

PUTTING REINS ON THE DRAGON:
EXPLAINING CHINA'S EXPORT CONTROL DEVELOPMENT SINCE 1992

by

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(Under the Direction of Professor Gary K. Bertsch)

ABSTRACT

Chinese nonproliferation export controls have dramatically changed since 1992. Before then, China regularly defied and mocked international efforts to control strategic exports. Since 1992, however, Beijing has been rigorously engaged in modernizing and internationalizing its export controls. That China's export controls, then, are steadily improving is a recognized fact. What accounts for this trend, however, remains to be determined. This thesis analyzes nine possible explanations for China's extensive export control development since 1992.

INDEX WORDS: China, Export controls, International regimes, Nonproliferation, International security, Weapons of mass destruction, Nuclear Suppliers Group, Wassenaar Arrangement, Missile Technology Control Regime, Australia Group, Center for International Trade and Security

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ACRONYMS

AG	Australia Group
AIP	Air Independent Propulsion
BWC	Biological Weapons Convention
CGWIC	China Great Wall Industry Corporation
CIA	Central Intelligence Agency
CITS	Center for International Trade and Security
CMEC	China Metallurgic Equipment Corporation
COCOM	Coordinating Committee for Multilateral Export Controls
CRS	Congressional Research Service
CW	Chemical Weapons
CWC	Chemical Weapons Convention
DPP	Democratic Progressive Party
DPRK	Democratic People's Republic of Korea
EU	European Union
GA	Georgia
GATT	General Agreement on Tariffs and Trade
HEU	Highly Enriched Uranium
IAEA	International Atomic Energy Agency
ISS	International Space Station
JCCT	Joint Commission on Commerce and Trade
MECA	Multilateral Export Control Regime
MFA	Ministry of Foreign Affairs
MOFCOM	Ministry of Commerce
MTCR	Missile Technology Control Regime
NGO	Nongovernmental Organization
NPT	Treaty on the Nonproliferation of Nuclear Weapons
NSC	National Science Council
NSG	Nuclear Suppliers Group
PLA	People's Liberation Army
PRC	People's Republic of China
PSB	Public Security Bureau
TSMC	Taiwan Semiconductor Manufacturing Company
TSU	Taiwan Solidarity Union
UGA	University of Georgia
UK	United Kingdom of Great Britain and Northern Ireland
UN	United Nations
UNSC	United Nations Security Council
US	United States of America
USDOC	United States Department of Commerce
USD TD	United States Treasury Department

USGAO	United States General Accounting Office
WA	Wassenaar Arrangement
WMD	Weapons of Mass Destruction
WTO	World Trade Organization
ZAC	Zangger Committee

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CHAPTER 1

INTRODUCTION

Relevance

While China is becoming one of the chief exporters of strategic matériel and dual-use technology in the world, it is still in the process of developing robust export controls.¹ That reality is an immediate concern to other key supplier states, as it increases the odds of dangerous proliferation to unstable regions, rogue nations and terrorist groups. Since 1992, China has been making concentrated efforts at advancing and internationalizing its export control system, which has significantly strengthened global security.² Moreover, it appears that progress will continue in the years to come: longitudinal research on the status of export controls in China shows a clear pattern of positive, steady improvement.³ However, as long as China's foreign policy remains open to "various sides in a complex zone of conflicts," the status of Chinese export controls will remain politically relevant.⁴

Objective

Chinese nonproliferation export controls have dramatically changed since 1992. Before then, China regularly defied and mocked international efforts to control strategic exports. Since 1992, however, Beijing has been progressively modernizing and internationalizing its export controls. That China's trade controls are improving, then, is a recognized fact.⁵ What accounts

¹ Cheng, 2005:60

² Kan, 2006

³ See, Cupitt and Murayama, 1998; Cupitt in Beck, et al., 2003; Jones, 2005

⁴ Pierre, 1997:207

⁵ Davis, 2005; Medeiros, 2005; Yuan, 2002

for this trend, however, remains largely undetermined. Thus, the objective of this thesis is to shed light on why China has been developing comprehensive export controls since 1992.

Puzzle

Why is China developing robust export controls? This question is puzzling because until 1992, China was wary of export controls and definitely eschewed the international nonproliferation regime. In 1992, however, the PRC made an about-face and started modernizing and internationalizing its export controls, a process which has yet to cease. This turn of events is puzzling and demands close analysis.

Background

The record of Chinese nonproliferation policy starts in 1949 when the new “Red” China elicited Soviet support in developing effective export controls.⁶ The first national regulation of exports in China was the Provisional Rules of Foreign Trade Administration enacted in 1950. The rules compelled all private exporters in China to obtain state licenses before transferring items abroad. Soviet aid to China continued for most of the 1950s until disputes between Beijing and Moscow caused it to terminate in 1960.

China continued working on export controls independently after 1960, although isolation from Moscow and the West mostly stifled innovation and improvement. When private exporters in China were nationalized in 1956, the Chinese politburo gained full authority to conduct foreign trade. As a result, rule-based export controls declined in favor of ad hoc executive-orders and policy coordination from within the ranks of the Chinese Communist Party. Innovative work on export controls would not reoccur until 1978, when Beijing began economic reforms and opened the country back up to the West.

⁶ Murayama, 1998:5

After 1978, the advanced democracies readily extended help to Beijing in the area of strategic trade controls, mostly because the Chinese had the means of manufacturing and exporting nuclear, chemical and biological weapons. Nevertheless, in the late 1970s and 1980s, China was often internationally uncooperative and rejected outside assistance. At the time, China's frame of mind was deeply affected by Communism and harbored residual distrust toward Japan and the West for historical reasons. Thus, relations between China and the advanced democracies were, by and large, discordant and tense during the late 1970s and 1980s.⁷ Moreover, when China initiated economic reforms in 1978, it was poor, underdeveloped, and needed infusions of foreign capital fast. It was, therefore, not uncommon in the late 1970s and 1980s for Beijing to sell exports of unconventional weapons and equipment to (among others) Algeria, Iran, Iraq, Libya, North Korea and Pakistan.⁸ In Beijing's view, "economic development was China's chief imperative, while nonproliferation was seen as the 'rich-man's burden.'"⁹

By the late 1980s, China began submitting to the pressures and realities of its new economic reforms; that is, it began cooperating internationally.¹⁰ The economic modernization of China increasingly depended on transfers of high technology from the advanced democracies. The new Chinese economy also needed a great deal of foreign direct investment from the West and Japan to fuel immediate economic growth and domestic capital accumulation. Beijing eventually realized that one of the most effective ways of expediting access to Western capital and technology was to develop export controls and cooperate with international nonproliferation efforts. Thus, by 1987, Beijing was compelling all foreign entities with trade interests in China to accept IAEA (International Atomic Energy Agency) safeguards. Then in 1988, the IAEA Board

⁷ Yuan, 2002:209

⁸ Yuan, 2002:210

⁹ Medeiros, 2005:9-10

¹⁰ China became the target of two forceful arms embargos as a result of the 1989 crackdown at Tiananmen Square, neither of which has been rescinded as of 2006.

of Governors reached an accord on the application of safeguards in China. The settlement was concluded based on China's pledge to "accept IAEA safeguards on all source or special fissionable material in peaceful nuclear facilities to be designated by China within its territory with a view of enabling the Agency to verify that such material is not withdrawn."¹¹ Still, for the most part, "the 1980s ushered in a decade of Chinese proliferation, with most exports of sensitive goods and technologies officially or tacitly sanctioned by the Chinese government."¹²

The year 1992 marked a "sea change" in China's nonproliferation policy when Beijing acceded to the Treaty on the Nonproliferation of Nuclear Weapons (NPT).¹³ Since then, China has (among other things) enacted a Foreign Trade Law (1994/2004); signed the Comprehensive Test Ban Treaty (1996); joined the Zangger Committee (1997); established a Department of Arms Control and Disarmament (1997); published regulations missile exports (2002); engaged in bilateral talks with the Missile Technology Control Regime (2003); set up a new electronic application platform in the Ministry of Commerce (2004); joined the Nuclear Suppliers Group (2004); and expanded end-use visits with the United States (2006).

¹¹ Hu, 1997-1997:22

¹² Davis, 2005:6

¹³ Davis, 2005:51

CHAPTER 2

THEORY AND EXPLANATIONS

I analyze nine possible explanations for the development of Chinese export controls in accordance with three international relations theories (i.e. neorealism, rational institutionalism and liberal identity theory). The nine explanations are broken down into sets of three, and each set is organized under one of three theoretical rubrics. Thus, each theory is associated with three of the nine proposed explanations.

Neorealism

New realism is anchored in five precepts: 1. the international system is anarchic; 2. states are rational, unitary actors that calculate utility and constitute the chief players of global politics; 3. states either balance or maximize power depending on the global distribution of capabilities; 4. states devise and execute foreign policy based on national security interests; 5. states only engage in international cooperation as a means of balancing power. Neorealists divide national interests into “high” and “low” politics. High politics include security and survival interests. Trade and other socioeconomic policies define low politics. As per neorealism, a state will use whatever means are required to realize its goals, even if that includes force. In addition, as indicated above, “the capacity for one state to influence another is determined by: 1) its capabilities, 2) its willingness to assert these capabilities and accept the consequences, and 3) a state’s relative capabilities compared to its competitor that may also include non-traditional power determinants.”¹⁴

¹⁴ Heller, 2003:1 in section II

Neorealism argues that, because war can happen anytime in international anarchy, states are constantly driven to balance power, defend the national interest and pursue relative gains. New realism also contends that while anarchy drives states to expand their material power, doing so inevitably triggers counterbalancing. That is, rising powers must be constantly aware of the security interests of others as it expands materially because other states will defend their sovereignty against them by engaging in internal and external counterbalancing. Affected states, for example, may align themselves in collective security arrangements like the Coordinating Committee for Multilateral Export Controls (COCOM), thereby advancing their relative security against rival regimes.¹⁵ Realism also predicts, however, that once threats to sovereignty have subsided, alliances based on mutual defense collapse. Lastly, neorealism argues that in choosing whether or not to launch military attacks, states carefully calculate the costs and benefits of military action and choose the option that maximizes utility. For instance, if an invasion stands to maximize a country's utility, it will attack.

In line with neorealism, I argue that China is modernizing and internationalizing its export controls because it expects that doing so will (a) be to the collective benefit of Beijing and the advanced democracies in balancing against mutual threats to their sovereignty; (b) weaken Taiwan by controlling the export of military items and technology that could empower Taipei to declare independence; (c) defend against terrorist threats to Chinese security as a result of weapons, equipment and technology proliferation.

¹⁵ The United States spearheaded what came to be the defining multilateral export control regime of the Cold War: COCOM. COCOM was made up of NATO allies and focused its controls against the emerging Communist Bloc. Its purpose was to facilitate strategic trade among the NATO allies without compromising the national security interests of individual members in the process through secondary proliferation to the Communist Bloc or Communist sympathizers.

Rational Institutionalism

Rational institutionalism is the theoretical product of repeated observations of iterated international cooperation despite anarchy. As per rational institutionalism, the global system is anarchic because it has no overarching government to facilitate cooperation and joint gains among nations. While the theory admits that security competition results from anarchy, it also argues that security dilemmas can be overcome by rational calculations of utility, especially in low politics where economic gains from cooperation abound. Thus, states maximize utility and seek absolute gains.

A common deduction of rational institutionalism is that states can and do form formal and effective multilateral institutions despite the anarchic reality of the international system. The multilateral institution functions to bring about interstate cooperation because the norms, rules and regulations on which it is based allow members to communicate preferences, link issues, and predict the actions of others. Furthermore, joint efforts are expedited in multilateral institutions because member states are subject to the same controls and pledges. Multilateral institutions also facilitate the utilization of side-payments and opportunities to demonstrate sincerity in state commitments.

The origin of interstate cooperation lies in the rational cost/benefit analyses of states per rational institutionalism. Apparently, states weigh the costs and benefits of forming multilateral institutions and if the benefits outweigh the costs, proper action is taken to craft the institution. Multilateral institutions are arranged to resolve common issues of concern and to profit on collective interests.¹⁶ Pledges to the call of iterated cooperation induce affiliates of multilateral institutions to maintain their memberships in the regimes. Such cooperative interactions also influence nonmembers to join multilateral institutions. Over time the individual interests of

¹⁶ Bertsch and Grillot, 1998:5

different states in a multilateral institution become interwoven, causing high levels of interdependency. Moreover, the overarching controls of multilateral institutions diminish unilateral action, strategic defection and mutual distrust among members.

In line with rational institutionalism, I argue that China is modernizing and internationalizing its export controls because it expects that doing so will (a) maximize access to strategic exports/economic benefits from the advanced democracies; (b) reduce uncertainty in China-Japan-US relations to facilitate regional stability and economic growth; and (c) generate iterated interactions that “spill over” into the Taiwan issue, allowing Washington and Beijing to cooperate on Taipei’s reintegration with the mainland.

Liberal Identity

Liberal identity theory posits that the character of any given state affects the actions of that state. It also posits that interstate cooperation is not brought about by rational analysis, but by the identification of a state as a member of a group of similar others.¹⁷ An assortment of states with similar qualities can come together to attain common objectives. The forces that function to bind separate states comprise frequent interaction, communication, financial transactions and sometimes shared historical, cultural and linguistic traits. The former Anglo-American colonies and today’s European Union are two cases in point. Accordingly, an alliance of states united by a shared identification operates through mutual obligation, loyalty and trust.

In the 1950s, Karl Deutsch sought to understand and curtail certain behaviors to eliminate violent conflict in the international arena.¹⁸ In his view, security communities differed based on the extent to which they exhibited integration and institutionalization. That is, the position of a security community was measured in relation to others according to where that security

¹⁷ Bertsch and Grillot, 1998:10

¹⁸ Deutsch, 1957

community fell along a range of points defined in terms of more or less amalgamation. Deutsch also believed that security communities acted together to solve common issues of concern in a nonviolent manner.

More recent scholars have utilized Deutsch's ideas on the security community to explain the famed democratic peace.¹⁹ These scholars maintain that a state's identity deeply influences what it does and how. They also insist that groups of undemocratic states are less likely to initiate and participate in mutual alliances than groups of democratic states. Apparently, democratic states can be readily unified under their shared prescriptive and institutional foundations as for instance the democratic belief in nonviolent action to resolve internal conflicts. In contrast, undemocratic states tend to consist of totalitarian regimes whose dictators openly eschew democratic virtues. Thus, it stands to reason that, due to their undemocratic values, illiberal groups will be more internally divided and distrustful than liberal groups.

As per liberal identity theory, states gain esteem and prestige through group membership. The theory also argues that countries in one group often discriminate against nonmembers to protect their group's unity and identity from outside interference. Liberal identity theory further claims that groups of liberal states habitually discriminate against illiberal groups.

Although liberal identity theory argues that different groups single one another out as a matter of course, the theory also claims that states are capable of changing identities and switching sides. However, because groups distrust outsiders, states wishing to join different collective units must first demonstrate commitment to their desired group's value-system. Thus, liberal identity theory posits that regimes in the process of joining liberal groups must endure initiation rituals and trial periods in which they prove their loyalty to the ideals of democracy,

¹⁹ See Bertsch and Grillot, 1998:9

capitalism and human rights. Once this stage is complete, the newly emerged liberal regime will be welcomed into the group of liberal states.

It can be inferred from the above that states cooperating with one another on export controls will be more likely to develop a common identity and sense of community. Since export controls are valued by the advanced democracies and not by others, it should be expected that robust checks on strategic exports will be practiced by countries that are already democratic or are in the process of democratizing (i.e. building the normative and institutional foundations of liberal democracy). It can also be deduced that robust systems of export controls will be correlated with shifting identities connected to the liberal security community. Finally, it should be expected that developing systems of export controls will be associated with progressively more export policies aimed at the containment of illiberal states.

In line with liberal identity theory, I argue that China is modernizing and internationalizing its export controls because (a) iterated interaction with the advanced democracies is affecting China's identity; and (b) doing so will weaken illiberal regimes like North Korea and Pakistan. I also contend, in accordance with liberal identity, that (c) as China moves away from socialism, the country will evince ongoing improvements in national export controls, growing involvement in global nonproliferation issues and increasing engagement with the multilateral export control regimes.

CHAPTER 3

RESEARCH METHODS

Case Study

I utilize the case study method for the following reasons: it addresses “how” and “why” questions; facilitates research on sociopolitical events and subjects in which dependent and independent variables cannot be entirely controlled; permits analysis of multivariate equations, and concentrates on the complexity of context in which social events occur.²⁰ In addition, the case study method can be applied to many social and political puzzles with myriad variables such as executive decisions, social processes and institutional context. Researchers can also use case studies to analyze questions about the impact of individual variables as well as multivariate effects.²¹

I expressly focus on the case of Chinese export control development. That is, I analyze nine explanations for Chinese export control development since 1992 in accordance with three international relations theories. My objective is to shed light on why, since 1992, China has chosen to strengthen its national export controls and integrate them with the international nonproliferation regime.²²

Temporal Parameters

I trace and analyze key events in the development of Chinese export controls between 1992 and 2006. It starts in 1992 because in that year, China acceded to the NPT, highlighting “a

²⁰ See Yin, 1989.

²¹ See George, 1979 and Van Evera, 1996.

²² See Davis, 2005

marked shift in its nonproliferation policy, as it reversed years of criticism and made the PRC the last of the five original nuclear powers to join the NPT.”²³ Since then, China has (among other things) enacted a Foreign Trade Law (1994/2004); signed the Comprehensive Test Ban Treaty (1996); joined the Zangger Committee (1997); established a Department of Arms Control and Disarmament (1997); engaged in bilateral talks with the Missile Technology Control Regime (2003); instituted a new electronic application platform in the Ministry of Commerce (2004); joined the Nuclear Suppliers Group (2004); and expanded end-use visits with the United States (2006).²⁴ The study ends in 2006 because empirical data is not yet available for 2007.²⁵

Data Sources

Case studies demand the use of multiple sources of evidence.²⁶ I use a wide range of open source material in the form of books, journals, government documents, dissertations, theses and internet websites. I provide an exhaustive list of source material in the reference section.

Additional sources are organizations whose internet websites serve as portals to copious information on Chinese export controls: the Center for International Trade and Security (CITS) (www.uga.edu/cits/); the Center for Nonproliferation Studies (<http://cns.miis.edu>); and the Nuclear Threat Initiative (www.nti.org). A recent CITS report on export controls in China written by Jonathan Davis is particularly rich in data and can be accessed on the CITS website.²⁷

Data Collection Procedure

I gather data primarily via literature review. The first step in collecting data through literature review is choosing a topic. To do this, I initially conduct an electronic search of the

²³ Davis, 2005:7

²⁴ Yuan, 2002:4; Davis, 2005; Cheng, 2005; USDOC, 2006:
<www.bis.doc.gov/News/2006/JCCTPressRelease04_10_06.htm>

²⁵ For alternative temporal parameters, see Zhu, 1997 and Cheng, 2005.

²⁶ Bertsch and Grillot, 1998:11

²⁷ Davis, 2004

literature to gain a broad sense of what research exists and what questions remain unresolved in an issue area. I also seek advice from specialists and university faculty to pinpoint possible topics of study. This stage is time consuming, but necessary to ensure that the final topic is sufficiently narrow and has not been studied before.

After coming up with a topic, I utilize both the standard and network approaches to data collection.²⁸ I start with the standard approach. That is, I initially trace the intellectual roots of relevant books, articles, documents and internet sites, among other things, and then make a list of potentially relevant material. I next locate the items on the list as a means of finding the keystone studies in a topic area. Once all the key studies are in possession, I switch to the network method of data collection. That is, I trace the intellectual roots of the keystone sources as far back as needed. It is similar to the standard method but research starts with two or three bedrock studies rather than copious ad hoc materials. Together, the standard and network approaches enable researchers to find ample data to engage in objective analysis and deduction.

Data Analysis Procedure

I utilize process-verification to reveal the most useful explanations for Chinese export control development since 1992.²⁹ Thus, as per the procedure, I analyze the empirical record of Chinese export controls to assess the validity and utility of the nine proposed explanations. Careful attention is paid to the reliability, objectivity and publication date of source material. Greater weight is given to current and recently updated open sources. Data from China are analyzed when possible. The objectivity of deductions (internal validity) is reinforced and controlled by external reviews of the analysis by reputable experts on China, export controls, and the international nonproliferation regime. The generalizability of deductions (external validity) is

²⁸ McCabe, 2005

²⁹ Bennett and George, 1997

enhanced and accounted for as a result of using methods, concepts and procedures equivalent to those used in other studies of export controls.

Key Concepts

Three concepts underlie this research: 1. export controls; 2. the international nonproliferation regime; and 3. Chinese export controls. A correct understanding of all three is not only critical in carrying out effective analysis, but also in drawing conclusions and replicating the research.³⁰ Each term is operationalized below.

Export Controls

Export controls “are a national system for licensing the exportation of goods, services, and technologies as defined by regulation.”³¹ In most countries, export controls regulate three core areas: 1. exports of certain matériel and arms-related technology; 2. exports connected with the construction of nuclear weaponry; and 3. exports of certain commercial products and technology that the government identifies as inherently dangerous to national security if uncontrolled.

It is imperative that export controls be clearly defined and well-enforced to prevent illicit exports of strategic equipment, materials and technology that can be used in developing weapons of mass destruction. It follows that the core reason behind export controls is preventing unauthorized users from securing strategic exports. To minimize the risk of proliferation through international trade, governments must continuously enforce, evaluate and invest in national export controls as well as coordinate domestic regulations with multilateral export control regimes.

³⁰ See Schafer, 2001

³¹ Bryen, 2001:1

Some export controls target specific commercial equipment and technology. If commercial products are regulated by export controls, they are called “dual-use” exports. That is because these items can be converted from a legitimate civilian use into equipment designed to augment military power or produce weapons of mass destruction. The 5,000 or so ring magnets transferred from China to Pakistan in 1994 and 1995 are a case in point. Such magnets “can be used to make gas centrifuges, technology that in turn can be used to produce weapons-grade HEU [Highly Enriched Uranium].”³²

The International Nonproliferation Regime

The international nonproliferation regime is a blanket term for five separate multilateral export control arrangements or regimes (MECAs): 1. the Wassenaar Arrangement; 2. the Nuclear Suppliers Group; 3. the Australia Group; 4. the Missile Technology Control Regime; and 5. the Zangger Committee.³³ While each MECA is unique, together they share the same core objective: maximizing global security by controlling exports of sensitive technologies and equipment related to WMD. While members of MECAs “make no legally binding commitments in joining them, participating countries undertake a political commitment to abide by the goals and principles of the [arrangements].”³⁴ The five MECAs “operate on the basis of consensus of all members and decisions on how to implement and interpret regime decisions are left to the national discretion of each member.”³⁵

The Wassenaar Arrangement (WA) is headquartered in Austria and exists to maximize regional and international security by boosting transparency and more accountability in exports

³² Davis, 2005:9

³³ Beck, Craft, Gahlaut, and Jones, 2002

³⁴ USGAO, 2002:4

³⁵ USGAO, 2002:4

of conventional matériel and dual-use items.³⁶ It was established through several stages of consensus-building between 1994 and 1996, with the arrangement coming into full force in 1996. The WA maintains lists of items that member nations must agree to include among their regulated exports. Member nations consent to control exports of items identified by the WA as a means of preventing these items from being used to undermine global security and undercut the goals of the arrangement. On top of that, the WA enjoins members to provide it with occasional reports on their export control activities.

The Nuclear Suppliers Group (NSG) is a multilateral arrangement dedicated to reducing nuclear proliferation by curbing exports of nuclear-related items and by ameliorating safeguards and security on existing nuclear facilities and weapons stockpiles.³⁷ It was founded in 1975 in reaction to the 1974 Indian nuclear test. The Indian test showed that certain dual-use nuclear technology could be readily converted into nuclear weaponry. Since then, total NSG membership has grown from 7 to 45 countries. Today, the NSG still seeks to prevent nuclear proliferation without harming legitimate civilian exports of nuclear-related goods and technology.

The Australia Group (AG) is an informal multilateral arrangement of 40 countries founded in 1985 to reduce the proliferation of chemical and biological weapons by regulating exports of equipment and technology needed to manufacture them.³⁸ The impetus for its creation was the use of chemical weapons in the Iran-Iraq War (1980-1988). The current mission of the AG is promoting the use of licensing procedures that regulate exports of specified chemicals, biological agents and related dual-use items needed in the manufacture of chemical and biological weaponry. The AG accomplishes its mission by coordinating and standardizing the export licensing controls of all 40 members. The AG holds its annual meetings in Paris, France.

³⁶ Export Control News Update No. 16, 17 Nov. 2006.

³⁷ Export Control News Update No. 16, 17 Nov. 2006.

³⁸ Export Control News Update No. 16, 17 Nov. 2006

The Missile Technology Control Regime (MTCR) was established in 1987 and its mission is to reduce the spread of unmanned delivery systems for nuclear and other weapons of mass destruction.³⁹ Its founding members are Canada, France, Germany, Italy, Japan, Great Britain and the United States. The regime was initially concerned with state proliferators but expanded its mission after 9/11 to include non-state actors as well. MTCR achieves its aims by coordinating and standardizing common export control guidelines among members.

The Zangger Committee (ZAC) came into being in 1970 as the result of Article II(2) of the Treaty of the Non-Proliferation of Nuclear Weapons. Today, it maintains and regularly revises a trigger list of exports which must have safeguards attached. It also permits members to harmonize policies related to nuclear proliferation. The Zangger Committee is less rigid than the Nuclear Suppliers Group, which means that it regularly takes the lead on contentious nuclear-related issues. At present, the Zangger Committee has 36 members, among which, all the nuclear powers are included.⁴⁰

Chinese Export Controls

Three legal elements provide China with authority to manage export controls: domestic law, international law and international sanctions. The legal basis at the domestic level “comprises the 2004 Foreign Trade Law and the official export control regulations promulgated over the last ten years, including the 2002 export control measures.”⁴¹ Chinese export controls “also draw on international treaties and agreements to which the Chinese government is a party, including the NPT; the Biological Weapons Convention [BWC]; and Chemical Weapons

³⁹ Export Control News Update No. 16, 17 Nov. 2006

⁴⁰ Export Control News Update No. 16, 17 Nov. 2006

⁴¹ Davis, 2005:13

Convention [CWC].”⁴² Chinese export controls also find legal basis through “international trade sanctions mandated by UN Security Council Resolutions”.⁴³

The Export Control Division in China’s Ministry of Commerce handles dual-use export controls.⁴⁴ The Department of Arms Control and Disarmament in the Ministry of Foreign Affairs is “the chief interpreter of China’s multilateral and bilateral nonproliferation commitments.”⁴⁵ The National CWC Implementation Office controls chemical exports in China and falls under the authority of the State Reform and Development Commission. The China Atomic Energy Authority supervises China’s nuclear exports. China’s Commission on Science and Technology and Industry for National Defense regulates the transfer of conventional weapons. Lastly, the General Armaments Department under the People’s Liberation Army serves as a high-ranking consultative body on exports with salient national security implications. See appendix B for an outline of the Chinese export control system.

⁴² Davis, 2005:13

⁴³ Davis, 2005:13

⁴⁴ Medeiros, 2005

⁴⁵ Medeiros, 2005:27

CHAPTER 4

FINDINGS AND CONCLUSIONS

Neorealism

Explanation (A)

Chinese export control development does not appear to be a function of collective balancing by Beijing and the advanced democracies against mutual threats to their sovereignty.

While China has made visible progress in the area of strategic trade controls since 1992, power politics in South Asia often compels Beijing to overlook nonproliferation norms and engage India and Pakistan with “containment and balance of power strategies.”⁴⁶ The threat of a revisionist India drives Beijing to maintain strategic trade ties with Pakistan, a notoriously illiberal state outside the international nonproliferation regime. Since the late 1970s, China has provided Islamabad with conventional matériel as well as nuclear and missile-related technology despite the fact that Pakistan rejects IAEA safeguards and does not belong to any of the multilateral export control regimes.

China supplies Pakistan with sensitive weapons and technology as a means of balancing Indian power. China has been Pakistan’s staunch ally since 1962 following the Sino-Indian border war. After the war, China realized that a powerful India could severely threaten its security, and has pitted Islamabad against New Delhi ever since. In 1974, India detonated a nuclear device, which instantly upped the stakes in South Asia. As a result, China initiated nuclear trade with Islamabad (in addition to conventional armaments). The Chinese knew that unless Pakistan developed atomic weapons, the balance of power in South Asia would favor

⁴⁶ Paul, 2003:8

New Delhi in a matter of years, a status quo Beijing could not tolerate. Thus, China initiated nuclear and missile-related trade with Pakistan.

Since 1974, strategic exports from China to Pakistan have critically affected the balance of power in South Asia. Consider from 1990 to 1998 alone, “Pakistan is believed to have built between 7 and 12 nuclear warheads—based on Chinese designs, assisted by . . . Chinese [exports].” In the decades since 1974, China has reportedly provided Pakistan with “500 ring magnets useful in gas centrifuges that can make weapons-grade enriched uranium (1994-95); tritium used to boost the yield of atomic weapons (1986); heavy water needed to operate a plutonium production reactor, a special industrial furnace to melt plutonium or weapons-grade uranium into the shape of a nuclear bomb core (1996); high tech diagnostic equipment (1996); a nuclear weapon design (1983); and weapons-grade uranium for the production of one or more nuclear weapons (since 1983).”⁴⁷ In addition, it seems that “despite the conclusion of many analysts that the possibility of nuclear war in South Asia has increased since 1998,” Beijing has continued supplying Pakistan with key missile parts, steels and expertise needed to build long range ballistic missiles.⁴⁸

Moreover, evidence reveals that China’s strategic alliance with Pakistan even trumps the threat of secondary proliferation to North Korea.⁴⁹ North Korea’s atomic weapons program was originally supported by the Soviet Union; however, when the USSR collapsed, so did its aid to North Korea. Meanwhile, China was helping Pakistan develop nuclear weapons, which culminated in Islamabad’s 1998 atomic explosion. While Beijing adroitly balanced India by arming Pakistan, it stood helpless against Islamabad’s ensuing secondary proliferation. The danger and reality of secondary proliferation out of Pakistan came to light in 2003 when

⁴⁷ Paul, 2003:4

⁴⁸ Paul, 2003:5; also see Center for Nonproliferation Studies, <www.nti.org/db/china/mpakpos.htm>

⁴⁹ Paul, 2003

documents obtained from Libya revealed a global nuclear proliferation ring centered in Islamabad.⁵⁰ In the meantime, China had been actively supplying North Korea with ballistic missile technology. In 2002, evidence surfaced indicating that since 1997, Pakistan had been exporting nuclear materials and technology to North Korea. In exchange, the DPRK provided Islamabad with fully-assembled ballistic missiles.⁵¹ The Chinese must have known about the deals as well, because transport planes from Islamabad and Pyongyang almost certainly flew over Chinese air space, and even likely stopped in China to refuel before proceeding to their final destinations.⁵² Yet, the PRC took no corrective action, indicating that Beijing considered its strategic relations with Pakistan to be more important than the effects of secondary nuclear proliferation. As Dr. T.V. Paul states: “It is noteworthy that as an ally of both Pakistan and North Korea, China would be well-placed to restrain their behavior. Beijing has, however, shown no such leadership . . . due to fears of undermining . . . Pakistan.”⁵³

Admittedly, since 2000, China has slowly but increasingly restricted its sensitive exports to Islamabad, which some experts claim represents a new strategic posture by Beijing as a “responsible major power.”⁵⁴ Clearly, new threats from Muslim extremism and integration with the international nonproliferation regime are shaping and curtailing strategic exports from Beijing to Islamabad. Nevertheless, “as long as the Sino-Indian and Indian-Pakistani rivalries exist, China is likely to support its South Asian ally . . . [and] balance of power considerations will remain a dominant source of Chinese proliferation behavior in the region.”⁵⁵

⁵⁰ Kan, 2006

⁵¹ Kampani, 2002

⁵² Paul, 2003

⁵³ Paul, 2003:5

⁵⁴ Medeiros, 2005:xi

⁵⁵ Paul 2003:8

Explanation (B)

It appears that the development of robust export controls in China is not associated with denying strategic exports to Taiwan as a means of squeezing it into submission. In fact, the political dynamics of cross-strait export controls indicate quite the opposite: Since the late 1990s, Taiwan has been improving its own export controls to contain Chinese economic power, particularly in the semiconductor industry where Taiwan is a global leader.

In the past decade, Taipei has been utilizing export controls to blunt Beijing's growing clout in the semiconductor industry and stem illegal transfers of technology to the Asian mainland. Taiwan knows full well that since the late 1990s, Beijing has been on a mission to acquire "independent, proprietary high technology capabilities" as part of its effort to expedite national economic and military modernization.⁵⁶ Taiwan is also painfully aware that Beijing's strategy is panning out: China, for instance, has been rapidly expanding its control over the global semiconductor industry at a considerable cost to Taiwan since 2000. In the late 1990s, roughly half the world's fabrication plants were in Taiwan and many experts were predicting as many as 30 more would be built on the island by 2008. The experts were wrong. With China's entry into the semiconductor business in 2000, cross-strait control of chip manufacturing has changed drastically. To be sure, "2003 saw nineteen fabrication plants under construction in China, compared to four plants in Taiwan."⁵⁷

Besides mounting pressure from economic competition, the semiconductor industry in Taiwan has suffered from illegal and questionable exports of sensitive equipment and technology to the mainland, which further undermines what competitive edge it has left. Reports indicate that sometime between late 2000 and early 2001, an employee of a leading chip manufacturer in

⁵⁶ US-China Security Review Commission, 2002:48

⁵⁷ Wuebbels, 2005:397

Taiwan facilitated transfers of sensitive technology to Shanghai.⁵⁸ Also in 2001, Taiwan industrialist, Winston Wong Wen-Yang, stunned Taipei when he announced that he would manufacture chips in China with Jiang Mianheng, the son of Chinese President Jiang Zemin. The “Wong-Jiang” coalition was alarming because it involved sensitive technology and possible violations of export control law. While trade with China has never been a clear-cut issue, explosive outsourcing and illicit transfers since 2000 have convinced many Taiwanese that “eager local capitalists are playing right into China's two driving ambitions: to bring Taiwan back into the fold, and to gain high technology.”⁵⁹

As a result of recent experience in cross-strait semiconductor trade, Taipei has initiated debates on the use of export controls to stem the tide of technology loss and shrinking semiconductor investments as a matter of strategic defense. For example, “Pan Green coalition partners, the DPP, and the Taiwan Solidarity Union (TSU), have contended that stronger regulations on technology transfers should be viewed as a matter of national security.”⁶⁰ They argue that if current rates of outsourcing and technology loss to the mainland persist, the military modernization of China will overpower Taiwan’s self-defense capacity in a matter of decades.

In 2001, the Taiwan government set up a task force to examine the dynamics of illicit exports from Taiwan to China as well as delegated authority to the National Science Council (NSC) to draft new export control legislation with special emphasis on high-technology transfers. The NSC completed and submitted its draft legislation in 2002 called the National Science and Technology Protection Act. If enacted, the new export controls will reinforce and augment many of the regulations already on the books such as the National Security Law, National Secrets Protection Law and Copyright Law. The new legislation also stands to empower

⁵⁸ Specifically, the employee worked for the Taiwan Semiconductor Manufacturing Company (TSMC).

⁵⁹ Cheng, 2001: <www.asiaweek.com/asiaweek/technology/article/0,8707,97635,00.html>

⁶⁰ Wuebbels, 2005:398

the NSC and certain others in the government to enforce export controls falling into the following three categories: 1. vital technology to national security; 2. vital technology to economic strength; and 3. other important technology to national security and economic strength.

To date, the National Technology Protection Act has not been enacted because it apparently conflicts with such related legislation as the Sensitive Technology Protection Act. Still, it indicates that Taiwan is developing export controls to thwart mainland economic and military ambitions. Advocates of tough export controls in Taiwan share the conviction that Chinese control over the semiconductor industry expedites the rise of Beijing's military power and thus threatens their political security. For the moment, however, Taipei has chosen to compromise on the issue in hopes of balancing the needs of industry and national defense. The Taiwan Ministry of Economic Affairs, for example, concluded in 2002 that it would permit Taiwanese companies to build 8-inch-wafer fabrication plants on the mainland so long as they also built at least one 12-inch-wafer plant in Taiwan.⁶¹ In 2006, Taipei made moves to allow Taiwanese firms with plants in China to produce chips with 0.18-micron rather than 0.25-micron processing technology; however, no timetable has been set on the changes because many government officials still maintain that "the [current] restrictions aim to prevent local companies from losing market share to their Chinese rivals as well as to safeguard national security."⁶²

Explanation (C)

*The lesson of 9/11 that terrorists can acquire WMD and use them to wide effect does appear to be motivating China to develop robust export controls.*⁶³ As China's Foreign Ministry stated in 2003, "the 9/11 incident underscored the imminent threat of terrorism to international

⁶¹ Bloomberg and AP, 2002

⁶² Wang, 2006:12

⁶³ Davis (2005) states on page ix: "Nonproliferation export controls took on considerable policy significance in China after September 11, 2001."

peace and security.”⁶⁴ The terrorists’ use of civilian aircraft to attack the World Trade Center and Pentagon in the United States has made the Chinese government aware that, if terrorists ever obtained WMD in China, they might very well use them against Beijing.

Yet, terrorism is not new to China. Since 1991, the rise of Islamic extremism in Central Asia has spilled over into the western reaches of Chinese territory, leading to violent acts of subversion. Currently, the East Turkistan Islamic Movement is China’s most dangerous terrorist group. Made up of Islamic Uygur fanatics, they have but one goal: creating a fundamentalist Muslim state called East Turkistan in Xinjiang.⁶⁵ Before 1991, Beijing tightly monitored its Uygur minorities and let the Soviets handle Islamic fundamentalism in Central Asia. Once the Soviet Union fell, however, Beijing could no longer count on Moscow to emasculate religion in Kazakhstan, Tajikistan and Kyrgyzstan.⁶⁶ Soon after 1991, religious zealots from Central Asia were covertly crossing into China with their call to jihad. Ethno-religious conflict erupted and, according to Beijing, “from 1990 to 2001, the East Turkistan terrorist forces [provoked] more than 200 terrorist incidents in Xinjiang, which resulted in 162 deaths and over 440 injuries.”⁶⁷ Clearly, “[t]he trend of these events reveals that Uighur separatists are increasingly joining forces with Central Asian Islamic extremists to act as a unified front.”⁶⁸

Today, the Chinese understand that developing robust export controls is critical in preventing Islamic extremists from smuggling WMD into Xinjiang and disrupting legitimate trade with Central Asia. China is especially concerned with modernizing its border security, customs controls and end-user checks to thwart infiltrations of unconventional weapons. The arms captured in Xinjiang thus far have been conventional matériel such as grenades, antitank

⁶⁴ Chinese Ministry of Foreign Affairs, 2003:145

⁶⁵ Ji, 2004

⁶⁶ Uzbekistan and Turkmenistan do not border China.

⁶⁷ Wu, 2004:116; also see Vicziany, 2003:224

⁶⁸ Rotar, 2004:6

rounds and automatic weapons. Yet, Beijing is aware that WMD will enter China sooner or later unless it effects closer integration of export licensing offices and customs/border-patrol agents in Xinjiang. The Chinese likewise know that, without strong export controls, theft of nuclear material by Islamic terrorists in the western provinces will always pose a threat to the state.

As a result, the Chinese have invested considerable time, energy, and money into modernizing their export controls since 2000. They have improved and harmonized clearance procedures with export licensing bodies, and increasingly made exporters of controlled items submit licenses to customs officials at ports and customhouses. Customs agents have also been given full authority to search suspicious vehicles and individuals, and larger numbers of export authorities are being provided with “specialized equipment to detect radiological, biological, and chemical items . . . [which] includes X-ray machines, electronic platform balances, plate identification systems, electronic gates, and container identification systems.”⁶⁹ The Chinese have also increasingly required foreign importers to accept pre-license checks and post-shipment verifications. In 2002, Beijing engaged in joint military exercises with Kyrgyzstan, which focused on border security and illicit arms trafficking. It held similar joint exercises with Kazakhstan in 2006.

China has engaged in export control development since 2001 because the 9/11 attacks revealed the lethal connection between secondary proliferation and terrorism. Since 9/11, “China has . . . learned lessons about the negative repercussions of strategic trade with Pakistan and other countries. Consequences of secondary proliferation from past transfers of WMD-related technology are now apparent in China’s own backyard.”⁷⁰ All the same, Beijing’s rather limited post-shipment certification system and uneven capacity to patrol its international borders

⁶⁹ Medeiros, 2005:31

⁷⁰ Davis, 2005:1

“exacerbates the risk of Chinese exports’ being put to unauthorized end-uses or being re-transferred to unauthorized end-users without the Chinese government’s knowledge.”⁷¹

Furthermore, recipient states like North Korea and Iran are not restricted or officially monitored by the international nonproliferation regime. Hence, China has sought to strike at the roots of the problem by modernizing its export controls in the areas of customs inspections, pre-license checks and post-shipment verifications.

Rational Institutionalism

Explanation (A)

It appears that access to strategic technology and lucrative trade relations with the advanced democracies is a major reason why China has been modernizing and internationalizing its export controls since 1992. China’s history with the World Trade Organization (WTO) is a case in point. In 1986, China sought to join GATT (now WTO) because membership in the regime meant “unparalleled opportunities for trade and economic expansion,” including access to coveted Western technology and capital.⁷² The United States and other countries told China that it could eventually join GATT/WTO but would first have to qualify by instituting international-standard nonproliferation export controls.

Given all the benefits associated with joining GATT/WTO, Beijing made the rational choice and started developing internationally compliant export controls. From 1992 to 2001, China (among other things) signed the NPT; joined the Zangger Committee, restricted trade with Pakistan; enacted export control regulations; and released white papers on nonproliferation. It also became an adherent to the MTCR; signed the CWC; and acceded to the BWC. China’s efforts finally paid off in 2001 when it was admitted to WTO.

⁷¹ Davis, 2005:37

⁷² Heller, 2003:14

China has also carried out export control development since 1992 because it wants access to technology reserved for members of the MECAs. Beijing is especially interested in obtaining restricted MTCR-technology because of the benefits it will bring to China's expanding objectives in space. China's space program is not only ambitious but large and highly successful by international standards: The PRC maintains three launch facilities; averages six satellite missions per year; runs eight domestic satellite tracking sites, two foreign sites and four satellite tracking ships; and has the capacity to implement manned space flights. Nevertheless, to maximize progress in space, China must join MTCR.

China stands to reap four major benefits from MTCR membership. First, membership will allow the PRC to import considerably more advanced civilian space launch technology, which it can use to expedite development of futuristic carrier rockets. MTCR membership will also considerably expand China's opportunities to market its international commercial launch services. Third, joining MTCR will provide China with access to information exchanges, particularly with regard to the most restricted items (e.g. ballistic missiles, carrier rockets and reconnaissance drones) but also to Category-II items (e.g. gyroscopes, guidance sets and digital computers). Lastly, MTCR membership will place China in a much stronger position to bargain for lucrative contracts working on the International Space Station.

Yet, the fact remains: China must demonstrate consistent, responsible nonproliferation behavior before MTCR will allow it to join. As a result, over the last few years, China has noticeably restricted its nuclear and missile exports as well as punished violators more often than in the past.⁷³ In 2002, Beijing issued a clear set of missile controls, and the next year, told MTCR of its interest in joining the regime. While China was rejected by MTCR in October 2004, it still

⁷³ A recent exception concerns the CGWIC, which was accused in June 2006 by the USTD as supporting Iranian missile-technology development; see CGWIC, <www.cgwic.com/news/index.html>.

appears that Beijing would like to join the regime in the future. Thus, it stands to reason that, at least for now, the PRC will not resume its old supply patterns of exporting fully developed rocket systems but will continue improving its export controls.

Explanation (B)

China does seem to be engaging in export control development to reduce tensions with the United States and Japan. China has been working on improving national export controls since 1992 as part of its “peaceful rise” strategy, which maintains that political stability, foreign investment and international cooperation are vital to China’s modernization efforts. The strategy is not only widely accepted in Beijing but drives the direction and tenor of most Chinese domestic and foreign policy. The Chinese government is obsessed with designing methods to maintain internal and external political stability as well as annual economic growth rates of eight percent or higher. Beijing projects that, under these conditions, it stands to be one of the most powerful economies on earth by 2020.

The peaceful rise policy has been a positive force on Chinese export control development. Today, the Chinese realize that unrestricted proliferation threatens political stability around its periphery. And since regional stability is a chief goal of the peaceful rise strategy, controlling strategic exports has naturally become a priority for Beijing. Yet, China must cooperate with Japan and the United States if it wants to achieve this strategic goal. That is because Tokyo and Washington are two of China’s largest trade partners; wield extremely strong militaries; and dominate the international nonproliferation regime.⁷⁴

At present, relations between the United States, Japan and China are tense and distrustful because of different political systems and World War II. Thus, it is often hard to get all three to

⁷⁴ See CIA World Factbook, <www.cia.gov/cia/publications/factbook/geos/ch.html>.

cooperate and build consensus. Since China needs the United States and Japan to achieve its peaceful rise, it has worked rigorously to join the international nonproliferation regime since 1992. China assumes that by doing so, it will diminish mutual distrust and enhance cooperation. That is, with robust export controls, China will be in a better position to integrate with the MECAs and interact with the United States and Japan to clarify and communicate Chinese preferences, motives and intentions. In Chinese strategic logic, the multilateral export control regimes are places where collective norms, rules and patterns of practice reduce transaction costs; allay asymmetries of information; and boost the degree of certainty that members count on in assessing new policies and changes to the regime. The MECAs also affect interstate relations by changing the calculus of advantage in decision frames, and allowing members to generate regular procedures from which mutual expectations can emerge. China calculates that it can maximize economic growth and diminish residual distrust with Japan and the United States as a full member of the international nonproliferation regime. In the long run, accepting restrictions inherent in multilateral agreements and deepening relations with Tokyo and Washington will lead to far greater rewards for China. It is a key reason why the Chinese have invested considerable time and energy into modernizing and internationalizing their system of export controls.

Explanation (C)

It does appear that Chinese export control development is correlated with gaining US cooperation on Taiwan. China has been rapidly modernizing its military in recent years. Some experts predict that China will wield a fully operational aircraft carrier battle group by 2020. The Chinese have also reportedly made “huge progress” in submarine technology since 1996 and

more of the same is anticipated.⁷⁵ In December 2006, the *Taipei Times* reported that “China's Ming-class submarines [had] begun testing the installation of an air-independent propulsion (AIP) system that operates on liquid oxyhydrogen cells . . . [and] [that] China's navy continues to improve its Type 039 Song-class submarine, which was recently found stalking the USS *Kitty Hawk* near Okinawa.”⁷⁶

The international context in East Asia today is a classic example of the security dilemma: As Beijing modernizes its military, the United States takes action to counterbalance or contain China through (among other things) security alliances and arms races. For example, since the late 1970s, a chief way the United States has dealt with China's growing military strength has been to supply Taiwan with more than \$20 billion worth of military-related equipment and contracts.⁷⁷ The United States has also balanced China by maintaining armed forces in Okinawa, which is near enough to Taiwan to facilitate rapid counteroffensives against an invasion of the island.

Most recently, Washington has sought to contain Chinese power by extending theater missile defense to Taiwan, a plan Beijing intensely opposes. China is antithetical to theater missile defense in Taiwan because it knows that such a system could undercut Chinese leverage over Taipei, hinder modernization efforts and lead to an “axis” of intelligence cooperation between Tokyo, Taipei and Washington. In addition, many officials in Beijing opine that strategic trade with Taiwan not only contradicts but in fact undermines Washington's declared foreign policy of engagement with China. They reason that “arms sales upset regional stability by encouraging the Taiwanese to feel confident enough to move toward an independence that

⁷⁵ Cheng, 2006:8

⁷⁶ Cheng, 2006:8

⁷⁷ Nuclear Threat Initiative, 2005: <www.nti.org/e_research/e3_61a.html#fn5>

would not be tolerated by China. They point out that such a move would certainly result in military action by the PRC if necessary to protect their sovereignty.”⁷⁸

Because China totally opposes US arms trade with Taiwan, it has periodically manipulated the issue of missile proliferation to divide and deter the two governments with direct threats and concessions. In 1998, for instance, Washington reportedly considered canceling missile defense sales to Taiwan in exchange for a reciprocal action by China with regard to new missile exports to Iran; however, no agreement was reached.⁷⁹ The Chinese government has also reportedly warned US officials including Defense Secretary William Cohen in July 2000 that it will carry on with missile-related exports so long as the United States supplies Taipei with missile defense equipment and technology.⁸⁰ In February 2002, just days before a top Chinese arms control delegation was due in Washington, an unidentified Chinese official told the *Associated Press* that the US government “can’t just accuse us of violating our commitments and at the same [time] sell large amounts of arms to Taiwan.”⁸¹ He/she later added that US-Taiwan arms trade was “a kind of proliferation.”⁸² On 24 July 2004, China’s state-run newspaper, *Wenweipo*, ran a similar story in which another (or the same) nameless official linked China’s missile sales to ongoing US-Taiwan security cooperation.

The Chinese are interested in joining the multilateral export control regimes because being a full member will give them space to pressure and negotiate with the United States more effectively vis-à-vis arms trade with Taiwan. The Chinese have demonstrated their willingness to manipulate proliferation issues to split Washington and Taipei, as indicated by the quotes and evidence above. In the international nonproliferation regime, China will be even more

⁷⁸ Bullard, 2000: <<http://cns.miis.edu/pubs/reports/illinois.htm>>

⁷⁹ Kan, 2006

⁸⁰ Kan, 2006

⁸¹ McDonald, 2002:1

⁸² McDonald, 2002:1

empowered to engage and pressure Washington on strategic trade with Taipei. The Chinese know that “[s]upply-side control measures can only be effective if all major supplier states share broadly similar foreign policy preference in specific issue-areas.”⁸³ Taiwan is a major issue for China and unless it is resolved, there will always be tension and hypocrisy involved with export controls in the region. As a full member of the MECAs, Beijing not only stands a better chance of engaging Washington in collective milieus where issues can be linked, but also gains the power to severely undermine the authority and prestige of the regimes by cheating and violating their procedures, norms and rules. Of course, China would rather deal with the United States constructively in the multilateral export control regimes. That China wants to resolve the Taiwan issue without resorting to military conflict is a recognized fact. War would violate China’s peaceful rise strategy and set the country back decades. However, the importance of Taiwan to Beijing is no joke. The predicted power of regimes to maintain international discipline and provide transparency is notoriously weak in issues of high politics. As a result, if it joins all the MECAs, China will be in a much better position to broker deals vis-à-vis Taiwan. China knows that multilateral export controls, especially on nuclear and missile-related items, are highly important to US security interests.⁸⁴ Moreover, American economic ties are rapidly growing with mainland China. Thus, the Chinese rationally calculate that Washington is unlikely to risk the authority of multilateral export controls or its deepening interests with Beijing over arms trade and missile defense with Taiwan. Clearly, it is a rational step for Beijing to join the international nonproliferation regime.

⁸³ Yuan, 2002: <www.cns.miis.edu/research/china/chiexp/prcxc.htm>

⁸⁴ This position was advanced by the Under Secretary for Export Administration, USDOC, (18 September 2001). See USGAO, 2001.

Liberal Identity

Explanation (A)

The analysis cannot confirm that interaction with the advanced democracies drives Chinese export control development. That is, it remains uncertain whether Beijing's growing commitment to controlling strategic exports is a function of an emerging liberal identity or something else. China's nonproliferation behavior only provides indirect evidence that political liberalization is affecting export control development. To be sure, China today is no democracy despite decades of interaction with the West, as this 2005 report by the British government bears out:

The UK continues to have serious concerns about basic human rights in China, including extensive use of the death penalty; torture; shortcomings in judicial practices and widespread administrative detention, particularly re-education through labour; harassment of human rights defenders and activists (NGOs, political activists, journalists and lawyers); harassment of religious practitioners and adherents of Falun Gong; the situation in Tibet and Xinjiang; and severe restrictions on basic freedoms of speech and association.⁸⁵

Yet, this finding leaves a major observation unexplained: Why are Chinese export controls being rapidly developed in line with international nonproliferation standards while the Chinese politburo remains undemocratic?

The answer may lie in narrow democratization. That is, perhaps contact with the advanced democracies is having a narrow, direct effect on the Chinese export control bureaucracy. For example, as part of the April 2006 meeting of the Joint Commission on Commerce and Trade (JCCT), both the United States and China reassessed the value of the Exchange of Letters on the End-Use Visit Understanding signed in 2004.⁸⁶ China has wrangled over end-use checks for decades because many in Beijing consider them a breach of Chinese

⁸⁵ Cm6606, 2005:40

⁸⁶ USDOC, (11 April 2006), <www.bis.doc.gov/News/2006/JCCTPressRelease04_10_06.htm>

sovereignty. Washington supports the checks, however, and eschews sensitive trade with governments that forbid them. Over the course of the 2006 JCCT conference, the United States managed to re-convince Beijing that end-use checks help maximize strategic trade and trust between the two countries. Furthermore, both governments agreed to launch a US-China High Technology and Strategic Trade Working Group within JCCT. Forming the working group was a significant step in US-China trade relations because it provided both countries with a salient new way of carrying out end-use visits. Nevertheless, seeing that interaction with the advanced democracies is not affecting Beijing's political identity broadly, it would be spurious to conclude at this juncture that democratization of any kind, narrow or otherwise, is at play. Therefore, the hypothesis that interaction with the advanced democracies drives Chinese export control development remains unconfirmed.

Explanation (B)

Chinese export control development does not appear to be driven by a policy to weaken illiberal regimes as a matter of course. Many interests and factors are pushing, pulling and shaping Chinese identity in the area of export controls, including nearly sixty years of communism and thirty years of renewed contact with the West. It is no surprise, then, that China's nonproliferation policy twists and turns in ways both in line with and against the expectations of the advanced democracies. Today, Chinese political identity is, if anything, in a state of flux: it is no longer decidedly totalitarian, but neither is it liberal. In the last six years, for example, "China has pursued balanced [proliferation] positions on Iran and North Korea, but also evolved to vote for UN Security Council resolutions on those countries that called for some

sanctions.”⁸⁷ Still, one thing is certain: the Chinese are not developing robust export controls because they want to weaken illiberal governments as such.

The PRC and a great many Chinese entities are antithetical to sanctions and share priorities that include energy and strategic trade with illiberal countries like North Korea, Iran and Pakistan.⁸⁸ In June 1999, Chinese entities reportedly supplied Pyongyang with accelerometers, gyroscopes, and precision grinding machinery.⁸⁹ In November 2000, a variety of highly restricted items (Category-II) were exported by Chinese entities to Iran.⁹⁰ In early 2001, a Chinese company reportedly shipped 12 loads of rocket components to Pakistan.⁹¹ In the same year, the China Metallurgical Equipment Corporation (CMEC) was accused of illicitly transferring rocket technology to Pakistan.⁹² In 2002, Iranian entities allegedly received Chinese patrol boats armed with anti-ship ballistic missiles.⁹³ In late 2003, a number of Chinese entities were accused of helping Pakistan produce short and medium range ballistic missiles that run on solid-fuel.⁹⁴ In April 2004, five Chinese entities reportedly exported prohibited items to Iran.⁹⁵ A month later, the Chinese government signed a contract to build a second nuclear reactor in Pakistan.⁹⁶ In October 2004, Beijing and Tehran sealed a deal in oil and gas sales worth between \$70 and \$100 billion.⁹⁷ In December 2005, the US State Department imposed sanctions on six Chinese entities for exporting restricted chemicals to Iran.⁹⁸ In January 2006, China made another energy deal with Iran worth \$33 million to maintain oil drilling equipment in the Caspian

⁸⁷ Kan, 2006:1

⁸⁸ Entities are (semi)private firms, businesses, etc.

⁸⁹ Washington Times, 1999

⁹⁰ CRS, 2006:14

⁹¹ Washington Times, 2001

⁹² CRS, 2006:8

⁹³ Washington Times, 2002

⁹⁴ CRS, 2006:8

⁹⁵ CRS, 2006:11

⁹⁶ Nucleonics Week, 2004

⁹⁷ CRS, 2006:11

⁹⁸ Gertz, 2005

Sea.⁹⁹ Finally, in June 2006, Beijing invited Iran to be an observer at a summit of the Shanghai Cooperation Organization.¹⁰⁰

Explanation (C)

It does appear that, as China moves away from socialism, the country evinces ongoing improvements in national export controls, growing involvement in global nonproliferation issues and increasing engagement with the MECAs. In 1992, China acceded to the NPT, initiating “a marked shift in [its] nonproliferation policy.” Since then, China has enacted a Foreign Trade Law (1994/2004); signed the Comprehensive Test Ban Treaty (1996); joined the Zangger Committee (1997); and established a Department of Arms Control and Disarmament (1997). In 2002, China issued a white paper on national defense in which it stated China’s intention, “together with the international community, to contribute to the maintenance of the legal system for international arms control and disarmament.” In June 2004, Beijing became the 41st member of NSG, signaling a new and higher level of integration with the international nonproliferation regime. In September 2003, China gave word to the MTCR that it was willing to join the regime and, in 2004, it sat for three dialogues on the matter. China also in 2004 initiated contact with the Australia Group. In late 2003, it set up communication procedures with the Wassenaar Arrangement and held its first talks based on the procedures in April 2004.

Since 2000, China has also instituted a broad system of legal export controls, further showing improvements in its international nonproliferation strategy. China’s 2003 white paper is a case in point: It was “the first to specifically address Chinese nonproliferation export controls, capped a decade and a half of policy development and represented the most comprehensive

⁹⁹ CRS, 2006:11

¹⁰⁰ CRS, 2006:13

pledge yet by the PCR to adhere to international nonproliferation standards.”¹⁰¹ The 2003 white paper is especially noteworthy in light of its excellent clarification of China’s system of export controls. It also stands out because it concedes that national and international conditions demand that China modernize its export controls by building them on a sound legal basis. It reveals the details of what constitutes proper end-use(er) certificates, a licensing system, license tests, consent standards, a catch-all principle and punishments for export violations. The paper also lucidly lays out the legal bases for controls on exports of nuclear, chemical, biological and missile-related items. Lastly, it expresses China’s intention to engage in additional dialogues with the multilateral export control regimes.

China’s involvement in international nonproliferation issues can be seen at the UN as well. In April 2004, China showed support for nonproliferation by voting for the first ever UNSC resolution on curbing the spread of WMD (Resolution 1540). Then, in another surprise move, China abstained when the IAEA passed a resolution on 24 September 2005, accusing Iran of violating the NPT. Four months later, at a special meeting consisting of the P-5 and Germany, China agreed to report Iran’s case to the UNSC at the IAEA conference in early February. On 4 February 2006, “China was one of 27 countries that voted at the IAEA to support a resolution to report Iran to the UNSC, showing . . . progress in China’s cooperation.”¹⁰²

Summary of Results

The results show multiple sources of motivation and evidence for the recent expansion and internationalization of Chinese export controls. It does not appear that China is developing robust export controls as a function of collective defense with the West and Japan. Nor does it seem that squeezing Taiwan and targeting illiberal states are especially stirring China to expand

¹⁰¹ Davis, 2005:10

¹⁰² Kan, 2006:12

trade controls. The Chinese do seem, however, to be motivated to build export controls in order to prevent terrorists from entering China with WMD. They also appear to realize that with robust export controls, they will maximize access to strategic technology and commercial benefits from the West as well as reduce security competition with the United States and Japan. The Chinese also seem to be accelerating export control development as a means of diminishing US-Taiwan security cooperation. Lastly, it does appear that, as China moves away from socialism, the country evinces ongoing improvements in national export controls, growing involvement in global nonproliferation issues and increasing engagement with the MECAs. However, it remains uncertain whether Beijing's rising participation is the result of a nascent liberal identity.

CHAPTER 5

DISCUSSION AND FUTURE RESEARCH

Discussion

One interesting finding is that many of the motives behind Chinese export control development overlap and contradict one another. Beijing's need to both maximize regional stability and balance Indian power is a case in point: the former goal enjoins no proliferation while the latter demands it. It is also contradictory that China fears North Korean proliferation but takes no issue with proliferating to unstable regions itself. It is also interesting that China progressively accepts international nonproliferation norms by integrating with multilateral export control regimes but, at the same time, refuses to target illiberal states like North Korea as a matter of course.

It is not always clear what causal-order variables take in China's decisions to modernize and internationalize export controls. The effect of interaction with the advanced democracies is a good example. Certainly, China's progress in developing robust export controls has not followed any significant liberalization of the Chinese government: China is no democracy despite decades of dealing with the liberal democratic world. Conversely, Chinese export controls are very much developing in line with international nonproliferation standards. It could follow then that contact with the advanced democracies may be having a narrow, direct effect on the Chinese export control bureaucracy. However, since interaction with liberal governments is not affecting Beijing broadly, it would be spurious to conclude here one way or another.

China is one of the most important and largest suppliers of conventional and unconventional weapons in the world. As a result, Chinese nonproliferation policy has global effects. As Davis puts it, “Because China remains one of the world’s largest supplier states, its export control and nonproliferation policies will remain of great importance to the success of global nonproliferation efforts.”¹⁰³ It stands to reason then that effective Chinese export controls are critical to international security and preserving the current global system. Indeed, no advanced democracy is safe with a China that exports WMD and sensitive dual-use items to unstable regions, rogue nations and terrorist groups. It is critical that the advanced democracies engage the PRC and help it improve its export controls. Moreover, there is no reason why China should fail to meet international expectations: Robust export controls in South Korea, Japan and Taiwan prove that nonproliferation policies are totally compatible with East Asian tradition, culture and strategic context.¹⁰⁴

Since 1992, China has made tremendous progress in modernizing and internationalizing its export controls, which is borne out by a clear, steady decline in government sanctioned transfers of sensitive exports and a sharp rise in integration with the international nonproliferation regime. China is loosely emerging as a cooperative global player in the area of nonproliferation export controls. However, given all the motivations behind China’s export control development, it is too early to tell exactly what path China will ultimately take as it acquires the power to affect international nonproliferation policy unilaterally.

¹⁰³ Davis, 2005:58

¹⁰⁴ While the PRC is not limited to “East Asia” geographically, the cultural roots of its dominant Han ethnicity are fundamentally of the Far East. Thus, it is always highly appropriate to compare China with Japan, Korea, Taiwan and Vietnam regarding questions of cultural compatibility.

一个中华朝韩日越文化世界

Future Research

A possible avenue of future research is analyzing the effects of epistemic communities on Chinese export control development. “Recognizing that human agency lies at the interstices between systemic conditions, knowledge, and national actions, [some] [scholars] offer an approach that examines the role that networks of knowledge-based experts—epistemic communities—play in articulating the cause-and-effect relationships of complex problems, helping states identify their interests, framing the issues for collective debate, proposing specific policies, and identifying salient points for negotiation.”¹⁰⁵ Proponents of epistemic communities argue that, because power is a function of who controls knowledge and information, it follows that international policy is often the product of advice from networks of specialists connected with a government.

Epistemic communities are “network[s] of professionals with recognized expertise and competence in a particular domain and an authoritative claim to policy-relevant knowledge within that domain or issue-area.”¹⁰⁶ They also share several common elements: a unified code of moral beliefs, mutual notions of causality/validity and a shared sense of purpose. Epistemic communities serve as reliable information-shortcuts for statesmen who have no time to gather, collate and understand key information themselves, but who want their policies to be authoritative. Since epistemic communities are in fact collections of reputable specialists, their advice carries a stamp of reliability and expertise. Thus, harried statesmen tend to consult them before making policy. The epistemic communities approach, therefore, indicates that state interests are not fixed but fluctuate according to the dynamics of anarchy and second-image variables.

¹⁰⁵ Haas, 1992:2

¹⁰⁶ Haas, 1992:3

The idea that networks of experts have a definitive and significant impact on the outcomes of political decisions is intuitively appealing and makes sense in the case of Chinese export controls. Clearly, China's export control bureaucracy looks increasingly like its counterparts in the West. It is a matter of fact, however, that most of the Chinese government remains illiberal despite years of interaction with the advanced democracies. Liberal identity theory cannot explain this paradox but perhaps the epistemic communities approach can. That is, perhaps the core difference between China's export control bureaucracy and the rest of Beijing is the impact of an epistemic community.

Future researchers may want to begin studying the effects of epistemic communities on Chinese export controls at the Center for International Trade and Security at the University of Georgia. CITS "strives to address dangers posed by the security of, and trade in weapons of mass destruction (WMD) technologies and materials, and other military-related transfers."¹⁰⁷ It is staffed by internationally recognized experts on nonproliferation export controls and has considerable connections with China. Plainly, then, CITS is an ideal organization for studying connections between epistemic communities and Chinese export controls. In addition, CITS has recently launched an International Export Control Academy. The academy may be another venue in which meetings and interviews with Chinese officials can take place. Finally, to assess the full impact of epistemic communities on China's export controls, future researchers should carry out investigative analysis in China itself.

Another future line of research concerns links between the 1989 crackdown at Tiananmen Square and China's ongoing interest in export control development since 1992. In the summer of 1989, Beijing responded to student protests against the Chinese Communist Party by ordering the People's Liberation Army to stomp the whole thing out. Thousands of civilians were injured or

¹⁰⁷ CITS, 2006: <www.uga.edu/cits/about/mission.html

killed in the ensuing fight. And, unlike past protests in China, the foreign press was able to film and report this one first hand. The advanced democracies, therefore, had little choice but to respond politically. As a result, the United States and Western Europe each initiated strategic arms embargos against mainland China.

Since a large part of China's development plans had always included military modernization, it stands to reason that the two arms embargos following the Tiananmen incident may have directly and significantly motivated Beijing to develop domestic export controls and join the MECAs. Even before 1989, the Chinese were aware that cooperating with the advanced democracies was one of the surest ways of expediting their modernization efforts. Clearly, then, being the target of two hard-hitting arms embargos ran counter to Beijing's grand strategy. Put otherwise, the Chinese may have simply felt compelled to alter their proliferation behavior with a view to reversing the embargos that followed the confrontation at Tiananmen Square. This possibility is ready to be further explored.

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APPENDICES

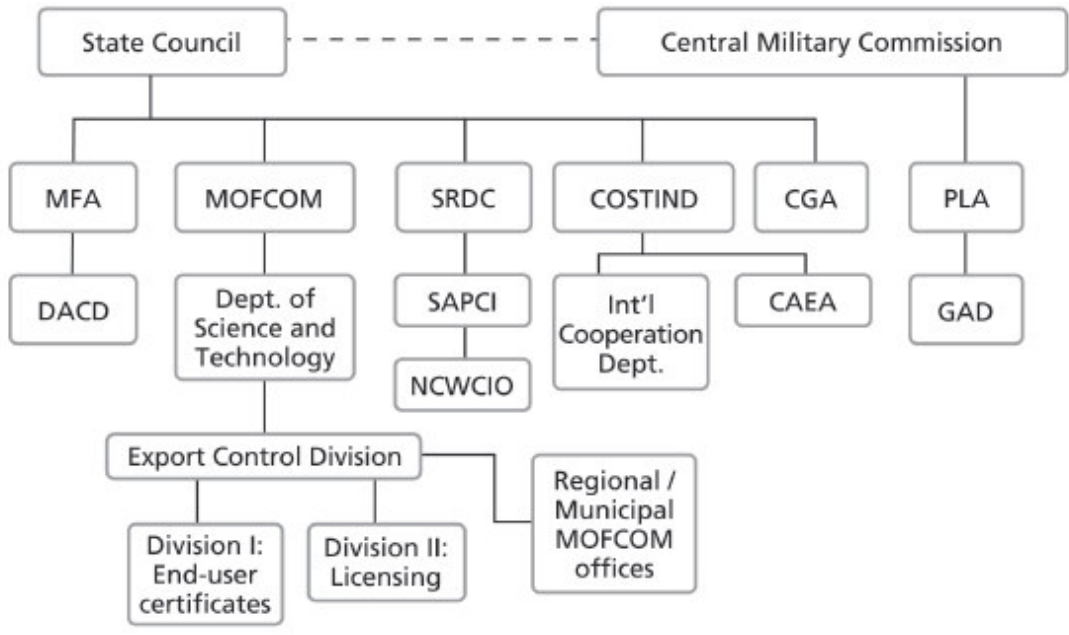
Appendix A

MAP OF CHINA



Appendix B

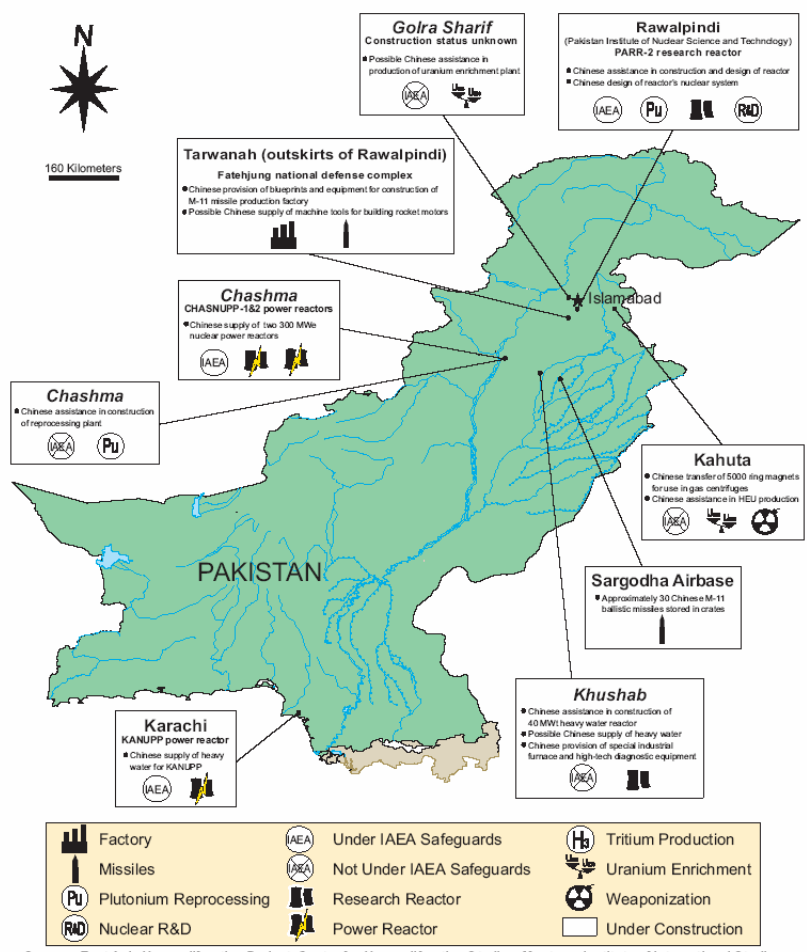
THE CHINESE EXPORT CONTROL SYSTEM



Source: Davis, J. (February 2005). *Export Controls in the People's Republic of China 2005*. (Athens, GA: Center for International Trade and Security, University of Georgia).

Appendix C

CHINESE ASSISTANCE TO PAKISTANI NUCLEAR AND MISSILE FACILITIES



Source: East Asia Nonproliferation Project, Center for Nonproliferation Studies, Monterey Institute of International Studies

Appendix D

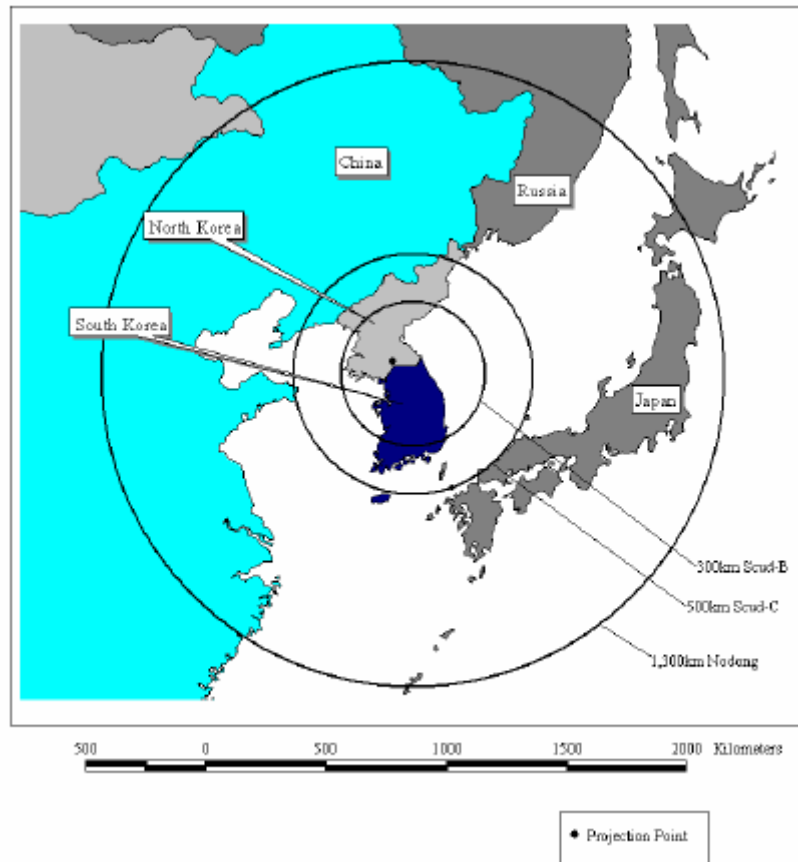
BALLISTIC MISSILES BY CATEGORIES OF RANGE AND COUNTRY

Range	Country
Intercontinental and/or Submarine-Launched Ballistic Missiles (>5,500 km)	China, France, Russia, United Kingdom, United States, possibly North Korea (Taepo Dong 2 or Taepo Dong ICBM)
Intermediate-Range Ballistic Missiles (3,000 - 5,500 km)	India, Iran, possibly North Korea
Medium-Range Ballistic Missiles (1,000 - 3,000 km)	Israel, North Korea, Saudi Arabia, China, India, Pakistan, Iran
Short-Range Ballistic Missiles (70 - 1,000 km)	Afghanistan, Algeria, Argentina, Armenia, Belarus, Bulgaria, China, Czech Republic, Egypt, Greece, India, Iran, Iraq, Israel, Kazakhstan, Netherlands, North Korea, Pakistan, Romania, Russia, Serbia, Slovakia, South Korea, Syria, Taiwan, Turkey, Turkmenistan, Ukraine, United Arab Emirates, Vietnam, and Yemen.

Source: Fieckert, A. (26 July 2005). "Missile Survey: Ballistic and Cruise Missiles of Foreign Countries." *CRS Report for Congress*. (Congressional Research Service: CRS Web.)

Appendix E

EFFECTS OF CHINESE PROLIFERATION: NORTH KOREAN SHORT AND MEDIUM RANGE MISSILE CAPABILITIES



Source: Fieckert, A. (26 July 2005). "Missile Survey: Ballistic and Cruise Missiles of Foreign Countries." *CRS Report for Congress*. (Congressional Research Service: CRS Web)

Appendix F

**CHINESE INVOLVEMENT IN THE
INTERNATIONAL NONPROLIFERATION REGIME**

REGIME	CHINESE PARTICIPATION	DATES OF PARTICIPATION
<u>Australia Group</u>	No; Declined May 1997 US invitation to join; Beijing is currently in on-going discussions with group on possible Chinese participation.	NA
<u>Missile Technology Control Regime (MTCR)</u>	Under discussion; began discussion with member states in February 2004 Pledged adherence to original 1987 guidelines;	Sent letter to Chair of MTCR announcing interest, September 2003. Written assurance (to US) February 1992;
<u>Nuclear Suppliers Group (NSG)</u>	Yes Joined May 28, 2004	Participant status took effect through exchange of notes on June 10, 2004
<u>Wassenaar Arrangement</u> (on Export Controls for Conventional Arms and Dual-Use Goods and Technologies)	No; Urged to join by US Beijing is currently in on-going discussions with group on possible Chinese participation.	NA
<u>Zangger Committee (ZAC)</u> (NPT Nuclear Suppliers Committee)	Yes	Attended as observer in May 1997; Joined 16 October 1997

Source: Nuclear Threat Initiative. (20 June 2004). "China and Multilateral Export Control Regimes." <www.nti.org/db/china/intexcon.htm>, (accessed 13 December 2006).