

Export Control Challenges

Background Notes for the
International Security Industry Council

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What Needs to be Controlled?

- Scientific knowledge applicable to:
 - current and future tangible and intangible national security capabilities, and
 - commercial sector

- Actual products, capabilities, production processes, hardware, software, and subsystems

The Fundamentals

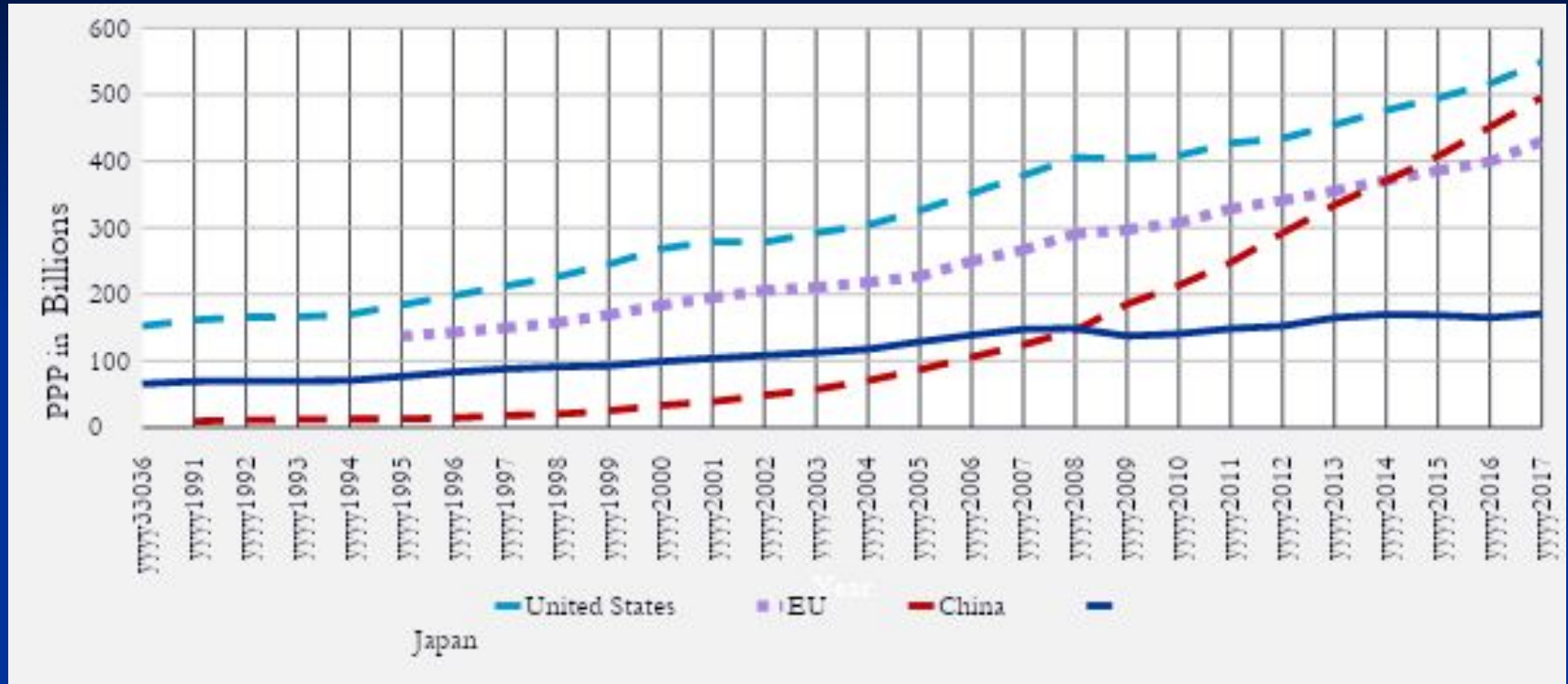
□ Commercial sector

- existing products, production processes, equipment, and materials
- technology base for new products, production processes, and equipment
- sales generate corporate revenue, domestic employment, international trade, and funding for next generation R&D
- Commercial technology, know how, and products can have utility for defense systems

□ National security sector

- defense systems, production processes, equipment, and materials
- technology base for new defense systems, production processes, equipment, and materials
- strengthens deterrence as perceived by others
- strengthens military response capability if a nation is militarily challenged
- Government contracts to aerospace and defense industry generate corporate revenue, domestic employment, international trade, and funding for next generation R&D

Gross Expenditures on R&D



Source: The State of U. S. Science & Engineering 2020, National Science Board

PPP- Purchasing Power Parity. Compares different countries' currencies through a "Basket of Goods" approach.

France, Germany & UK account for 57% of EU expenditures on R&D.

Export Control versus Technology Sharing with Allies

-Maximizing Collective Benefits and Deterrence-

Relevance of R&D—Past and Present

- NATO nations contained the Soviet Union by:
 - investing in R&D,
 - protecting R&D results, and
 - cooperating with other nations

- China's level of R&D investment first surpassed Japan's in 2008; surpassed the EU's in 2015, and is about to surpass the US

- Despite low levels of past investment China advanced its defense systems and commercial competitiveness by stealing technology from numerous technologically advanced nations

Modes of Defense System Technology Sharing

□ Transatlantic cooperation benefitted the US and others for over 50 years:

- US exchanged defense system technology, starting in the mid-1960s, through: Scientist & Engineer Exchange, Master Data Exchange, FMS, and defense system cooperation
- Four nations signed an MOU in 1968 to develop the NATO Seasparrow Missile
- Three nations signed an MOU in 1976 to develop the Rolling Airframe Missile
- Five nations signed an MOU in 1975 for cooperative production of the F-16, in the US and Europe; they later cooperated on system up grades
- Numerous MOUs were signed in the 1980s to cooperatively acquire a wide variety of technologically advanced defense systems
- Many bi-lateral and multi-lateral agreements were amended to support second and third generation system advances

Nations should apply to today's threats, the lessons they learned from addressing Soviet Union threats

How has the US Approached Export Control?

Gradual Evolution of the US Export Control System

- ❑ Export control regime of 1935-1939 prevented US entanglement with warring European nations
- ❑ Export Control Act of 1940 (aircraft parts, chemicals and minerals), later extended to all commodities
- ❑ Export Control Act of 1949 restrained the Soviet Union, supported NATO, and formed CoCom
- ❑ Export Administration Act of 1969 balanced need to protect defense related technology and promote international trade
- ❑ Arms Export Control Act (1976)
- ❑ Export Administration Act (1979) responded to Soviet Union using western dual-use technology to modernize its forces

Export control organizations/practices evolved over several decades to accommodate changing international security and economic factors

Major Evolution of the US Export Control System

- Export control system became increasingly bureaucratic, warranting reinvention:
 - numerous government agencies involved, and
 - lengthy delays processing export license requests which sometimes rendered US industry non-responsive to allies/friends and non-competitive in the global marketplace

- Obama Administration launched a 2009 comprehensive review of the US export control system

- Secretary of Defense Gates proposed a four part approach:
 - create a single export control licensing agency for dual-use and munitions exports,
 - adopt a unified control list,
 - establish a single enforcement coordination agency, and
 - create a single integrated information technology system

- Substantial progress was made, but more remains to be done

National Security Implications for Japan of an Enlightened Export Control System

- Increase quantity of defense systems and components produced by serving domestic *and* export markets
- Reduce unit price of MOD defense systems and components
- Enable Japan's MOD to acquire more systems and components for the same budget
- Increase defense capability for the MOD
- Increase Japan's perceived value as a coalition partner
- Enhance Japan's national security

Conclusions

- There is no single best way to manage export control.
- Each nation must consider its various government organizations, its industrial base, and regional allies, and regional threats
- It must craft a solution that protects its technology while also positioning its government and industry to collaborate with allies to their collective benefit.
- Every other nation has a similar challenge; perfect solutions are infrequent, periodic refinements are the norm, and simplicity is preferable to complexity

Conclusions – cont'd

- ▣ Cooperative acquisition and defense system exports can strengthen national defense, but they require a predictable and responsive export control process
- ▣ Short decision times are achieved through agreed lists of what requires control, minimum number of players in the review and decision process, and open communications with those seeking export approval
- ▣ Japan, the US, and others need to stem leakage of defense and commercial technology to China and other hostile nations
- ▣ Export controls of themselves only *slow* erosion of technological superiority
- ▣ Technological superiority erodes over time:
 - adversaries build on knowledge/products that enter the marketplace, and
 - deploy current/next generation improvements with modest investment