Chinese Procurement Reform and the National Logistic Defense Base

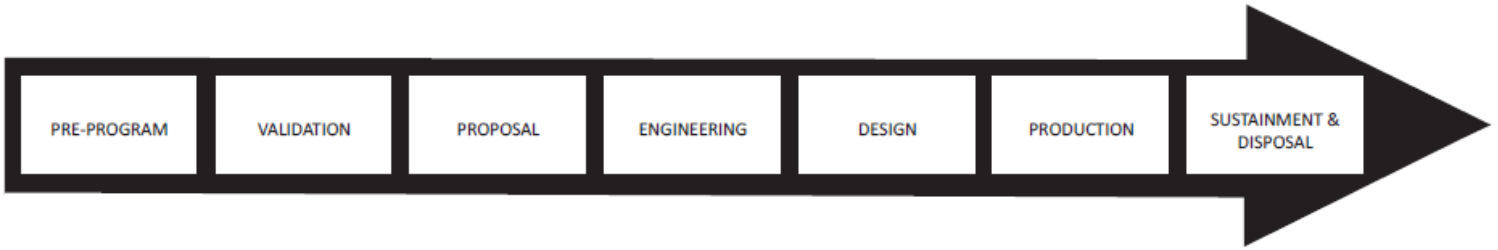
Richard A. Bitzinger
Military Transformations Program
S.Rajaratnam School of International Studies, Singapore

The Key Challenge

- How to achieve self-sufficiency *and* innovation
  - Autarky – but historically, indigenous weapons were of inferior capability, poor quality
  - Relied heavily upon foreign technology inputs (Russian, Western [1980s])
- Moving "further upstream" the research, development and acquisition (RDA) process has been a key goal
  - Move from imitation to innovation
  - *Zizhu chuangxin* ("innovation with Chinese characteristics")

The RDA Process
(Various Models)

Comprehensive Feasibility Study	Project Design	Engineering Development	Experiment and Design Finalization	Batch Production



Pre-Program Activities	Requirement/Needs	Research and Design	Development and Demonstration	Production/ Manufacturing	Operations and Maintenance

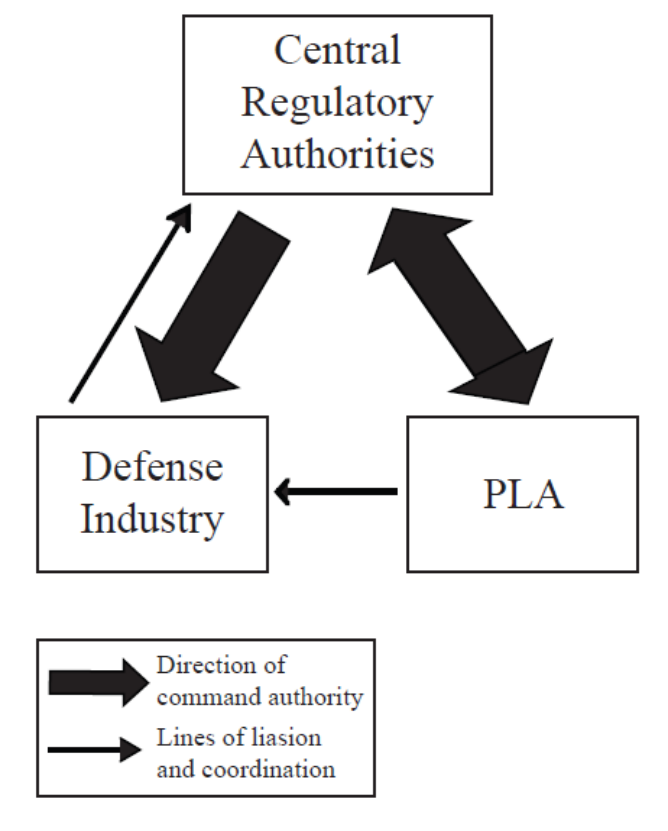
The RDA Process in Detail

Pre-Program Activities	Requirement/Needs	Research and Design	Development and Demonstration	Production/ Manufacturing	Operations and Maintenance
Basic/Basic Applied Research *Research laboratories and institutes.* *Development facilities.* *Defense funding of civil-related technology research.* *Organizations creating a DARPA-effect.* *Entrepreneurial skills to market technology advances.* *Degree of foreign involvement.*	The identification of equipment needs based on capability gaps and strategic priorities. Concepts are developed and submitted for consideration. *Political and military organizations.* *Budgets for Investment in defense programs.* *Perceived threats.* *Recent events that trigger a military response.* *Contract mechanisms* *Import/export approval mechanisms.* *Organizations approving program start-up.* *Degree of foreign involvement.*	The government accepts a design concept. A feasibility study is conducted. Plans are made to develop or acquire technology and insert into the program. Final specifications are accepted by the government. *Research laboratories and institutes.* *Development facilities.* *Design organizations.* *Leading design personalities.* *Defense funding of civil-related technology research.* *Organizations creating a DARPA-effect.* *Regulations guiding acceptance of proposals. Review process for concepts.* *Program management practices.* *Degree of foreign involvement.*	A program manager sets a development, industrial production schedule with milestones. Designs are finalized, demonstrated, and approved for production. Contracts are selected and a systems integration plan is set in place. *Human capital—level of expertise.* *Production facilities* *Contributing enterprises.* *Technical know-how.* *Systems integration skills.* *Funding sources.* *Approval processes and organizations.* *Demonstration processes.* *Regulations* *Standards* *Degree of foreign involvement.*	A manufacturing plan is executed. All production-related activities are defined and monitored. Equipment is tested for final production and acceptance. *Manufacturing facilities and locations.* *Approval processes.* *Technical skills* *Oversight and approval for fielding.* *Culture for presenting finished products.* *Interaction between organizations.* *Role of political and military leadership.* *Degree of foreign involvement.*	System is presented to the service for acceptance. Failures to meet performance requirements may result in rejection and modification. Systems are delivered for operational use. At the end of the spectrum, equipment is maintained and eventually disposed of according to the life cycle plan. *Services involvement in acceptance and retirement of systems.* *Skill set for maintenance.* *Degree of foreign involvement.*

Pre-1998: A Broken Procurement Process

- COSTIND: unified bureaucracy, merging buyer, supplier
  - Directed PLA procurement *and* administered the state-owned defense industry
  - Intended to foster closer relationship between buyer and supplier, ensure that PLA needs were being met
- In reality, process was mostly geared toward protecting defense industries
  - Quota system and guaranteed payments
  - Unresponsive to PLA requirements: military often forced to accept and acquire defense industry output, however poor quality or unwanted

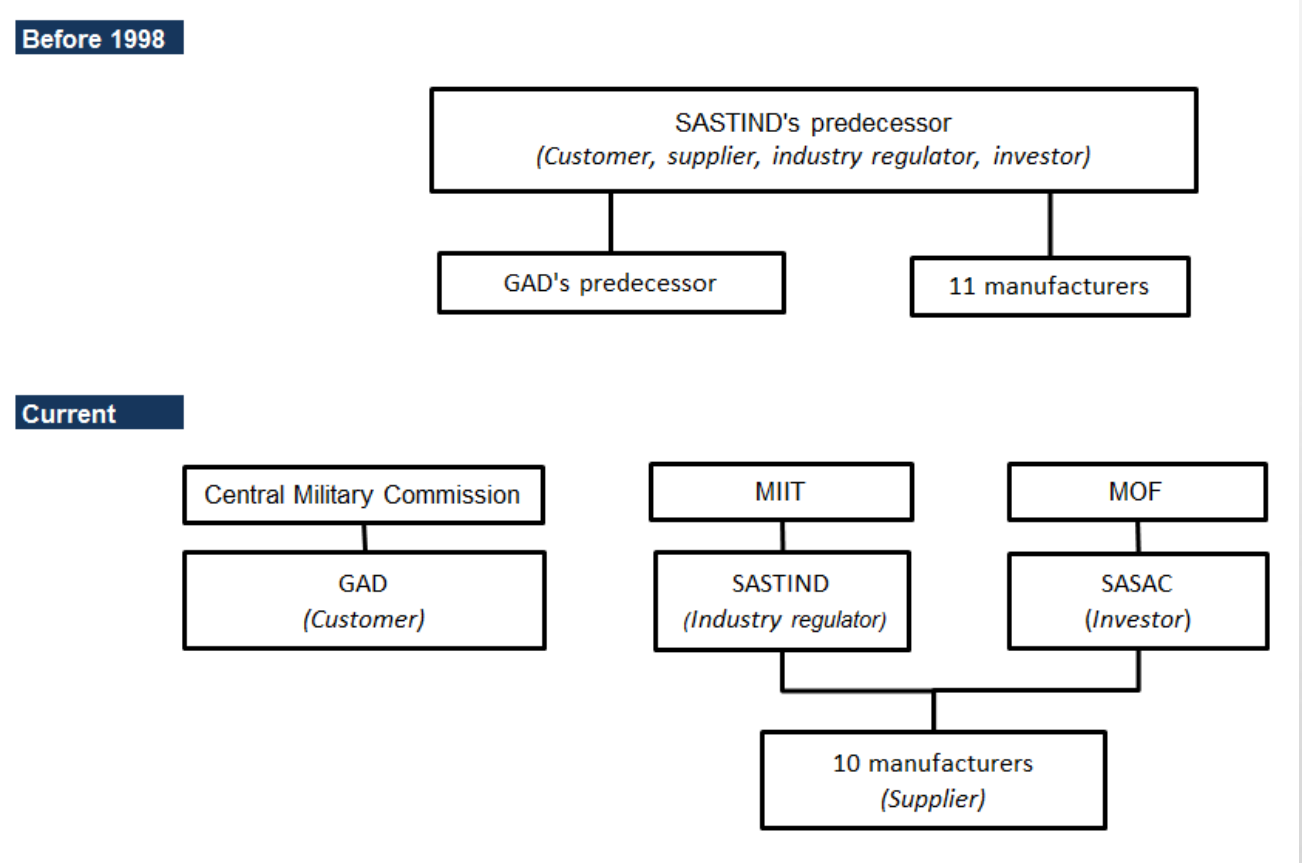
Chinese Procurement Model, 1980s-1990s



1998 Reforms

- Broke up COSTIND: separating "buyer" and "supplier"
  - PLA General Armaments Department (GAD): responsible for military R&D, arms procurement
  - State Administration for Science, Technology and Industry for National Defense (SASTIND): responsible for overseeing/ regulating the defense industry, promoting/maintaining core capabilities
- State-owned defense enterprises placed under the control of the State-owned Assets Supervision and Administration Commission (SASAC)

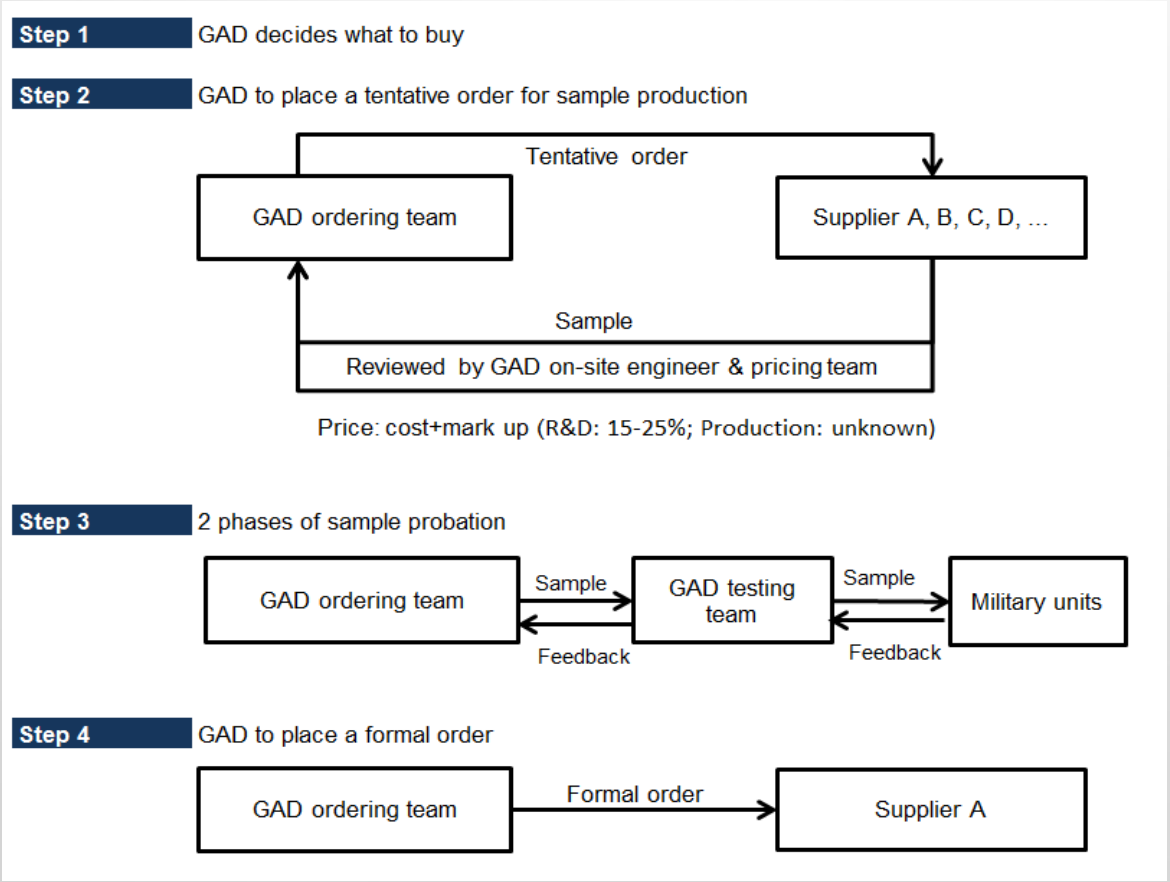
1998 Restructuring Reforms



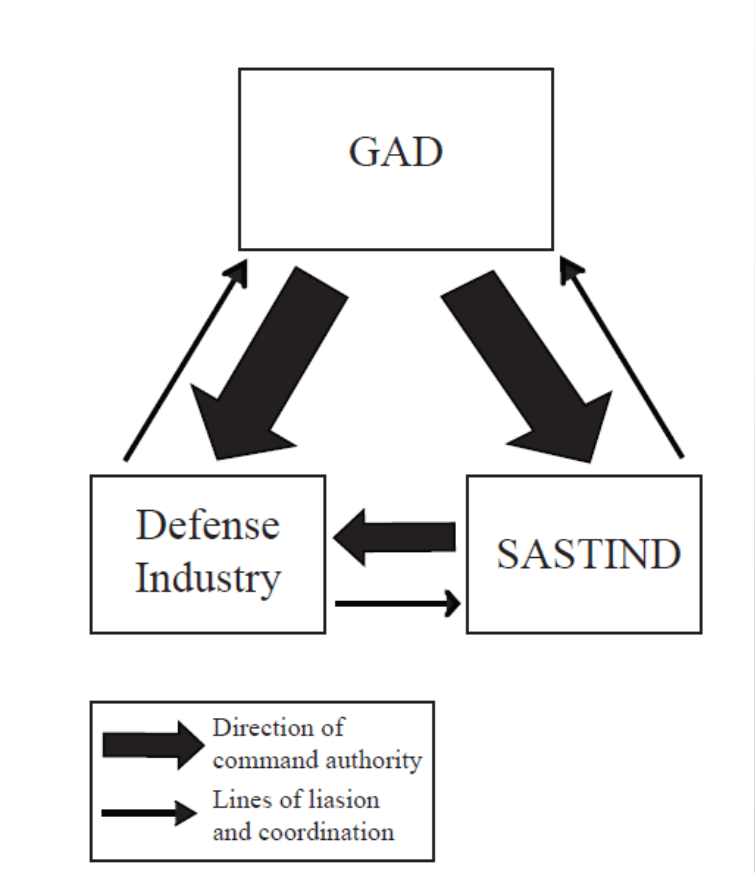
GAD: *The* Critical Reform?

- GAD created by taking military procurement oversight functions out of COSTIND
  - Loosely modeled after the DGA, FMV
  - Consolidate, centralize, standardize all PLA procurement and acquisition – the "chief buyer" for the military
  - Ensure that suppliers meet PLA requirements when it comes to performance, quality, cost, program milestones
    - Has frequently resisted pressures to buy locally produced but inferior weapons systems (FC-1 fighter, for PLAAF)
  - Inject more competition in the arms procurement process, including approval of arms imports

Current Chinese Procurement Process

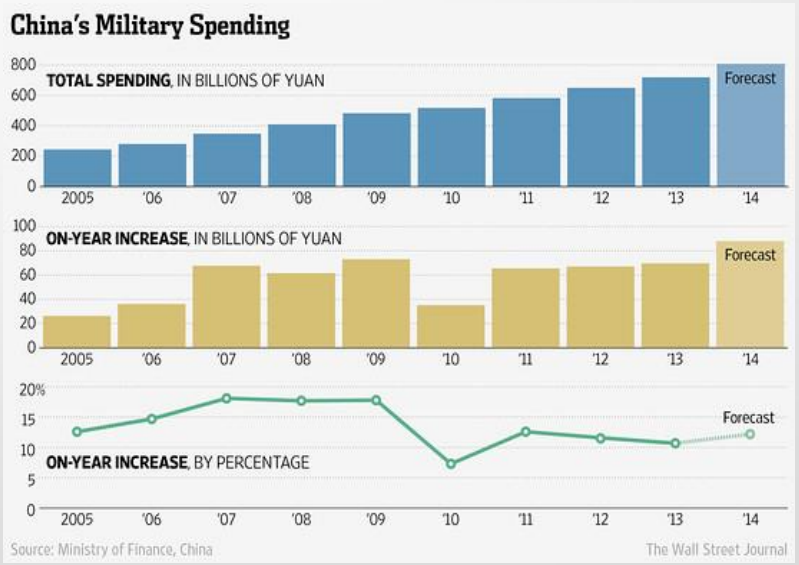


Emerging Chinese Procurement Model, 2000s-



Other Supporting Factors

- Defense spending increases permitted PLA to greatly expand R&D and acquisition
  - 1997 to 2014: defense budget increased from US$7b to US$145b
  - Defense industry: increased incentives to produce arms that the PLA wants; more money for factory modernization
- Arms and technology imports expanded during the late 1990s/early 2000s
  - Increased access to foreign military know-how (reversed-engineered; other types of technology exploitation)



Chinese Arms Exports

- China: 4th largest arms exporter, 2009-13 (US$7.4b, or 6% of global market)
- Most arms exports are directly controlled by defense enterprises, through subsidiary trading companies
  - CATIC: aircraft
  - CMPIEC: missiles
- PLA engages in arms exports indirectly, via Polytechnologies (division of Poly Group)
  - Poly technically under SASAC, but likely controlled by PLA
  - Mostly small arms, ex-PLA surplus items

GAD: How Successful?

- GAD has failed to fully absorb *all* PLA procurement functions
  - Services still have considerable autonomy when it comes procurement decisionmaking
    - PLAAF Equipment Department still has primary responsibility for approving aircraft development programs
  - GAD is most influential when it comes to high-priority projects
- Defense industry still retains considerable autonomy
- Lack of transparency hampers assessments

Procurement Reform and the Defense Industry

- Pluses:
  - Defense industry more responsive to military's needs
  - Improved weaponry for PLA
  - More funds for R&D, acquisitions
  - More funds for modernization of defense industrial base
  - Expanded arms exports
- Negatives:
  - GAD has had limited impact on procurement
  - Little real competition between defense firms
  - Hard to see real progress in improving RDA process (lack of transparency)
  - Success: mostly the result of throwing more money at problem?