Military Modernization in the Asia-Pacific: Driving a New Arms Race?

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As a result of both arms imports and indigenous defense production, many countries in the Asia-Pacific have since the middle of the 1990s greatly expanded their warfighting capacities beyond the mere modernization of their armed forces – that is, simply replacing older fighter aircraft with more sophisticated versions, or buying new tanks and artillery pieces. In fact, many militaries in the region have over the past decade added capabilities that they did not possess earlier, such as new capacities for force projection and stand-off attack, low-observability (stealth), and greatly improved command, control, communications, computing, intelligence, surveillance, and reconnaissance (C4ISR) networks. Several armed forces in the Asia-Pacific now deploy or will soon acquire several new weapons platforms, advanced armaments, or sophisticated military systems, including aircraft carriers, submarines, maritime patrol aircraft, air-to-air refueling aircraft, longer-range air-to-air missiles, UAVs and drones, airborne early warning (AEW) aircraft, and modern antiship cruise missiles (ASCMs). For example:

- Most countries in the Asia-Pacific are in the process of greatly expanding their open-ocean-capable navies with ***modern surface warships:***
    - China's Peoples Liberation Army (PLA) Navy (PLAN) has acquired four Russian-made *Sovremennyy*-class destroyers, armed with supersonic SS-N-22

anti-ship cruise missiles; in addition, the PLAN has constructed six destroyers of three different types, and at least six frigates since 2000.

- Japan will soon field six Aegis-class destroyers, as well as four 13,500-ton *Hyuga*-class "helicopter destroyers" (DDH).
- Australia is planning to acquire and construct three *Hobart*-class air warfare destroyers (AWD), which will be based on the U.S. Aegis combat system and the SM-2 Standard surface-to-air missile. These AWDs will provide protection to amphibious, sealift, and support ships from aircraft and antiship cruise missiles.
- South Korea is constructing a series of indigenous KDX destroyers; the current third-generation KDX-III is equipped with the U.S.-supplied Aegis air-defense radar and fire-control system, and is armed with the Standard SM-2 Block IIIB air-defense missile and the indigenous *Hae Sung* (Sea Star) antiship cruise missile (ASCM).
- Singapore acquiring six *Formidable*-class frigates, which are based on the French-designed Lafayette-class "stealth" frigates, armed with Harpoon ASCM and the French Aster-15 air-defense missile, which is capable of providing anti-ballistic missile defense.

- At the same time, many of these navies are also building up their ***submarine fleets:***
  - China has acquired 12 Russian *Kilo*-class diesel-electric submarines, and since the turn of the century, it has also constructed up to 16 indigenously built

diesel-electric and at least three nuclear-powered submarines (including one nuclear-power ballistic missile submarine [SSBN]).

- Japan is currently building a new class of diesel-electric submarines (equipped with air-independent propulsion (AIP); South Korea is also building a fleet of AIP-equipped submarines, based on the German Type-214 design.
- India is acquiring six Franco-Spanish *Scorpène*-class submarines, which will be constructed under license. India also wants to build its own nuclear-powered submarines, and the Indian Navy hopes to launch its first indigenous nuclear boat by 2009 and ultimately deploy a fleet of three SSBNs by 2015, armed with the indigenously developed Sagarika submarine-launched ballistic missile.
- Southeast Asia has witness an explosion in submarine-acquisition activity over the past decade. Singapore has acquired six second-hand submarines from Sweden (including two outfitted with AIP), Malaysia is buying two *Scorpène*-class submarines, and Indonesia plans to acquire four *Kilo*-class and two *Lada*-class submarines from Russia.

- Finally, many Asian-Pacific navies are increasing their ***capacities for expeditionary and amphibious warfare:***
  - The PLAN has recently launched the Type-071 17,000- to 20,000-ton LPD (landing platform dock) amphibious warfare ship, equipped with two helicopters and two air-cushioned landing craft (LCAC), and capable of carrying up to 800 troops; up to eight Type-071s could eventually be built,

and it could be complemented by a new larger LHD-type amphibious assault ship. In addition, rumours persist that the PLAN will add at least one aircraft carrier to its fleet by 2015-2020.

- The MSDF has acquired three 13,000-ton *Osumi*-class amphibious warship ships, while the the *Hyuga* DDH, with its "through-deck" design and below-deck hangars, closely resembles a small aircraft carrier; conceivably, this ship could be retrofitted with a "ski-jump" deck for fixed-wing aircraft or outfitted with vertical-lift combat jets, such as the F-35 Joint Strike Fighter (JSF).
- The Royal Australian Navy (RAN) plans to acquire two new 28,000-ton *Canberra*-class amphibious power projection (LHD-type) ships, each capable of transporting 1,000 troops and 150 vehicles (including the Australian Army's new M1A1 Abrams tanks), and carrying both landing craft and a mix of transport and battlefield support helicopters.
- The ROK Navy (ROKN) is acquiring the *Dokdo*-class amphibious assault ship, which displaces 14,000 tons and is capable of carrying 700 troops, ten tanks, 15 helicopters, and two LCACs. At least two *Dokdo*-class vessels have been ordered, and the ROKN may eventually deploy up to four such ships.
- India is in the process of acquiring two large-deck aircraft carriers – one a former Soviet Navy vessel, the former *Admiral Gorshkov*, which is being extensively refitted and upgraded, and which operate navalized MiG-29 fighters – and the other an ambitious project to design and build an indigenous carrier, outfitted with either the MiG-29 or the India's *Tejas* Light Combat Aircraft.

- Thailand has acquired a small aircraft carrier from Spain, while Singapore has constructed its own fleet of four small amphibious assault ships.

- In terms of airpower, nearly every Asia-Pacific country currently possesses or is acquiring at least some ***"fourth-generation" fighter aircraft*** – such as the Russian Su-27/Su-30 (China, India, Malaysia, Indonesia), the Russian MiG-29 (Myanmar, Vietnam), the U.S. F-16 (Indonesia, South Korea, Singapore), the U.S. F-15 (Japan, South Korea, Singapore, Thailand), the U.S. F/A-18 (Malaysia), and the Swedish *Gripen* (Thailand). In addition, these fighter aircraft are capable of firing ***stand-off active radar-guided air-to-air missiles***, such as the US AMRAAM or the Russian AA-12, or dropping ***precision-guided weapons***, such as the Joint Direct Attack Munition (JDAM).

- In terms of air-based power projection**,** China, India, Japan, South Korea, Malaysia, and Singapore have all received or else will soon acquire ***tanker aircraft*** for air-to-air refueling, while Australia, China, Japan, and Malaysia are acquiring ***long-range transport aircraft***. Both Japan and India plan as well to expand their fleet of ***maritime patrol aircraft*** with modern state-of-the-art systems.

- Some Asian-Pacific militaries are acquiring the capabilities for ***long-range precision-strike***. India, for example, is developing the Brahmos supersonic cruise missile in cooperation with Russia; the Brahmos can attack both land- and sea-based targets. China has put particular stress on building up – both quantitatively and qualitatively –

its arsenal of conventional ballistic missile systems, including reportedly developing a medium-range missile with an anti-ship capability, mostly likely for use against large warships, such as aircraft carriers. South Korea, meanwhile, has developed it own land-attack cruise missile, the *Hyunmoo* IIIC. Finally, most countries in the region by now also equip their navies with sophisticated anti-ship cruise missiles.

- Several countries in the region, including India, Japan, Korea, and Singapore, have plans to acquire ***missile defenses***. In particular, Japan, in cooperation with the U.S. Navy (USN), is upgrading its Aegis-class destroyers with new software and a new interceptor missile, so as to be able to search, detect, track, and engage incoming ballistic threats. The MSDF and the USN successfully tested this system off the coast of Hawaii in June 2006, and Japan performed a solo missile intercept test in late 2007.

- Finally, most Asia-Pacific militaries are engaged in greatly expanding and upgrading their ***C4ISR*** capabilities. China, Japan, Singapore, and Taiwan all currently possess airborne early warning and command (AEW&C) aircraft, while Australia, India, and South Korea intend to acquire AEW&C aircraft in the near future. Both Japan and South Korea have or will soon have the *Aegis* naval sensor and combat system deployed on their largest surface combatants, while Taiwan is buying long-range early warning radar. Nearly every major military in the region is acquiring unmanned aerial vehicles (UAVs) and are increasingly using outer space for military purposes, including satellites for surveillance, communications, and navigation/target

acquisition. Several countries in the region – particularly Australia, China, Japan, Singapore, South Korea and Taiwan – have also made or are presently making considerable investments in new types of information processing and data fusion, command and control, and the digitization of their armed forces.

Enabling the Asian-Pacific Arms Buildup #1: Rising Defense Spending

Rising defense budgets have particularly underwritten the arms buildup in the Asia-Pacific over the past decade. The Chinese military, for example, has long been the beneficiary of a long-term expansion in defense spending. Between 1997 and 2005, Beijing increased defense spending by double-digit doses *every year* – 13.7 percent per annum, in *real*, i.e., after inflation, terms, according to the Chinese's own statistics. China's official 2008 budget of US$58.8 billion, for example, constituted a 17.6 percent rise over the previous year. Consequently, Chinese military expenditures have more than *quintupled* in real terms since 1997, thus permitting Beijing to put considerable additional resources into the hardware and software of military modernization. China now outspends Japan, France, and the United Kingdom on national defense, and likely Russia as well.

Other Asian-Pacific nations have not stood still. Indian defense spending has nearly doubled between 1996 and 2006, according to data provided by the Stockholm International Peace Research Institute (SIPRI). In 2008, New Delhi announced that it would raise its military budget by 10 percent to US$26.4 billion. Moreover, India plans to spend at least US$30 billion on new arms by 2012. Australia has increased defense spending by 45 percent over the same period, while South Korea has increased by 34

percent. Of all the larger countries in the Asia-Pacific, only Japan and Taiwan have had to contend with relatively static military budgets (this year, Taiwan has decided to increase defense spending by 15% over 2007, to US$10.3 billion).

Defense spending in Southeast Asia has also recovered from its depths of the Asian Financial Crisis of the late 1990s. Malaysia's military budget has grown more than 75 percent between 2000 and 2006, from US$1.7 billion to US$3 billion (in constant 2005 dollars). Indonesian defense spending over the same period went from US$2.2 billion to US$3.7 billion, a 68 percent increase – and this figure *does not* include weapons purchases using export credits. And Singapore's defense budget rose 24 percent, from US$4.6 billion in 2000, to US$5.7 billion in 2006; in 2008, Singapore's military budget will total US$7.5 billion.

After the 2006 coup the Thai military junta approved a 34 percent increase in the 2007 defense budget, and a further 24 percent rise in 2008. In November 2007, the military proposed a new ten-year, 317 billion baht (US$9.8 billion) modernization program, starting in 2009, which would push defense spending from 1.58 percent of GDP to 2 percent by 2014.

Enabling the Asian-Pacific Arms Buildup #2: The Global "Buyer's Market" in Armaments

Along with rising regional defense spending, the highly competitive nature of the current global arms market has meant that there are a lot of motivated sellers on the supply side of the arms business. Nearly every leading arms-manufacturing country has come to depend heavily on overseas sales to bulk up their business, and the Asia-Pacific has

become a particularly crucial market. During the period 2002-2005, for example, nearly 85 percent of all Russian arms deliveries – almost US$13 billion worth – went to this region, mainly to China and India but also increasingly to Indonesia, Malaysia, and Vietnam. Almost half (45 percent) of France's arms sales agreements during 1998-2005 – and fully three-quarters during just the period 2002-2005 – were made to this region. During the same 1998-2005 timeframe, the region accounted for 58 percent of Germany's, and 35 percent of the United Kingdom's, total arms sales agreements.

The Southeast Asian arms market is particularly noteworthy, since, while it is relatively small – collectively worth around US$2 billion to US$3 billion annually – it is also one of more truly open and competitive markets when it comes to arms sales (compared to China or India, which mostly buy from Russia, or Japan or Taiwan, which are more or less captive markets of the U.S. defense industry). While the United States, for example, dominates Southeast in the sale of fighter aircraft (e.g., F-15s to Singapore; F-16s to Indonesia, Singapore, and Thailand; F/A-18s to Malaysia), the United Kingdom has scored particular success in exporting its Hawk trainer jet to Malaysia and Indonesia. Germany, meanwhile, has sold submarines to Indonesia and corvettes to Malaysia and Singapore; France, frigates to Singapore and antiship cruise missiles to Indonesia, Malaysia, Singapore, and Thailand; Russia, Su-30 fighters to Malaysia, Indonesia, and Vietnam; and Sweden, submarines to Singapore. Malaysia and Singapore constitute the largest arms buyers in Southeast Asia; during 2002-2005, for example, Kuala Lumpur placed orders for $2.8 billion worth of arms.

Given the size and strength of the regional arms market, it is not surprising that this area has become a critical market – and therefore the object of particularly fierce

competition – for the world's leading arms suppliers, particularly the United States, Western Europe, Russia, and Israel. Consequently, supplier restraint has been replaced by a readiness to sell just about every type of conventional weapon system available to the region, and, in addition, to use technology transfers and offsets as inducements to make an arms sale. Such sweetheart deals, therefore, can have as much impact on what kind of arms Southeast Asian militaries buy as can actual threats or military requirements.

Repercussions of the Asian-Pacific Arms Buildup

The acquisition of these new military capabilities has had at least two major repercussions for militaries in the Asia-Pacific. First of all, to reiterate, the arms buildup in the region over the past ten or fifteen years has been more than "mere" modernization; rather, these new types of armaments being acquired promise to significantly upgrade the manner of warfighting in the region. Certainly, Asia-Pacific militaries are acquiring greater lethality and accuracy at greater ranges, improved battlefield knowledge and command and control, and increased operational maneuver and speed. Stand-off precision-guided weapons, such as cruise and ballistic missiles and terminal-homing (such as GPS or electro-optical) guided munitions, have greatly increased combat firepower and effectiveness. The addition of modern submarines and surface combatants, amphibious assault ships, air-refueled combat aircraft, and transport aircraft have extended these militaries' theoretical range of action. Advanced reconnaissance and surveillance platforms have considerably expanded their capacities to "look out" over the horizon and in all three dimensions. Additionally, through the increased use of stealth

and active defenses (such as missile defense and longer-range air-to-air missiles), local militaries are significantly adding to their survivability and operational capabilities. Consequently, conflict in the region, should it occur, would likely be more "high-tech:" faster, more long-distance and yet more precise, and perhaps more devastating in its effect.

More important, many Asia-Pacific militaries – particularly China, Japan, South Korea, and Singapore – are acquiring the types of military equipment that, taken together, could fundamentally change the concept and conduct of warfare. In particular, those systems related to precision-strike, stealth, and above all C4ISR comprise some of the key hardware ingredients essential to implementing a revolution in military affairs. Sensors, computers, communications systems, automated command and control, electronic warfare systems, advanced navigation and targeting aids, and "smart" weapons can be bundled together in innovative new ways that could greatly synergize their individual effectiveness and create new "core competencies" in warfighting. These emerging capabilities, in turn, have the potential to significantly affect strategy and operations on tomorrow's battlefield and hence to alter the determinants of critical capabilities in modern warfare. At the very least, therefore, the countries of the Asia-Pacific region increasingly possess the kernel of what is required to transform their militaries.

Impacts and Conclusions

The Asia-Pacific will continue to be an important arms market and an increasingly avid consumer of advanced weapon systems. As already noted, many of these recent

arms acquisitions go beyond modernization, and are greatly expanding the capabilities of local armed forces when it comes to force projection, precision-strike, and battlespace knowledge and command and control. The impact of these developments on regional security is still unclear, although it has many potentially ominous aspects.

From the perspective of the American superpower, for example, the acquisition of more advanced weapons by U.S. allies and friendly countries could further regional security, both by strengthening bilateral military alliances and aiding interoperability and burden-sharing with US forces in the region. For example, America's closest allies in the region (Australia, Japan, and South Korea) have over the past decade imported more than $50 billion worth of arms in order to modernize their armed forces. This enhanced interoperability could be especially crucial as the United States continues to transform its armed forces along the lines of the information technologies-based revolution in military affairs, as it would permit Asia-Pacific allies to tie into U.S. concepts of net-centric warfare. For example, Japan and South Korea are both acquiring the Aegis naval sensor and combat system, which could enable to their ships to link up with U.S. naval forces in cooperative engagements against opposing forces, or, as in the case of Japan, permit these nations to work with the United States in developing and deploying ship-based missile defenses.

On the other hand, the introduction of new types of arms and, therefore, unprecedented military capabilities into a region can have many unintended consequences. They can, for example, create or exacerbate arms races that, in turn, could seriously disturb or even destabilize regional or bilateral military balances (such as China-Taiwan, or India-Pakistan), leading to more insecurity and instability in the

region. Arms races are generally defined as arming actions occurring between two or more participants who already possess a high degree of mutual animosity or antagonism towards each other; where national military and diplomatic planning is based directly on the capabilities and intent of the perceived adversary; where there also usually occurs large or consistent increases in defense spending; where a country's arming specifically focuses on achieving superiority over a perceived adversary; and where, in general, countries attempt to seek dominance over perceived adversaries in international political-military affairs via intimidation. At the same time, arms races are too often based on negative inferences regarding an adversary's intentions, which can often lead to misperceiving an adversary's actions in favor of seeing bellicosity, or discounting positive, benign overtures.

In this regard, the spread of the most advanced conventional weapons could have an adverse effect on regional security environments where tensions are already high, such as in the Taiwan Strait. Beijing's growing arsenal of more modern warships, submarines, fighter aircraft, and precision-guided munitions has certainly increased Taiwan's threat perceptions of China, and it has fueled Taipei's counter-acquisition of new air and missile defenses, anti-submarine and anti-surface warfare systems, and counter-landing weapons. Yet, as these militaries become more capable, the situation across the Taiwan Strait has not necessarily become less tense – just the opposite, in fact, as armed forces on both sides increasingly test each other's strengths and weaknesses in the strait. Such concerns are only multiplied when one considers the types of military systems being acquired – transformational weapons that promise

to fundamentally change the conduct of warfare and which could greatly increase its destructiveness.

Moreover, without necessarily leading to arms *races*, these new arms acquisitions can lead to very expensive, and ultimately imprudent, arms *competitions*. Arms competitions are usually defined as non-cataclysmic, "status-quo" oriented rivalries, dedicated mainly to the maintenance of military balances; however, they can still be disruptive to regional security and can perhaps even evolve into arms races. For example, South Korea's efforts to acquire a blue-water navy (complete with a large fleet of ocean-going submarines), intended to rival Japan's and China's maritime forces, could have the effect of drawing resources away from defending against an attack from North Korea. In particular, continued purchasing of advanced weapon platforms may contribute to a classical "security dilemma" – a situation whereby actions taken by a country can actually undermine the security and stability that they were meant to increase. In this case, arms acquisitions by one state, even if it has no desire to threaten its neighbors, can often lead to anxieties and insecurities being felt by nearby states. Reciprocal responses by neighboring states to "regain" security by buying their own advanced weapons often only raise regional tensions further. Even if such tit-for-tat arms purchases do not lead to conflict, they can reinforce mutual insecurities and suspicions, and ultimately have a deleterious impact on regional security.

Finally, when it comes to the poorer countries in the Asia-Pacific, one might question the wisdom of such arms purchases from an economic aspect, particularly if these acquisitions divert considerable funds away from more pressing social needs. This is particularly apropos when it comes to Southeast Asia: Does Thailand, for

example, actually "need" an aircraft carrier, especially one that was so expensive to acquire and to operate and is of such little strategic value? Should Western countries sell certain types of armaments – such as modern submarines or AMRAAM-type air-to-air missiles – to countries in the Southeast Asia when the release of such weapons systems could have far-reaching implications for regional security dynamics (a moot point, unfortunately)? In the end, the only actors who may actually benefit from increased arms sales to the region may be the sellers.

Of course, it is presumptuous to lecture any nation as to its "legitimate" defense requirements, and it should be noted that nation-states, of course, have a right to self-defense (it is even enshrined in the UN Charter), and therefore to maintaining armed force with sufficient capabilities to meet perceived requirements; in this regard, many arms acquisitions can be viewed as "security-building." At the same time, it is still legitimate to question how much these increasingly sophisticated armaments contribute to or detract from regional peace and stability. At the very least, therefore, we should want to carefully monitor how much the introduction of new types of armaments might complicate the future security calculus in the Asia-Pacific region.

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