

**LOWY INSTITUTE**  
FOR INTERNATIONAL POLICY

**PERSPECTIVES**

---

**ASIAN MILITARY MODERNISATION**

**RICHARD C. SMITH**

---

**OCTOBER 2008**

**The Lowy Institute for International Policy** is an independent international policy think tank based in Sydney, Australia. Its mandate ranges across all the dimensions of international policy debate in Australia – economic, political and strategic – and it is not limited to a particular geographic region. Its two core tasks are to:

- produce distinctive research and fresh policy options for Australia’s international policy and to contribute to the wider international debate.
- promote discussion of Australia’s role in the world by providing an accessible and high quality forum for discussion of Australian international relations through debates, seminars, lectures, dialogues and conferences.

Lowy Institute Perspectives are occasional papers and speeches on international events and policy.

The views expressed in this paper are the author’s own and not those of the Lowy Institute for International Policy.

## **Asian military modernisation**

**Richard C. Smith**

*Originally prepared for presentation to the  
International Institute of Strategic Studies Global Strategic Review,  
Geneva, 12-14 September 2008*

### **Introduction**

Because funding is a necessary underpinning of force modernisation, this paper begins with a summary of defence spending among Asian countries.<sup>1</sup> It then considers the nature of the capabilities and equipment they are acquiring, and comments on the way in which forces are being structured, commanded and managed.

### **Asian defence spending**

In 1980 Asia generated about 17 per cent of the world's GDP; by 2007, that figure had reached nearly 30 per cent.<sup>2</sup> While military forces have benefited significantly from the region's new wealth, the available data suggests that as a whole Asia's share of military spending has not increased at the same pace as its share of global GDP; in other words, with some notable exceptions, Asian countries are not growing their military spending as fast as they are growing their economies.<sup>3</sup>

It is as difficult to generalise about military spending in Asia as it is about any other aspect of the 22 countries from Pakistan to Japan. Economic growth and domestic evolution have been uneven, and so too have military spending and modernisation. This is reflected in the data for the last ten years.<sup>4</sup>

In North East Asia, China of course has been the main story. While acknowledging the well-reported shortcomings of Chinese data, it is nevertheless reasonable to conclude that China's military spending has grown fourfold over the last decade, increasing from 0.9 per cent of GDP to at least 1.5 per cent.<sup>5</sup>

The Republic of Korea is the only other country in North Asia which is increasing its military spending. Three years of negative growth following the Asian financial crisis have been followed by steady increases which, over the five years 2003-2007, have averaged eight per cent growth a year to reach a decade high of 2.8 percent of GDP.

Japan's defence budget by contrast remains flat in real terms and has in fact declined a little since 2004 both as a percentage of GDP (1 per cent to 0.9 per cent) and as a percentage of government spending. Taiwan's military spending has declined over the decade; though the budget increased by 15.3 per cent in 2007 following the resolution of a parliamentary stand-off over procurement programs, it nevertheless remains smaller in absolute terms and as a percentage of both GDP and government spending than it was in the 1990s.

Defence budgets in South-East Asia are small by comparison with those elsewhere in Asia: indeed, though spending generally has recovered from the negative growth which followed the Asian financial crisis, in 2007 spending by the eleven countries amounted to only about only 13 per cent of that of Asia as a whole.<sup>6</sup> Singapore dominates, spending just on five per cent of its GDP on defence. The figures for Malaysia and Thailand show impressive recent increases in percentage terms, especially in Thailand since the 2006 military coup, but off relatively low bases. Indonesian spending is also increasing again, though again off a low base and the defence budget is still less than one per cent of GDP, as it is also in the Philippines.

As to South Asia, India has far and away the biggest defence budget, having doubled it since 1997. This increase has been consistent with the country's economic growth: defence spending has been relatively constant at around 2.2 per cent of GDP and has in fact declined as a percentage of government outlays.

By contrast, Pakistan's defence budget saw six years of contraction after 1997 and, as a proportion of the country's GDP, fell from 5.2 per cent in 1997 to 3 per cent in 2007, though remaining around 20 per cent of government outlays.

Comparisons between particular states shed some light on trends in the region. China's expenditure, even by the more conservative estimates, overtook India's in 2002 and Japan's in

2008. India, for its part, now spends more than four times Pakistan's military budget, and the gap is widening. Singapore accounts for some 23 per cent of all ASEAN military spending and nearly 40 per cent of the spending of the original ASEAN five.

As to Asia as a whole:

- though Asia generates some 30 per cent of global GDP, its military spending amounts to about 15 per cent of the global total, about 32 per cent of that of the United States, and about 57 per cent of Europe's;<sup>7</sup>
- while, according to one estimate,<sup>8</sup> 2.5 per cent of world GDP is devoted to military spending, the average for the countries of Asia for which data is available is about 2.3 per cent, with many countries below that figure;
- compared with their spending levels a decade ago, few countries (China significantly, Malaysia and Indonesia very marginally) are spending more of their GDP on their military forces and few are devoting a larger share of their government spending to them;
- nevertheless, two Asian countries (China and Japan) rank among the world's top five military spenders, and four – Japan, China, India and South Korea – among them account for more than 70 per cent of Asia's military spending.<sup>9</sup>

### **Capability development and acquisitions**

Looking beyond funding levels to the capability development and acquisitions programs of Asia's armed forces, the risks of generalising about Asian military forces are again evident. What is true of capability development and acquisitions in Japan, China, South Korea, Singapore and India, for instance, isn't likely to be true of say Indonesia, Vietnam, the Philippines, Burma or Bangladesh. Nevertheless, three broad points can be made.

First, something in the order of 75 or 80 per cent of the spend, by one estimation,<sup>10</sup> goes into maintaining and training the existing force, paying for fuel, spares, provisions and so on. In most cases acquisition and R & D programs are a small part of total spending. In particular, the increasing cost of personnel has become a more significant aspect of expenditure for many of Asia's military forces, even for China, which has made 'downsizing' a key element in its modernisation plans. This has resulted in part from the need for skilled personnel to manage more sophisticated military equipment but probably more from the fact that as economies grow and new industries emerge there is increasing competition for skilled labour and the armed forces are having to pay more for their manpower.

Second, historically Asia's armed forces have for the most part constituted relatively large armies which in many cases were 'brought up' fighting wars of national liberation or internal insurgencies and closely involved in government. Those in which the armed force continue to be heavily involved in internal security and/or government – Bangladesh, Burma, Pakistan, the Philippines and Sri Lanka, for instance – are generally modernising far less quickly than others in which domestic conflicts have been resolved.

Third, while armies still dominate the military culture in most Asian countries, and it has taken time for military leaders to adjust their visions of what a military force relevant to today's needs will look like, there is a trend towards the development of maritime and air capabilities. Land forces are modernising, for instance through the acquisition of new tanks and artillery, but maritime and air forces are generally modernising faster.

In summarising the modernising trends in hardware acquisition, Andrew Davies' taxonomy is helpful. He distinguishes three main trends.<sup>11</sup>

The first is the modernisation of existing capabilities. Examples of this include the proposed acquisition by Singapore and South Korea of F-15S and F-15K aircraft, respectively, to replace some of their existing fleets.

The second modernising trend is the acquisition of capabilities which are in service elsewhere in the world but have not been in Asia before. The acquisition of submarines by many coastal states in the region is a striking example of this; the published plans indicate that upwards of 40 submarines will enter the region's inventories over the decade, although realistically the net gain in boats in service will probably be less than forecasts suggest. Other significant examples include the acquisition of ballistic and cruise missiles and beyond visual range air-to-air missiles, and of AEW&C aircraft and AEGIS destroyers. A number of countries are also enhancing their fleets of coastal frigates and patrol boats, recognising the reality of the day-to-day challenges of managing their own waters.

The third trend relates to capabilities which are new by any standards. These would include China's anti-satellite and network attack capabilities and the supersonic sea-skimming missiles developed and deployed by India and China.

Notable in this broad overview is the low priority being given to aircraft carriers. India has one aging vessel and plans for two more, though the planning time seems long. China has certainly

been considering carriers, and observers seem to expect that a small number will eventually be fielded, but for the present at least submarines appear to remain at the heart of the PLA Navy's development plans. Some countries, including Japan, the ROK, Thailand and Indonesia, have either acquired or are planning for helicopter-carrying ships, but their power-projection capabilities seem limited.

### **The management of armed forces**

Three questions arise from this summary:

- First, how deliberate or planned or integrated is the force modernisation that is taking place?
- Second, given that buying a platform is not the same as acquiring a capability, how well placed are the region's armed forces to make optimal use of their acquisitions?
- Third, 'modern' warfighting requires command and control that is built around robust and interlinked information systems. The various arms of the service should be capable of functioning jointly, as one, in delivering force and producing a 'combined arms effect'. How do Asia's armed forces rate against these requirements of modernisation? Does 'transformation', in the American sense, have traction in Asia?

On all three questions, the picture in Asia remains mixed.

On the first, in some cases modernisation is a very deliberate and deliberative process. China and Singapore stand out in this regard, with publicly articulated visions for force modernisation, and the ROK is also adjusting purposefully to the need for greater self-sufficiency and to changes in American force dispositions in the region. China's self-conscious modernisation embraces doctrine as well as platforms, and has a clear purpose – that is, in the first instance to raise the cost of any US intervention in support of Taiwan and, in a wider strategic sense, to set China on a path toward meeting its major power aspirations. The emphasis on missiles, targeting systems and submarines reflects lessons learned from observing other conflicts over the past decade or more, and confirms the existence of a smart and responsive planning system, albeit one characterised by vigorous internal debate.

In other cases, modernisation is evolutionary. Military forces are growing simply because, with money available, they can. In these cases, acquisitions often amount to simple replacements of old platforms without any reassessment of their capability needs, frequently reflecting the

aspirations and influence within government of particular military leaders, the reach and influence of arms sellers and their home governments, and perceptions of national prestige. The result is reflected in *ad hoc* and ‘penny-packet’ purchases, often for made for ‘diplomatic reasons’ and in connection with State visits.

On the second question, some forces obviously make better use of their capabilities than others. A number of factors influence the operational availability of platforms and combat systems, not least the effectiveness and efficiency of logistic management and the extent to which requirements in this area are factored into the acquisition process.

Again, Asian military forces vary widely in this area. Some, including the Japanese, South Korean and Singaporean forces, support their acquisitions well and get good value from their investments. Others, for instance those with several variants within small aircraft fleets, struggle to maintain operational availability. China seems to have effectively integrated and adapted Russian equipment and developed some capable platforms domestically, while others seem to have struggled in both regards.

On the third question, modern military operations place a high premium on command and control systems that exploit modern communications and information technology. These systems must be capable of supporting both joint and combined operations by integrating the command and control needs of sea, land and air elements. They must also be able to draw on other national capabilities, including in the area of intelligence. In this area again performance among the countries of Asia is uneven.

Progress in this area of modernisation varies widely. It relates not just to the armed forces themselves, their internal cultures and the clarity of their vision, but also to the nature of the economy, the strength of its industrial and technological base, the level of skills in its workforce and so on. For very few countries, and certainly not yet for China (as its 2006 White Paper admitted), has ‘modernisation’ approached ‘transformation’.

## **Conclusion**

Force modernisation is multi-faceted. Money is a necessary but not sufficient requirement. In Asia, those countries which have been able to defeat internal insurgencies, or never faced them, have both ‘liberated’ their armed forces and been able to grow their economies fastest, and are thus modernising their forces fastest.



Two final conclusions suggest themselves from this brief analysis. First, neither the data on military spending nor the information about acquisitions suggest that Asia is experiencing an arms race. Some countries are reacting to the acquisition of specific capabilities and platforms by others, in a 'keeping up with the neighbours' or 'tit-for-tat' sense, but the broad picture in spending patterns, acquisitions and – so far as can be told – attitudes to military development does not suggest a race.

Second, the rise of China as an economic and military power is both striking in itself and the most salient strategic development in Asia. While this does not appear to be driving military spending or acquisitions by others, its present reality and even greater potential is undoubtedly shaping strategic relationships and calculations.

## SOURCES

Statistical data about military spending is available from a number of sources, including IISS's *The Military Balance* and SIPRI's *Annual Yearbook 2008*. While this paper draws on both, it draws mostly on the 2007 edition of the Australian Defence Intelligence Organisation's publication *Defence Economic Trends in the Asia-Pacific*.

DIO's methodology lends itself well to comparisons over time and between countries, and especially to comparisons of military spending as percentages of GDP and of government spending. In short, this methodology involves using a defence deflator for each country, based on data or assessments about spending in the areas of military operations, procurement and personnel and on information about inflation rates in each relevant sector of the country. It also applies exchange rate adjustments on an annualised basis for each country which enables it to show all the figures from 1997 to 2007 in year 2000 US dollar equivalents. (The 2008 publication is expected to show the data in 2005 US dollar equivalents.) This methodology is explained fully in the DIO publication, which is available on-line at [http://www.defence.gov.au/dio/documents/2007\\_DET.pdf](http://www.defence.gov.au/dio/documents/2007_DET.pdf).

That said, *Defence Economic Trends* does not include data on all the countries of Asia – none is provided on Bangladesh, Mongolia, Nepal or Sri Lanka, and the information on the DPRK and Timor Leste is limited.

Apart from the IISS, SIPRI and DIO publications, this paper also draws on an excellent analysis by Andrew Davies, an analyst at the Australian Strategic Policy Institute in Canberra, whose paper on *Asian military trends and their implications for Australia* was published in ASPI's 'Strategic Insights' series in July 2008. It is available at [www.aspi.org.au](http://www.aspi.org.au).

---

## NOTES

<sup>1</sup> In this paper I use the term 'Asia' to include the 22 countries from Pakistan to Japan. I do not include Afghanistan or any of the countries of central Asia, Russia, Australia, New Zealand or the Pacific Island countries. As explained above, data is not equally available for all 22 countries.

<sup>2</sup> Data drawn from the World Bank's *World Development Indicators database*, 1 July 2008, and the IMF's *World Economic Outlook* database. GDP assessments are on a PPP basis.

<sup>3</sup> Data on which this conclusion is based are drawn from SIPRI's *Annual Yearbook 2008*, table 5.1, page 176. In a speech delivered on 4 June 2008, the Australian Prime Minister, Mr Rudd, apparently drawing on data from various sources, said that by 2020 Asia would account for 45 per cent of the world's GDP and 25 per cent of global military spending.

<sup>4</sup> The figures referred to in the following paragraphs are from DIO's *Defence Economic Trends in the Asia-Pacific*, except (a) those for Bangladesh and Sri Lanka which are from *The Military Balance*, and (b) where otherwise noted.

<sup>5</sup> Some assessments posit that China's real military spend at three or more times the published figure. IISS's *The Military Balance 2008* (page 370) contends that 'total military related revenue available to the PLA in 2005 was about 1.7 times the state-budget figure'. SIPRI's *Annual Yearbook 2008* puts it at 2.1 per cent of GDP. The US DoD's 2008 report to Congress estimated the 2008 budget at \$US 58 bn.

<sup>6</sup> Calculation based on SIPRI *Annual Yearbook 2008*, table 5.1, page 176.

<sup>7</sup> Calculation based on SIPRI *Annual Yearbook 2008*, table 5.1, page 176.

<sup>8</sup> SIPRI *Annual Yearbook 2008*, page 175.

<sup>9</sup> SIPRI *Annual Yearbook 2008* (page 194) puts this figure at 80 per cent.

<sup>10</sup> Andrew Davies, *Asian military trends and their implications for Australia*. ASPI Strategic Insights, Canberra, July 2008, page 7.

<sup>11</sup> Andrew Davies, address to ASPI National Conference, 3 July 2008.



## ABOUT THE AUTHOR

*Mr Richard C. Smith* AO PSM is a Visiting Fellow at the Lowy Institute for International Policy. Mr Smith was Secretary of the Australian Department of Defence from November 2002 until December 2006, having earlier served as a Deputy Secretary of Defence (1994-1995). As a senior diplomat he served as Australia's ambassador to China (1996-2000) and Indonesia (2001-2002). His diplomatic service also included postings to New Delhi, Tel Aviv, Manila and Honolulu. As a Deputy Secretary in the Department of Foreign Affairs and Trade from 1992-1994 he had responsibility for Australia's relations with Asia, and worked closely at building ties with ASEAN and in developing regional dialogue mechanisms, including the ASEAN Regional Forum. Mr Smith was educated at the University of Western Australia, and taught in high schools before joining the then Department of External Affairs in 1969.

**LOWY INSTITUTE**  

---

**FOR INTERNATIONAL POLICY**

**[WWW.LOWYINSTITUTE.ORG](http://WWW.LOWYINSTITUTE.ORG)**