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**China's Export Control Policy in East Asian Context:
Implications from Economic Perspectives**

Yuzo MURAYAMA

Associate Professor, Osaka University of Foreign Studies
8-1-1 Aomadani-Higashi, Minoh-Shi, Osaka, Japan 562-8558
Tel/Fax 0727-30-5413
E-mail murayama@post01.osaka-gaidai.ac.jp

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INTRODUCTION

It has increasingly become clear that national security and economic factors are interconnected in the post-Cold War era. The recent economic crisis in East Asian countries clearly shows that economics has such security impacts as political stability of countries as well as regional security stability in general.

One of the areas where national security and economic factors are most clearly interconnected is technologies, especially in the area of dual-use technologies (DUT). Such high technology items as computers, semiconductors, and flat panel displays are all DUT and could be used both for military and commercial applications. Since a majority of technologies that have been increasing well-being of countries can be also converted to military uses, it is a natural trend that to control exports of those sensitive high technology items for a national security purpose is becoming an increasingly important issue.

The author and the U.S. colleague have been conducting research on export control policies of East Asian countries regarding DUT in last several years. We have covered Japan, South Korea, Singapore, Taiwan, Hong Kong, China, and Malaysia so far and evaluated their export control systems.¹ We have been also investigating driving forces behind the implementation of export control measures in each country.

The purpose of this paper is to find out specific characteristics of China's export control policies by comparing it with the ones in other East Asian countries. Special attentions are paid to differences of perceptions of export controls regarding the linkages between national security and economic factors. In the next section, export control policies of East Asian countries are briefly reviewed and the driving forces behind the implementation of policy measures are discussed. It is argued that economic interpretation of national security issue is adopted for justifying the implementation of export controls. Characteristics of China's export control policies are discussed in the second section and it is pointed out that the driving force for China's export control policy is different from other Asian countries. China tends to put more emphasis on treaty obligation aspect of export controls and implement measures accordingly. In the last section, implications of this difference on China's technological development is discussed, especially from the perspective of technology transfer from foreign countries.

CHARACTERISTICS OF EXPORT CONTROL POLICIES IN EAST ASIA

¹ See Richard Cupitt and Yuzo Murayama, "Nonproliferation and Export Controls: Malaysia, Singapore, and Taiwan," a paper presented at the International Studies Association 1996 meeting, April 18, San Diego, California; Richard Cupitt and Yuzo Murayama, "Export Controls in the People's Republic of China: Status Report-1997," Center for International Trade and security, The University of Georgia, September 1997; and Richard Cupitt, "The Emergence of Security Regimes: Export Controls in East Asia," a paper presented at the workshop on Nonproliferation Export Controls: U.S. and Japanese Interests and initiatives, 1995. We treat People's Republic of China, Taiwan, and Hong Kong separately simply because they have different export control systems.

One of the most important characteristics of export control policies in East Asia is that there is a strong correlation between levels of economic growth and implementation of multilateral export control measures, that is, a country that started economic growth in earlier period and has high GDP level tends to implement more complete measures of export controls.²

Japan is the first country that started economic growth in the post-W.W.II in the region and it is the very country that joined the multilateral export control community and implement the best measures of export controls. Japan joined COCOM in 1952 and adopted IC/DV (Import Certificate/Delivery Verification) system that was similar to the ones adopted by other COCOM countries and adhered to COCOM rules. Japan has also been active in nonproliferation export control regimes. Japan participated in the establishment of the Nuclear Suppliers Group and is an original member of such regimes as Australia Group and Missile Technology Control Regime (MTCR). In addition, Japanese government started to play leadership roles in nonproliferation export controls by establishing basic guidelines that include nonproliferation factors in providing official development assistance (ODA Assistance Charter implemented in 1991) and by dissemination information on export controls through multilateral seminars (Asian Export Control Seminar started in 1993), bilateral talks and training programs.

South Korea is the second active player in this field. South Korea revised the Foreign Trade Act for export control purposes in 1989 and introduced IC/DV system in 1990. By October 1993, South Korea had developed a COCOM-like system and begun to control DUT for nonproliferation purposes. And finally in 1995, South Korea obtained membership of Nuclear Suppliers Group and in 1996 it obtained a membership of Wassenaar Arrangement, a post-COCOM arrangement on export controls.

Singapore, Taiwan and Hong Kong have developed export control systems adjusting their own economic and trading circumstances and some of them have "comparable in practice" to COCOM-like systems although none of them are members of multilateral export control regimes. For instance, Singapore developed a system to check transit trade items, that are main concerns of export control community, for nonproliferation purposes. Authorities in Singapore cooperate closely with U.S. officials for this end. Taiwan introduced a pilot IC/DV system in science industrial park in 1992 and applied the same system nation wide in 1994. Taiwan now is said to have system as nearly "comparable in practice" to COCOM-like system. Hong Kong adopted a system of export controls taking advantages of the experience and resources of the United Kingdom. Hong Kong has controls that conform to the multilateral export control regime and even after the reversion to China it controls items effectively.

South Korea, Singapore, Taiwan, and Hong Kong are the countries and economies that started economic growth after Japan and although they have developed systems of export controls, they still lagged behind Japan in terms of actual implementation of measures and regime adherence.

² For the details of the following argument, see Yuzo Murayama, "A membership-Fee Theory and Export Controls in East Asia: Integrating Economic and Political Factors " a discussion paper, Center for International Trade and Security, University of Georgia, September 1996.

In other East Asian countries such as Malaysia, Indonesia, Thailand, and Philippines, although they have certain systems for export controls, focus is mainly for export of basic commodities such as tin, timber and other raw materials, therefore not for nonproliferation purposes. Thus, these countries are the ones that do not have effective export controls systems and started their economic growth late compared with the above mentioned countries and economies.

The basic question is why this kind of correlation exists between levels of economic growth and implementation of export control measures. We presented the following explanation using "Membership-Fee Theory of Export Control". Our hypothesis is that countries in East Asia participate in export control activities in order to obtain membership of an international community and are willing to sacrifice costs of practicing export controls for this purpose. That is, we hypothesize that as one country's economy grows, benefits of practicing export controls increase at a faster pace than the costs of export controls. Those benefits are 1) political benefits -- a country can become a member of an international community where it can be treated as a respectable "international citizen" and obtain such benefits as being treated fairly in international affairs and raising political influence of the country in international institutions; 2) economic benefits -- A country can reduce risk of being isolated from international trading system by obtaining membership of international export control community and complying with the international standard(not violating and receiving sanctions). In addition, when a country obtains this membership, technology trade with technologically-advanced countries become easier because they feel safe to transfer technologies to countries with effective export control systems and procedures to obtain technologies are also simplified.

The membership-fee theory seems to fit well with East Asian environment; Maintaining high economic growth has the high priority in these economically growing countries, and isolation from the international trading system is very costly due to high dependency of their economies on international trade, foreign direct investment and technology transfers from technologically-advanced countries. Therefore, issues concerning export controls, that are basically problems in national security arena, tends to be interpreted in economic terms.

For instance, Japan, at least before the Toshiba-Kongsberg case in 1987, interpreted COCOM export controls in economic terms. In one litigation in 1952, Japanese government defended COCOM controls by stating "Japan could develop its economy only in close cooperation with liberal countries. If Japan violated COCOM the United States and other liberal countries would retaliate against Japan, which would be detrimental to the Japanese economy." MITI also showed the same interpretation in the later year. In the paper submitted to the Tokyo District Court, it stated "Japanese violation of COCOM agreements would undermine Japanese international credibility, weaken Japanese influence in the world, and bring isolation of Japan by destroying close economic ties with liberal countries. Due to various restraints imposed by other countries, Japan would suffer in many fields such as 1) the import of technologies from abroad, 2) Japanese export and import in general, and 3) the introduction of foreign capital.

This is one of the motivations that some of the countries started to adopt export

control measures. During our interview tour in 1995, one official at Trade Development Board of Singapore government stated that Singapore complies with export control standards because they want to be "a good international citizen". In Taiwan, several officials states that the reason they participate in export controls is to follow "international norms" and to avoid isolation from the international community.

CHARACTERISTICS OF CHINA'S EXPORT CONTROL POLICY

We have assessed the export control system of China using a method developed by a group at the University of Georgia. We released the first assessment in 1997 and are about to release the second report.³ Since we wrote the first report, the China's export control system has greatly improved and the total score increased from 27.5 (full point-72) to 41, increase of 49% (see Table I).

Preliminary conclusions we made in the new assessment are as follows.

- 1) China's nonproliferation export controls continue to become more compatible with emerging mulilateral standards, especially in the area of nuclear export controls.
- 2) China has become more willing to adopt policies that impose real costs on its enterprises in order to meet its international nonproliferation commitments.
- 3) Despite increases in commitment and compatibility, considerable divergence between the current Chinese system of nonproliferation export controls and emerging multilateral standards persists.
- 4) Bargaining and the acceptance of universal nonproliferation principles jointly explain the current mix of compatibility in China's export controls. Compatibility appears highest in those areas where either international treaty obligations exist or where China has struck a bargain with the United States.
- 5) Several opportunities exist for cooperative programs that would enhance the compatibility of China's export controls.

From this paper's context, the conclusion 4) is especially important, that is, driving forces behind China's improvement in export control is international treaty obligations and negotiations/agreements with the United States. For instance, China has been most active in nuclear nonproliferation by acceding and signing nuclear-related treaties such as Non-Proliferation Treaty in 1992 and Comprehensive Test Ban Treaty in 1996. This is the very area that we see China has established the most compatible export control systems with the multilateral standards.

The same point can be made by looking at areas of improvements in China's export control systems. Table I shows the comparison of scores in each element of export controls between 1997 and 1998. According to the table, the areas of improvements are Information Sharing (+4.5), Regime Adherence (+3), Training (+2), and Verification (+2) and these four elements consist 85% of the improvements.

The scores for the Information Sharing are increased mainly because Chinese export control systems became more transparent through such measures as release of published regulations, rather than unpublished notices, attendance of Chinese officials to various export control seminars and meetings (sometimes making public

³ Cupitt and Murayama (1997) and Richard Cupitt and Yuzo Murayama, "Export Controls in the People's Republic of China, 1998," a preliminary draft, September 1998.

presentations on Chinese export controls), and joining international organizations that are involved with significant information exchanges such as Zangger Committee and the Organization for the Prohibition of Chemical Weapons.

The scores for Regime Adherence are increased because China has joined Zangger Committee and adopted the list of the Nuclear Suppliers Group. They also have started to include control items that are included in the Australia group and MTCR. The scores for Verification are increased because China has reached agreement with the United States on Post Shipment Verification and it is being implemented. The Training scores are increased because such government Ministry as MOFTEC and MFA started to provide some training on export controls.

It can be said that joining Zangger Committee, that is pushed by the positive Chinese policy toward nuclear nonproliferation, has both direct and indirect impacts on increasing scores. In addition, the negotiation with the U.S. government led to the positive step toward verification and is a part of the reason why China started to include more items for the control, to attend more meetings, and to publish regulations publicly.

The point that the basic driving force for Chinese export control policy is international treaty commitments can be also confirmed by interviews with Chinese government officials as well.⁴ Therefore, there is a very clear contrast with the driving forces for other East Asian countries, that is, China tends to emphasize political and security aspects of export controls, rather than their economic aspects.

EXPORT CONTROLS, TECHNOLOGY TRANSFERS, AND ECONOMIC DEVELOPMENT

The reasons why China's perceptions regarding export controls are different from other East Asian countries and economies are not difficult to find out. The first reason is obviously that China is a country with nuclear weapons while others in East Asia do not possess them. Therefore, China has different set of incentives based on China's nuclear strategies (See Freeman, plus Pakistan) and has to pay more attentions to military aspects of export controls.⁵

The second factor is something to do with China's pattern of technological development that differs from the patterns of other East Asian countries'. During 1950s and 60s China's priority in technology development was on military technologies.⁶ China developed its own weapon-production capabilities with a great help from Soviet assistance during 1950s. After Sino-Soviet relations became sour and technological assistant was cut, China tried to develop military technologies indigenously. Although China started to put more balanced emphasis on commercial side of technologies since the late 1970s, it is the fact that China's technological development pattern was heavily leaned toward military side until very recently. This is a clear contrast with other East Asian countries such as Japan where the first

⁴ Interviews with officials from MOFTEC and MFA, December 1997 and May 1998.

⁵ For instance, China could gain political and military benefits by exporting, for instance, nuclear-related technologies to such countries as Pakistan.

⁶ See Bates Gill and Taeho Kim, China's Arms Acquisitions from Abroad: A Quest for 'Superb and Secret Weapons', SIPRI Research Report No.11, Oxford University Press, 1995, pp.18-34.

priority was put on technological development for economic growth. Because of this kind of historical difference, China tends to pay more attentions to military aspect of export controls.

The third factor is differences of economic structures. China started from a Soviet-type planned economy, thus, economic decision making was exclusively carried out within the communist government. After the economic liberalization in the late 1970s, some of the economic decision making was transferred to actual players of economic activities such as farmers and managers of companies, however, there are still few rooms that their economic interests are reflected in economic policy making by the government that tends to perceive export controls as a national security matter.

Although China's tendency to emphasize military aspects can be justified by the above historical and structural differences, it would provide challenging issues to the Chinese economy. As the Chinese economy is being integrated into the world economy, it becomes necessary to move goods, capitals, money, and people freely into China. As the basic economic theory tells us when they are moved without any obstacles, economic profits are maximized, that is, both China and trading partners are best off.

Because of incomplete system of the export controls, however, there are obstacles to trading with China. Especially its impacts on technology transfer can not be ignored. When Chinese enterprises form joint ventures with foreign companies in technology sectors, it is a concern for the foreign companies that technologies transferred to Chinese enterprises are ended up in undesirable places.⁷ If this kind of incident actually occur, it hurts the company's reputation and would have to suffer sanctions that leads to actual monetary loss. In addition to multilateral export control standards, the U.S. companies are probably extra-cautious about the possibility of the violation because some members of the Congress are extremely sensitive about this issue. Japanese companies are cautious about the violations as well, especially since the Toshiba-Kongsberg incident in which case Toshiba Machinery sold COCOM-prohibited milling machines to the former Soviet Union and was severely criticized and punished as a result. Since then, Japanese companies became extremely cautious about technology transfers to suspicious countries and companies and try its best to avoid involvement to the issue. In the case of one Japanese electronics company we interviewed in China, they virtually do not sell products manufactured by the joint venture with a Chinese enterprise because they are afraid that Chinese export controls are incomplete, thus, the products might end up in undesirable places. In order to circumvent the problem the company export the products internally into their subsidiaries in neighboring countries that have better systems of export controls and sell them through the subsidiaries. If this kind of practice becomes widespread among foreign companies operated in China, its impacts on Chinese economy is not negligible. That is, China could become a manufacturing base for foreign companies, however, China could not utilize this opportunities fully because uses of the products would be limited in Chinese market. Thus, China loses some of the economic opportunities to develop industries using advanced products manufactured in China.⁸

⁷ Interview with a Japanese Company, Beijing, November 1996.

⁸ For instance, if semiconductors manufactured in China can not be utilized in Chinese computer industry, it would hurt a healthy development of the computer industry in China. This is because semiconductor and computer industries are, to a certain extent, technologically interconnected.

China's Export Control Policy in East Asian Context

Chinese Minister of Foreign Affairs used the term "economic security" at the ASEAN Regional Forum in explaining threat of speculative money game on Asian economies. Chinese defense white paper also expressed the importance of "economic security".⁹ Behind these statements, there is an increasing recognition in China that economic and national security issues are interconnected. As was stated at the beginning of this paper, export controls are the area where these two issues are linked directly through technologies. It seems that time has come for China to look into economic aspects of the export controls and devise policies by balancing economic and national security interests.

⁹ Asahi Shimbun, August 24, 1998.