Explaining Nonproliferation Export Controls

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Road Map for the Talk

- Proliferation and the Dual-Use Dilemma
- Export Controls and a Case Study of Their Applicability
- National Export Control Systems
- Multilateral Export Control Arrangements
- UNSCR 1540 and International Export Control Development

Proliferation and the Dual-Use Dilemma

- Many of the technologies, goods, and raw materials required to construct nuclear weapons programs and ballistic missile programs have legitimate commercial applications.

- While the capacity to produce items of proliferation concern used to be concentrated in the hands of a small number of suppliers, globalization has led to the emergence of countless secondary suppliers

- Much of what a country or non-state actor needs for a WMD program can now be purchased in the international marketplace

What are Export Controls?

- Export controls are laws that regulate the export and sharing of sensitive technologies, equipment, software, and related data and services to foreign states and citizens, including to foreign nationals or representatives of a foreign entity on domestic territory, for reasons of national security and/or protection of trade

- Export controls are not necessarily complete prohibitions; instead, they require that licenses or governmental permissions be obtained for the export or dissemination of controlled goods and technologies

Controlling What Goes to Who

- Export controls apply to a list of specifically controlled goods (e.g., products, technologies, and raw materials)
  - Only 3% of U.S. exports are subject to export controls
  - Controlled goods may be ranked in terms of different levels of sensitivity and have varying criteria applied to their export

- Export controls are applied discriminately
  - Items that are subject export controls when sent to some states may not be controlled when sent to others
  - Certain individuals or firms may be black-listed from received controlled goods
  - If any good is expected to be used in a WMD program, the transaction may be subject to restriction (“Catch-All Clause”)

The Benefits of Export Controls

- Prevent spread of dangerous materials and technologies to state and non-state enemies (e.g., COCOM)
- Prevent other states or non-state actors from acquiring WMD or military goods, which could harm global security and stability
- Preserve relative economic and military power advantages in high-tech sectors
- Promote secure trade in these goods between likeminded states

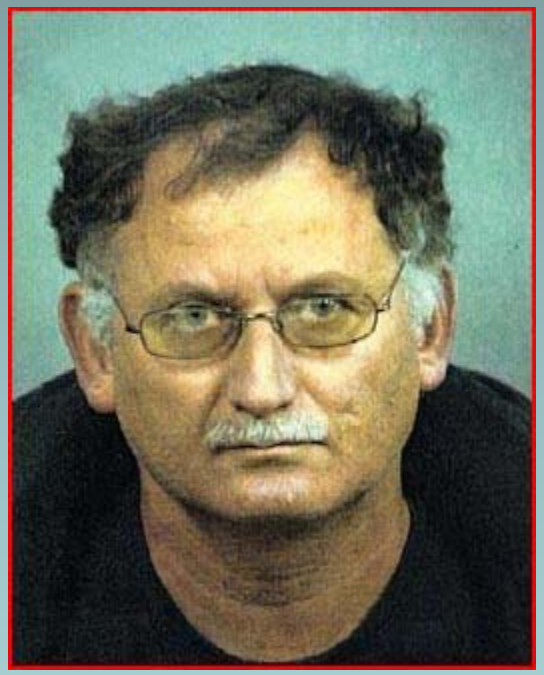
The Costs of Export Controls

- Export controls prevent potentially lucrative international trade opportunities
- They can deter foreign investment and intellectual talent from coming to the country
- They can hurt competitiveness of domestic firms
- They anger domestic political constituencies
- They can have diplomatic costs

Tension between States' Commercial and Security Interests

- The equilibrium strategy reached between U.S. business interests and the security establishment has tended towards building higher fences around a smaller number of technologies, rather than building low fences around many
  - Benefits: Has helped to maintain consensus support for the export controls that are in place and it provides rewards for innovation
  - Risk that countries can still proliferate using outdated technology (e.g., the Calutrons in Iraq) or that business-friendly decision-makers will try to define what's inside the fences too narrowly

Asher Karni and the Case of the Triggered Spark Gaps (2003)

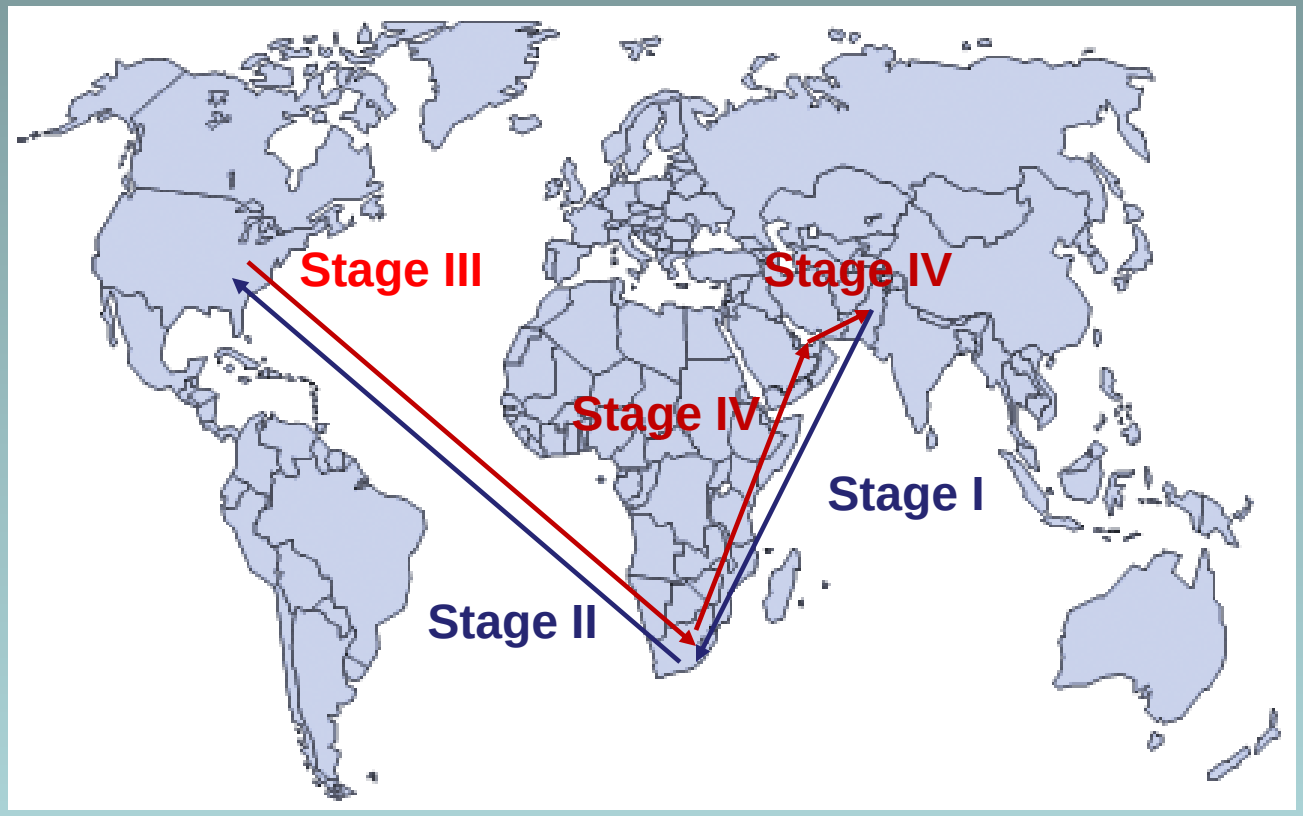


Asher Karni

Triggered Spark Gap

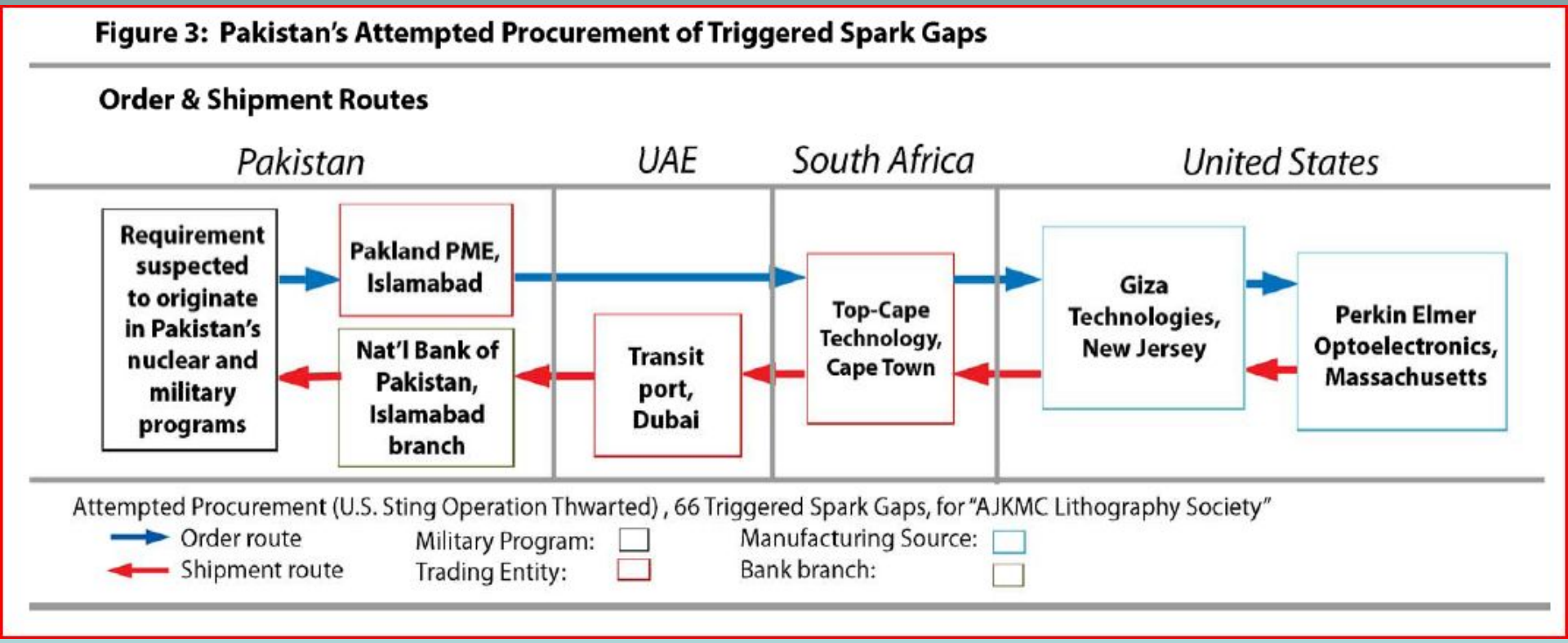
Humayun Khan of Pakland PME Corporation in Pakistan

The Proliferant Transaction in Stages



Stage I: Pakistan to South Africa
Stage II: South Africa to the U.S.
Stage III: U.S. to South Africa
Stage IV: South Africa to the UAE
Stage V: UAE to Pakistan

The Illicit Procurement Path



Source: ISIS

A Happy Ending…?

- PerkinElmer and anonymous tipster from South Africa notified the U.S. Government about the transaction, which sought to set up a sting operation
- The TSGs that actually made it to Pakistan were disabled by the U.S. Government, which rendered them useless for nuclear weapons applications
- The sting operation failed when officials in the UAE refused to cooperate. The Pakistani Government also refused to cooperate in the case.
- In 2004, Asher Karni was arrested in Denver. He was found guilty of five felony export control violations in 2005. He was sentenced to 3 years in prison, fined $500, and denied export privileges for 10 years.

National Export Control Systems

Types of Export Controls

- Export of domestically-produced goods
- Re-export, transshipment, and transit controls
- Brokerage Controls
- Intangible Controls
- Deemed Export Controls

Elements of an Effective National Export Control System

- Legal and Regulatory Framework
- Licensing Procedures and Practices
- Enforcement, Investigation, and Prosecution
- Industry Outreach

Legal and Regulatory Framework

- Governments should possess legislation that provides the legal foundation for the export control system
- Laws must establish jurisdiction over controlled goods, technologies, and activities, and the territory over which those jurisdictions apply
- Laws must grant the necessary authority for implementing the export control processes
- Establish penalties for violating the law and the provide the authority for enforcing them

Licensing Procedures and Practices

- Effective and transparent licensing organizations and processes to ensure adequate review of license applications for nonproliferation reasons

- Procedures and watch lists for evaluating parties involved in transfers, paying particular attention to those considered suspicious, unreliable, or presenting a high risk of diversion

- Processes to ensure that technical experts, intelligence experts, and policy officials from all legally entitled government agencies have the knowledge and opportunity to evaluate license applications for proliferation concerns

- End-use verification for licensed transactions

Enforcement, Investigation, and Prosecution

- Exercise effective control over the state's POEs and borders
- Policies that provide enforcement agencies with the mission, authority, training, and resources necessary to detect, identify, and stop transfers that violate export control laws, as well as to investigate and prosecute export control violators
- Have procedures and watch lists for evaluating parties involved in transfers and apply risk management and targeting strategies to detect suspect transfers.
- Cooperation among agencies responsible for export controls, including those responsible for licensing, investigation, and prosecution to ensure that laws are enforced effectively

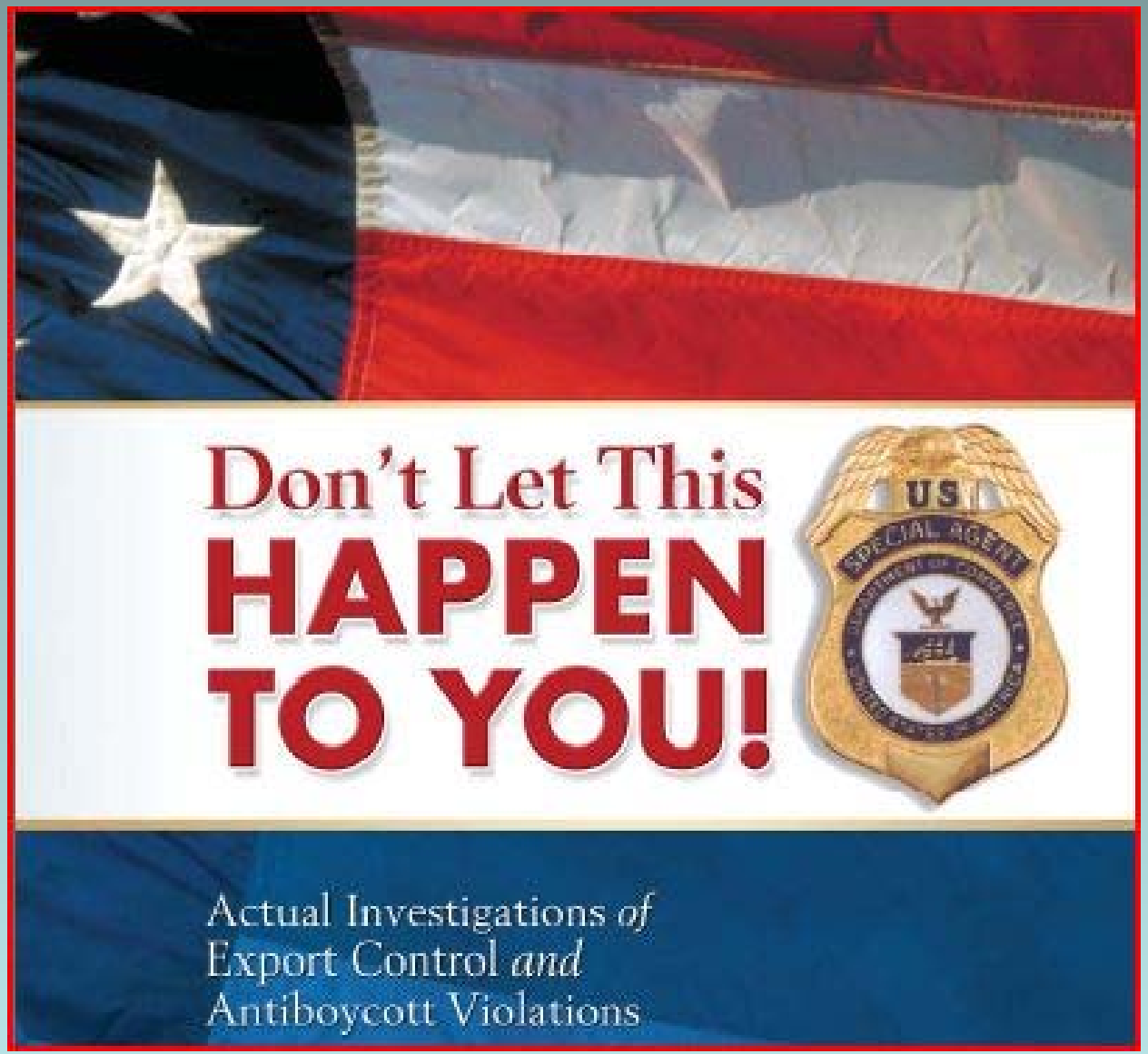
Industry Outreach

- Effective outreach to raise the awareness of individuals, firms, universities, and centers of research and development about their responsibilities under the economy's export control system.

- Educate the commercial constituencies about compliance requirements and publicize the punishments for violations

- Policies that encourage firms to develop internal compliance programs (ICPs) and engage in self-reporting and self-policing for violations

U.S. Bureau of Industry and Security's



Inherent Challenges in Creating Effective National Export Controls

- Requires a significant amount of technical expertise and tacit knowledge
- Foreign and domestic political obstacles
- Requires a significant bureaucratic effort, involving the coordination of multiple branches of government
- Requires a lot of resources to effectively administer, especially for countries with small national budgets and small customs agencies

MTCR

Multilateral Export Control Arrangements (MECA)

ZANGGER COMMITTEE

NSG

General Characteristics of the MECA

- These regimes are informal and impose no legally-binding obligations on their participants
- Formed from groups of likeminded states and have exclusive membership criteria
- Rely on voluntary cooperation, consensus agreement, and communication to improve national export controls
- MECA assist in coordination of national export control policies in order to control proliferation of controlled goods through the joint implementation of common export control lists by participating governments
- Member states can trade more freely with one another because they know that such trade is safe.

Zangger Committee

- The Zangger Committee was formed in 1971 by 7 nuclear supplier states that were party to the NPT

- The Zangger Committee sought to reach common understanding on how to implement *Article III.2* of the NPT. Member states compiled a list of sensitive nuclear exports, including: HEU, plutonium, and equipment "especially designed or prepared" for their production (EPDs). Dual-use items and technologies were not included.

- The nuclear suppliers agreed that the transfer of items on the list would "trigger" a requirement for IAEA safeguards to assure that the items were not used to make nuclear explosives. Only single-facility, not full-scope safeguards were required.

Zangger Committee (cont.)

- The Zangger Committee's export controls targeted transactions with non-nuclear weapons states that were not party to the NPT
- During the 1980s and after the Iraq War, the Zangger Committee updated its trigger lists with restrictions on new technologies and equipment
- In 1992, the NSG agreed to harmonize its control list with the Zangger Committee's list
- The Zangger Committee currently has 37 members

Nuclear Suppliers Group

- The NSG was created following India's explosion of a nuclear device in 1974. Differed from the ZC because it involved France and was not explicitly tied to the NPT.
- The scope of its XCs have always been broader than the ZC's controls. As well, NSG guidelines apply to all non-nuclear states.
- It is an informal, voluntary grouping that aims to harmonize implementation of controls on the export of sensitive nuclear and dual use equipment, materials, and technologies.
- The NSG has no formal administrative structure, no legal authority to influence the nuclear trade policies of its members, and no formal enforcement mechanism.

NSG (cont.)

- The NSG published its first guidelines for nuclear exports in 1977 and set about expanding its membership
  - Created Part 1 of the NSG's Guidelines, which govern the export of materials and technologies that are exclusively for nuclear use and require the application of IAEA safeguards at recipient facilities

- Following the first Iraq War, the NSG underwent a major overhaul
  - It expanded its membership
  - It harmonized its Part 1 control list with the ZC
  - The NSG created Part 2 of its Guidelines, which cover the export of dual-use materials and technologies that can contribute to nuclear programs
  - It adopted the U.S.'s policy of requiring full-scope safeguards for all nuclear exports

NSG (cont.)

- In 1994, the NSG added a provision concerning a “non-proliferation principle” to its Part 1 Guidelines and, in 2004, the NSG’s members adopted the “catch-all” principle

- In 2003, the NSG strengthened its provisions concerning recipient states’ measures to ensure the physical protection of the materials and technologies shared with them

- NSG states are supposed to share information with other members about the export applications they deny. This supports a no-undercutting principle amongst its member states.

Beyond the NSG

- The NSG's control list and guidelines have become the normative nonproliferation standard
- The NSG has expanded to 46 members, with a larger number of countries that profess to be adherents
- Argued that the NSG has largely supplanted the ZC

Missile Technology Control Regime (MTCR)

- In April 1987, the United States, Canada, France, West Germany, Italy, Japan, and the United Kingdom created the MTCR to limit the proliferation of missiles capable of delivering WMD

- Challenge: No NPT equivalent for the proliferation of missiles and significant dual-use issue with space programs.

- The MTCR is based on the premise that foreign acquisition and development of missiles can be delayed and made more difficult and expensive if major producers agree to control exports of missiles and the equipment and technology used in missile production

MTCR (cont.)

- The MTCR has a set of common export control guidelines adopted and administered independently by each of the partner nations.
  - Category I : Restricts transfers of ballistic missile systems and UAVs that have a range of 300 km and payload of 500 kgs or greater, their means of production, and major subsystems. A strong assumption of denial is advocated.
  - Category II: Restricts transfer of ballistic missile systems of lesser capabilities and a wide range of dual-use goods
- 34 countries are now partners in the MTCR, with a larger number of countries that claim to be adherents (e.g., Israel, Romania, and the Slovak Republic)
- Notably, China is not a member

Pros of the MECA

- Improved coordination in international export control efforts by states who have the greatest access to these technologies and materials
- Better information about trade in sensitive goods amongst members
- Improved trade flows in sensitive goods amongst member states
- Strengthens nonproliferation norms and pressure to comply

Cons of the MECA

- Breed resentment among non-member states, who feel that they are unjustly excluded and discriminated against
- Ultimately, MECA have no enforcement mechanisms to force state compliance
- Rely on consensus, so recalcitrant member states can block group efforts
- Coordination problems between the various MECA, in addition to incongruent memberships

UNSCR 1540

- Passed in 2004 by the UN Security Council
- UNSCR 1540 creates a binding, hard-law obligation under Chapter VII of the UN Charter for all states to impose effective national export controls
- Obliged countries to criminalize proliferant trade
- Obliged all UN member to report to the 1540 Committee concerning the status of their export controls
- It “invites” those states capable of providing assistance to those that may need it, but does not require its provision

The UNSCR 1540 Committee: Activities and Potentials

- The 1540 Committee collected reports from nearly all UN members in 2005
  - Though the quality and bias of the reports vary, the 1540 Committee's collection constitutes the most comprehensive source of data on countries' export control systems ever assembled

- The 1540 Committee was supposed to be a coordination point for the provision of export control assistance, but that really has not occurred

A Small-N Analysis of Comparative Export Control Development

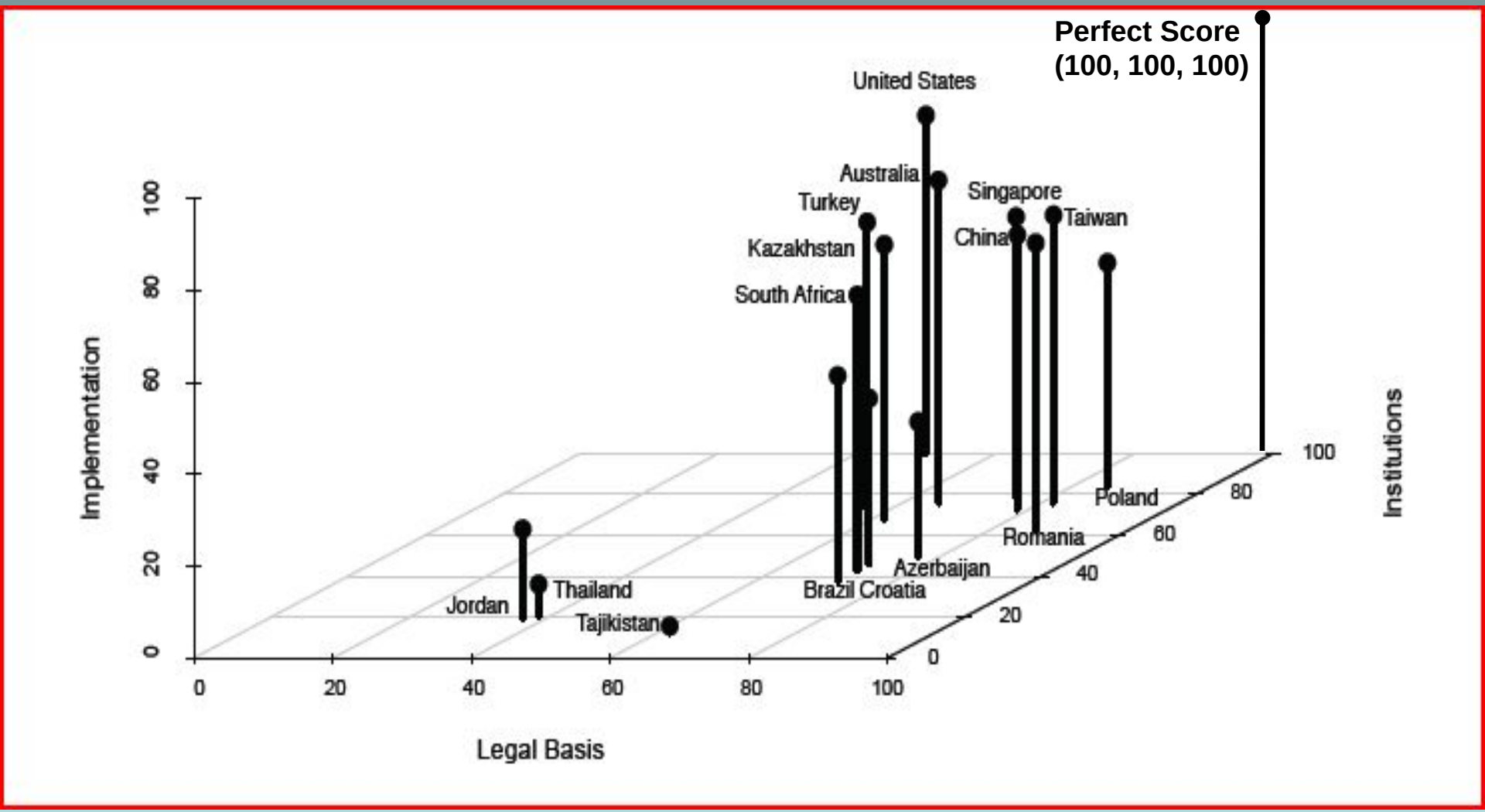
- Significant cross-national variation in countries' export control development

- UNSCR 1540 has not been successful, as of yet, of garner substantial compliance with obligations it has created.

An Evaluation of 16 Countries' National Export Control Systems

- Assessed countries' export control systems along three dimensions using 100+ question survey circa
  - Legal Development (Scored 0-100)
  - Institutional Development (Scored 0-100)
  - Implementation (Scored 0-100)

- Countries Include:
  - United States, Brazil, Australia, China, Taiwan, Thailand, Singapore, Poland, Romania, Croatia, Kazakhstan, Turkey, Azerbaijan, Jordan, Tajikistan, and South Africa



Source: Stinnett, Early, Horne, and Karreth (2009)

Conclusion

- Export controls are an important supply-side strategy for slowing down would-be proliferators and making their activities more costly, but they cannot be expected to prevent all illicit transactions from taking place

- After the passage of UNSCR 1540, all countries have an obligation to impose national export controls

- Significant variation remains in the degree to which countries' export control systems are developed: would-be proliferators can be expected to exploit the weakest link countries as suppliers or as transit points

Questions?

Resources

- Michael D. Beck et al. 2003. *To Supply or Deny: Comparing Nonproliferation Export Controls in Five Key Countries*. New York: Kluwer Law International.
- Gary Bertsch and Suzette Grillot. 1998. *Arms on the Market* . New York: Routledge.
- Joseph Cirincione et al. 2005. *Deadly Arsenals: Nuclear, Biological and Chemical Threats*. Washington, DC: Carnegie Endowment for International Peace.
- Richard Cupitt. 2000. *Reluctant Champions*. New York, Routledge.
- Matthew Fuhrman. 2008. "Exporting Mass Destruction? The Determinants of *Dual-Use* Trade." *Journal of Peace Research* 45(5): 633-652.
- Douglas Stinnett et al. 2009. "Complying by Denying: Explaining Why States Develop Nonproliferation Export Controls." Unpublished Manuscript. Athens, GA: The University of Georgia.