



Preventing WMD Proliferation

Myths and Realities of Strategic Trade Controls

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Togzhan Kassenova

Summary

Laptops, radios, instant coffee, train-signaling systems, satellites—we are surrounded by products that rely on the same technologies and materials as weapons of mass destruction (WMD). The international community faces a serious challenge. Trade is globalized, technology is spreading rapidly, and demands for economic development and uninhibited exchange of goods are greater than ever. How can states ensure that trade in dual-use goods and technologies does not contribute to WMD proliferation?

One solution is the establishment of national strategic trade control systems, which refers to a set of government policies and practices designed to regulate trade in proliferation-sensitive products for the purposes of preventing the spread of WMD and simultaneously facilitating trade in strategic goods. This relatively new concept emerged from the practice of export controls. A few decades ago, when proliferation-sensitive trade was confined to a few key producers, traditional export controls had political underpinnings and suppliers would choose their customers based on strategic alliances. Today, we live in a world in which goods and technology that can be diverted for WMD programs are much more widespread than ever before. They constitute a significant component of international trade, and the lines between the peaceful and military applications of the same products and technologies are less clearly defined.

Though these systems may seem to be the ideal solution for Western and other developed countries, developing countries often question their efficacy and worry about the regimes' effects on their international competitiveness. They fear that introducing comprehensive controls on strategic trade will put unnecessary burdens on government agencies and industry, inhibit trade, and divert valuable resources from addressing more pressing development needs.

The reality, however, is far more nuanced. The WMD threat is not just a concern of Western countries—in a globalized world, even countries without WMD programs or high-tech industries are at risk. What's more, investing resources into proliferation controls does not have to come at the

expense of meeting other national objectives and can, in fact, have positive effects in areas such as trade and competitiveness.

Each state must work, to the best of its ability, to prevent WMD proliferation. Governments should have the legal authority and institutional capacity to implement the licensing of sensitive trade, as well as the means to enforce any controls they have in place to prevent intentional illegal activity. They should also compile restricted items into a comprehensive national control list. A successful system requires close working relationships between government and industry, and whenever possible, governments should provide incentives to companies to be especially diligent when it comes to sensitive trade. Finally, for a national strategic trade control system to work, close cooperation between countries at the regional and international level is critical.

There will never be enough capacity or expertise to fully implement strategic trade controls. But no contribution to the common goal is too small. Working to limit WMD proliferation will make the world safer for all countries.

The Emerging WMD Proliferation Threat: Dual-Use Products and Technology

WMD-relevant technology and materials are all around us. Semiconductors, for instance, are indispensable in the advanced electronics we use every day (including computers), but they can also be utilized in a variety of military equipment, such as satellites, infrared imaging products, and transistors. Freeze-drying technology used to make instant coffee or instant noodles can also be used in biological-warfare research. Encryption technology has many civilian applications—for instance, in train-signaling systems—but malicious actors can also use it to communicate without being detected by law enforcement agencies. Similarly, satellite technology may have civilian applications, weather monitoring for example, or military ones, such as missile guidance.

The broad applications for dual-use goods and technology in everyday life result in constant flows of proliferation-sensitive items across borders. And this poses a real danger. Gradual acquisition of components and technology from various sources that can enable a nonstate or state actor to build a WMD program is a more likely proliferation threat than an actor acquiring an already-built weapon from an external source.

The best illustration of how real this threat is in the nuclear realm is the story of the A. Q. Khan network. Pakistani scientist A. Q. Khan and his associates successfully exploited gaps in controls of nuclear exports in Pakistan and

beyond during the 1980s and 1990s. The network assisted Iran, North Korea, and Libya in acquiring a whole range of nuclear weapons—relevant items.¹ According to a recent report by nonproliferation expert Joshua Pollack, India, surprisingly, was the fourth customer of the Khan network, procuring uranium-enrichment technology.²

Unfortunately for the proliferation outlook, progress in high-tech industries, especially in the fields of electronics and biotechnology, as well as the expansion of nuclear power and the globalization of trade, further exacerbate the challenge of firewalling international trade from WMD proliferation.

The Basics of Strategic Trade Controls

To minimize the threat of WMD proliferation in this particular context, the implementation of a robust strategic trade control system is necessary. This constitutes a set of measures designed to regulate trade in proliferation-sensitive dual-use goods and technology, as well as munitions. The key objective of strategic trade controls is to allow and facilitate trade of strategic items for legitimate purposes while preventing their diversion to WMD programs. Governments can achieve this goal by promoting greater oversight of strategic goods and technology.

A comprehensive strategic trade control system consists of several key components. To begin with, governments should have the legal authority and institutional capacity to implement the licensing of sensitive trade. By requiring traders to apply for a license before they export, import, transit, or transship strategic goods,³ the government gains the opportunity to review flows of sensitive products and prevent inadvertent proliferation.

Governments should compile restricted items into a comprehensive national control list that includes all items on the control lists of the four multilateral export control regimes currently in existence—the Australia Group, the Nuclear Suppliers Group, the Missile Technology Control Regime, and the Wassenaar Arrangement. Each regime maintains a list of items that its members believe should be controlled for nonproliferation purposes. The Australia Group’s list covers biological and chemical items that can contribute to the development of biological and chemical weapons. The Nuclear Suppliers Group includes items that can be used in the development of nuclear weapons programs. The Missile Technology Control Regime covers items that can be used in developing delivery systems for weapons of mass destruction. And the Wassenaar Arrangement’s list contains conventional arms and conventional dual-use goods and technology.

In addition to a comprehensive licensing system designed to prevent inadvertent proliferation, governments should have the legal authority and institutional

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capacity to enforce any controls they have in place to prevent intentional illegal activity. Strong enforcement depends on the capacity of intelligence, law enforcement, border, and customs agencies to detect and respond to smuggling in a timely and effective manner and on the education of producers and traders regarding the rationales and requirements of strategic trade controls. This in turn depends on the provision of appropriate training and equipment. Civilian and criminal penalties for violations are also an indispensable part of an effective enforcement mechanism.

A successful system requires close working relationships between government and industry, whereby the government makes every effort to educate and assist companies in abiding by relevant laws and regulations in the realm of strategic trade controls. Whenever possible, governments should provide incentives to companies to be especially diligent vis-à-vis sensitive trade. For example, they can facilitate export licensing for companies that establish internal compliance programs (a company's own procedures for due diligence). Industry can be an indispensable ally of governments in terms of preventing WMD proliferation because it is in the best position to detect suspicious purchase orders.

Finally, for a national strategic trade control system to work, close cooperation between countries at the regional and international level is critical. Effective international cooperation in intelligence sharing and assistance with enforcement capacity building can help prevent the exploitation of strategic trade for proliferation purposes.

Countries that implement strategic trade controls minimize the risk that malicious actors will divert domestically produced goods and technology to WMD-related purposes. They will also have greater confidence that their national territories are not being used for the unauthorized transit or transshipment of sensitive goods.

But they are also compelled to strengthen proliferation controls by international law. All UN member states have an *obligation* to establish and maintain effective domestic controls to prevent WMD proliferation under UN Security Council Resolution 1540, adopted in 2004. While the resolution itself does not provide a blueprint for what constitutes "effective" controls, its text and the matrix that countries are encouraged to use in reporting their implementation progress includes criteria extremely relevant for strategic trade controls. For example, the resolution specifically calls for "appropriate effective national export and transshipment controls over such items ... that would contribute to proliferation, as well as establishing end-user controls; and establishing and enforcing appropriate criminal or civil penalties for violations of such export control laws and regulations." It also urges countries to put in place "appropriate effective border controls and law enforcement efforts to detect, deter, prevent and combat ... the illicit trafficking and brokering in such items."⁴

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Five Myths of Strategic Trade Controls

Before any of these systems can be put in place, however, countries must first overcome widespread misperceptions about the controls. While the benefits of strategic trade controls for international security are undoubted in principle, their impact on national strategic and economic interests, and their applicability to individual countries, are keenly debated. There are five fundamental myths that stall the development of these controls.

Myth #1: A Country With No WMD History and No Advanced High-Tech Industry Should Not Concern Itself With Strategic Trade Controls

Many countries that never developed WMD programs and do not have advanced high-tech industries view comprehensive strategic trade controls as unnecessary. Those states believe that they do not pose proliferation risks and are not susceptible to them. Unfortunately, the absence of WMD programs or high-tech industries does not mean that a country is immune to proliferation challenges. First, even without advanced and large-scale dual-use industries, almost every country has at least some exposure to dual-use trade, be it chemicals widely used by industry, radioactive material used for medical or research purposes, or advanced electronics.

Second, proliferation challenges are not limited to cases in which nations act as suppliers of sensitive goods. Malicious actors can exploit any country as a transit/transshipment hub, regardless of whether it does or does not produce dual-use goods. Here the A. Q. Khan case is again instructive for its use of Dubai as a transshipment hub for WMD commodities. In 1994–1995, for instance, a Sri Lankan businessman working for Khan and based in Dubai used a freighter to ship centrifuge components to Iran by routing them from Pakistan to Dubai, via the Arabian Sea and the Persian Gulf. And between 2002 and 2003, A. Q. Khan's associates shipped centrifuge components from a factory in Shah Alam, Malaysia, near Kuala Lumpur, to Dubai and then on to Libya.⁵

But Khan is not the only example. In 1996, a South African company attempted to ship 100 tons of zirconium powder to Iran. The cargo had transited Germany, Poland, Belarus, and Russia before it was detained in the Russian Caspian Sea port of Astrakhan.⁶

Even if a country is not a major supplier of strategic goods, it should still consider developing strategic trade controls to prevent its exploitation as a transit/transshipment hub for smuggling. What's more, these countries' trade in strategic goods is bound to increase as their economies advance. Implementing controls early can help ease the process.

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Myth #2: WMD Proliferation and WMD Terrorism Pose a Threat Only to Western Countries

More often than not, officials and experts from non-Western countries note that they do not see a threat of WMD proliferation or WMD terrorism as directly relevant to them. In reality, a WMD threat does not discriminate and is relevant to all countries, no matter their size, politics, or region.

A WMD terrorist event will have repercussions on nations far beyond the boundaries of the country where it occurs. In 2004, the RAND Corporation conducted an extensive exercise that simulated a nuclear terrorist attack.⁷ For the sake of the exercise, RAND developed a scenario that involved a terrorist-detonated nuclear attack in the port of Long Beach, California. One of the key findings was that “the economic effects of the catastrophe are likely to spread far beyond the initial attack, reaching a national and even international scale.”

More specifically, RAND specialists noted that there would be a “conflict between the political desire to mitigate the risks of future attack compared with the business requirements for continued operation of the ports and the global shipping supply chain.” They also determined that as a result of the theoretical attack, there would be “reasonable prospects for extended closures of *all* U.S. ports to incoming traffic.” Among a multitude of projected repercussions of the shutdown of U.S. ports, global trade would be severely affected as a high percentage of activity in that realm involves U.S. ports.

Another way to look at this problem is from the perspective of individual industries. Former U.S. customs and border protection commissioner Robert Bonner made a compelling case in 2002 that if terrorists used sea containers to smuggle a nuclear device that was later detonated, it would have an irreversible impact on the global shipping industry and global trade: “Simply put, the shipping of sea containers would stop. The American people, for one, would not likely permit one more sea container to enter the United States until there was a significantly greater assurance—such as 100 percent inspections—that no additional terrorist weapons would be smuggled into the country. Governments in other major industrial countries would no doubt adopt a similar policy, thus bringing the global economy to its knees.” All countries would suffer as a result, but it would especially hurt states that rely on the containerized shipping industry. As Bonner noted, “even a two-week shutdown of global sea container traffic would be devastating, costing billions.”⁸

The 9/11 attacks provided a stark example of the kind of havoc a major terrorist act can wreak on the world economy in addition to tragic loss of life. In such a globalized world, almost everyone will feel some effects. Al-Qaeda’s 9/11 attacks were meant to inflict as much economic damage as possible, and in fact

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led to a significant drop in world economic growth—from 4.1 percent in 2000 to 1.4 percent in 2001.⁹ In a televised interview soon after the attacks, Osama bin Laden boasted that they “caused losses of more than a trillion dollars for America.” Though the figure is disputed by the International Monetary Fund, it demonstrates al-Qaeda’s intent.¹⁰

The impact from an attack on any means of global transportation or any global transport hub would not be confined to national borders. Even a nonmilitary incident such as the Icelandic volcano Eyjafjallajökull caused disruption far beyond Iceland. The crisis that emerged following the 2010 Eyjafjallajökull eruption resulted in the largest air-traffic shutdown since World War II. The International Air Transport Association stated that the total loss for the airline industry was around \$1.7 billion with 1.2 million passengers a day affected.¹¹ It is estimated that 107,000 flights were cancelled during an eight-day period, accounting for 48 percent of total air traffic.¹²

In yet another example, an outbreak of Severe Acute Respiratory Syndrome (SARS) disrupted air travel in Asia for two months. The authors of a recent study *Preparing for High-impact, Low-probability Events: Lessons from Eyjafjallajökull* note that SARS had an even greater impact on the economies of Asia than Eyjafjallajökull on Europe. They note that regional GDP for East Asia went down by about 0.6–0.7 percent in 2003. And SARS affected economies even in those Asian countries that did not have actual cases of the disease.¹³ This again proves that countries are now more connected than ever, and leaves one to ponder what a man-made biological or chemical attack could inflict.

In the age of interconnected economies, disruption at one major seaport or in one supplier country would affect global supply chains. Production of goods that might be critical for other countries’ economies would be disrupted, cargo flows would be interrupted which would create deadlocks at ports, and the ripple effect of an event in one country would spread to many nations around the world. All countries should recognize that a WMD event anywhere is an attack on everyone and it is bound to have repercussions on all world economies.

In the context of strengthening nonproliferation norms, any country that does not make an effort to the best of its ability to prevent WMD proliferation will increasingly be perceived as an outlier of the global security regime. That will lead to a gradual erosion of trust in that country, which, among other repercussions, will have a negative effect on the country’s trade and economy. International partners will be reluctant to provide high-tech technology and sensitive materials to a country that cannot guarantee those goods will stay out of WMD programs. The chance to contribute to global governance should also serve as a motivation for countries to work toward stronger proliferation controls, including those on sensitive trade.

Myth #3: Strong Strategic Trade Control Legislation Equals a Strong Strategic Trade Control System

Countries that are new to the concept of strategic trade controls rightly focus on developing appropriate legislation. Development of a strong legal basis (laws and implementing regulations) is critical for any strategic trade control system. Governments must decide on the scope of controls; what kind of transactions to regulate; and whether the controls will cover exports, imports, re-exports, transits, transshipments, brokering, and/or technology transfers. Equally important decisions pertain to the legal authorities assigned to different agencies regarding licensing, enforcement, industry outreach functions, and the scope of international cooperation. Finally, the legislation has to address the question of penalties: what is considered a violation and how will violations be punished?

This may be the first task on the agenda of any country serious about building a strategic trade control system, but legislation is not an end in itself.

Comprehensive laws and regulations are paper tigers unless they are supported by strong institutional, implementation, and enforcement mechanisms. In order for strong strategic trade control legislation to be meaningful, these mechanisms should be working. If licensing officers do not have the capacity to carry out due diligence on license applications, customs officers lack appropriate training or equipment to detect smuggling of strategic goods, and law enforcement systems are not set up to deal with enforcement of strategic trade control violations, the whole legislative exercise becomes futile.

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Myth #4: Strategic Trade Controls Stifle Economic Development and Hamper or Prohibit Trade

Many developing countries fear that imposing licensing controls on exports would stifle their trade and development, sometimes equating strategic trade controls with “prohibition.” Government officials and industry representatives worry that certain types of goods and technology will be banned from export and import if strategic trade controls are adopted. They are concerned that the licensing application and review process will be lengthy and that there will be delays at shipping points due to enhanced customs and border procedures for controlled items. Businesses will be forced to invest resources in internal compliance programs, and governments likewise in regulatory and enforcement mechanisms. The burdens build up.

But these fears are misplaced. Strategic trade controls are in place to *regulate* trade, not *prohibit* it, and to prevent WMD proliferation and attacks that certainly would inhibit trade if they were carried out. The main purpose of a strategic

trade control system is to give governments an opportunity to be informed about where sensitive goods and technology are flowing and stop high-risk transactions without preventing trade in such items for legitimate purposes.

While the establishment and maintenance of strategic trade controls no doubt require resources, the positive effects of such investment must be considered. Clearly defined procedures for strategic trade can facilitate trade operations for companies working in high-tech and other relevant industries. There will be more transparency and more efficiency in how companies trade. And more streamlined and efficient customs procedures introduced as part of strategic trade control systems will likely result in higher customs revenues. By adopting strategic trade controls and thus strengthening domestic proliferation prevention, countries create better conditions for trade in high-tech goods and technology. Domestic legislation in key supplier states prevents their companies from exporting sensitive products and technologies to countries, entities, and individuals that are known to have weak proliferation controls. At the same time, key supplier states facilitate trade with countries that are known to have strong proliferation controls.

U.S. legislation, for example, makes it difficult and sometimes impossible for domestic companies to engage in trade with actors with a poor nonproliferation record.¹⁴ Japanese strategic trade control legislation imposes varying levels of export control requirements depending on security concerns and on how strict the export control system of the importing country is. Japanese companies therefore have an incentive to trade with countries that have appropriate levels of export controls. In such cases, the Japanese government allows them to apply for so-called “bulk” licenses that exempt the company from having to apply for an individual license for each transaction, thus cutting time and costs involved.¹⁵

While it is difficult to quantify the impact of strategic trade controls on economies, it is clear that countries can expect a whole range of trade and development benefits.

Myth #5: Resources Spent on Strategic Trade Controls Are Resources Taken Away From Issues of Higher Priority

If a country faces the all-too-real problem of small arms and drugs smuggling, if terrorist groups operate on its territory, or if its population is vulnerable to epidemics of highly infectious diseases, its government will likely be more concerned with those immediate challenges than with WMD proliferation. With limited resources, why should they divert finite human and financial resources from addressing their everyday pressing concerns?

In reality, this is not a zero-sum game, and investing resources into proliferation controls does not have to come at the expense of meeting other national

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objectives.¹⁶ If planned and implemented wisely, capacity building for domestic proliferation controls can be helpful in dealing with a range of other issues.

For example, some of the equipment, detection techniques, and personnel training related to WMD proliferation are also key to preventing the smuggling of drugs and small arms. Intelligence and law enforcement capacity critical to confronting terrorist groups is indispensable to preventing the operation and financing of proliferation networks. Similarly, capacity for disease surveillance, detection, and source identification—vital during outbreaks of highly infectious diseases such as the avian flu—is central to preventing the proliferation of sensitive biomaterials for malicious purposes.

The benefits of allocating resources to strategic trade controls can be manifested in other areas of priority for governments, such as the prevention of smuggling in general, better protected borders, and a stronger capacity to respond to disease outbreaks, to name just a few.

Conclusion

One common concern shared by many countries is that there will never be enough capacity or expertise to fully implement strategic trade controls. Unfortunately, this concern is not based on myth. No country will ever have enough capacity and expertise to fully implement controls on all strategic trade, and the system will never be 100 percent foolproof. No measures will be enough to eliminate all risks of terrorism, WMD proliferation, or smuggling in their entirety. There is no government that can ensure complete compliance with its comprehensive strategic trade control laws, nor can any government be absolutely confident that a licensed dual-use item will not end up in a WMD program. Equally, no country, developing or developed, can afford to conduct physical inspection of all goods flowing in and out of its territory, to train its customs and border officials to recognize hundreds of items appearing on control lists, or to outfit all its borders with equipment able to detect all restricted items.

What strategic trade controls can do is *substantially* minimize the risk of WMD proliferation. A strategic trade control system creates significant hurdles for would-be proliferators to engage in smuggling. It weeds out opportunists who might attempt smuggling because it appears easy and profitable. Most importantly, it narrows the space in which malicious actors can interact and increases the chances that attempts at WMD proliferation through trade channels will be detected.

Many countries, especially in the developing world, rightly point to the limits they face with developing and implementing strategic trade controls. In this context, it is important to remember that no contribution to the common goal

A strategic trade control system narrows the space in which malicious actors can interact and increases the chances that attempts at WMD proliferation through trade channels will be detected.

of preventing WMD proliferation is too small. The cumulative effect of every country acting to the best of its ability to prevent WMD proliferation results in a safer international system for all.

Notes

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TOGZHAN KASSENOVA is an associate in the Nuclear Policy Program at the Carnegie Endowment and a Stanton Nuclear Security Fellow. She specializes in weapons of mass destruction nonproliferation issues, with a regional focus on Central Asia and Southeast Asia; nuclear security; strategic trade management; and civilian nuclear energy programs.

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