

Confucianism and Industrialization

Wei-Bin ZHANG

Department of Economics
National University of Singapore

I. Introduction

Since industrialization has become a global phenomenon, an increasing number of commodities are available to an increasing number of people in the world. Industrialization has brought about material affluence to not a small number of the population in the world. A cursory comparison of the living conditions of many economies in the world between the beginning of this century and the present reveals great material progresses. It is argued that these progresses are strongly related to cultural values.

Confucius has been continuously reexamined by Chinese, Japanese and Korean scholars over many hundreds of years and has been repeatedly studied by Western scholars since Confucius was introduced to Europe in the 16th century. Many books were published concerning Confucius as well as his school, Confucianism. As argued in Zhang (1999), it is necessary to examine issues related to implications of Confucianism for industrialization in modern times. This study examines issues related to whether or not Confucianism may provide possible contribution to the industrialization of the Confucian regions. The issues related to relationships between capitalism and Confucianism were examined by Weber. Earlier in the twentieth century Confucianism was generally perceived as an obstacle to modernization. After the Korean War attitudes towards Confucianism were gradually changed. Due to Japan's economic success and China's failure in industrialization it was argued that Japanese Confucianism was not an obstacle to modernization; while Chinese Confucianism was. Now there is a tendency to credit the Confucian work ethic and encouragement of learning with providing people in the Confucian regions with the motivation, discipline, and skill necessary to engage in many essential processes of modernization.

No man has determined the character of China's civilization, in general as well as in particular, as profoundly as Confucius (Creel, 1949, Fung, 1958, Needham, 1956). Confucius has received much attention over the centuries mainly due to his multiple qualities. He is original as a moral thinker. His knowledge mirrors his age. His success as a practical thinker is measured not through his actions but through how the Chinese people live when China does not follow his principles. His ethics has meaning for all times in China. How he is treated in China has always symbolized the current state of the Chinese mind. Neglect of Confucius' teachings is almost certainly associated with social chaos and sufferings in China's history. When Confucius is socially despised, the Chinese people are faced with the fate of working under the control of foreigners. The historical humiliations suffered at the hands of the Mongols, the Manchus and the West were all preceded by the decline of Confucianism. When Confucius is properly respected, China experiences order and prosperity. This is similarly true for modern times. From the beginning of this century until 1977 Confucius had been criticized in mainland China and the Chinese people's living standard had been under the bottom of the world. In contrast to China's performance, Japan's success in modernization has been mainly due to properly applying the Confucian principles (Morishima, 1978, 1982, Zhang, 1998).

In this study by "the Confucian regions" we refer to mainland China, Taiwan, Hong Kong, Macao, Japan, South Korea, North Korea, and Singapore. Except Singapore, all these areas employed Confucianism as the state ideology before the West came to East Asia in modern times (Morishima, 1982, Zhang, 1998, Deuchler, 1992, De Bary, 1991, Koh, 1996). It is also important to remark that most of these regions were traditionally rice-economies (Hsü, 1995, Gernet, 1990, Reischauer and Fairbank, 1960, Bray, 1989). The traditional cultural manifestations of the Confucian principles have much to do with this traditional economy. It is generally held that Confucianism shaped the social fabric, forged status consciousness and provided the system of role enforcement in these regions before modern times. We call these regions Confucian because they displayed similarity on the level of the grand vision of man and society that Confucius provided before modern times. Since it is a major philosophy that was used as the state ideology for a long time in these regions, Confucianism might have had some deep impact on them. Confucianism may affect these regions in two ways. The first is that it directly affects social and economic behavior and institutional structures. For instance, the "over-emphasis" on children's education common in the Confucian regions might be due to Confucian values and tradition. The second way is that it affects perception and value structures. How decisions are made and how behavior is culturally interpreted by, for instance, the Chinese might be deeply influenced by Confucianism.

There is often confusion about the Confucian principles and their manifestations, such as actual forms of filial piety, propriety and ceremony. Confucian philosophical tradition does not hold that there is a unique correspondence between a principle and its manifestations under varied circumstances. This implies that special customs designed under the Confucian principles for an agricultural economy may be invalid for an open industrial economy; but the Confucian principles may be still valid in the new environment. Confucianism is a philosophy that had been implemented as the state ideology in the Confucian regions since long before modern times. The term, Confucianism, may refer to two different aspects. The first is its basic principles. The second is the manifestations of its principles. For instance, the institutional structures, choice of officials through examination system, the concept of filial piety, customs and ceremonies, the patterns and contents of conscience of the population, and actual forms and patterns of human interaction in traditional China were influenced by or designed under the direction of Confucian principles. There are intimate relationships between a principle and its manifestations. In general, it is wrong to identify the principle and its manifestations because one principle may have multiple manifestations and one socioeconomic phenomenon may result from different principles. A new scientific development, called complex theory or nonlinear theory, provides an important incentive for re-examining Confucianism. This new theory provides a new scientific and rational vision for looking at the world. It has provided scientists concerned with man and society with new insight into the complexity of socioeconomic systems (Haken, 1977, 1983, Zhang, 1991, 1999a, Gleik, 1987, Capra, 1982, Prigogine, 1997, Waldrop, 1992). Traditional science is characterized by the linear vision of systems evolution. To the mind characterized by the linear scientific vision there is a unique correspondence between industrialization and ideology. In other words, if one ideology proves to be suitable for industrialization, other ideologies would not fit for similar economic processes. It is quite natural for Max Weber (1864-1920) who held a traditional vision of dynamic evolution to conclude that Confucianism and other religious traditions, except Protestantism which had proved to be the ideology for industrialization, are detrimental to modernization initiated in Western Europe (Weber, 1905, 1951). But the modern history of East Asia displays a challenge to Weber's viewpoint (e.g., Tu, 1996). Theoretically nonlinear economics shows that it is quite possible for one ideology to sustain multiple economic development patterns, or that two different ideologies may lead to a similar pattern of economic development. The difference between Japan's and China's industrial processes shows that two cultures with similar traditional ideologies may lead to divergent paths of economic development (Zhang, 1998). The similarity in economic conditions in Japan and Western developed countries shows that two economies with different cultural

backgrounds and ideologies may lead to similar economic development processes and live similar material lives, even though they feel and interpret 'symbols' in quite different spirits.

This paper examines the basic principles of Confucianism and provides insight into the issues about why some Confucian regions are capable of rapid industrialization, while some others still remain at initial stages of industrialization. Section II explains the Confucian principles. Section III simply illustrates the industrial processes of the Confucian regions. Section IV examines possible implications of Confucianism for industrialization. Section V concludes the study.

II. The Confucian Principles

Like socialism and capitalism, the meaning of Confucianism is ambiguous in the sense that different people understand the term to mean different things. It may refer to the philosophical tradition represented by Confucius, Mencius and their followers or it may refer to the institutions and customs that were created under the influence of Confucian doctrines. In this study the term Confucianism mainly refers to its philosophical tradition. Confucianism goes far beyond the actual personality or teachings of Confucius. Having analyzed various schools of Confucianism, in my recent book on Confucianism I (Zhang, 1999) summarize the main Confucian (ethical, political and economic) principles which are commonly held by the main schools of Confucianism as follows:

1. Free Will and Rationality

Confucianism views society as changeable rather than stationary and as organic rather than mechanic. It admits the existence of universal truth or the Way; but it does not hold that the Way has been fully found by any individual. In the I Ching, we find the traditional Chinese belief: "All the movements under the sky are constantly subject to the one and the same rule." But in reality, over many centuries no rational Confucianist had claimed that he could find a universal principle applicable everywhere.

Confucius believed that an individual possesses a kind of autonomy. For him the mind is the carrier of knowledge and reasoning capacity, which are the basic conditions of moral judgment. The central feature of Confucius' doctrine is summarized in Confucius's following saying:

The Master said, "Shen, my doctrine is that of an all-pervading unity." The Disciple Zeng replied, "Yes". The Master went out, and the other disciples asked, saying, "What do his words mean?" The disciple Zeng said, "The doctrine of our master is

to be true to the principles of our nature and the benevolent exercise of them to others,
- this and nothing more.”

Confucius required that one be true to the principles of one's nature. It is not the emperor or a special social group but the Way that one should be true to. In modern terms it approximately means that one should be loyal to one's own conscience. This conception of loyalty is also reflected in Confucius' following saying: “A gentleman is not a utensil”. Free will and its individuality are the basis of freedom. Confucius did not say whether or not society should use a man as means or tool; what he said was that the gentleman does not allow himself to be treated as a tool. If all the members of society are gentlemen, then each member will perform his social duty and not use any other man as a means (according to the “What you do not want done to yourself, do not do to others” as Confucius requires of the gentleman). This will result in an ideal society in which each man exists as an end. This is what freedom means in the Confucian sense. Confucius argued that the gentleman is fully obedient to virtue and duty, but never purposely follows a wrong course:

Let every man consider virtue as what devolves on himself. He may not yield the performance of it *even* to his teacher.

In Confucian tradition there is no final authority such as God. Confucianism is rational and flexible because it admits the existence of rational law in things and affairs; but at the same time it denies the existence of any concrete authority about the Way.

2. Natural Equality and Social Inequality

Man is born naturally equal in the sense that each man's social position is singly determined by one's own quality as being human and has nothing to do with any external factor such as family background or race. In Confucian tradition it is the mind that really matters for being human. For the mind to be good, it needs to be active, constantly learning and practicing. Men are naturally equal but not necessarily socially and economically so. There is a permanent belief in Confucian tradition that a good society should be hierarchically organized with virtuous and talented men at the top. This structure is not to serve any privileged class or group of people, but to best serve the people. By putting cultivated and talented people in important positions, society benefits as a whole.

Confucius advocated universal education and taught that diplomatic and administrative positions should go to those best qualified academically, not socially. In Confucian tradition education is the only factor determining social status. The rulers obtain public trust by a very thoroughgoing education in the principles of morality and

government. Officials are selected on the basis of their assimilation of education. The officials should not rule by arbitrary whim. They should not be freed from the domination, via conscience and public opinion, of the Way.

3. Self-Cultivation Through Education and Equal Opportunity in Education

Men are born without much difference at the time of birth, even though men may display great difference in talent due to life experiences and the initial 'small difference' (small difference may lead to a large difference in a nonlinear dynamic world). Self-cultivation through education and learning is emphasized. Since there are no discrimination against men, education and social position should be accessible to anyone in society. Confucius placed benevolence, justice, ceremony, knowledge and faith as among the most important virtues. He held that it is benevolence, which must be at the heart of humanity. He believed that benevolence has to be tempered with justice and reinforced by knowledge. A simple, spontaneous humanity is not enough. The significance of knowledge in his doctrine is further illustrated by his following saying:

There is the love of benevolence without the love of learning; - the beclouding here leads to a foolish simplicity. There is the love of knowing without the love of learning; - the beclouding here leads to dissipation of mind. There is the love of being sincere without the love of learning; - the beclouding here leads to an injurious disregard of consequences. There is the love of straight-forwardness without the love of learning; - the beclouding here leads to rudeness. There is the love of boldness without the love of learning; - the beclouding here leads to insubordination. There is the love of firmness without the love of learning; - the beclouding here leads to extravagant conduct.

The above saying results from Confucius' flexible vision, which holds that there is no fixed authority with regard to life's important issues and one has to judge events oneself.

4. The Welfare of the People and the Benevolence Policy

As far as social practice is concerned, the central purpose of Confucius' doctrine is to guarantee and improve the living conditions of the people. Confucius considered the living conditions of the people to be of primary concern to the government. Confucius suggested that a ruler should put the trustworthiness first among his priorities, the livelihood of the second and military matters last. Confucius taught people to look at their

social and economic situations and relationships to other members of society with sober eyes. Rather than military power, he asked the government to improve the conditions of the people. The political economic method he advocated was to let people freely do what they consider for their own best, with government intervention when necessary.

Since a good government takes the welfare of its people as the main purpose of governing, it is no surprise to see that society under such a government attracts people from both near and far away:

Good government obtains, when those who are near are made happy, and those who are far are attracted.

5. Hierarchical Social Structure Supported by Talent and Merit

Men are different as far as talent is concerned and different social positions require different talents. It is necessary to employ people according to their talents. Confucian society is hierarchical. Confucian tradition holds that man is born naturally equal but with different physical as well as intellectual characteristics. A good society should properly cultivate and utilize human potentials. To put virtuous and talented men at high positions is to diffuse their positive potential throughout the whole society. In fact, modern economics is concerned with similar principles but in different terms and in much broader perspectives (Zhang, 1996, 1999). It may be argued that (classical) Confucianism is to actualize potential sources of increasing returns to scale through properly operating social organizations.

6. Mutual Obligation Rather Than Law in Maintaining Social Justice

Confucius preferred virtue and propriety to law in maintaining social justice since he did not believe that law will make the people's heart virtuous. Confucius tried to find a way to secure social justice in a feudal-bureaucratic society. He rejected any idea of constitutional government on the ground that under the principles of constitutionalism order is imposed upon society by law. Since those who break the law are penalized, people come to think how they can best avoid punishment, and the resulting society has no sense of shame. His argument is summarized as follows:

If the people be led by laws, and uniformity sought to be given them by punishments, they will try to avoid the punishment, but have no sense of shame. If they be led by virtue, and uniformity sought to be given them by the rules of propriety, they will have the sense of shame, and moreover will become good.

However, it is significant for society to be under the sway of the principle of government by virtue of something analogous to the law found in a constitutional society. Confucius referred this principle as ceremony - norms established by custom and being less rigid than law.

7. The Values of Social Symbols and the Rectification of Names

Social symbols, like wealth, teacher and emperor, are significant in society. People should show respect to different symbols according to what they stand for. The Confucian doctrine of the rectification of names requires that there should be a correct correspondence between the actuality and the essence that the symbol is supposed to stand for. If one is virtuous and talented, one should hold power, obtain riches, get respected and live long as well. Confucius held that every (social) symbol, such as clothes, behavior, words, contains certain implications that constitute that class of things to which the symbol corresponds. He used the rectification of names to advocate not only the establishment of a social order in which names and ranks are properly regulated, but also the correspondence of words and action or of words and actuality. In Confucius' conception of social organization the significance is the true correspondence between social symbol (like emperor or minister) and duty performance. Success/failure or gain/loss is interpreted in this correspondence.

8. Market Mechanism with Government Intervention

In a good society, the government should intervene as little as possible in people's economic affairs. Taxation should be as low as possible. The less involved in economic activities (and education) the government, the better for society. People should be rewarded differently according to merit rather than according to working hours. Moreover, the government should maintain public infrastructures (in particular, irrigation systems) in good condition.

9. Love with Different Degrees of Intensity

Confucius held that the natural affection existing between relatives within one family is the cornerstone of social morality. He argued that love that arises from benevolence manifests itself in different degrees of intensity. Love starts from its (supposed) most intimate and stable basis - love of one's parents and the rest of the

members of the family. Love originates with the bonds of a common parentage and extends to other relationships until it culminates in the stage of benevolence toward all people. He makes the virtues of filial piety and fraternal love the cornerstones of his doctrine. It is only after one cultivates the capacity for love of parents and the rest of the family members that one can extend one's love to the universal.

In Confucian tradition love is not extended to such an extreme scope so that it includes one's own enemies. Confucius held benevolence and (emotional) love to be the most important components of society; but this does not mean that he extended kindness to any situation. He says:

Some one said, "What do you say concerning the principle that injury should be recompensed with kindness?" The Master said, "With what then will you recompense kindness? Recompense injury with justice, and recompense kindness with kindness.

This is the principle of reciprocity in Confucian tradition. It does not extend human love to enemies; but it requires people to learn from and properly appreciate their enemies.

10. Respect for Hard Work and Appreciation of Frugality

Confucius held that man has seven feelings given by nature, not by learning; they are joy, anger, sadness, fear, love, hatred and desire. Confucius held that man should have desires, but the fewer, the better. Confucius considered the impact of consumption on the mind in the long term. He advised people to spend less for the following reason:

Extravagance leads to insubordination, and parsimony to meanness. It is better to be mean than to be insubordinate.

He did not value spending because he believed that some forms of pleasure do not have a desirable impact on the mind in the long run.

Hard working and frugality are highly valued in Confucianism. Since wealth is a respectable symbol in a just environment, hard work for the purpose of acquiring wealth is highly valued in Confucianism. Knowledge accumulation for the purpose of earning a high salary is considered a commonly acceptable purpose.

11. Emphasizing Social Harmony and Justifying Rebels Against Corrupt Governments

Confucianism emphasizes harmony among varied social groups on the basis of virtue, talent and merit. But this does not mean that Confucianism requires the people to

blindly obey authority. Since truth is given (or discovered) by man, society does not have a god-like figure who is able to make a final decision about truth. Truth is uncertain and requires that the concrete mind judge it in special circumstances. No concrete authority, like the emperor, is entitled to be the final judge of truth. The dominant theme in Confucian political ideology is not power but ethics. The state is seen as a mechanism for exerting social control and establishing and maintaining moral order. The government is not a means to use people for some special purpose; but is considered as a body of organizations whose end is to serve the people. Accordingly, the ruler's duty is to work for the welfare of the people. Confucius held that the best policy of the government is to maintain peace and establish order in society. He proposed five methods - respecting people's business and sincerity, loving people, taxing properly and operating economically - for the government to win the trust of the people and make them contented and tranquil. The people obey the rulers only if the ruler behaves in a proper way. If they fail to behave in just way toward the people, their authority as rulers of the people would be taken away from them. When the government is poor then revolution by the common people is justified. This theory of political stewardship and the justification of revolution were further developed by Mencius.

III. Economic Development of the Confucian Regions

The Confucian regions have displayed a fantastic economic history since the end of World War II (e.g., Findlay and Wellisz, 1993, Duus, 1976, Francks, 1992, So and Chiu, 1995). Japan is the first non-Western country to become industrialized. Japan's economic position in the world has been dramatically changed since the end of the Second World War. Its economic success was called a miracle in the 1960s and 70s. This miracle was soon followed by other economic miracles in the Confucian regions. The four tigers, Taiwan, South Korea, Hong Kong and Singapore, displayed high growth rates in the 1970s and 80s. Soon after its economic reform was started in 1978, mainland China has consistently maintained high economic growth rates for twenty years. The only area in the Confucian regions, which has not experienced rapid economic growth since the end of the Second World War, is North Korea.

1. Japan

More than one hundred and thirty years ago, Japan like most of the rest of the Confucian regions was an agricultural country with virtually no modern industry. It used

Tokugawa Confucianism as the state ideology (Hauser, 1974, Dore, 1965, Maruyama, 1963, 1974, Zhang, 1998). But the Japanese began to start its industrialization (and militarization) with the Meiji Restoration of 1868. The effort to create a modern industrial society was successfully carried out by imitating European and American technology and institutions. It had rapidly developed basic conditions for industrialization for that special international environment: armaments, industrial bases, successful military campaigns, and colonies. Japan was able to play the game of power politics and in the process not only extended its control over weaker countries but also shared other powers' global interests (e.g., Morishima, 1982, Moulder, 1977). To illustrate the Japanese economic miracle we note that at the beginning of the 20th century, Japan accounted for a mere 1 percent of the world's total GNP, while the United States accounted for 30 percent and the United Kingdom 20 percent. In terms of per capita GNP, Japan achieved a level comparable to that of the United States and the United Kingdom by the end of the 1980s. Over this eighty-year period, the Japanese economy had grown 30 times as fast as the US economy and 20 times as fast as the UK economy. One hundred and thirty years of national effort has led Japan from its humble status as a small underdeveloped economy to what it is today. Japan's prolonged and persistent efforts to industrialize and the resultant economic growth have aroused worldwide interest (Chapman, 1991, Reischauer, 1977, Wolferen, 1989). The economic miracle of this resources-poor small island is much due to rapidly spread education and fast development of modern science and technology (Howe, 1996, Hayashi, 1990). The institutional values were quickly switched from "Tokugawa Confucianism" of fixed class by birth to "Meiji Confucianism" of social position by education (Zhang, 1998). Although Confucianism had influenced Japan for long time before the Meiji Restoration, Japan never fully practiced the most important feature of Confucianism, social position determined by education and merit. By the Meiji Restoration, Japan began to fully employ this traditional Chinese practice. As argued in Zhang (1998), as far as economic efficiency is concerned, it might not be economically effective for Tokugawa Japan to use examination systems to determine people's social positions because talent accumulated through traditional education could hardly enlarge the national pie but might complicate division of consumption of the pie; but modern science and technology have changed the economic efficiency of this Confucian practice in the way that the talent accumulated through education in science and technology enlarges the national pie rather than merely complicate the division of consumption of the pie. It may be argued that Japan, rather than China, has been the master of timing in the last three hundred years in applying the Confucian main practical principle of putting the talented at the right position for social benefits. Another character of Japan's modernization is that the Japanese have accepted neither capitalism, nor socialism, nor

traditional Confucianism as its dominant ideology, even for a short period of time since the Restoration. No extreme ideology was used as dominant ideology for national management.

2. South Korea

In 1876 Japan forced a commercial treaty on the Koreans and the economy slowly opened up. One of the main intentions of this treaty was to weaken the Chinese influence in Korea. Japanese dominance increased slowly after the Chinese defeat in the Sino-Japanese War in 1894-5. After the Japanese defeated the Russians in the 1904-5 War, the Japanese grip on Korea tightened considerably. In 1910 the Japanese colonized the country. During the Japanese occupation, Korea experienced strong economic growth between 1910 and 1940. Many Korean companies were established under the Japanese and there was a substantial transfer of managerial technology. An educational system and material infrastructures were established and the urban labor force was expanded. In 1945 the colonization ended with the defeat and subsequent withdrawal of the Japanese. Korea was split into two halves after the Second World War, with the United States occupying the South and the Soviet Union the North. The first Republic of South Korea was founded in 1948. South Korea is one of the most outstanding performers of the newly industrialized countries. During 1953-62, initial efforts were made to reconstruct the economy. The country was in a very underdeveloped condition. It was poor and politically unstable. To promote investment by the private sector, the government provided different incentives. The government mobilized domestic savings by setting realistic interest rates and maintaining positive net rates of return for savers. Foreign capital also provided an important source of funds available for investment for economic development. Education received a great emphasis. Accumulation of human capital through education was an important element in its successful economic development. Education was seen as important source of upward mobility as well of new job options. The economic development of South Korea has been among the most rapid and sustained in the world. From 1953 to 1963, GDP growth was 4 percent annually. During the period 1963-73 Korea experienced high annual growth rate of 9.0 percent on average, while the period of 1973-79 had a growth rate of 9.3 percent (Pilat, 1994). After 1979 growth settled at 8.2 percent. In 1986 per capita income reached \$2,300, the share of the manufacturing sector in GNP reached 30 percent and the share of agriculture, forestry, and fisheries was 12.3 percent of GNP. The share of exports of primary products in total exports was 8 percent and that of manufactured goods 92 percent (Suh, 1992).

3. Taiwan

In a number of respects, Taiwan's success story strongly resembles South Korea's (Lau, 1990). Taiwan is a mountainous island of 36,000 square kilometers. When Japan took control of Taiwan from China in 1895, Taiwan had developed into a supplier of agricultural products aiding Japan's industrialization. When Taiwan was restored to the Republic of China in 1945, the primary school enrollment rate was 81 percent for boys and 61 percent for girls. World War II destroyed much of the infrastructure and lowered farm output by 36 percent in Taiwan. Production and distribution did not reach pre-war levels until 1952-53. By 1954 agricultural output had increased and the small manufacturing and service sectors had greatly expanded their productive capacity. Throughout the 1950s agriculture's share of net domestic product was over 30 percent and the services accounted for over 40 percent. The period 1965-81 was a turning point for Taiwan's economic industrialization. The economy was restructured on the basis of the widespread usage of modern technology. Resources were more effectively allocated. A turning point occurred in 1965 when manufacturing's share overtook that of agriculture. By 1981 manufacturing's share of net domestic product was 45 percent, while agriculture's share was less than 10 percent. By 1981, the manufacturing sector employed 42.2 percent of the labor force, in comparison with only 22.3 percent in 1965. By 1981, the agricultural sector employed less than one-third of all workers, in comparison with over half prior to 1965. Over the past four decades, due to a combination of government macroeconomic policies, a cheap and hard-working semi-skilled labor force, strong private entrepreneurship and a peaceful international environment, Taiwan has undergone a successful transformation from a poor, underdeveloped backwater to a newly industrialized area. Between 1952 and 1989, it experienced an average annual percentage increase in real per capita income of 6.3 percent and achieved a persistent reduction in poverty and a most equitable distribution of income. Taiwan has experienced considerable government intervention ranging from ownership of public enterprises to an extraordinary use of import-limiting measures, special credit facilities, and so on (e.g., Wade, 1990). Education is widespread (e.g., Liu, 1992). The nine-year compulsory elementary education is supplied completely free of charge to students and their families. There are also many publicly funded senior high schools, colleges and universities, charging low fees. Even private schools receive large subsidies or grants from the government. Public outlays for education, sciences, and cultural service have increased from 14.6 percent of total government expenditures in 1965-70 to 18.7 percent in 1981-1985 and 20.2 percent in 1986-1988, respectively (Chang, 1992). There have also been important improvements so far as freedom and democracy are concerned.

4. Hong Kong and Singapore

Both Hong Kong and Singapore are cities states influenced heavily by Western traditions of governance. Both were British colonies. Singapore and Hong Kong were islands with small populations and economic activities until they were developed as ports and trading stations mainly with migrated Chinese labor in the 19th century under the British. The basic resource was the skill and enterprise of the population.

Hong Kong is located on the southeastern coast of China. Before the Second World War and immediately afterward, Hong Kong mainly played a role of an entrepot economy that conducted trade between China and the rest of the world. Following the Japanese surrender in 1945 and the Communist victory on the mainland in 1949, many Chinese went to Hong Kong. Many Shanghai entrepreneurs from China in 1949 brought their own machinery, foremen and rerouted machinery orders to Hong Kong. These entrepreneurs began exporting textile products to the United Kingdom and other industrial economies. The population increased from 600,000 in 1945 to more than 2 million in 1951. Political and economic behavior of the immigrants provided a supply of entrepreneurs. With hard-working obedient Chinese working force, the colonial government experienced social and political pressure (e.g., Woronoff, 1980, Lethbridge, 1980).

Singapore is a small island, 176 kilometers north of the. It covers only 622 square kilometers and has a population of about 2.6 million. About 75 percent of its residents are of Chinese descent, 15 percent are Malayan, and 6 percent are Indian. After its independence in 1965, Singapore changed its economic strategy to develop a more open economy. Its economic strategy emphasized integration into the world economy and carving out a place in the international division of labor. It has adopted liberal economic policies and the main objective of national policies has been the pursuit of rapid economic growth. Politicians opt for an active development role for the state in promoting industrialization. It has succeeded in establishing a close integration with the international economy.

Aside from excellent harbors and easy access to the sea, Hong Kong and Singapore lack natural resources. They have similar cultural, political and institutional backgrounds and are both heavily dependent on external markets for economic development. Since 1960, the economies of two areas have grown at spectacular rates. It is often argued that the miracles are partly due to the British governing style and hard work and frugality of Confucian common people. In both regions some Confucian values can still be identified (e.g., Chen, 1995, Redding, 1993, King, 1996). Like Taiwan, both have prospered economically with improved distribution of income. The three mini-

dragons provide examples that a fast growing economy need not also experience deterioration in income distribution.

5. Mainland China

Mainland China established social order only after 1949. Before 1949, there had been no consensus among Chinese people (Schrecker, 1991). Before the collapse of the Qing Dynasty in 1911, the Han Chinese was under control of the Manchus. Since then China was characterized by domestic chaotic conflicts among local warlords without any central authority or national consensus (Feuerwerker, 1995). There are many controversials about the role of the Western powers and Japan in China's industrialization before the Liberation. Since 1949, the Communists attempted modernization in an almost closed society. As a consequence of cultural isolation and the continuation of traditional practice, the Cultural Revolution further destroyed China in many aspects (Zhang, 1998). A turning point came in 1978 when the economic reform was started.

The critical turning point for economic policy came when the Third Plenum of the Eleventh Central Committee was held in December 1978. The Third Plenum officially declared that the focus of the Party was now turned to economic development. The purpose of the reform was to modernize the economy by allowing marketing forces to guide allocation and distribution decisions, to re-arrange economic structures, to decentralize the over-concentration of central authority in economic planning, and to use material incentives as the key to raising economic efficiency. The Chinese economic reform has been characterized by a trial-and-error approach that calls for a gradual transition and partial reforms focusing on certain sectors and regions in a sequential process. The economic reform was started in the agricultural sector before China carried out the industrial reform and set up special economic zones to lure foreign capital. Since the country was opened, the size of the domestic economy has grown at an extremely rapid speed by world standards. Its economic relations with the rest of the world have also grown correspondingly. Although the Party has insisted on retaining a monopoly on political power, ordinary people reaped enormous benefits, including expanded personal freedom, from the economic reform. The state lost its power to deny a work and thus individuals livelihood as private employers offered an alternative source of survival. The standard of living has steadily increased. The Chinese now enjoy more choice regarding where and how they live. People travel more, both within China and abroad (Harding, 1987, Riskin, 1987).

The rural reforms brought about a dramatic improvement in production performance. Agricultural gross output value grew by no less than 9 per cent per year

between 1978 and 1984. The structure of rural production became more diversified as a result of the relaxation of the “grain-first” policies of the past. Rapid growth and diversification in agriculture finally began to improve the quantity and quality of the average diet. Moreover, cotton production also ended its stagnation with an average annual increase of 17.5 per cent between 1978 and 1984. With growing output came higher incomes. The average net real income per capita in a sample household survey of the rural population more than doubled between 1978 and 1984. For the first time in many years, China’s diet began to improve, with significant additions of protein and fats. From 1978 to 1990, the amount of grain available for human consumption increased from 195 kg to 240 kg per capita. The amount of meat and vegetable oil increased from 8.1 kg to 20.1 kg and from 1.6 to 5.7 kg, respectively (Tuan and Webb, 1993).

The introduction of market forces to industrial and urban areas proceeded at a much slower pace than in the rural areas. The urban reform was mainly started in 1984 with the Party’s Decision and the 7th Five-Year Plan, even though the enterprise reform program had been underway since the end of 1978. In 1984, the government carried out the first major price reform by decentralizing the control of several hundred prices. In May 1988, price reform was further carried out, irrespective of mounting inflation. In September 1988, faced with rampant inflation, the plan was abandoned. The policy was focused on improving the economic environment, establishing economic order, slowing down inflation and checking corruption. But the incident of June 1989 further complicated the situation. The pace of the reform revived only in early 1992. The economic reform ended the isolation policy and has opened China to the world. After the two decades of reform, China has become an important trading nation, exporting and importing a wide range of products and product quality is constantly improving. Foreign enterprises and overseas Chinese have been encouraged to invest in forms including the establishment of enterprises and joint ventures. Most of the ventures are engaged in the exploitation of natural fuels, labor-intensive manufacturing or tourism, plus some infrastructure projects such as power, highways, railways and port development. Since the reform, there have been sharp increases in foreign trade, utilization of foreign funds (including government loans from foreign countries), direct foreign investment, imports and exports of technologies and international scientific, technological and economic co-operation (e.g., Lardy, 1992, Yi, 1992).

It may be argued that a main feature of modern China has been that Chinese intellectuals have great ideological conflicts with the state (Goldman, 1981, Grieder, 1981). The traditional harmony between scholars and the state was broken under the influence of Western civilization. Since the economic reform was started, great efforts have been made in improving education and spreading knowledge in China (e.g., Wang,

1991, Hayhoe, 1996). In 1977, colleges and universities began to admit students through competitive entrance examinations based on academic performance. For the first time in more than a decade, China had a normal freshman class. Many research institutions and professional societies were reconstituted and founded. Professional ranks and titles were restored. The government turned its policy from the anti-professional, anti-intellectual ideology of the Cultural Revolution to the values of efficiency, educational achievement, and technical competence. Elements of freedom and democracy have been introduced into Chinese life, but very slowly, like in Japan's, Korea's Taiwan's initial stage of industrialization.

IV. Confucianism and Industrialization

There have been many studies about how each of the Confucian regions is Confucian in modern times (e.g., Morishima, 1982, Tu, Heitmanek and Wachman, 1992, 1996, Smith, 1959, Jansen, 1965). There has also been an increasing concern with the impact of Confucianism on industrialization of the Confucian regions. As the orthodox philosophy for Chinese civilization for over two thousand five hundred years, Confucianism has influenced the Chinese mind on both conscious and unconscious levels. Confucianism has influenced the Chinese mind in multiple ways, through the Confucian teachings, arts (which were inspired by Confucianism), literature, poetry, customs, and ceremonies. The mind affects action. The connection between Confucianism and action (including political and economic decision-making) is found in the mind. It is obviously difficult to measure how Confucianism affects the minds of the Confucian regions in modern times.

Even if we assume that the entire industrialization process of the Confucian regions has been due to Western influence without any direct impact from Confucianism, this does not imply that the Confucian principles do not suit modernization. Confucian doctrines exist, independent of whether the Chinese or the Japanese or the Koreans explicitly use them. Some contemporary Chinese may believe Adam Smith but disregard the Confucian doctrines. But this does not mean that there is no similarity between two thought systems. Mencius says:

There are the foot-paths along the hills; - if suddenly they be used, they become roads; and if as suddenly they are not used, the wild grass fills them up.

I consider it meaningful to re-examine Confucianism since I hold that if the old roads constructed by Confucius and his followers are properly used, we may be able to more deeply understand the processes of industrialization of the Confucian regions and gain new insights about the futures of these regions.

I will use the Confucian principles provided in Section 2 to explain some common features of the successful economic stories of the Confucian regions. It should be emphasized here again that it is not my purpose to prove that any particular aspect in any particular Confucian region is actually due to the impact of Confucianism in modern times. But I argue that, at least, if the Confucian regions had deeply understood the Confucian principles and had applied them to reality, they might have made social and economic progresses more rapidly and there might have been less cultural misunderstanding between the West and the Confucian regions.

1. The People's Livelihood and Mass Education

Knowledge about nature, man and society plays an essential role in modern economic development. A main feature of Confucianism is that it highly values knowledge and its social and economic role. Classical Confucian tradition holds that the first thing for the government to be concerned with is providing the people a basic livelihood. Once the people's livelihood is secured, education should be spread. We already mentioned that Confucius advised that the government should make the people rich and then make them educated. This is further explained by Mencius as follows:

They are only men of education, who, without a certain livelihood are able to maintain a fixed heart. As to the people, if they have not a certain livelihood, it follows that they will not have a fixed heart. And if they have not a fixed heart, there is nothing which they will not do, in the way of self-abandonment, of moral deflection, of depravity, and of wild license. ... Therefore an intelligent ruler will regulate the livelihood of the people, so as to make sure that, above, they shall have sufficient wherewith to serve their parents, and, below, sufficient wherewith to support their wives and children; that in good years they shall always be abundantly satisfied, and that in bad years they shall escape the danger of perishing. After this he may urge them, and they will proceed to what is good, for in this case the people will follow after that with ease. ... It never has been that the rulers of a state where such results were seen, - the old wearing silk and eating flesh, and the black-haired people suffering neither from hunger nor cold, - did not attain to the Imperial dignity.

The people's livelihood, rather than an ideology or religion, is the essence for the state. The government should first guarantee the livelihood of the people so that they would work in harmony (with the state). But material living conditions are the 'initial concerns' of the government in socioeconomic development processes. As soon as livelihood is secured, the government should spread education. It should be noted that the

contents of traditional education are different from that of modern education. This implies that even if the government is economically oriented, a modern government should emphasize science and technology for economic purposes because science and technology are basic to economic development. A man does not need much training in order to dig the earth in a traditional economy; but a man must get basic education in order to become a modern worker. This change in economic production means that it is necessary to carry out policies and mass education at the same time in order to secure the people's livelihood. The industrialization of the Confucian regions had been initiated with economic reforms as well as education.

Human capital plays an increasingly important role in economic production in modern times. Education and training are significant in determining qualitative aspects of the labor force. It will not be surprising to learn that the economic success of Japan and the four tigers, these five resource-poor regions, is closely related to their emphasis on human capital accumulation by education. As far as patterns of industrial processes are concerned, Japan and the four tigers had followed similar patterns of economic development. Political freedom was not emphasized but the people's livelihood and training in science and technology were emphasized in the initial stages of their economic development. These regions were once called 'economic animals' because they were extremely economic-oriented in their take-off stages.

In modern China, Confucius was repeatedly criticized before the economic reform was started. Confucianism was perceived as a symbol of the evils of society. Moral education (ideology) rather than the people's livelihood was the main concern of Chairman Mao and the Party. With regard to the reason for mainland China's poverty before the economic reform, we quote Mencius:

Now, the livelihood of the people is so regulated, that, above, they have not sufficient wherewith to serve their parents, and below, they have not sufficient wherewith to support their wives and children. ... In such circumstances they only try to save themselves from death, and are afraid they will not succeed. What leisure have they to cultivate propriety and righteousness?

2. Rationality without Extreme Ideology

Confucianism considers society an organic whole. It is a rational force that flows in a dynamic sense and has different currents. It has the capacity to interact with other religions and thought systems. There is no Confucian community that one may join analogous to a church, shrine, or synagogue. But this does not mean that there is no belief. From very early days the Chinese believed that each existence implies a certain

principle. In the *Book of Odes* which is one of the basic Confucian classics, consisting of 305 poems from the Shang dynasty (1766-1045 B.C.) and the various states of early Chou (1045-256 B.C.) we read:

Heaven produces the terming multitude;

As there are things, there are their specific principles (*tse*).

In Confucian tradition it is deeply believed that inherent in every single thing there are principles about its being.

In Confucian tradition it is held that everything is changeable and it is not proper to fix one's thought in extremes (yin or yang in popular terms). When the Confucian mind is concerned with social systems, it will not accept either socialism or capitalism (the two extremes of Western rationalism) as its ideal. The good in reality (not necessarily with regard to intellectual speculation) lies somewhere in between. This mentality is illustrated by Mencius' following saying:

The principle of the philosopher Yang was - 'Each one for himself.' Though he might have benefited the whole empire by plucking out a single hair, he would not have done it. The philosopher Mo loves all equally. By rubbing smooth his whole body from the crown to the heel, he could have benefited the empire, he could have done it. Zimo holds a medium between these. By holding that medium, he nearer the right. But by holding it without leaving room for the exigency of circumstances, it becomes like their holding their one point. The reason why I hate that holding to one point is the injury it does to the way of right principle. It takes up one point and disregards a hundred others.

We see that neither socialism nor capitalism will find a lasting home in the (educated) Confucian mind. Although I will not explain what 'the two extremes of Western rationalism' exactly mean in this book, for illustration I refer limitations of capitalism to Schumpeter (1928, 1942) and limitations of socialism to Mises (1981). These books explore the issues from dynamic visions, even though each of them is of one-direction. If one carefully reads them together, one may not get partial judgment about the dynamics of socialism and capitalism.

The traditional scientific mind seems to get puzzled by the political practice of the successful Confucian regions. Japan, South Korea, Taiwan and Singapore did not seem to accept any Western ideology such as socialism or capitalism. Hong Kong is an exceptional but complicated case in this respect. It may be argued that these regions are characterized by political flexibility. Since the economic reform started, this Confucian character had also been reflected in political practice of mainland China.

3. Objective Symbols as Social Success

Socioeconomic transformation is not only a process of developing and applying science and technology to economic production and consumption, but also a process of transforming values of social symbols. 'Social values distribution' of varied professions differs in agricultural and industrial economies. For instance, social rank in China had been determined more by qualification for office than by wealth. This qualification was determined by education. Traditional China made literary education the yardstick of social prestige. Successfully completing one's examination was the most important step toward class advancement. The literati had definitely been the ruling stratum in China before the collapse of the Qing Dynasty. Their dominance was often interrupted; but it was always renewed and expanded. Merchants tended to be looked down upon in practice. Contemporary Chinese people tend to have a 'balanced' view of merchants and scholars. 'Social value distribution' of varied professions shifts so rapidly in modern times that it is difficult to foresee what professions are socially or economically 'profitable' in next decade in developed economies. It may be argued that whether or not a society is able to create and maintain new 'social value structures' in a proper way strongly affects its economic development. If a society does not adapt a new value system of social symbols which is more suitable for promoting economic development than its traditional one, then its economic development may be delayed. In this sense it is important to examine how each industrial Confucian region has adapted and developed new symbol systems in order to understand its industrialization process.

In Zhang (1998) it is argued that the contents of traditional Confucian learning did not benefit economic development because it wasted talent, time and resources and the educated officials had few opportunities to improve economic efficiency of the rice economy. Hence, despite the high respect for learning in China and the practice of social mobility as a result of learning, Chinese life had not become materially comfortable. However as a result of industrialization the operation of economic laws changes. The secret of Japanese success is that it practiced the traditional Chinese principles: social positions are determined by merits and learning and the reason for China's slow economic development until the economic reform is that it had destroyed this traditional Chinese practice. It is important to remark that each industrial Confucian region has adapted, except the Confucian principles mentioned above, Confucius' own attitude toward profit:

If the search for riches is sure to be successful, though I should become a gatekeeper with whip in hand to get them, I will do so. As the search may not be successful, I will follow after that which I love.

Irrespective of its emphasis on self-cultivation, Confucianism greatly values objective symbols such as official positions, wealth and educational degrees. As far as practice is concerned, the Chinese always paid high respects to the people sporting high social symbols (such as power and learning). To have power almost means to be rich in Confucian tradition. The association of (just) power with wealth is theoretically justified. In traditional China and Korea education is seen as a prerequisite for power (and consequently social respect and money). Since the Meiji Restoration education has become a significant symbol of social position in Japan.

An important feature of capitalism is an intense personal interest in the pursuit of profit on the part of the people who are most involved, for instance, the businessmen, capitalists, entrepreneurs, and so forth. The all-consuming passion is capital accumulation for its own sake. Keynes put it very well when he said that the essential characteristic of capitalism is an intense appeal to the moneymaking instinct of individuals (Keynes, 1936). He characterized capitalism as the belief that the nastiest of men for the nastiest of motives will work for the good of us all. The emphasis on seeking after objective symbols as concrete goals of one's life (rather than serving some abstract symbol) means that it is theoretically not difficult to switch the Confucian mind from scholarship to materialism. Objective rather than spiritual symbols are concrete and have a clear fixed goal in sight. People might search for that goal without deeply inquiring into the 'meaning' of that goal. Since scholarship is supposed to exist in order that the common mind have a chance to achieve social advancement it is easy to understand that it is not intellectually difficult for the Confucian mind not to be against materialism among the masses.

The Chinese mind is pragmatic and devoted to seeking 'profit'. But in traditional (agricultural) China this profit was defined in a complicated way. It included 'academic face', material rewards and other social rewards. People work hard to accumulate their 'wealth', which was not necessarily oriented to economical activities. It is important to note that the Chinese mind is traditionally devoted to hard work in order to pursue concrete goals (such as scholarship or official position) because the Chinese official and economic markets are merit-dependent and competitive. Chinese people of traditionally peripheral regions (like South China) did not 'benefit' from traditional practice but basically held the same value structure. When they found themselves in a new environment and escaped the control of the central regions (which benefited from traditional practice), they rapidly accepted symbols such as wealth (rather than scholarship, which is controlled by the central region). This partially explained why the Chinese in South China and overseas have adapted materialism much more rapidly than the so-called cultural regions of China.

In the case of Japan, the situation is different from China. Before the Meiji Restoration, the social structure was almost fixed. Birth rather than education determined one's social class. The Japanese chose different symbols of social importance before the Meiji Restoration from the traditional Chinese. Education was socially respected as Confucianism was accepted as the state ideology. But in practice education did not play a large role in social mobility. There was no dominant elite class that would prevent new knowledge from being introduced into Japanese society. The real significance of the Meiji Restoration was to restore the Confucian principle that a man's social value is not determined by birth but by merit and education in Japan. Since Japan traditionally respected rationality and learning (the main character of Confucianism) and there was no dominant social group to 'control' learning, the Japanese mind was able to rapidly switch from Tokugawa Confucianism (of the fixed-class system) to the traditional Chinese symbol system of mobile class structure with education as the main criterion (Morishima, 1982, Zhang, 1998).

4. Market Mechanisms and Government Intervention

It may be argued that as far as economic policy is concerned the economic successes of the industrial Confucian regions and mainland China are mainly due to practicing market mechanisms with government intervention (e.g., Okimoto, 1989, Pempel and Muramatsu, 1995, Johnson, 1982, Sheridan, 1993, Scitovsky, 1990, Ito, 1992, Nakamura, 1983). Although the development of market economies of the Confucian regions have been heavily influenced by Western economic theories and inspired by Western practice, the idea of economic freedom with proper government intervention is actually not new in the Confucian regions. Economic freedom with minimum government intervention is a main feature of Confucianism.

In order to appreciate the Confucian economic principles, we mention that Confucianism influenced the development of ideas related to market economics. As far as the Confucian political economic principle is concerned, the most important figure in the West is François Quesnay (1694-1774). Quesnay lived in the age of Enlightenment, which was an epoch in which the Europeans re-examined European cultures and learned from other cultures. In the Enlightenment China was perceived as a model of society, subject to the rule of law and the maximization of the happiness of the people. Both in France and in England the fact that China, under the impulsion of Confucianism, had long since virtually abolished hereditary aristocracy, was used as a weapon to attack against hereditary privilege. Confucianism was paid close attention by French thinkers in the early period of the Enlightenment (Clarke, 1997).

Quesnay admired the rational principle of the Chinese constitution. In particular, he greatly admired the education system in China that helped the state select talented people for public service through a rigorous program of study and a competitive examination system. Politically they hoped for an economic reform initiated by an open-minded monarch from above. Quesnay considered China as a model while building its national economy on the basis of agriculture adhering to the reasons and principles regulated by Heaven. In his concern with the natural principles in accord with which prosperous governments are constituted, he wrote:

a systematic account of the Chinese doctrine, which deserves to be taken as a model for all states.

In fact in his lifetime Quesnay was called “the Confucius of Europe” (Shen, 1996). The impact of Confucius on his school has been actually well recognized. Maverick (1938) stated:

The influence of the Chinese upon the physiocrats was probably more extensive and more significant than has generally been appreciated. If one will but look into the matter, he can readily discern similarities in thought on the part of Chinese sages and French *économistes*... This similarity is more than mere coincidence; it is due to an actual borrowing on the part of the physiocrats.

5. Hard Work and Frugality

The savings rates of the industrial Confucian regions have been high for many years (Horioka, 1990, Ito, 1992, Lau, 1990). The competition in education is especially unique among the industrial Confucian regions and mainland China. It is obvious that hard work is a necessary condition for rapid economic development for countries without rich natural resources. Although frugality (related to material and service consumption) may either harm or benefit economic development as classical and Keynesian economics show, it is held that the frugality played a positive role for initial industrialization of each Confucian region. It should be noted that contemporary economics also considers education and training as components of savings. This implies that the industrial Confucian regions are frugal even in the modern sense.

V. Concluding Remarks

This study tried to identify some common features of the successful economic stories of the Confucian regions. It appears that economic conditions tend to be

converging rather than diverging in recent years among the various Confucian regions. We argued that this tendency of convergence results from the fact that these regions tend to converge in applying similar political and economic principles. The successful industrialization of the Confucian regions is characterized by strong government leadership, severe competition in education, a disciplined work force and principles of equality (in the Confucian sense) measured in merit and frugality. It is argued that these principles are mainly Confucian in a 'visionary sense'.

The rapid industrialization of the Confucian regions has transformed their social, political and ideological spheres. These regions have experienced rapid urbanization, a steady decline of the percentage of the population employed in agriculture and changes of life styles. There have emerged new social and political forces for transforming traditional societies into post-industrial or industrial societies. Most of the Confucian regions are becoming economically industrial or politically democratic. This paper is mainly concerned with Confucianism and its implications for economic development. I hold that the Confucian principles are basically suitable for industrialization but (many of) the concrete manifestations of these principles designed for agricultural economies don't promote modernization. From this basic point of view, I conclude that industrialization of each Confucian region should be a process to further promote the Confucian principles rather than to work against them, to abolish (some of) the Confucian practices rather than to exactly follow all of them, to design or imitate (from the West) new rules and concrete moral standard rather than to pursue the traditional practice.

This paper is mainly concerned with possible implications of Confucianism for economic development for the Confucian regions. We don't discuss possible implications of Confucianism for democratization of the Confucian regions. It is believed that the spread of education and democratic voting will promote actualization of the humanistic aspects of Confucianism which has never been practiced in China, as still validly claimed by Chu His (1130-1200): "The way of Confucius had not been put into practice for a single day." Although economic aspects of Confucianism were actualized, for instance, humanistic aspects of Confucianism have never been practiced in mainland China. The main reason for this failure in Confucian China is that traditional institutional structures designed under the Confucian principles don't provide social mechanisms to check absolute powers (Zhang, 1999).

References:

Book of Poetry (1993), translated by Yuanchong Xu and revised by Shengzhang Jiang, published in the Chinese English bilingual series of Chinese classics, Hunan Publishing House, Hunan.

Bray, F. (1989), *The Rice Economies - Technology and Development in Asian Societies*, Basil Blackwell, Oxford.

Capra, F. (1982), *The Turning Point - Science, Society, and the Rising Culture*, Simon and Schuster, New York.

Chang, C.H. (1992), Public Finance, in Ranis, G. (ed.), *Taiwan - From Development to Mature Economy*, Westview Press, San Francisco.

Chapman, W. (1991), *Inventing Japan - The Making of a Postwar Civilization.*, Prentice Hall Press, New York.

Clarke, J.J. (1997), *Oriental Enlightenment - The Encounter between Asian and Western Thought*, Routledge, London.

Confucius (1992), The Confucian Analects, in *The Four Books* translated by James Legge and revised and annotated by Zhongde Liu and Zhiye Luo, Hunan Publishing House, Hunan.

Creel, H.G. (1949), *Confucius - The Man and the Myth*, Greenwood Press, Westport.

De Bary, T. W. (1991), *The Trouble with Confucianism*, Harvard University Press, Cambridge, Mass.

Deuchler, M. (1992), *The Confucian Transformation of Korea*, Harvard University Press, Cambridge.

Dore, R. (1965), *Education in Tokugawa Japan*, University of California Press, San Francisco.

Duus, P. (1976), *The Rise of Modern Japan*, Houghton Mifflin Company, Boston.

Feuerwerker, A. (1995), *The Chinese Economy, 1870-1949*, University of Michigan, Center for Chinese Studies.

Findlay, R. and Wellisz, S. (1993, ed.), *Five Small Open Economies*, Oxford University Press, New York.

Francks, P. (1992), *Japanese Economic Development - Theory and Practice*, Routledge, London.

Fung, Y.L. (1958), *A History of Chinese Philosophy*, Princeton University Press, Princeton.

Gernet, J. (1990), *A History of Chinese Civilization*, Cambridge University Press, Cambridge.

Gleick, J. (1987), *Chaos: Making a New Science*, Viking, New York.

- Goldman, M. (1981), *China's Intellectuals - Advise and Dissent*, Harvard University Press, Cambridge.
- Grieder, J.B. (1981), *Intellectuals and the State in Modern China - A Narrative History*, The Free Press, New York.
- Haken, H. (1977), *Synergetics: An Introduction*, Springer-Verlag, Berlin.
- Haken, H. (1983), *Advanced Synergetics - Instability Hierarchies of Self-Organizing Systems and Devices*, Springer, Berlin.
- Harding, H. (1987), *China's Second Revolution - Reform after Mao*, The Brookings Institution, Washington, D.C.
- Hauser, W. (1974), *Economic Institutional Change in Tokugawa Japan*, Cambridge University Press, London.
- Hayashi, T. (1990), *The Japanese Experience in Technology: From Transfer to Self-Reliance*, United Nations University Press, Tokyo.
- Hayhoe, R. (1996), *China's Universities, 1895-1995, A Century of Cultural Conflict*, Garland Publishing, New York.
- Horioka, C.Y. (1990), Why Is Japan's Household Saving Rate so High? A Literature Survey, *Journal of the Japanese and International Economics*, Vol. 4, pp. 49-92.
- Howe, C. (1996), *The Origins of Japanese Trade Supremacy - Development and Technology in Asia from 1540 to the Pacific War*, Oxford University Press, Hong Kong.
- Hsü, I.C.Y. (1995), *The Rise of Modern China*, 5th ed., Oxford University Press, Oxford.
- I Ching or Book of Changes (1993), translated by James Legge and revised and annotated edited by Qin Ying, Hunan Publishing House, Hunan.
- Ito, T. (1992), *The Japanese Economy*, The MIT Press, Cambridge.
- Jansen, M. (1965), *Changing Japanese Attitudes Toward Modernization*, Princeton University Press, Princeton.
- Johnson, C. (1982), *MITI and the Japanese Miracle*, Stanford University Press, Stanford.
- Keynes, J.M. (1936), *The General Theory of Employment, Interest Rate and Money*, Harcourt, Brace, New York.
- King, A.Y.C. (1996), *The Transformation of Confucianism in the Post-Confucian Era - The Emergence of Rationalistic Traditionalism in Hong Kong*, in Tu (1996).
- Koh, B.I. (1996), *Confucianism in Contemporary Korea*, in Tu (1996), pp.191-201.
- Lardy, N. (1992), *Foreign Trade and Economic Reform in China, 1978-1990*, Cambridge University Press, Cambridge.
- Lau, L.J. (ed.) (1990), *Models of Development - A Comparative Study of Economic Growth in South Korea and Taiwan*, ICS Press, San Francisco.

- Lethbridge, D. (1980), *The Business Environment in Hong Kong*, Oxford University Press, Hong Kong.
- Liu, P.K.C. (1992), Science, Technology and Human Capital Formation, in Ranis. G. (ed.), *Taiwan - From Developing to Mature Economy*, Westview Press, San Francisco.
- Maruyama, M. (1963), *Thought and Behaviour in Modern Japanese Politics*, Oxford University Press, New York.
- Maruyama, M. (1974), *Studies in the Intellectual History of Tokugawa Japan* (translated by H. Hane), University of Tokyo Press, Tokyo.
- Maverick, L.A. (1938), Chinese Influences upon the Physiocrats, *Economic History*, Vol. 3, pp. 54-67.
- Mencius (1992), The Works of Mencius, in *The Four Books*, translated by James Legge and revised and annotated edited by Liu and Zhiye Luo, Hunan Publishing House, Hunan.
- Morishima, M. (1978), The Power of Confucian Capitalism, *The Observer* (London), June.
- Morishima, M. (1982), *Why Has Japan Succeeded?*, Cambridge University Press, Cambridge.
- Moulder, F. (1977), *Japan, China and the Modern World Economy*, Cambridge University Press, Cambridge.
- Nakamura, T. (1983), *Economic Growth in Prewar Japan*, University of Chicago Press, Chicago.
- Needham, J. (1956), *Science and Civilization in China*, Vol. II, History of Scientific Thought, Cambridge University Press, Cambridge.
- Okimoto, D.I. (1989), *Between MITI and the Market: Japanese Industrial Policy for High Technology*, Stanford University Press, Stanford.
- Pempel, T.J. and Muramatsu, M. (1995), The Japanese Bureaucracy and Economic Development: Structuring a Proactive Civil Service, in H.K. Kim, M. Muramatsu, T.J. Pempel, and K. Yamamura (eds.), *The Japanese Civil Service and Economic Development: Catalysts of Change*, Clarendon Press, Oxford.
- Pilat, D. (1994), *The Economics of Rapid Growth - The Experience of Japan and Korea*, Edward Elgar, Vermont.
- Prigogine, I. (1997), *The End of Certainty - Time, Chaos, and the New Laws of Nature*, The Free Press, New York.
- Redding, S.G. (1993), *The Spirit of Chinese Capitalism*, Walter de Gruyter, Berlin.
- Reischauer, E.O. (1977), *The Japanese*, Harvard University Press, Cambridge.
- Reischauer, E.O. and Fairbank, K. (1960), *East Asia: The Great Tradition*, Houghton Mifflin, Boston.
- Riskin, C. (1987), *China's Political Economy - The Quest for Development since 1949*, Oxford University Press, Oxford.

Schumpeter, J. (1928), The Instability of Capitalism, *Economic Journal* , Vol. 38, pp. 361-68.

Schumpeter, J.A. (1942), *Capitalism, Socialism, and Democracy*, Harper, New York.

Scitovsky, T. (1990), Economic Development in Taiwan and South Korea, 1965-1981, in Lau, L.J. (ed.), *Models of Economic Development - A Comparative Study of Economic Growth in South Korea and Taiwan.*, ICS Press, San Francisco.

Sheridan, K. (1993), *Governing the Japanese Economy*, Polity Press, Cambridge.

Smith, W.W. (1959), *Confucianism in Modern Japan: A Study of Conservatism in Japanese Intellectual History*, Hokuseido Press, Tokyo.

So, A.Y. and Chiu, S.W.K. (1995), *East Asia and the World Economy*, Sage Publications, London.

Suh, S.M. (1992), The Economy in Historical Perspective, in Corbo, V. and Suh, S.M. (eds.), *Structural Adjustment in a Newly Industrialized Country - The Korea Experience*, Johns Hopkins University Press, London.

Tu, W.M., Hejtmanek, M. and Wachman, A. (1992), *The Confucian World Observed - A Contemporary Discussion of Confucian Humanism in East Asia.*, Institute of Culture and Communication, Hawaii.

Tu, W.M. (ed.) (1996), *Confucian Traditions in East Asian Modernity - Moral Education and Economic Culture in Japan and the Four Mini-Dragon*, Harvard University Press, Cambridge.

Tuan, F.C. and Webb, S.E.H. (1993), Agriculture: Past and Prospects, in W. Galenson (ed.), *China's Economic Reform*, The 1990 Institute, San Francisco.

von Mises, L. (1981), *Socialism*, translated from the German original by J. Kahane. Liberty Classics, Indiana.

Wade, R. (1990), *Growing the Market: Economic Theory and Taiwan's Industrial Policies*, Princeton University Press, Princeton.

Waldrop, M.M. (1992), *Complexity - The Emerging Science at the Edge of Order and Chaos*, A Touchstone Book, New York.

Wang, Y.F. (1991), *China's Science and Technology Policy, 1949-1989*, Stockholm Studies in Politics, p. 39, University of Stockholm.

Weber, M. (1905), *The Protestant Ethic and the Spirit of Capitalism*, translated from the German by T. Parsons, 1991, Harper Collins Academic, London.

Weber, M. (1951), *The Religion of China - Confucianism and Taoism*, translated from the German original by H.H. Gerth, The Free Press, New York.

Wolfen, K. (1989), *The Enigma of Japanese Power - People and Politics in a Stateless Nation*, Macmillan, London.

Woronoff, J. (1980), *Hong Kong: Capitalist Paradise*, Heinemann Educational Books, Portsmouth, N.H.

Yi, D. (1992), Economic Reform and Opening to the Outside World, in G. Totten and S.L. Zhou (eds.), *China's Economic Reform: Administering the Introduction of the Market Mechanism*, Westview Press, San Francisco.

Zhang, W.B. (1991), *Synergetic Economics*, Springer-Verlag, Heidelberg.

Zhang, W.B. (1998), *Japan versus China in the Industrial Race*, Macmillan, London.

Zhang, W.B. (1999), *Confucianism and Modernization*, Macmillan, London.

Zhang, W.B. (1999a), *Capital and Knowledge - Dynamics of Exchange Values and Economic Structures*, Springer, Heidelberg.