



**S. RAJARATNAM SCHOOL  
OF INTERNATIONAL STUDIES**  
A Graduate School of Nanyang Technological University

# RSIS COMMENTARIES

RSIS Commentaries are intended to provide timely and, where appropriate, policy relevant background and analysis of contemporary developments. The views of the authors are their own and do not represent the official position of the S.Rajaratnam School of International Studies, NTU. These commentaries may be reproduced electronically or in print with prior permission from RSIS. Due recognition must be given to the author or authors and RSIS. Please email: [RSISPublication@ntu.edu.sg](mailto:RSISPublication@ntu.edu.sg) or call 6790 6982 to speak to the Editor RSIS Commentaries, Yang Razali Kassim.

## **Singapore's Arms sale to UK: A Defence Export Breakthrough**

Ron Matthews and Curie Maharani

2 January 2009

*Singapore's sale to the United Kingdom of military vehicles is not the way of major arms deals: sophisticated military exports should move from the big advanced nations to small states, not the other way around. Singapore's sale therefore bucks the established trend, representing a major breakthrough for the small state into the lucrative but highly competitive international arms market.*

IN MID-DECEMBER 2008, it was announced that the Singapore defence company, Singapore Technology Kinetics (STK), had won a major S\$330 million land systems contract with Britain's Ministry of Defence. Coming on the back of an earlier 2007 British S\$65 mil order for 40mm grenades, it demonstrates powerfully that Singapore has achieved 1<sup>st</sup>-Tier international capability in the development and production of high performance weapons systems. This is not the way it is supposed to happen; it debunks the widely held view that small defence economies cannot compete in the global defence export market.

According to data from the Stockholm International Peace Research Institute, Singapore's defence exports, across 1970-2007, amounted to a modest US\$894 mil. This made it the world's 37<sup>th</sup> defence exporter behind other marginal exporting nations, such as the Czech Republic, Romania and South Africa. The island state's first overseas arms sale occurred in 1971, interestingly to Malaysia.

Over the subsequent 37-year period, Singapore's arms have been exported to a broad array of countries, including Bangladesh, Belgium, Brazil, Brunei, India, Indonesia, Kuwait, Oman, Papua New Guinea, the Philippines, Sri Lanka, Sweden, Taiwan, Thailand and the United Arab Emirates. Categories of weapon exports have included aircraft (US\$121 mil), artillery (US\$4 mil), missiles (US\$2 mil), and ships (US\$767 mil). To date, India has been the biggest importer of Singaporean arms at US\$265 mil.

### **Singaporean 1<sup>st</sup>-Tier Defence Capability**

Britain's purchase of 100 of STK's BRONCO All Terrain Vehicles (ATV), represents the company's

first overseas sale in the lucrative Land Systems market. The Bronco, designated the 'Warthog' by the UK MoD, has been in service with the Singapore Armed Forces for eight years. The sale builds on the US' short-listing in 2000 of the BIONIX for the US Army's Interim Armoured Vehicle. STK just missed out on this US\$4 billion order, but gained massive experience from the competition, with STK becoming synonymous with quality engineering and boosting the company's ambition of creating an international brand.

Land systems is a specialized sector in the international defence equipment market, with only two suppliers, Britain's BAE Systems' subsidiary company, Hägglunds of Sweden, and STK. STK won the acquisition competition because its Bronco model enjoys impressive military capability. The Bronco delivers longer range, has a higher payload at 9 tonnes, and a bigger internal capacity, enabling it to carry 10 passengers compared to eight in the Hägglunds' Viking Mark 2.

Moreover, securing this landmark deal is all the more remarkable given that the Bronco is a replacement for the Viking ATV that has been in service for several years with Britain's elite Royal Marines in Afghanistan's testing operational conditions. STK's bid would have had to overcome two significant advantages accruing to Hägglunds' as the incumbent supplier. Firstly, the Viking Mark 2 prototype, which participated in the acquisition competition, enjoys logistics and training compatibilities with the existing fleet of Vikings in Afghanistan. Secondly, the Viking is battle-proven in a hostile military environment, demonstrating 88 percent reliability in theatre.

### **ST Engineering Business model: Civil Leveraging Military.**

Yet, the Bronco export order did not just happen overnight; it is the culmination of decades of continuous dogged effort by STK and its holding company, ST Engineering. The latter is an integrated global technology enterprise that generated S\$5.05 bil sales revenue in 2007 from a worldwide workforce of 19,000 operating in over 100 subsidiaries in 24 countries, including the US and China. Moreover, it is a contemporary role model for cost-effective civil-military technological processes.

STK's defence side of the business accounts for 30 percent of total output, leveraging its development of high technology weapons systems from frontier technologies produced in ST Engineering's dominant commercial divisions. This synergy produces unique 'dual-use' systems, providing innovative solutions at the cutting edge of technology.

STK, with over S\$1 bil sales in 2006, is the core defence company in this huge industrial conglomerate. It is the prime contractor for home grown weapons systems, such as the Bronco, and also a systems integrator for sophisticated indigenous defence electronics on foreign platforms, such as the F-15 Eagle, procured from the US for Singapore's Armed Forces. STK's defence industrial capabilities extend across the defence spectrum, embracing a broad sweep of products in the aerospace, land and marine sector.

### **Small Can be Beautiful**

So what are the policy lessons from Singapore's defence export success? The central message is that 'small can be beautiful', and just as importantly, viable. Viability may be viewed from two perspectives. Firstly, the possession of high calibre arms ensures sovereignty of supply. This is obviously of critical importance, because defence goods are clearly dissimilar to TVs and refrigerators. Arms become an imperative when a country goes to war and that is normally the time, when for political and diplomatic considerations, overseas suppliers embargo delivery.

Secondly, small country defence viability is profoundly influenced by economics. Small defence economies traditionally do not export entire weapon systems to major defence industrial powers. Small nations typically do not have the experience, resources, value chain, indigenous R&D capability

or systems engineering expertise. In this respect, Singapore has surpassed Israel's acknowledged defence industrial excellence; the latter has only a chequered performance in the export of entire integrated platforms rather than sub-systems.

Furthermore, Singapore has not benefited from the substantial US foreign aid that Israel enjoys. Remarkably, Singapore has technologically leap-frogged over several development stages, achieving a level of defence-industrial maturity akin to that of Sweden. The Swedish defence-industrial model has evolved an indigenous capability -- over generations -- to produce fully-integrated sophisticated weapons systems, such as the Gripen fighter, that was recently exported to Thailand.

Exports of advanced weapon systems represent the ultimate metric of competitiveness for defence economies, yet, they remain an elusive goal for many countries. Malaysia, for example, has spent billions of US dollars on defence acquisition but its military exports are non-existent. Equally, India, an emerging mega-military power, has spent billions over decades seeking to develop indigenous weapons, such as the Arjun MBT, an agile helicopter and a lightweight combat aircraft. However, all have experienced spectacular decades-long delays, constraining export opportunities.

The Bronco deal, then, represents a genuine milestone in Singapore's impressive technological advancement. The first of these ATVs will be delivered in Spring 2009, with the bulk shipped in 2010. Thales UK will be the local British partner, providing final integration work, including extra armour and specialist electronic counter-measure equipment. With STK already a proven niche supplier in other areas of defence subcontracting, including aerospace conversion and upgrade, it is likely that future 1<sup>st</sup>-Tier defence-industrial partnerships will become the norm rather than the exception.

*Ron Matthews and Curie Maharani specialize in defence economics and defence acquisition respectively at the S. Rajaratnam School of International Studies (RSIS), Nanyang Technological University. Professor Matthews is a British-trained specialist in Defence Management, holding the Chair in Defence Economics and also the deputy directorship of the Institute of Defence and Strategic Studies at RSIS. Curie Maharani is a researcher at RSIS with a Masters degree in defence studies from Bandung Institute of Technology (ITB), Indonesia. She has worked on security sector reform with local and international NGOs in Indonesia.*