Aerospace, Secure Trading Chains and India's Strategic Trade Controls

Dr. V. Siddhartha
Former Scientific Consultant (Advanced Technologies)
Office of the Principal Scientific Adviser to the Government of India
(and several other formers)

Programme on
Strategic Trade Regulations and Practices for the Indian Hi-Tech Industry

Organised by
Federation of Indian Chambers of Commerce & Industry (FICCI) &
Center for International Trade and Security, University of Georgia, USA

National Aerospace Laboratories, Bangalore, India, 20-21 February, 2014

GOVERNANCE OF AEROSPACE TECHNOLOGIES

Two salient points pertinent to the business plans of the aerospace sector

- Foreign-investment permitted in manufacture of military products
- 150% of R&D expenditure deductible from profits before tax

GOVERNANCE OF AEROSPACE TECHNOLOGIES

- Regulatory regime in India for foreign investment in aerospace is still evolving (e.g. offset obligations)

- Rise in compensation of blue- , grey- and white-collar workers

➔ manufacture for global aerospace markets will tend to move from India to even lower-wage countries, including by Indian companies.

➔ value addition in India's export basket of aerospace goods, software or technology will need to move to area of comparative advantage:
* Brain-ware * IPR * Superior manufacturing technology

The import-export of increasing proportions of the roots and fruits of that basket will - because of their dual-use nature - be regulated by both the foreign *and* Indian state

GOVERNANCE OF AEROSPACE TECHNOLOGIES

The new regulatory environment will require that companies assure *both* the Indian and foreign state of implementing robust Internal Compliance Programmes (ICP), i.e.

supply-chain security & end-use integrity

- **Without a robust ICP, neither foreign investment, nor foreign *or* *Indian* advanced technology will be available**
- **ICP for strategic trade controls and assureable supply-chain integrity will need to be instituted for both Imports and Exports**
- **Even for *non*-WMD relevant goods and technology, monitorable ICPs will likely become a conditionality of not only the *importing state* but also of importing *companies***

Global reputation may well be more valuable to trading partners than the Indian companies' exports to them.

APPLICABLE PRIMARY INDIAN LAWS

Import & Exports of notified goods & technology (SCOMET) is governed by

- **Atomic Energy Act**
- **CWC Act**
- **FTDR Act**

In addition, the **WMD Act** is the national legal instrument for the implementation of India's obligations under UNSCR 1540.
It legislates control over WMD-relevant

- Export of unlisted goods and technology ("catch-all")
- Instruments of WMD-relevant export transactions (e.g. financing, facilitating/brokering)

The Definition of Technology in India's Strategic Trade Controls

One enforcement-significant differentiator of these primary Indian laws from their foreign counterparts is the definition of 'technology':

The WMD, Atomic Energy and FTDR Acts define 'technology' identically and emphasise the *content* of information, rather than the *means of transmission* of this intangible.

TERRORISTS, NON-STATE ACTORS & THE VULNERABILITY OF AEROSPACE TECHNOLOGIES

- The locus of attention of the international community is now the nefarious activities of terrorists and non-state actors - most-notoriously exemplified by AQ Khan and his state-supporters

- While the concern globally [UNSCR 1540] is the exercise of strict and impermeable controls at the border of WMD-and missile-relevant goods and technologies

- Our concern in India will need to concentrate on mitigating the vulnerability of *domestic* supply chains, including

- As required by the WMD Act, the supervision of certain categories of 'technology' training provided in our educational institutions (public or private) to non-Indian citizens.

'Trust but Verify': The mantrum of Public-Private Partnership

- The most cost-effective way to control quality is to ensure that the manufacturing defect does not occur in the first place.
- Likewise, the most effective way to ensure compliance with export control law is to monitor and secure manufacture and the movement of export-controlled goods and services well before they reach the customs post or electronic border.
- It should be obvious that if supervising domestic trade in listed goods and services, not to say "catch-all" controls, is not to become an implementation nightmare, then
- A public-Private partnership based on the mantrum of '**Trust but Verify**'
  - ➔ through state-monitored Industry Compliance Programmes (ICPs) is inevitable.

GOVERNANCE OF AEROSPACE TECHNOLOGIES: THE CONFLUENCE OF STC AND PPP

- It will take time, effort and minute attention to regulatory detail to set-up a government-monitored system of manufacture and trade (both foreign and domestic) in aerospace goods and services.
- As a country we are not new to this type of technology-based, full-chain, integrity-assurance. The Indian nuclear industry is familiar with the entire systematic of IAEA safeguards.
- After nearly forty years of LPQR, Indian industries have tasted the heady freedom of de-regulation. But now, the next wave of expansion, growth and value-addition in their basket of exports will be increasingly laden by the products of foreign or domestic state-controlled technologies and services.

FICCI, SIATI and other Indian industry groupings need to start a serious dialogue with Government

about the *shlokas* in the *mantrum* of 'Trust but Verify' chanted at the confluence of STC and PPP.