

**This is a discussion paper series. You are welcome to communicate
your comments to the author:**

markus.taube@uni-duisburg.de

This issue represents the extended version of a paper prepared for the conference “Japan and China: Economic Relations in Transition”, organized by the German Institute for Japanese Studies & Fujitsu Research Institute in Tokyo, 18-19 January 2001. The revised conference paper will be published under the title “China’s Industrialization: Which Role for Japan?” in: Hilpert, Hanns Günther; Haak, René (ed.): Japan and China: Cooperation, Competition and Conflicts, Basingstoke, Hampshire et al.: Palgrave.

Content

Abstract..... IX

Introduction 1

Japanese industrial policy as a model for China..... 2

The Japanese model of industrial policy..... 4

Traces of Japanese influences in China’s industrial policy..... 5

Effects of Japanese ODA to China on industry 10

Industrial upgrading by means of Plant and Technology Contracts..... 15

Impact of Japanese FDI on industrialization in China 18

Impact of FDI on the host economy: theoretical considerations..... 19

Actual impact of FDI on China..... 19

Impact of Japanese FDI on the Chinese industrialization process..... 22

Japanese governance structures and business concepts as a model for Chinese corporations .30

Conclusion 33

Bibliography 35

Boxes

Box 1	Indirect transfer of Japanese technology: the case of China Motor Corporation	29
Box 2	Adoption of Toyota Production System: China's Automotive Industry	32

Charts

Figure 1	Structural characteristics of industrial policy in Japan	4
Figure 2	Development of actually realized FDI in the PR China, 1979-1999	20

Tables

Table 1	Japan's ODA Disbursements to China, in million US\$	11
Table 2	Sectoral Distribution of Japanese Loan Aid to the PR China 1979-1998.....	12
Table 3	Sectoral Distribution of Japanese FDI in China, 1989-1999 (Value).....	24
Table 4	Sectoral Distribution of Japanese FDI in China, 1989-1999 (Cases).....	24
Table 5	The PR China as a host country for world and Japanese FDI	26

Abstract

The role of Japan in China's contemporary industrialization process is analyzed by studying five areas in which Japan might have been able to influence developments in China: Industrial Policy, Official Development Assistance, Transfer of Technology without Equity Participation, Foreign Direct Investment, Corporate Governance and Business Concepts. In conclusion Japan is seen to have played an important role in China's industrialization process. This influence has been exerted over various channels, none of which played a dominating role just by itself. The PR China did not copy the Japanese model of industrial policy but has selectively chosen certain elements and tried to integrate them in an eclectic approach of systemic transformation and industrial upgrading. By means of ODA, Plant and Technology contracts, and in the 1990s FDI, there has been a continuous transfer of capital, modern technology and know-how from Japan to China, which enabled the Chinese economy to significantly reduce the development gap to the industrialized economies. In addition Japanese style management concepts have been widely accepted by Chinese companies.

Introduction

Seen from a historical perspective, Japan did in fact play a rather prominent role in China's industrialization process. For reasons not to be discussed here China did not create a substantial industrial sector either during the Qing dynasty or the ensuing first years of the Republic in the way that Japan did in that period.¹ Therefore, the first time a Chinese region went through a modern integrated industrialization process dates back to the Japanese occupation of Northeast China. During a period of nearly 20 years, from the late twenties until the end of the Japanese presence in China, Japan made considerable efforts to build up a heavy industry in Manchuria.²

The long-term impulse of the Japan-directed industrialization of Manchuria on the industrialization of the PR China has nevertheless been rather insignificant. In the aftermath of WW II, the Soviet Union dismantled large parts of the Manchurian industrial complexes. Classified as Japanese reparation payments, machinery and whole plants were transferred to the Soviet Union in order to strengthen her own post-war industrialization process. The remaining industrial infrastructure of Northeast China initially empowered Gao Gang to become the most influential politician next to Mao Zedong. But this power struggle was also rather quickly resolved, when Mao strengthened his position and Gao Gang died under rather mysterious circumstances.

During the ensuing three decades the PR China pursued an industrialization policy, first modeled on the Soviet example, and then turning more and more towards self-developed approaches heavily influenced by ideological considerations. Japan did (and could) not have a role in China's industrialization during this period of time. It was only after the rise to power of Deng Xiaoping in the late seventies that, on a political and institutional level, the possibility of Japanese influences on China's contemporary industrialization process was recreated.

¹ For a comparison of the Japanese and the Chinese approach to industrialization during this era see: Kasper, Wolfgang (1994): *Global Competition, Institutions, and the East-Asian Ascendancy*, San Francisco, pp. 30-32.

² Lardy, Nicholas R. (1987): *Economic recovery and the 1st five-year plan*, in: *The Cambridge History of China*, Vol. 14, Part 1, Cambridge, pp. 144-184, here p. 148.

In order to evaluate the role of Japan in China's contemporary industrialization process, five interfaces are identified by which Japanese economic actors might have had an influence on Chinese developments. They are:

1. *Industrial Policy*: Did the Japanese industrial policy serve as a model for Chinese policy-makers?
2. *Official Development Assistance (ODA)*: Did Japanese ODA disbursements have an impact on Chinese industrialization in terms of its speed and direction?
3. *Transfer of Technology without Equity Participation*: In how far did Plant and Technology Contracts between China and Japan contribute to industrial upgrading in China?
4. *Foreign Direct Investment (FDI)*: Did the (aggregate) engagement of Japanese companies in the Chinese economy exert a substantial influence on the build up of industrial structures?
5. *Corporate Governance and Business Concepts*: Did Japanese companies exert influence on the corporate governance structures and business concepts of their Chinese partners?

In the following these five aspects will be discussed in further detail.

Japanese industrial policy as a model for China

Looking back at the history of industrial policy in China, the Japanese model of industrial policy could be expected to have exerted a rather strong attraction for China's policy makers. The Chinese industrialization process since the late Qing dynasty (i.e. the second half of the 19th century) was characterized by strong government. As a matter of fact, the history of industrialization in China is a history of distrust of private entrepreneurship and a corresponding claim of control by government. When modern industry became a topic of intellectual discourse in the late Qing dynasty, it was regarded as something foreign and culturally inferior, but at the same time something indispensable, if China wanted to withstand the onslaught of foreign powers, build a powerful military and regain national strength vis-à-vis the Western nations. In this rationale "industry was too important to be left in the hands of private entrepreneurs".³

³ Wellington, K.K. Chan (1980): Government, merchants and industry to 1911, in: The Cambridge History of

Although this government-focused approach failed to initiate a dynamic industrialization process,⁴ the central role of government was never questioned, even after the Qing dynasty had fallen from power. During the years of the Nanjing Republic intellectual discourse about (post-war) industrial policy was based on the idea of strong government. Consensus existed that government had to have direct control over pillar industries and direct the development of industry as a whole.⁵ As a matter of fact, Japan did exert some influence on this debate, as the majority of China's leading economists had received their academic training in Japan.

Therefore, when the Communist Party came to power and rebuilt the war torn economic system according to the Soviet-model, it was neither introducing something completely new nor did it follow a line of economic thinking that was totally at odds with the mainstream economic policy debate of the Republican era. The opinion that government should have a leading role in the country's industrialization process was widely accepted. Even though the kind of planned economy installed by the Communist Party during the ensuing decades was certainly not the kind of economic system the Republican think tanks had in mind, when theorizing about post-war industrial policy for China. From the mid-fifties to the late eighties the realm of industrial policy was an integrated part of the socialist planning system and did not exist independently. There simply did not exist any non-government industry.

China, Vol. 11, Part 2, Cambridge, pp. 416-462, here p. 419.

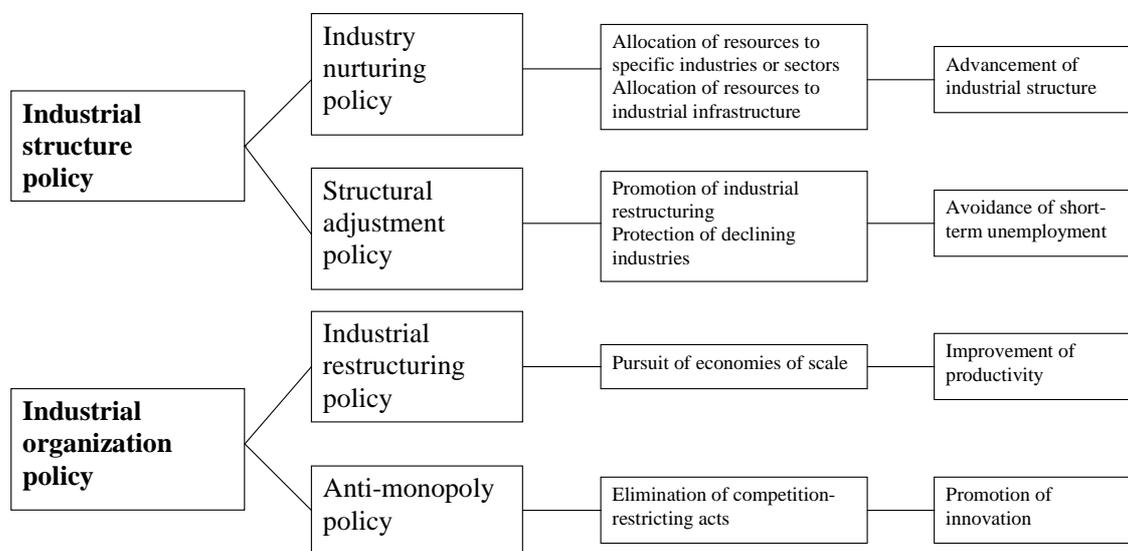
⁴ When the Qing dynasty finally collapsed in 1911, there existed no more than about six hundred enterprises that employed machine-driven production processes and were not owned by foreign businessmen. The capital stock of these industrial enterprises was only about 6 to 7 % of the capital accumulated in agriculture. Wellington, K.K. Chan (1980): Government, merchants and industry to 1911, in: *The Cambridge History of China*, Vol. 11, Part 2, Cambridge, pp. 416-462, here p. 416.

⁵ Malik, Rashid (1997): *Chinese Entrepreneurs in the Economic Development of China*, Westport-London, pp. 24-26; and: Meyer, Michael (2001): *Wirtschaftspolitik und State-Building. Die nationalchinesische Industriepolitik in historischer Perspektive*, in: *Asien*, Vol. 80 (Juli 2001), pp. 42-63.

*The Japanese model of industrial policy*⁶

The “typical” Japanese industrial policy⁷ is composed of the two realms of industrial structure policy (*sangyo kozo seisaku*), aimed at influencing the allocation of resources, and industrial organization policy (*sangyo soshiki seisaku*), targeting the size and number of individual enterprises competing in the same industry (with a bias towards oligopolistic structures) and the creation of cross-industry organizations.⁸ See figure 1.

Figure 1: Structural characteristics of industrial policy in Japan



Source: ifo Institute for Economic Research; Sakura Institute of Research (1997): *A Comparative Analysis of Japanese and German Economic Success*, Tokyo et al., p. 215.

The main instruments of Japanese industrial policy are understood to be (i) direct interventions, as exemplified by the restriction of business behavior by law and the provision of subsidies, and (ii) instructive guidance, as exemplified by the provision of investment incentives

⁶ This account concentrates on the main characteristics of the Japanese model of industrial policy, which itself has gone through a process of permanent change and adaptation to its environment. In this process the policy maker’s leverage over the economic sphere has been reduced, while the price mechanism and the forces of market competition have grown in importance for the allocation of resources. Komiya, Ryutaro (1986): *Industrial Policy in Japan*, in: *Japanese Economic Studies*, Vol. 14, No. 4, pp. 52-81, here pp. 61-62.

⁷ This account concentrates on the main characteristics of the Japanese model of industrial policy, which itself has gone through a process of permanent change and adaptation to its environment. In this process the policy maker’s leverage over the economic sphere has been reduced, while the price mechanism and the forces of market competition have grown in importance for the allocation of resources (Komiya 1986: 61-62).

⁸ Pascha, Werner (1997): *Industrial Policy in Japan and the Policy in Japan and the Policy Choices for Central and Eastern European Countries- A Commentary on Some Controversial Issues*, Duisburg Working Papers on East Asian Economic Studies, No. 37/1997, Duisburg, p. 4.

via taxation or policy-oriented finance, the provision of industrial structure visions and the adjustment of production and capital investment through administrative guidance.⁹

As shown above, industrial policy in China had historically a strong bias in favor of an industrially active and interventionist government. When the PR China opened towards the world economy and started to transform its economic system into a market-oriented system during the eighties, it could have been expected that the Japanese model of strong government was rather sympathetic to Chinese decision-makers and the economic policy think tanks. It seemed to show a third way between the – obviously inefficient – “all-state” model of economic planning and the “no-state” model of neo-liberal coinage.¹⁰

In addition to its government-friendly approach to economic developments, the Japanese model should have looked even more attractive to the Chinese decision-makers by the attitude of Japanese researchers and politicians working in the realm of developmental economics towards adequate political regimes during the development process. Contrary to neoclassical positions, the Japanese model goes in line with an open acceptance and even propagation of an authoritarian development process. This authoritarian developmentalism is understood as “a particular kind of dictatorship [...] where strong leadership holds up economic development as the supreme goal and legitimizes its rule by actually delivering on the goal.”¹¹

Traces of Japanese influences in China's industrial policy

Consequently, the model of industrialization underlying the economic take-off Japan experienced during the 1950s and 1960s has been widely discussed and, for the most part favorably evaluated in the circles of Chinese academia and politics.¹² However, when the PR China en-

⁹ Ifo Institute for Economic Research; Sakura Institute of Research (1997): *A Comparative Analysis of Japanese and German Economic Success*, Tokyo et al, p. 214.

¹⁰ For a detailed discussion of the differences between the „Washington Consensus“ and the Japanese model see: Yanagihara, Toru (1998): *Development and dynamic efficiency: “framework approach“ versus „ingredients approach“*, in: Ohno, Ken'ichi; Ohno, Izumi (1998) (ed.): *Japanese Views on Economic Development. Diverse paths to the market*, Routledge Studies in the Growth Economies of Asia 15, London – New York, pp. 70-76.

¹¹ Ohno, Ken'ichi (1998): *Overview: creating the market economy*, in: Ohno, Ken'ichi; Ohno, Izumi (1998) (ed.): *Japanese Views on Economic Development. Diverse paths to the market*, Routledge Studies in the Growth Economies of Asia 15, London – New York, pp. 1-50, here p. 39. The author concedes that at a later stage, this “authoritarian developmentalism must be replaced by a freer and more open system”, but this will happen only after *several decades* of high growth. Ibid. p. 32.

¹² Taylor, Robert (1996): *Greater China and Japan. Prospects for an economic partnership in East Asia*, London-New York, p. 27.

tered the era of economic reform and opening to the world in the late 1970s, the measures taken were at first only meant to improve the performance of the existing command-economy by partially introducing market-economy type elements. It was not until 1985/6 that the group around Zhao Ziyang committed itself to a market-based economic system,¹³ and China's economic policy was shaped in order to transform the economic system. It was also in 1986 that China applied for (re-)admission to GATT. Since then and especially since the start of serious membership negotiations in 1992, Chinese politics and industry have become sensitized to the consequences such a move might exert on the Chinese enterprise sector and have looked for ways to prepare Chinese enterprises for the world market.¹⁴ Therefore, it is only since the middle of the 1980s that traces of a market-based industrial policy in China, and Japanese influences in particular, can be identified. Until this point in time the PR China had, step-by-step, dismantled its planning system and dramatically reduced the discretionary power government agencies held over the allocation of resources. But although the PR China in the run of this disempowerment process the PR China had not lingered at stages characterized by strong direct interventionist policies as they have been employed in Japan during the post-war reconstruction (e.g. the priority production system) period, and quickly moved on to policy models characterized by a much less pronounced role of government, it still had not reached the institutional threshold beyond which a full-fledged recourse on the Japanese model of industrial policy would have been possible.

Some of the most important features of Chinese industrial policy bearing the imprint of the Japanese model include the following:

China's industrial structure policy in the nineties was certainly influenced by Japanese policies. At its core were two strategy papers on industrial development published by the State Council in 1989 and 1994.¹⁵ Both papers identify industries worthy of promotion, while investments in others were discouraged. Special emphasis was laid on agriculture, energy, transport as well as on the metallurgic and the petrochemical industries. But the program of 1989 was characterized by such a broad range of industries eligible for governmental protec-

¹³ Naughton, Barry (1997): *Growing out of the plan. Chinese Economic Reform, 1978-1993*, Cambridge, pp. 187, 196.

¹⁴ Marukawa, Tomoo (2001): *WTO, Industrial Policy and China's Industrial Development*, paper represented at the DIE-JETRO International Symposium "China enters the WTO: Pursuing Symbiosis with the Global Economy", Tokyo 17.01.2001, p. 1.

tion and promotion, that in the end no single industry received a genuine “priority treatment”. Most incentives, subsidies and preferential measures were distributed rather evenly among all industries, thereby diluting the allocative impact the program could potentially have exerted on the economy’s industrial structure.

It was only after Chinese economic policy went through a radical change of strategy¹⁶ that industrial policy became really focused. In the program of 1994 the number of industries with priority status was drastically reduced. Instead, certain key industries were identified that were supposed to lead the economy towards higher stages of economic development. Mirroring the priorities formulated by MITI in the 1960s, these industries included electronics, machinery, petrochemicals, automobiles¹⁷ and construction.¹⁸

In order to promote development of these industries, various instruments were applied: the formulation and implementation of new laws and administrative guidelines, subsidies in the form of tax-concessions, distorted prices and soft-budget constraints, the provision of financial means for research and development, the establishment of complementary financial institutions to promote the operations of these industries, protection of key business fields against foreign competition, and, in certain areas, promotion of foreign equity participation in order to acquire state-of-the-art technologies.¹⁹ These instruments show an obvious similarity to the various instruments used by Japan in the course of its industrial structure policy.

The closest resemblance to Japanese policies can probably be found in the area of industrial organization policy. In its strive to secure a leading position for China in the world economy, the Chinese government has taken recourse to strategies very similar to those formulated during the 1950-60s in Japan. The central idea is that a nation needs a certain number of large

¹⁵ Song, Xueming (1999): *Wirtschaftliche Entwicklung und Systemtransformation in China*, Duisburg (mimeo).

¹⁶ Naughton, Barry (2001): *Changing Horses in Mid-Stream? Explaining Political Economy Regimes in China*, paper presented at the Conference “Japan and China Economic relations in Transition”, Tokyo 18.-19.01.2001.

¹⁷ A critical assessment of the Chinese industrial policy plan for the automotive industry is provided by Marukawa (2001), who identifies it as resembling the MITI’s automotive policy plan in the 1960s.

¹⁸ Song, Xueming (1999): *Wirtschaftliche Entwicklung und Systemtransformation in China*, Duisburg (mimeo); Taylor, Robert (1996): *Greater China and Japan. Prospects for an economic partnership in East Asia*, London-New York, p. 27.

¹⁹ Lo, Dic (1997): *Market and Institutional Regulation in Chinese Industrialization, 1978-1994*, Basingstoke; Nolan, Peter (2001): *China and the global business revolution*, Basingstoke; Song, Xueming (1999): *Wirtschaftliche Entwicklung und Systemtransformation in China*, Duisburg (mimeo).

enterprises and enterprise groups that hold a considerable share of the world market in order to project its influence on a global scale. In order to make its enterprise sector fit for the world market and compete with the established multinationals, the Chinese government has therefore selected (or by means of mergers and acquisitions constructed) a group of large scale enterprises that are supported by various industrial policy instruments.²⁰ Instruments applied include:

- preferential treatment with respect to loans from the state banking system,
- privileged access to national and international capital markets,
- preferential treatment with respect to joint venture projects,
- protection against national contenders by means of prioritized issuance of licenses and business permits,
- protection against international competition by means of tariff and non-tariff barriers.

Recently, however, this policy has experienced a set-back as the Japanese model of large conglomerates (*kigyo keiretsu*) and the Korean *chaebol* (which had been designed after Japan's pre-war *zaibatsu*) have been discredited by the onslaught of the Asian crises.

But although various features of Chinese industrial policy resemble policies developed in Japan, a more comprehensive replication of the Japanese model has been prevented by some peculiar characteristics of the Chinese environment:

1. Successful industrial policy needs an institutional framework that guarantees macroeconomic stability, to prevent isolated policy measures from causing distortions that may infect the whole economic process. Just such an macroeconomic leveler has been lacking in China for a considerable period of time.²¹ This institutional deficit has first of all been caused by the frictions caused by the transformation of a planned into a market economy. It has arisen whenever regulation requirements have been out of step with regulation capacities of older institutions created for more plan-oriented economic processes. But also a lack of control of the central government over local government and decentralized insti-

²⁰ Nolan, Peter (2001): China and the global business revolution, Basingstoke.

²¹ Singh, Inderjit (1992): China: Industrial Policies for an Economy in Transition, World Bank Discussion Papers No. 143, Washington.

tutions has inhibited the execution of central industrialization policies. Local governments have been allowed considerable leeway to follow their own – locality centered – industrial development policies. The central government has not been able to effectively co-ordinate the various local initiatives, in order to bring about a macro-economic balance. Instead, once the central government had proclaimed certain industrialization targets, local actors tried to benefit from the preferential policies of the center without concerning themselves with the actions of other localities. As a result, the Chinese economy has been cyclically bogged-down by over-capacities²². In this analysis the Chinese attempts at Japanese-style industrial policy have created just the phenomenon, the prevention of which has been one of the guiding principles in the formulation of Japan's industrial policy: „excess“ competition.

2. China's policy towards its large-scale state-owned enterprises is burdened by the legacy of the planned economy, leading to an inconsistency of goals. The same enterprises that are supposed to compete with multinational corporations, which have streamlined their organizations in decades of fierce competition in the world market, are at the same time obliged to fulfill social welfare functions. As a result, the installation of incentive-based remuneration systems is being obstructed and resources are absorbed in inefficient organizational structures and processes.
3. China has been trying to apply features of industrial policy that have been designed in the context of a Japanese economy much further advanced than China's is at present. Chinese enterprises intending to compete on the world market find that there is not sufficient demand for their sophisticated, high value-added products in the home market in the first place. Therefore, they cannot realize economies of scale in their (protected) home market before entering the global market and competing with the already established players.
4. Industrial policy measures have to be unambiguously tied to the goal of economic development and growth, in order to have positive welfare effects for society at large.²³ But as

²² Taube, Markus (1997): Ökonomische Integration zwischen Hongkong und der Provinz Guangdong, VR China. Der chinesische Transformationsprozeß als Triebkraft grenzüberschreitender Arbeitsteilung, ifo Studien zur Entwicklungsforschung 31, München-Köln-London, p. 255.

²³ Pascha, Werner (1997): Industrial Policy in Japan and the Policy Choices for Central and Eastern European Countries- A Commentary on some Controversial Issues, Duisburg Working Papers on East Asian Economic Studies, No. 37/1997, Duisburg, p. 206.

industrial policy measures usually go along with a discriminatory provision of preferential treatment, they are prone to be abused by rent-seeking and corruption. China has not been able to neutralize such detrimental behavior which has greatly diminished the impact of policy on the creation of industrial structures and has led to a misallocation of resources.

In addition, it should be noted that the Japanese model of industrial policy has not been the only influence on China's academia and politics. From the early eighties China has been heavily influenced by the IMF and the World Bank, which, with their expertise and a substantial volume of soft-loans, have accompanied the process of economic restructuring since accepting the PR China to these organizations in 1980. Not only does the paradigm of developmental policy propagated by these organizations differ markedly from the Japanese model, the latter has lost much of its attraction following the prolonged crises Japan experienced in the early nineties – just when China was beginning to seriously formulate an industrial policy in the framework of a market-oriented economic system.

Effects of Japanese ODA to China on industry

Japan is by far the largest contributor of bilateral ODA to China.²⁴ The figures listed in table 1 show the financial resources Japan is providing to China. These resources are on average nearly two-times as high as those of the second most generous provider of ODA to China (Germany) and about ten times as high as those of the third most provider (France). France had been the second largest contributor until 1994, when it was surpassed by Germany which since then has widened the gap to France continuously. With its substantial transfer of resources Japan has for two decades been making an important contribution to economic development²⁵ and for the Chinese industrialization process in particular.

²⁴ The first disbursement of Japanese loan-aid to the PR China was in 1980. The first time grant-aid was extended in 1981. Jin, Xide (2000): *Riben zhengfu kaifa yuanzu* [Japan's Official Development Assistance], Beijing, p. 194

²⁵ In the early nineties Japan's loan aid alone amounted to 5-10% of the Chinese basic infrastructure investments, *ibid.*, p. 215.

Table 1: Japan's ODA Disbursements to China, in million US-\$

<i>Year</i>	<i>Grants</i>			<i>Loan Aid</i>		<i>Total</i>
	<i>Grant Aid</i>	<i>Technical Co-op.</i>	<i>Total</i>	<i>Gross</i>	<i>Net</i>	
<i>1994</i>	99.42	246.91	346.34	1,298.46	1,133.08	1,479.41
<i>1995</i>	83.12	304.75	387.87	1,216.08	992.28	1,380.15
<i>1996</i>	24.99	303.73	328.72	774.08	533.01	861.73
<i>1997</i>	15.42	251.77	267.19	556.75	309.66	576.86
<i>1998</i>	38.22	301.62	339.83	1,083.60	818.33	1,158.16
<i>Total</i>	756.13	2,596.12	3,352.26	11,312.30	9,900.48	13,252.72

Source: http://www.mofa.go.jp/policy/oda/summary/1999/ap_ea01.html

In terms of its sectoral distribution Japanese ODA has been concentrated in transport infrastructure, electricity generation and gas supply. Only in the nineties has agriculture become a target of Japanese ODA to China, but has since then risen to prominence. Most recently environmental issues and the development of the Chinese hinterland have become a focus of Japanese ODA. Of the 28 projects scheduled for the years 1999 and 2000 18 were directed at the Chinese hinterland.

The sectoral distribution of Japanese loan aid to the PR China during the years 1979 to 1998 is shown in table 2.

Table 2: Sectoral Distribution of Japanese Loan Aid to the PR China, 1979-1998

	<i>Projects</i>	<i>Volume in billion Yen</i>	<i>Percentage</i>
<i>transport infrastructure (airport, highway, port, railway)</i>	112	1,008.311	47.6
<i>electricity generation & gas supply</i>	37	432.221	20.4
<i>commercial credit</i>	5	130.000	6.1
<i>agriculture</i>	20	123.418	5.8
<i>communication</i>	16	120.202	5.7
<i>environmental protection</i>	15	93.783	4.4
<i>irrigation & water supply</i>	11	71.922	3,4
<i>financial system development</i>	1	70.000	3,3
<i>social services</i>	12	69.587	3,3
<i>Total</i>	229	2,119.444	100,0

Source: Jin, Xide (2000): Riben zhengfu kaifa yuanzu [Japan's Official Development Assistance], Beijing, p. 219; http://www.mofa.go.jp/policy/oda/summary/1999/ap_ea01.html

While there can be no doubt that due to a substantial transfer of resources Japanese ODA provided a strong impulse to the build-up of industrial structures in China, it is interesting to see how far Japanese ODA has had an impact on the style and direction of China's industrialization process. We assume that the choice and development of industrial policies and industrial organization in China may be prone to influences originating from the selective provision of ODA by the Japanese government and that at least two independent channels exist by which Japanese ODA might have been used to influence the Chinese industrialization process:

(1) Japanese ODA to China might function as an instrument of an active transnational industrial policy. Adhering to the model of a "flying geese" type regional industrialization process, Japanese ODA might be used to "prepare" neighboring economies for their role in this common development process and pave the way for Japanese FDI (or such from second or third tier economies).

The actual implementation of such a transnational strategy however has been severely inhibited by the fact that the Chinese government has always been highly suspicious of Japanese efforts to establish herself as a regional power and of her wish to enlarge her sphere of influence. Japanese ODA-programs that were interpreted as being instrumental to such aspirations on the Japanese side have therefore been rejected by China. This applies also to the highly ambitious regional industrialization program initiated by Japan in the late eighties. Conceived by MITI in 1988, the “New Asian Industries Development Plan” was based on the Japan-centered “flying-geese” model of industrialization. While the overall scheme was directed at the economic development of East Asia, the concrete sector-specific industrialization programs were to be negotiated bilaterally between the Japanese and the host country’s government and then implemented in co-operation with the private sector. The PR China rejected the proposal and did not participate.²⁶

But also in respect to “regular” ODA-disbursements the PR China has institutionalized some mechanisms strongly inhibiting the capacity of Japan to exert influence on the direction of the Chinese industrialization process. Between 1980 and 2000 Japanese loan-aid, which constitutes about three quarters of total Japanese ODA to China, was an integral part of the Chinese five-year-plans.²⁷ In so far as during these two decades all Japanese loan-aid was put into projects that had been included in the Chinese plans, Japan did not exert any influence on the quality of the Chinese industrialization process. Japanese ODA rather enabled the Chinese government to extend its plan balances.

(2) Japan might try to tie its ODA disbursements to the condition that only Japanese products are bought or that Japanese companies are entrusted with ODA-financed construction etc. By this means Japan might succeed in establishing systemic solutions²⁸ in the Chinese market and

²⁶ Hilpert, Hanns Günther (1997): Japan und China im ostasiatischen Wirtschaftsraum: Komplementaritäten und Konflikte, in: Taube, Markus; Gälli, Anton (1997): Chinas Wirtschaft im Wandel. Aktuelle Aspekte und Probleme, ifo forschungsberichte der abteilung entwicklungsländer 88, München-Bonn-London, pp. 29-66, here p. 41.

²⁷ From 2001, Japanese ODA to China will be granted on an annual basis, which is the standard approach practiced with all other beneficiary countries.

²⁸ Systemic solutions are understood as complex technological systems that command a fixed set of complementary products. Implicating that once the decision for a certain system and its industrial standards has been made, complementary goods will automatically be requested by the host country, while other systems and their complementary products remain excluded. Examples for competing systemic solutions in the telecommunications sector the GSM and CDMA technologies and in the transport sector the Transrapid versus the Shinkansen system etc.

by this issue of industrial standards strengthen the affinity of Chinese industries to (their dependence on) industrial structures in Japan.

Japan's development aid has traditionally been closely connected to the economic self-interest of Japan.²⁹ Not only has it been instrumentalized to guarantee Japan access to the natural resources she lacks, but it has also been used to establish the kind of infrastructure that facilitates Japanese FDI in the host country. These two aspects are clearly reflected in the concentration of Japan's loan aid in the fields of transport infrastructure and electricity generation & gas supply (see table 2). With respect to the promotion of Japanese suppliers and industrial standards, Japanese development aid was very successfully instrumentalized in the seventies³⁰ and eighties. Key technologies that Japanese corporations supplied to China and which for years set the standards for its industrial development were financed with subsidized loans provided by Japanese government agencies.³¹

In line with other DAC donor countries, Japan, during the nineties, increasingly abstained from the practice of tying the provision of ODA to the procurement of goods and services from Japan.³² During the nineties an increasing share of ODA was provided on an untied basis, i.e. without the condition of the money being used for purchases in Japan. In 1993/1994 already less than one third of yen credits provided to China under ODA-terms were actually spent in Japan.³³ What the data do not tell us, however, is how far companies, which are located outside Japan, but which are members of the Japanese enterprise networks (*kigyo keiretsu*), have profited from ODA and if the terms of disbursement were designed in their favor. It would just be those types of companies that would be the logical transmitter of Japanese technology and production processes to the flying geese in the next tier, in this case: the PR China.

To sum up: Japanese ODA has certainly served as an lubricant for economic relations with

²⁹ Seitz, Christine (2001): *Konditionierte Entwicklungshilfe? Politische Flexibilität japanischer Entwicklungshilfe*, Asien No. 79, pp. 35, 42.

³⁰ During the seventies this promotion lay outside the realm of ODA, but served the same aims.

³¹ For further details refer to the following chapter dealing with the provision of Japanese technology by means of so called plant and technology contracts.

³² Jin, Xide (2000): *Riben zhengfu kaifa yuanzu* (Japan's Official Development Assistance), Beijing, p. 206.

³³ Yokoi, Yoichi (1996:a): *Major Developments in Japan-China Economic Interdependence in 1990-1994*, in: Howe, Christopher (ed.) (1996): *China and Japan. History, Trends, and Prospects*, Oxford, pp. 147-154, here p. 152.

China. In this way it has (i) promoted the industrialization of China's economy and (ii) helped to strengthen the position and influence of Japanese companies in comparison to companies of other nationalities. But Japan has neither succeeded in leaving its imprint on the style and direction of the Chinese industrialization process nor has it been able to integrate China into its transnational development strategy for East Asia.

Industrial upgrading by means of Plant and Technology Contracts

Plant and Technology Contracts include the provision of whole plants, key facilities, collaborative manufacturing arrangements, technical licenses and technological services. They constitute a mode of economic co-operation that is definitely more intensive than anonymous trade and may be understood as a preliminary stage to foreign direct investment.

The utilization of this mode of economic co-operation as an element of China's foreign economic exchange dates back to the pre-reform era. While the overwhelming majority of plant and technology contracts in the fifties and early sixties were concluded with economies of the Socialist block, Japan became the most important partner in the seventies.³⁴ Of the 12.5 billion US\$ worth of plant and technology imports realized by the PR China during the fourth (1971-75: 3.1 billion US\$) and fifth five-year plan (1976-1980: 9.4 billion US\$) Japanese companies provided more than 50%. During that decade Japan made a substantial contribution to the technological upgrading and modernization of various Chinese industries, including iron and steel, electric-power generation, non-ferrous metals, petrochemicals, fertilizers, synthetic fibers, electric equipment and electronics. Key industrial complexes established in the PR China by means of plant and technology contracts concluded with Japanese companies in that period include the Baoshan Iron and Steel Complex in Shanghai, the Daqing Petrochemical Complex in Heilongjiang Province, the Qilu Petrochemical Complex in Shandong Province and the Yangzi Petrochemical Complex in Jiangsu Province.³⁵

³⁴ Although the break-up of the Soviet-Chinese alliance and the ensuing deterioration of relations with the Eastern European countries, left the PR China without contract partners as early as the first half of the sixties, various factors prevented an intensification of technology imports from industrialized economies outside the socialist block: China was still one of the main targets of the COCOM embargo and subject to an especially severe "China differential", diplomatic relations between China and the non-socialist block were impaired by the Vietnam War, and the state of chaos and disorganization China entered in the "Cultural Revolution" (1966-1976, with the "hot" phase ending 1969) prevented any large scale projects.

³⁵ Yokoi, Yoichi (1996:b): Plant and Technology Contracts and the Changing Pattern of Economic Interdepend-

The strong emphasis on petrochemical projects in this list is an indication to one of the most important motives for Japanese companies to conclude – and for the Japanese government to support³⁶ – plant and technology contracts with Chinese partners: securing access to Chinese natural resources in general and oil in particular. This constellation of interests is also mirrored in the Japan-China Long-term Trade Agreement dating from February 1978. According to this protocol, China was supposed to export coal and oil to Japan and receive plants and technology as well as construction materials in return. The trade flows were planned to amount to 10 billion US\$ in each direction during a five year period beginning in 1978. This barter trade was in operation for three years only.³⁷ From 1981 Chinese exports of coal and oil expanded steadily, while the provision of plants and technology from Japan stagnated.³⁸

While Japanese companies had played a dominant role in the seventies, they lost in relative importance in the eighties as North American and European companies intensified their activities in the PR China, the Yen appreciated substantially in the latter half of the eighties, and the Chinese government – in the face of increasing trade deficits with Japan – discouraged imports from there. During the eighties not only the Japanese share in such contracts shrank to about one fifth of China's total contract value and fell to less than 8% in 1988,³⁹ but also declined in absolute volumes. It was only in the early nineties that a rebound could be observed and Japanese companies once again commanded a substantial share (20-30%) in China's plant and technology contracts.⁴⁰

ence Between China and Japan, in: Howe, Christopher (ed.) (1996): *China and Japan. History, Trends, and Prospects*, Oxford, pp. 127-146, here pp. 130-131.

³⁶ This support was mainly exerted by means of deferred payment loans to China by the Japanese Ex-Im Bank.

³⁷ The signing and also the premature cancellation of this contract have to be seen in light of the so-called "New Great Leap Forward" proclaimed by the Hua Guofeng government in 1977/8. During this episode China once again tried to boost economic development by importing turnkey-plants in various strategic industries. But reluctance to widen the overall trade deficit beyond the 800 million Yuan that were to be reached in 1980 plus an unplanned for lack of foreign exchange due to unexpectedly low oil export revenues and, last but not least, the realization that China would not be able to make the complementary investments necessary to bring the projects on track all contributed to the decision to drastically scale down the program. In November 1980 the Chinese side informed its contract partners that it would not be able to adhere to its contractual obligations and cancelled numerous projects.

³⁸ Yokoi, Yoichi (1996:b), pp., 135-136.

³⁹ It should be noted that despite of the deterioration that Japanese plant and technology contracts with China experienced in the eighties it was not until 1987 that they were surpassed by Japanese FDI to China in their importance as a mode of economic co-operation with China. Only then did the value of FDI realized in China exceeded the value of Japanese plant and technology contracts with China.

⁴⁰ Yokoi, Yoichi (1996:a): *Major Developments in Japan-China Economic Interdependence in 1990-1994*, in: Howe, Christopher (ed.) (1996): *China and Japan. History, Trends, and Prospects*, Oxford, pp. 147-154, here p. 151.

The transfer of technology that Japanese companies provided under the auspices of plant and technology contracts has undoubtedly made a very valuable contribution to the build-up of industrial capacities in the PR China and promoted its industrialization process.⁴¹ At the end of the eighties, for example, 80% of the total Chinese ethylene production capacity were realized by six ethylene plants provided by Japan by means of plant and technology contracts. But the substantial impact Japanese technology transfer had on the Chinese industrialization process is perhaps best exemplified by the Baoshan Iron and Steel Complex. Baoshan Iron and Steel is a nearly 1 : 1 replica of the Kimitsu Works of Nippon Steel Corporation, which at the time of the signing of the contracts in 1978 had been the most modern steel producer worldwide. Not only the equipment, including the basic oxygen technology (BOF), the continuous caster furnaces and computerized control systems was to 100% brought in from Japan, but also the arrangement of buildings was just exactly copied. Therefore, when Baoshan went into production in 1985, the Chinese steel industry had undergone an unprecedented time-jump. This rapid modernization would not have happened without Kimitsu's willingness to transfer its technological know-how and substantial financial assistance by the Japanese government, which provided subsidized loans amounting to about 1.5 billion US dollar.⁴²

The technology employed by Baoshan certainly did not comply with the comparative advantage of the Chinese economy at the time, as it would have demanded a much more labor-intensive and less capital-intensive technology. But it fitted into the framework of an industrialization strategy based on government-induced industrial upgrading against the economy's contemporary factor endowment.⁴³

⁴¹ For a detailed account of the widespread introduction of production lines for electronic and electric household appliances from Japan see: Marukawa, Tomoo (2001): WTO, Industrial Policy and China's Industrial Development, paper represented at the DIE-JETRO International Symposium "China enters WTO: Pursuing Symbiosis with the global Economy", Tokyo 17.01.2001.

⁴² Otsuka, Keijiro; Lie, Deqiang; Murakami, Naoki (1998): Industrial Reform in China. Past Performances and Future Prospects, Oxford. p. 118.

⁴³ If we follow the argumentation of Otsuka et al., this technology choice was inappropriate and cannot be understood as being modeled on the Japanese post-war industrialization strategy, as they come to the conclusion that Japan during that period followed a strategy of appropriate technology choice. Ibid., p. 119.

Impact of Japanese FDI on industrialization in China

Until the end of the seventies the concept of FDI as a means of stimulating economic development was completely alien to the Chinese economic system and its policy makers. And even far into the eighties the ideological heritage of striving for autonomy and the far-reaching rejection of cross-border economic exchange made many prominent policy makers regard foreign direct investment as an instrument of foreign capitalists wanting to exploit the country.⁴⁴

But finally, the perception prevailed that there was no alternative to the introduction of FDI. The experience of the previous three decades had shown that the desired modernization and efficiency stimulus could not be achieved solely via the acquisition of technology in the form of licenses and turnkey plants without the technology provider participating in the operation and the adaptation to the local conditions.⁴⁵ This led to the realization that it was essential for a successful implementation of necessary technology imports to allow companies with foreign capital participation, i.e. the simultaneous import of capital, capital goods, and human capital.

After moderate beginnings, China became a major destination for world FDI flows in the 1990s. Between 1995 and 1999 China absorbed 7.5% of global FDI flows, and about one quarter of all FDI flows directed towards developing countries. In the years 1993 to 1996 China was host to more than one tenth of global FDI.⁴⁶

In the following the potential impact of Japanese FDI on the Chinese industrialization process is analyzed, applying a three-step method. We start with some theoretical considerations of how FDI may have a positive impact on the host economy and its industrial development. We then turn to empirical evidence: What impact did overall FDI inflows have on the Chinese economy and its industry in particular. Against this background we finally analyze the role FDI of Japanese origin may have played in this process.

⁴⁴ Hsu, Robert C. (1991): *Economic Theories in China, 1979-1988*, Cambridge, pp. 134-36.

⁴⁵ See World Bank (1988): *China: External Trade and Capital. A World Bank Country Study*, Washington, p. 250.

⁴⁶ For more detailed data see table 5 below.

Impact of FDI on the host economy: theoretical considerations

The main positive impulses that may result from FDI inflows to the host country are:⁴⁷

- an expansion of domestic capital formation beyond the degree that could be financed with domestic savings;
- the provision of production and process technology formerly not known to the host country;
- the creation of jobs;
- the training of technical and managerial personnel;
- the introduction of modern management and organizational know-how;
- the possibility to use foreign invested enterprises (FIE) as a benchmark for local enterprises with respect to various parameters like capital and labor productivity, logistics, quality control etc.
- the promotion of the domestic export-industry plus the ensuing positive effects on the trade balance and the availability of foreign exchange;

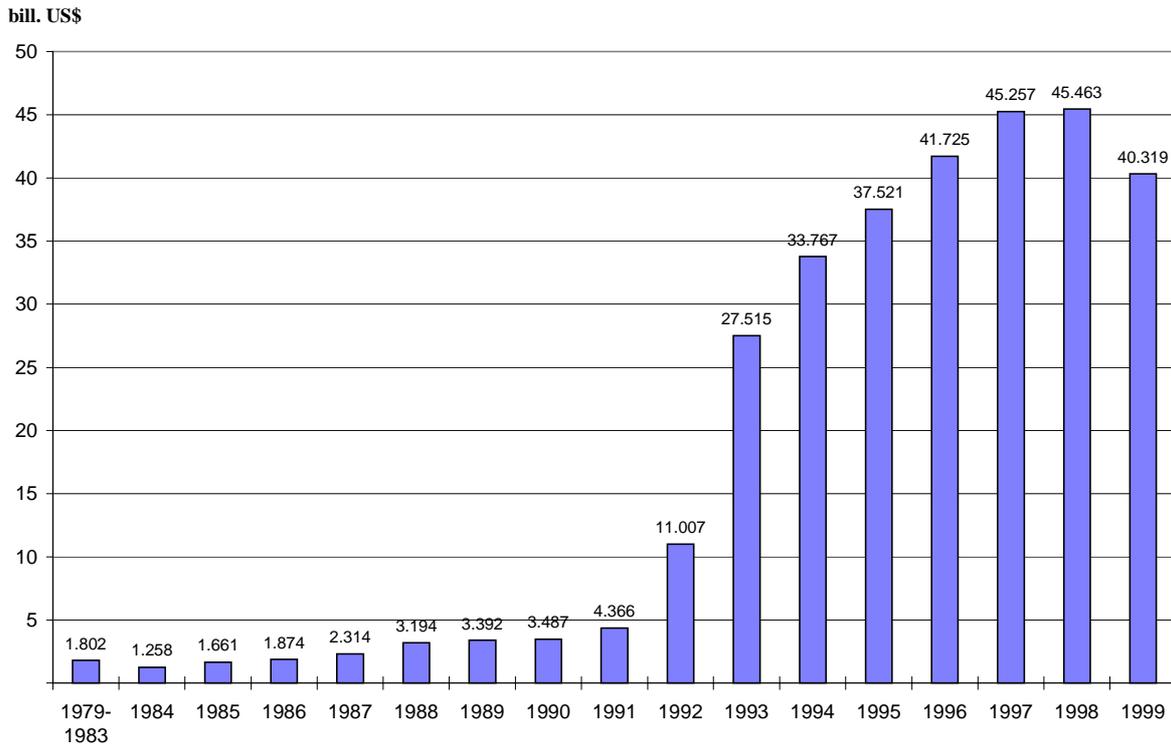
Actual impact of FDI on China

The initial legal and institutional basis for FDI directed towards China was established in the late 1970s and early 1980s. Until then there was virtually no FDI allowed to enter China. FDI inflows picked up slowly in the 1980s, with truly substantial amounts of FDI being recorded since the early 1990s. But it was not until 1992 that FDI overturned loans as the most important source of foreign capital.⁴⁸ An overview of the FDI inflows to China from 1979-1999 is presented in figure 2.

⁴⁷ Out of the large set of literature dealing with this issue see for example: Khan, Zafar Shah (1991): *Patterns of Foreign Direct Investment in China*, World Bank Discussion Papers 130, Washington, p. 2.

⁴⁸ From then on the relative importance of these two sources changed dramatically. In the mid-1990s, the volume of FDI absorbed by China was three times that of foreign loans. See: Guojia tongjiju [National Bureau of Statistics] (various): *Zhongguo tongji nianjian* [China Statistical Yearbook], Beijing.

Figure 2: Development of actually realized FDI in the PR China, 1979-1999



Data: Guojia tongjiju [National Bureau of Statistics] (2000) Zhongguo tongji nianjian 2000 [China Statistical Yearbook 2000], Beijing, S. 604.

Despite the massive inflow of FDI, these inflows have not contributed to domestic capital formation in China on a net basis.⁴⁹ FDI (and other forms of capital imports) have not been employed to expand the build-up of industrial capacity beyond the degree that could have been financed by domestic savings.

The major contribution of FDI inflows to China's economic development and industrialization has therefore been a reduction in the "technological gap".⁵⁰ In China, in the majority of cases, domestic and foreign investments cannot be substituted at will. Foreign direct investments are linked to the creation of a considerably more modern capital stock, which in addition is administered by superior management techniques, reducing X-inefficiencies and bringing the new technologies to full use. Over time this constellation brings about an improvement of human capital, as Chinese engineers and managers are trained in modern technology

⁴⁹ Lardy, Nicholas R. (1995): The Role of Foreign Trade and Investment in China's Economic Transformation, in: The China Quarterly, Vol. 144, pp. 1065-1082, here p. 1073; Taube, Markus (2001): Fit für das nächste Jahrhundert? Die Wachstumsfaktoren der chinesischen Volkswirtschaft auf dem Prüfstand, in: Schubert, Gunter (2001): China – Perspektiven für das 21. Jahrhundert, Hamburg (forthcoming).

⁵⁰ For a more detailed discussion of the impact of FDI on China see: See also: Khan (1991), pp. 13-15; and:

and management practices.

FIE have created a substantial number of jobs. At the turn of the century the total number of people employed by FIE was reported to have been in excess of 20 million.⁵¹ This figure should not be interpreted as meaning that FIE have created 20 million new jobs on a net basis. FIE are responsible for streamlining most industries, leading to the expulsion of a considerable number of workers. But in most cases, the loss of jobs only meant the transformation of hidden unemployment into open unemployment, contributing to a more transparent economic setting.

All in all it can be assumed that FIE did have a positive effect on the labor market, although the effect has been quite different, depending on the time period and the various segments of the labor market. FIE have certainly eased the strains on the market for unskilled labor. New ventures and the growth impulses originating from FIE have created new jobs (on a net basis) for an abundant pool of workers. With respect to qualified labor, FIE have (especially in the eighties) competed with local companies for scarce (human) resources and, due to their ability to pay higher wages and provide superior working conditions, have been able to crowd out local competitors. It has been only after a couple of years that, mostly by means of on-the-job training, FIE have over time also made a – considerable – contribution to the enlargement of the pool of qualified labor in the PR China.

One further important growth impulse of FIE for the Chinese economy stems from the competitive pressure these companies exert on local enterprises. Faced with the superior technology and management of FIEs, local enterprises are forced to improve their operations in order to maintain their place in the market. Chinese enterprises are known to have studied carefully management practices of their Joint Venture partners and foreign competitors (see also the following chapter for further details).⁵²

Lardy (1995), pp. 1073-1075.

⁵¹ Xie Shusheng (2000): Nuli zuohao xiehui gonzuo wie liyong waizi fazhan jingji fuwu [Strive to make good work in the association and serve the utilization of foreign capital and economic development], in: Zhongguo waizi, 2/2000, pp. 7-9.

⁵² This competitive pressure has not always showed itself, as in various industries artificial barriers have been erected protecting Chinese enterprises. Especially the strong political bias in favor of export-oriented FIE has until today led to a strong segregation of the markets local enterprises and FIEs operate in. China's entry to

In addition, FDI has contributed greatly to the development of an export-oriented industry in China. Starting from a minuscule share in China's total exports, FIE commanded more than 40% of China's exports during the later nineties. This way they have contributed to the development of a growth-inducing industrial structure and improved the availability of foreign exchange in China.

Export-oriented development strategies are generally regarded as growth-enhancing and superior to policies that rely on import substitution.⁵³ But it should be taken into account that the strong reliance on export processing as the main means of exports by FIE in China has also led to a low intensity of backward linkages and has thereby reduced the spill-over effects of technological innovations introduced by FDI to other areas of the economy.

Impact of Japanese FDI on the Chinese industrialization process

In the following we will try to isolate the impact of Japanese FDI on the Chinese industrialization process taking as the basis the general developments described above. In this analysis it seems justifiable to differentiate between two stages that roughly correspond with the eighties and nineties, as in these two periods the investments of Japanese companies show distinct differences.⁵⁴

Not only was the absolute volume of Japanese FDI directed towards the PR China throughout the eighties extremely small, but it was in most cases not directed towards manufacturing. Especially during the first half of the eighties, by far the largest part of Japanese FDI was in particular directed towards services, hotels and leasing companies.⁵⁵ Up to 1987, Japanese investments in the manufacturing sector amounted to only one sixth to one third of those in the services. The above considerations lead us to assume that the contribution of Japanese FDI to the Chinese industrialization process has been rather minor during that period, not the

the WTO is expected to change this situation substantially.

⁵³ Feder, Gershon (1983): On Exports and Economic Growth, in: *Journal of Development Economics*, Vol. 12, No. 1-2, pp. 59-73, here pp. 60-61.

⁵⁴ Cheung, Chiwai; Wong, Kwan-yiu (2000): Japanese Investment in China: A Global Perspective, in: Li, Si-ming; Tang, Wing-shing (ed.) (2000): *China's regions, Policy and Economy: A study of Spatial Transformation in the Post-Reform Era*, Hongkong, pp. 97-132, here p. 115.

⁵⁵ Ono, Shuichi (1993): *Sino-Japanese Economic Relationships. Trade, Direct Investment and Future Strategy*, World Bank Discussion Papers No. 146, Washington, p. 19.

least, because from the Chinese perspective “Japanese business was more interested in easy-to-earn service and other non-manufacturing industry and reluctant to transfer technology through opening production factories.”⁵⁶

This feature can be explained to some extent by historical developments. In the period under discussion, growing trade frictions with the USA forced Japanese companies to shift production plants to the USA. With resources being tied up by this move, a simultaneous, strong commitment in China was out of the question. But the initial low key engagement of Japanese companies in the Chinese market may also be understood as being the first stage of a long-term strategy to enter the Chinese market. In the first years of China’s reforms and opening to the world market, the *sogo shosha* acted as a “vanguard”. They invested in information networks, explored potential areas for more intensive forms of engagement and tried to gain experience in doing business as dictated by local circumstances.⁵⁷ At the next stage, the various *keiretsu*’s construction, financial services and logistics companies entered the Chinese market and prepared the physical and business infrastructure, until finally transplants were established in the manufacturing industries.⁵⁸

This pattern of a multi-stage market entry strategy fits perfectly well into the changes in volume and composition of Japanese FDI during the 90s.⁵⁹ The volume of Japanese FDI flows to China increased substantially and was accompanied by dramatic changes in their sectoral composition. As shown in tables 3 and 4, in the second half of the nineties about three quarters of Japanese FDI were directed towards manufacturing.⁶⁰

⁵⁶ Ono (1993), p. 20. As Ono notes, the absence of Japanese manufacturing companies has to be seen from the perspective of growing trade frictions with the USA, which just in the period under discussion forced these companies to shift production plants to the USA. With resources tied up by this move a simultaneous, strong commitment in China was out of the question.

⁵⁷ Campbell, Nigel (1994): Japan’s success in China, in: Schütte, Hellmut (ed.) (1994): The global competitiveness of the Asian Firm, London- New York, p. 32; Hilpert, Hanns Günther (2001): The Strategies of the Japanese General Trading Houses in the China Market, paper presented at the Conference “Japan and China Economic Relations in Transition”, Tokyo 18.-19.01.2001, p. 2.

⁵⁸ Bassino, Jean- Pascal; Teboul, Rene (1999): The Dynamics and Spatial Distribution of Japanese Investment in China, in: Dzever, Sam; Jaussaud, Jaques (ed.) (1999): China and India: Economic Performance and Business Strategies of Firms in the mid- 1990s, Basingstoke- London, pp. 73-94.

⁵⁹ Further important elements for the increase of Japanese FDI in China has been the improvement of the legal system and the publication of a comprehensive set of laws and regulations governing the activities of FIE during the late eighties and early nineties as well as the signing of the Japan-China Investment Protection Pact in August 1988. The positive impact of these new institutions on the risk perception of potential Japanese investors, however, was temporarily neutralized by the Tian’anmen incident in 1989.

⁶⁰ For a Case Study of Matsushita Electric Industrial Corporation in China see: Cheung, Chiwai; Wong, Kwanyiu (2000): Japanese Investment in China: A Glo-cal Perspective, in: Li, Si-ming; Tang, Wing-shing (ed.)

Table 3: Sectoral Distribution of Japanese FDI in China, 1989-1999 (Value)

	1989-1990		1991-1993		1994-1996		1997-1999	
	value (bn.)	% of total						
Food	3,1	2,82	14	3,4	48,1	4,89	25,2	5,43
Textile	4,6	4,19	51,8	12,57	101,6	10,34	35,2	7,59
Lumber&Pulp	0,4	0,36	5,4	1,31	12,2	1,24	5	1,08
Chemical	3,2	2,91	15	3,64	34,2	3,48	41,4	8,92
Metal	2,8	2,55	14,5	3,52	71,4	7,26	32,2	6,94
Machinery	13,1	11,93	36,8	8,93	91,9	9,35	39	8,41
Electrical	14	12,75	79,9	19,38	186,5	18,98	75,5	16,27
Transport	0,4	0,36	15,1	3,66	88,3	8,98	40,4	8,71
others	9,7	8,83	51,8	12,57	99,8	10,15	55	11,86
Manufacturing Total	51,3	46,72	284,5	69,02	734	74,69	348,9	75,21
Farming&Forestry	0,2	0,18	1,5	0,36	2	0,2	0	0
Fishery	1,4	1,28	2,7	0,66	2,1	0,21	0,1	0,02
Mining	3,5	3,19	0,4	0,1	1,3	0,13	0,1	0,02
Construction	1,6	1,46	1,6	0,39	23,3	2,37	16,3	3,51
Trade	1,6	1,46	10,4	2,52	55,1	5,61	24	5,17
Finance&Insurance	1,7	1,55	2,7	0,66	2,3	0,23	3,9	0,84
Service	43,4	39,53	68,1	16,52	67,5	6,87	37,8	8,15
Transportation	2,1	1,91	6,5	1,58	9,3	0,95	5,9	1,27
Real Estate	2,5	2,28	15,4	3,74	60,2	6,12	17,9	3,86
others	0	0	0	0	0	0	0	0
Non-Manufact. Total	58	52,82	109,3	26,52	223,1	22,7	106	22,84
Branches	0,5	0,46	18,5	4,49	25,6	2,6	9	1,94
Total	109,8	100	412,2	100	982,7	100	463,9	100

Source: <http://www.mof.go.jp>**Table 4: Sectoral Distribution of Japanese FDI in China, 1989-1999 (Cases)**

	1989-1990		1991-1993		1994-1996		1997-1999	
	cases	% of total	cases	% of total	cases	% of total	cases	% of total
Food	14	4,81	85	5,92	85	4,8	21	4,71
Textile	63	21,65	521	36,28	650	36,7	69	15,48
Lumber&Pulp	6	2,06	26	1,81	23	1,3	4	0,9
Chemical	17	5,84	50	3,48	69	3,9	37	8,29
Metal	13	4,47	53	3,69	128	7,23	34	7,62
Machinery	12	4,12	70	4,87	113	6,38	29	6,5
Electrical	25	8,59	113	7,87	189	10,67	44	9,86
Transport	4	1,37	31	2,16	88	4,97	27	6,05
others	44	15,12	189	13,16	191	10,78	60	13,45
Manufacturing Total	198	68,04	1138	79,25	1536	86,73	325	72,86
Farming&Forestry	5	1,72	13	0,91	3	0,17	0	0
Fishery	7	2,41	17	1,18	5	0,28	2	0,45
Mining	8	2,75	3	0,21	5	0,28	1	0,22
Construction	2	0,69	10	0,7	20	1,13	10	2,24
Trade	12	4,12	69	4,81	53	2,99	34	7,62
Finance&Insurance	2	0,69	2	0,14	1	0,06	1	0,22
Service	43	14,78	123	8,57	75	4,23	34	7,62
Transportation	4	1,37	24	1,67	28	1,58	11	2,47
Real Estate	8	2,75	22	1,53	25	1,41	23	5,16
others	0	0	0	0	0	0	0	0
Non-Manufacturing Total	91	31,27	283	19,71	215	12,14	116	26
Branches	2	0,69	15	1,04	20	1,13	5	1,12
Total	291	100	1436	100	1771	100	446	100

Source: <http://www.mof.go.jp>

(2000): China's regions, Policy and Economy: A study of Spatial Transformation in the Post-Reform Era, Hongkong, pp. 97-132, here pp. 118-125.

The development of FDI flows from Japan to China during the years 1989 to 1999 is depicted in table 5. A conspicuous feature are the extreme differences between the data cited from the official Chinese and Japanese sources. While both sources are known to be deficient, the Chinese data are expected to give a better picture of the reality than the Japanese. The Chinese data are thought to over-estimate the FDI inflows to China as (a) a significant share of FDI inflows was transferred “in kind”, i.e. in form of equipment, capital goods, technology etc., which is often over-priced; (b) a none too trivial amount of FDI constitutes money that Chinese enterprises have (illegally) transferred abroad, in order to bring it back in form of FDI. The reason for this “round-tripping” is that FIE enjoy special treatment with respect to taxation, foreign trade permits etc. In contrast to this bias towards over-estimation, the Japanese statistics have an institutionalized downward bias, as only FDI outflows in excess of 3 million Japanese Yen are covered. This point is especially unsuitable for the documentation of Japanese FDI in China as the bulk of these investments are done by small and medium sized enterprises with a rather small average volume per project. A further negative point of the Japanese statistics is that they are hardly comparable to other data, as they are published for the Japanese fiscal (April – March) and not the calendar year.

Table 5: The PR China as a host country for world and Japanese FDI

	<i>World FDI inflows to the PRC (million US\$)</i>	<i>China's share in World FDI (in %)</i>	<i>Japanese FDI to China</i>		<i>Japanese FDI to China as percentage of total FDI inflows to China</i>	<i>Japanese FDI to China as percentage of total FDI outflows from Japan</i>
			<i>According to PRC (inflows, in mn. US\$)</i>	<i>According to Japan (outflows from Japan, in mn. US\$)</i>		
1989	3,393	1,73	356.340	425.486	10,50	0,65
1990	3,487	1,68	503.380	352.925	14,43	0,61
1991	4,366	2,69	609.520	584.218	13,96	1,38
1992	11,156	6,34	748.270	1,089.976	6,71	3,12
1993	27,515	12,54	1,361.370	1,757.194	4,95	4,71
1994	33,787	13,20	2,086.160	2,625.245	6,17	6,27
1995	35,849	10,80	3,212.470	4,589.798	8,96	8,71
1996	40,180	10,64	3,692.140	2,599.265	9,19	5,23
1997	44,236	9,35	4,326.470	2,014.876	9,78	3,68
1998	43,751	6,43	3,400.360	1,041.253	7,77	2,61
1999	40,400	4,67	2,973.080	735.669	7,36	1,13

The Japanese sources provide all data in Japanese Yen. In order to make them comparable, they have been transformed in US-\$, using the annual average exchange rates as provided by the IMF.

Sources: Guojia tongjiju [National Bureau of Statistics] (various): Zhongguo tongji nianjian [China Statistical Yearbook], Beijing, UNCTAD (various): World Investment Report, Geneva; <http://www.mof.go.jp>.

Based on the Chinese data, the contribution of Japanese companies to China's overall FDI inflows is quite impressive.⁶¹ Japanese companies provided 8% of all FDI China received during 1989 to 1999.⁶² We can therefore assume that by their volume alone the impact Japanese FDI exerted on the Chinese industrialization process must have been very substantial during that period. This applies especially to the build-up of production capacities and the creation of jobs.

⁶¹ The reasons for the decrease of Japanese FDI in China from 1996 are many-fold. The most important factors were: the continuous depressed economic climate in Japan, the unsatisfactory performance of many Japanese ventures in China, the deteriorating investment conditions in China (i.e. dismantling of special treatments and concessions for FIE), the marked improvement of investment conditions in Europe and Northern America, and finally the detrimental effects of the onslaught of the Asian crisis in 1997.

⁶² Seen from the Japanese perspective China is far less important as a destination for Japanese FDI. Despite its geographical vicinity, China gathered only about 3% of Japan's (statistically registered) FDI outflows. This phenomenon is not as strange as it may seem at first sight. Like the other industrial economies in the European Union and Northern America, the bulk of Japan's FDI outflows are directed towards the triad, i.e. other industrialized economies.

With respect to their technology content, the Japanese FDI are probably less “modern” than FDI from other industrialized economies. Due to the dominant role small and medium sized enterprises command in Japanese FDI in China,⁶³ the technology content on average is comparatively low. But many smaller Japanese enterprises moving to China are known to give up their whole production facilities in Japan, while remaining firmly integrated in their supplier-customer networks. Therefore, the Chinese ventures are characterized by a high export content, while permanent industrial upgrading is assured.

While the technology content of Japanese FDI in China may have been comparatively minor, Japanese enterprises have certainly acted as the single most important role model with respect to management systems. Management concepts developed in Japan like the “Total Quality Control” drive, *kaizen*, *kanban* etc., have been received with much interest by Chinese companies. This phenomenon will be treated in more detail in the following chapter.

While the discussion above has dealt with national data, it may be useful to differentiate between various regions in China. It would be possible that Japanese FDI are concentrated in certain areas, where they exert a strong influence on local industrialization. Such a phenomenon could not be detected if the analysis would be based on aggregated national data. As a matter of fact, a concentration of Japanese FDI can be observed in the coastal provinces. An above average share is detectable in the provinces Shandong, Liaoning and Jilin in North-East China, which are profiting from their geographical vicinity to Japan. This is a phenomenon that constitutes no substantial deviation from the overall pattern of FDI distribution in China. With the slight exception of the north-eastern provinces the regional distribution of Japanese FDI in China follows the same pattern as overall FDI inflows,⁶⁴ i.e. after emphasizing export-oriented ventures in southern China during the early nineties, the focus of interest has now moved towards ventures directed at the local market and stationed in the eastern and north-eastern provinces.⁶⁵ In an even more disaggregated analysis, however, the city of Dalian, a major industrial center located on the coast of Liaoning province, can be identified as a loca-

⁶³ The dominance of small and medium-sized enterprises is in contrast to the composition of FDI originating in Europe and Northern America, where large enterprises with comparatively high average investments are dominant.

⁶⁴ Boillot, Jean-Joseph; Michelon, Nicholas (2000): The New Economic Geography of Greater China, in: China Perspectives, Vol. 30 (July-August 2000), pp. 18-30, here p. 25.

⁶⁵ Konomoto, Shingo (1998): Industrial Policy in China and the Strategies of Japanese Transplants, in: NRI Quarterly, Vol. 7, No. 3, pp. 36-47.

tion the economic development and industrialization of which has been especially influenced by Japanese FDI. At certain periods FDI originating in Japan has commanded a share of nearly 50% of total FDI actually used in the city. More than 10 % of all Japanese enterprises with operations in China are said in one form or another to be present in Dalian.⁶⁶

One potential channel by which Japanese FDI might have exerted an impact on the industrial development in China have been China-directed FDI originating from companies in South East Asia which had been founded as Joint Ventures with Japanese companies and which employ their technologies and organizational structures. It is impossible to quantify the impact that might have been exerted on the Chinese industrialization process via this indirect mechanism, as investments by Japanese corporations conducting their FDI in China via their transplants in South-East Asia do not enter the statistics under the label “Japan”. But as such a time-spanning transmission of technology and production lines constitutes an integrated element of the Japan-directed “flying geese” industrialization process of (South) East Asia, we may conclude that it has not been without influence. We assume that by this means technologies and production processes have been transferred into the PR China which were originally developed in Japan. But while in Japan they are no longer in use and therefore cannot be transferred directly from Japan to China, they are now introduced to China via the South-East Asian economies (including Taiwan) – just at a point in time, when in China the corresponding conditions (factor proportions) have eventually been established.

The pattern of indirect transmission of Japanese technology and industrial organization has been especially widespread with regard to Taiwanese companies. Many Taiwanese enterprises that had originally received technology and know-how from Japanese partners, having adapted this technological and organizational know-how to the Chinese enterprise culture, from 1985 have transferred this know-how to their partners and transplants in mainland China. One such case having been documented in detail is the Taiwanese China Motor Corporation Ltd. (CMC) which is now transferring Mitsubishi technology to China (see box 1).⁶⁷

⁶⁶ Information by Mitsubishi Research Institute and: Whitla, Paul; Davies, Howard (1996): Japanese and Overseas Chinese Investment in the Chinese Economic Area, in: JETRO China Newsletter, No. 125, pp. 20-24, here p. 22.

⁶⁷ For a detailed case-study see: Chen, Cheng-Cherng (1999): Taiwanese Investment in China – Don-Nan Automobile Company, in: Taube, Markus; Gälli, Anton (1999): Chinas Wirtschaft im Wandel. Aktuelle Aspekte und Probleme, ifo forschungsberichte der abteilung entwicklungsländer 88, München-Bonn-London, pp. 189-223; and: Chen, Cheng-Cherng (2000): Taiwanese Technology Transfer to China – The Automobile

Box 1: Indirect transfer of Japanese technology: the case of China Motor Corporation

CMC was founded in 1969 and in 1970 signed a technical licensing agreement with Mitsubishi Motor Co. Since then the company has been producing a variety of light commercial cars and sedans. The close business relations between CMC and Mitsubishi led, in 1985, to a participation of Mitsubishi Motor Co. (19%) and Mitsubishi Trading Co. (6%) at CMC's equity, that way transforming CMC into a Japanese-Taiwanese Joint Venture. In 1995, CMC has formed a Joint Venture with the mainland Chinese Fuzhou Motors Co.^a This Joint Venture, Fujian Southeast Motor Co., is producing two light commercial cars: the Delica DN 6470 and the Freeca, both of which had already been manufactured by CMC for a couple of years in Taiwan, based on Mitsubishi technology. The technology transfer from CMC to Fujian Southeast Motor Co. is administered by a technical agreement (license contract) covering the provision of manufacturing equipment, technical and manufacturing information and training.

In addition to this comprehensive transfer of knowledge by CMC, there are also 30 Taiwanese suppliers that went to mainland China together with CMC and have built production sites (wholly foreign-owned or Joint Ventures with mainland Chinese suppliers) in close vicinity to the Fujian Southeast Motor Co.^b These companies are transferring to China additional know-how in the areas of engineering (technical drawings, internal standards, material sheets, operation equipment, operation schedules, working instructions, quality control, manufacturing control) and management (product management, administration, personnel training) which have their roots in know-how originally transferred to Taiwan by Japanese companies.

^a Due to Taiwanese regulations CMC is not allowed to invest large amounts of capital in mainland China. The company therefore chose to first establish the Hwa-wei Co. registered in the Virgin Islands, UK. Hwa-wei in turn holds a 50% equity share of the Fujian Southeast Motor Co. and acts as CMC's representative.

^b Later on another 31 suppliers followed CMC to mainland China, which are not included in the inner-core of CMC's car-manufacturer part-supplier system.

Another feature of the Japanese influence on Chinese industrialization lying beyond easily available statistical proof are third country co-operations through which Japanese companies function as catalyst for the engagement of foreign companies in China, which would not be willing to enter the Chinese market without an experienced partner. By providing hands-on assistance when entering the Chinese market and operating in it, Japanese companies mobilize (third country) technologies and productions that would otherwise not have been transferred to China.⁶⁸

Japanese governance structures and business concepts as a model for Chinese corporations

Corporate governance structures in China are mostly in the tradition of either the former state-owned enterprises (SOE) or the traditional family enterprise. The so called “township-village enterprises”, which have been the object of intense academic debate, are not really a type of their own, but are rather constituting a group of very heterogeneous enterprises scattered along the whole range between the two extremes of the SOE and the family enterprise. These corporate structures have evolved organically over time and show no close relation to Japanese models. As the idea of modeling Chinese corporations according to the example of the Korean *chaebol*, which themselves were modeled along the lines of Japan’s pre-war *zaibatsu*, was discredited by the Asian crisis and efforts to implement a Japan-inspired main-bank system had to be given up because the Chinese banking system proved to be too frail, we may conclude that the Japanese model of corporate governance has not exerted a strong influence on China’s corporations.

One major exception may be the concept of comprehensive trading houses as exemplified by the Japanese *sogo shosha*. In the above mentioned drive to establish large conglomerates and trading houses, which are expected to be able to compete successfully in the world market, the first foreign trade joint venture of China, Dongling Trading Corporation, was set up in Shanghai in 1997. The idea to take the Japanese *sogo shosha* as a model for this venture is

⁶⁸ Some prominent examples of successful third country co-operation projects with Japanese companies in China are: Freudenberg & Co. Kg with NOK Corp.; Heraeus GmbH with Shin-Etsu-Chemicals; Linde AG with C. Itoh; Robert Bosch GmbH with Zexel Corp. etc. For a detailed account of third country co-operations by Japanese companies see: Hilpert, Hanns Günther; Taube, Markus (1997): *Deutsch-japanische Unternehmenskooperationen in Drittmärkten, ifo studien zur japanforschung 12*, Munich.

reflected in the participation of Mitsubishi Shôji which commands the second largest equity share (27%).⁶⁹

In comparison to the sphere of corporate governance the impact of Japanese companies on the evolution of business concepts in China and the way Chinese companies adapted to the world market has been very substantial. China's larger corporations are known to have closely studied and adapted Japanese innovations in the fields of industrial organization and management.⁷⁰ One example of Japanese influence on industrial organization in China has been the introduction of the Toyota Production System to the Chinese automobile industry as exemplified by First Automotive Works, who were the first to adopt it (see box 2).

⁶⁹ The other joint venture partners are Orient International Co. Ltd. of China (41%), Continental Grain Co. of the US (22%) and Shanghai Foreign Trade Corporation of China (10%). Dongling Trading Corporation has been granted the licenses for the domestic purchase of exported commodities, for the internal retail of imported commodities, for all international trade including compensation trade (with the exception of "strategic"-goods like fertilizer and steel), for the import and the export of technology and for processing and assembling of imported materials and parts. The company owns its own foreign exchange accounts and is authorized to carry out its own customs clearance. Although Dongling Trading has been established in order to boost China's industrial exports, its major business is presently the import of consumer goods. Today, Dongling Trading is already one of China's major corporations. Hilpert, Hanns Günther (2001): The Strategies of Japanese general Trading Houses in the China Market, paper presented at the conference "Japan and China Economic Relations in Transition", Tokyo 18.-19.01.2001.

⁷⁰ A comprehensive study of this phenomenon has been presented by Hao, Yanshu (1999): Chugoku no keizai hatten to nihon teki seisan sisutemu [China's economic development and the Japanese production system], Tokyo.

Box 2: Adoption of Toyota Production System: China's Automotive Industry

Until then, employing a Fordian production system based on a highly vertical organized production process, First Automotive Works (*Diyi qiche jituan gongsi*, abbr. FAW) started to gather information about alternative systems in the late seventies: study groups were sent abroad (mainly Japan) and Japanese top-management personnel invited to visit own production sites. In the early eighties elements of Toyota-style process-management were eventually introduced in the FAW plants, greatly improving their productivity. These included measures that have become known under the keywords *kaizen* and *kanban*, like just-in-time-production, multi-machine-handling, process synchronization, reduction of in-process stock, process-integrated quality control, etc.

The positive results of this new organization of production processes were quickly propagated to a wider public by various publications and workshops. But still, a comprehensive adoption to the Toyota Production System was not implemented. This was realized only after the establishing of a new transmission plant in the latter half of the eighties, which, under the guidance of the Japanese Hino Motor Company (i.e. a member of the Toyota group), established an integrated Toyota-style production system.^a

^a This paragraph draws on: Lee, Chunli (2000): Technology Transfer of the Toyota Production System in China, paper presented at the 19th Annual Hosei University International Conference "Japanese Foreign Direct Investment and Structural Change in the East Asian Industrial System: Global Restructuring for the 21st Century", 30th October – 1st November 2000, Tokyo.

Seen from a more general perspective, the input by Japanese companies has been of major importance for the genesis of some Chinese companies that are by now major players in the Chinese market. One case in point is the Stone Group (*Sitong jituan*). The corporation is specializing in electronic products and, in particular, computer-related products. Founded in 1984 as a "people-run collective enterprise" (*minban jiti qiye*) with nothing but ideals and a well-developed *guanxi* network, the Stone Group today belongs to the ten largest high-tech corporations of China. This is an astonishing development and would not have been possible without Mitsui, which provided the hardware on which to run Stone developed software. After less than two years of low key co-operation Mitsui and Stone formed a long-term alliance.

While Mitsui hoped this move would pave the way for its entry into the Chinese market, the real winner was Stone. With the organizational backing and its abundant resources Stone was now able to expand its activities and transform itself from a local retailer to a national wholesaler and even to expand to international markets.⁷¹

Conclusion

The analysis presented above has tried to present an overview about the potential channels by which Japan might have exerted influence on the Chinese industrialization process and its actual impact.

In conclusion, we may state that Japan certainly did play an important role in China's industrialization process over the last two decades. The Japanese influence has been exerted over various channels, none of which played a dominating role just by itself. Japan's impact on China's industrialization has rather to be understood as the combined effect of various influences.

The PR China has not copied the Japanese model of industrial policy but has selectively chosen certain elements and has tried to integrate them in an eclectic approach of systemic transformation and industrial upgrading.

While the high speed of the Chinese catching-up process is the result of an enormous transfer of resources by numerous private and governmental actors from East- and South-East Asia, Europe and Northern America as well as supra-national organizations, Japan certainly has made a decisive contribution to this process. By means of ODA, Plant and Technology contracts, and in the nineties FDI, there has been a continuous transfer of modern technology and know-how from Japan to China, which has enabled the Chinese economy to significantly reduce the development gap to the industrialized economies. In addition, Japanese-style management concepts have been widely accepted by Chinese companies.

⁷¹ Kennedy, Scott (1997): The Stone Group: State Client or Market Pathbreaker?, in: *The China Quarterly*, Vol. 152, pp. 743-777, here pp. 753-756.

Bibliography

Bassino, Jean-Pascal; Teboul, Rene (1999): The Dynamics and Spatial Distribution of Japanese Investment in China, in: Dzever, Sam; Jaussaud, Jaques (ed.) (1999): China and India: Economic performance and Business Strategies of Firms in the mid-1990s, Basingstoke-London, pp. 73-94.

Boillot, Jean-Joseph; Michelon, Nicholas (2000): The New Economic Geography of Greater China, in: China Perspectives, Vol. 30 (July-August 2000), pp. 18-30.

Campbell, Nigel (1994): Japan's success in China, in: Schütte, Hellmut (ed.) 1994): The global competitiveness of the Asian Firm, London-New York.

Chen, Cheng-Cherng (1999): Taiwanese Investment in China – Don-Nan Automobile Company, in: Taube, Markus; Gälli, Anton (1999): Chinas Wirtschaft im Wandel. Aktuelle Aspekte und Probleme, ifo forschungsberichte der abteilung entwicklungsländer 88, München-Bonn-London, pp. 189-223.

Chen, Cheng-Cherng (2000): Taiwanese Technology Transfer to China – The Automobile Industry as an Example, paper presented at the 19th Annual Hosei University International Conference “Japanese Foreign Direct Investment and Structural Change in the East Asian Industrial System: Global Restructuring for the 21st Century”, 30th October – 1st November 2000, Tokyo.

Cheung, Chiwai; Wong, Kwan-yiu (2000): Japanese Investment in China: A Glo-cal Perspective, in: Li, Si-ming; Tang, Wing-shing (ed.) (2000): China`s regions, Policy and Economy: A study of Spatial Transformation in the Post-Reform Era, Hongkong, pp. 97-132.

Feder, Gershon (1983): On Exports and Economic Growth, in: Journal of Development Economics, Vol. 12, No. 1-2, pp. 59-73.

Guojia tongjiju [National Bureau of Statistics] (various): Zhongguo tongji nianjian [China Statistical Yearbook], Beijing.

Goydke, Tim (1999): The Japanese Development Strategy as a Model for Vietnam? Lessons from the Systemic Change in Japan after World War II, Duisburg Working Papers on East Asian Economic Studies, No.46/1999, Duisburg.

Hao, Yanshu (1999): Chugoku no keizai hatten to nihon teki seisan sisutemu [China's economic development and the Japanese production system], Tokyo.

Hilpert, Hanns Günther (1997): Japan und China im ostasiatischen Wirtschaftsraum: Komplementaritäten und Konflikte, in: Taube, Markus; Gälli, Anton (1997): Chinas Wirtschaft im Wandel. Aktuelle Aspekte und Probleme, ifo forschungsberichte der abteilung entwicklungs-länder 88, München-Bonn-London, pp. 29-66.

Hilpert, Hanns Günther; Taube, Markus (1997): Deutsch-japanische Unternehmenskooperationen in Drittmärkten, ifo studien zur japanforschung 12, Munich.

Hilpert, Hanns Günther (2001): The Strategies of the Japanese General Trading Houses in the China Market, paper presented at the Conference "Japan and China Economic Relations in Transition", Tokyo, 18./19. January 2001.

Hsu, Robert C. (1991): Economic theories in China, 1979-1988, Cambridge et al.

ifo Institute for Economic Research; Sakura Institute of Research (1997): A Comparative Analysis of Japanese and German Economic Success, Tokyo et al.

Jackson, Steven F. (1996): Lessons from a Neighbour: China's Japan-Watching Community, in: Howe, Christopher (ed.) (1996): China and Japan. History, Trends, and Prospects, Oxford, pp. 155-178.

Jin, Xide (2000): Riben zhengfu kaifa yuanzu [Japan's Official Development Assistance], Beijing.

Khan, Zafar Shah (1991): Patterns of Foreign Direct Investment in China, World Bank Discussion Papers 130, Washington.

Kennedy, Scott (1997): The Stone Group: State Client or Market Pathbreaker?, in: China Quarterly, Vol. 152, pp. 746-777.

Komiya, Ryutaro (1986): Industrial Policy in Japan, in: Japanese Economic Studies, Vol. 14, No. 4, pp. 52-81.

Konomoto, Shingo (1998): Industrial Policy in China and the Strategies of Japanese Transplants, in: NRI Quarterly, Vol. 7, No. 3, pp. 36-47.

Lardy, Nicholas R. (1987): Economic recovery and the 1st five-year plan, in: The Cambridge History of China, Vol. 14, Part 1, Cambridge, pp. 144-184.

Lardy, Nicholas R. (1995): The Role of Foreign Trade and Investment in China's Economic Transformation, in: The China Quarterly, Vol. 144, pp. 1065-1082.

Lee, Chunli (2000): Technology Transfer of the Toyota Production System in China, paper presented at the 19th Annual Hosei University International Conference "Japanese Foreign Direct Investment and Structural Change in the East Asian Industrial System: Global Restructuring for the 21st Century", 30th October – 1st November 2000, Tokyo.

Lo, Dic (1997): Market and Institutional regulation in Chinese Industrialization, 1978-1994, Basingstoke.

Malik, Rashid (1997): Chinese Entrepreneurs in the Economic Development of China, Westport-London.

Marukawa, Tomoo (2001): WTO, Industrial Policy and China's Industrial development, paper presented at the DIE-JETRO International Symposium "China enters WTO: Pursuing Symbiosis with the Global Economy", Tokyo 17.01.2001.

Meyer, Michael (2001): Wirtschaftspolitik und State-Building. Die nationalchinesische Industriepolitik in historischer Perspektive, in: Asien, Vol. 80 (Juli 2001), pp. 42-63.

Naughton, Barry (1997): Growing out of the plan. Chinese economic reform, 1978-1993, Cambridge.

Naughton, Barry (2001): Changing Horse in Mid-Stream? Explaining Changing Political Economy regimes in China, paper presented at the Conference "Japan and China Economic Relations in Transition", 18./19.January 2001.

Ohno, Ken'ichi (1998): Overview: creating the market economy, in: Ohno, Ken'ichi; Ohno, Izumi (1998) (ed.): Japanese Views on Economic Development. Diverse paths to the market, Routledge Studies in the Growth Economies of Asia 15, London – New York, pp. 1-50.

Ono, Shuichi (1993): Sino-Japanese Economic Relationships. Trade, Direct Investment and Future Strategy, World Bank Discussion Papers No. 146, Washington.

Otsuka, Keijiro; Lie, Deqiang; Murakami, Naoki (1998): Industrial Reform in China. Past Performances and Future Prospects, Oxford.

Pascha, Werner (1997): Industrial Policy in Japan and the Policy Choices for Central and Eastern European Countries – A Commentary on Some Controversial Issues, Duisburg Working Papers on East Asian Economic Studies, No. 37/1997, Duisburg.

Pascha, Werner (1997): Nachholende wirtschaftliche Entwicklung in Japan und Südkorea: Die Rolle der Industriepolitik, in: List Forum für Wirtschafts- und Finanzpolitik, Vol. 23, No. 2, pp. 192-213.

Rowley, Anthony (1992): To Russia with Pride. Japan offers economic model, in: Far Eastern Economic Review, 13 August 1992, pp. 59-60.

Seitz, Christine (2001): Konditionierte Entwicklungshilfe? Politische Flexibilität japanischer Entwicklungshilfe, in: Asien 79, pp. 33-49.

Singh, Inderjit (1992): China: Industrial Policies for an Economy in Transition, World Bank Discussion Papers No. 143, Washington.

Song Xueming (1999): Wirtschaftliche Entwicklung und Systemtransformation in China, Duisburg (mimeo).

Taube, Markus (1997): Ökonomische Integration zwischen Hongkong und der Provinz Guangdong, VR China. Der chinesische Transformationsprozeß als Triebkraft grenzüberschreitender Arbeitsteilung, ifo Studien zur Entwicklungsforschung 31, München-Köln-London.

Taube, Markus (2001): Fit für das nächste Jahrhundert? Die Wachstumsfaktoren der chinesischen Volkswirtschaft auf dem Prüfstand, in: Schubert, Gunter (2001): China – Perspektiven für das 21. Jahrhundert, Hamburg (forthcoming).

Taylor, Robert (1996): Greater China and Japan. Prospects for an economic partnership in East Asia, London-New York.

UNCTAD (various): World Investment Report, Geneva.

Wellington, K.K. Chan (1980): Government, merchants and industry to 1911, in: The Cambridge History of China, Vol. 11, Part 2, Cambridge, pp. 416-462.

Whitla, Paul; Davies, Howard (1996): Japanese and Overseas Chinese Investment in the Chinese Economic Area, in: JETRO China Newsletter, No. 125, pp. 20-24.

Williamson, John (1990): Latin American Adjustment: How much has happened?, Washington.

World Bank (1988): China: External Trade and Capital. A World Bank Country Study, Washington.

World Bank (1993): The East Asian Miracle. Economic Growth and Public Policy, Oxford.

Xie Shusheng (2000): Nuli zuohao xiehui gonzuo wie liyong waizi fazhan jingji fuwu [Strive to make good work in the association and serve the utilisation of foreign capital and economic development], in: Zhongguo waizi, 2/2000, pp 7-9.

Yanagihara, Toru (1998): Development and dynamic efficiency: “framework approach“ versus „ingredients approach“, in: Ohno, Ken’ichi; Ohno, Izumi (1998) (ed.): Japanese Views on Economic Development. Diverse paths to the market, Routledge Studies in the Growth Economies of Asia 15, London – New York, pp. 70-76.

Yokoi, Yoichi (1996:a): Major Developments in Japan-China Economic Interdependence in 1990-1994, in: Howe, Christopher (ed.) (1996): China and Japan. History, Trends, and Prospects, Oxford, pp. 147-154.

Yokoi, Yoichi (1996:b): Plant and Technology Contracts and the Changing Pattern of Economic Interdependence Between China and Japan, in: Howe, Christopher (ed.) (1996): China and Japan. History, Trends, and Prospects, Oxford, pp. 127-146.

<http://www.mof.go.jp>

http://www.mofa.go.jp/policy/oda/summary/1999/ap_ea01.html