 2000* (<http://www.mpt.go.jp/eng/>)

Nikkei (2000) *Shido: Netto Bizinesu* ()

OECD Growth Project (<http://www.oecd.org/subject/growth>)

Sako, Mari (1992) *Prices, Quality and Trust* Cambridge: Cambridge University Press.

Softbank Annual Report 2000

Toyama, Yoshihiro et al (2000) *Public Utility Industries in Japan: Past, Present and Future* MSU Public Utilities Papers, East Lansing, Michigan: Michigan State University.

US Department of Commerce (199?) *The Emerging Digital Economy* (<http://www.ecommerce.gov/emerging.htm>)

Vitols, Sigurt (2000) *Frankfurt's Neuer Markt and the IPO Explosion: Is Germany on the Road to Silicon Valley Yet?* Mimeo, WBZ Berlin.

WMRC (World Market Research Centre) (2000) *Telecommunications Sector for Japan* (<http://www.worl.../wmo.telecoms.Telecoms?Sector=Telecommunications&Country=13>)

Westney, E.

Whitley, Richard (1999) *Divergent Capitalisms: The Social Structuring and Change of Business Systems* Oxford: Oxford University Press.

Whittington, Richard (2000) *What is Strategy?* Oxford: Oxford University Press.

Yoshimura, Katsumi (2000) *I mode Business Model Impact* (in Japanese) Tokyo: H&I.

Zeitlin, Jonathan and Herrigel, Gary)(eds) (2000) *Americanization and Its Limits: Reworking US Technology and Management in Post-war Europe and Japan*, New York: Oxford University Press.

Appendix 1: Summary of Surveys

MPT (Ministry of Post and Telecommunications) *Tsushin Riyo Doko Chosa*

MPT *Internet Commerce Chosa*

MPT *Internet Service Provider Ankeeto*

MIT *Internet Kanren Bizinesu Chosa*

Nikkei Multimedia *Internet Active User Chosa*
(<http://www1.nikkeibp.co.jp/NMM/active.htm>)

Nomura Research Institute NRI Cyber Business Case Bank
(<http://www.ccci.or.jp/cbcb/>)