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Global Defense Outlook 2013

Balancing security and prosperity

About Deloitte's Global Defense Outlook

This report examines current policies, practices, and trends affecting the defense ministries of 50 nations whose total publicly acknowledged spending on national defense accounts for more than 97 percent of global defense outlays. Publicly available information, interviews with officials in government and industry, and analysis by Deloitte's global network of defense-oriented professionals are applied to develop the insights provided here. This is an independently developed report, and the data and conclusions have not been submitted for review or approval by any government organization.

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Executive summary

Balancing security and prosperity: The Top 50 defense ministries in 2013

The economic and strategic environments of 2013 pose fresh challenges for defense policymakers, whose requirements to enforce stability and security must compete against rising demands for new social services and limited government spending.

The 50 nations whose defense budgets compose 97 percent of global defense spending (referred to as the "Top 50" throughout this document) now approach these challenges with sharply different strategies. Between 2006 and 2011, the Top 50 boosted defense spending by more than 20 percent as United States–led coalitions waged war in Iraq and Afghanistan and many countries modernized their armed forces.

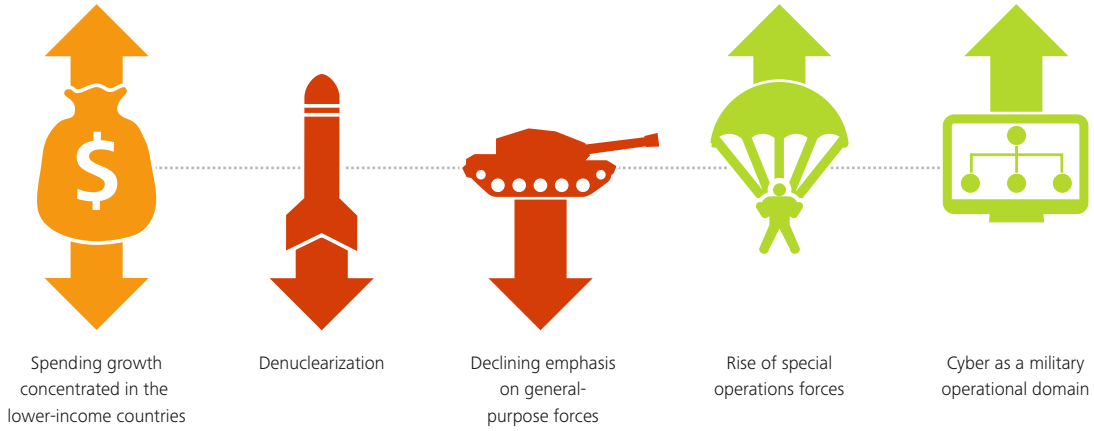
But the end of these conflicts, along with the variation in patterns of economic growth, produced diverging defense strategies among the Top 50. Higher-income countries are slowing defense spending as regional conflicts end and as domestic demands for austerity and social investment erode previous commitments to high levels of defense spending. In contrast, lower-income countries, braced by continued economic growth and lower levels of debt, are confronting instability and regional security challenges with higher levels of defense spending.

As nations adapt to new political and economic forces, five strategic realities are shaping policy, investment levels, and force structures:

- Spending growth concentrated in the lower-income countries
- Denuclearization
- Declining emphasis on general-purpose forces
- Rise of special operations forces
- Cyber as a military operational domain

These strategic realities present three difficult policy tradeoffs for the Top 50. First, policymakers are grappling with a new balance between military spending and rising domestic demands for social services or austerity. Second, governments are managing new tradeoffs between national security and civil liberties. Third, defense ministries are confronting new tradeoffs between the high military and political value of professional armed forces amid growing concerns about their affordability. Addressing these tradeoffs is the key national defense challenge facing the Top 50 in 2013.

Figure 1: New strategic realities



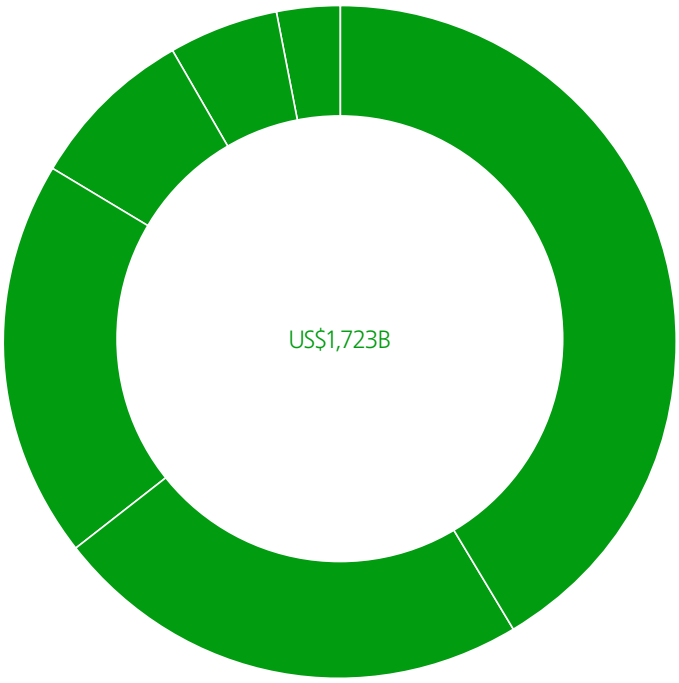
The global defense leaders

The Top 50 spend 97 percent of global defense outlays
In 2011, 50 countries accounted for 97% (US$1,670 billion) of the world's total spending on defense. The defense policies and programs of these 50 countries explain the majority of the world's defense-related activity and shape the global security environment in the broadest sense.

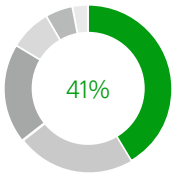
Within the Top 50, six countries—the United States, China, Russia, the United Kingdom, France, and Japan—generate about 64 percent of all global defense spending.[1] About 32 percent of global defense spending is driven by 44 countries, and the final 3 percent is accounted for by the spending of the remaining 149 United Nations member states. Given the relative size of their investment in defense, the spending of the top six significantly influences the structure, size, and posture of global defense forces.

By nearly all measures, the United States continues to outpace the rest of the world in defense spending, accounting for 41 percent of total global spending—fully twice the U.S. share of global gross domestic product (GDP)[2] and 10 times the U.S. share of global population in 2011.[3] The United States spent more on defense in 2011 than the combined defense spending of the next 14 countries. The preponderant weight of U.S. defense spending allows the United States to play a dominant role in shaping global security.

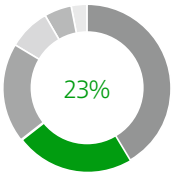
Figure 2: Top 50 defense spenders[4]



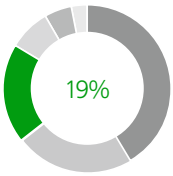
Global defense spending, 2011



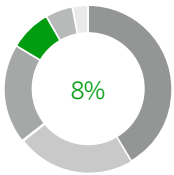
United States



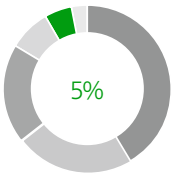
Next 5
China, France, Japan, Russia, United Kingdom



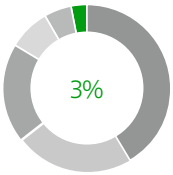
Next 10
Australia, Brazil, Canada, Germany, India, Israel, Italy, Saudi Arabia, South Korea, Turkey



Next 14
Algeria, Chile, Colombia, Greece, Iran, Netherlands, Norway, Pakistan, Poland, Singapore, Spain, Sweden, Taiwan, United Arab Emirates



Next 20
Angola, Argentina, Austria, Azerbaijan, Belgium, Denmark, Egypt, Finland, Indonesia, Iraq, Kuwait, Malaysia Mexico, Morocco, Oman, Portugal, South Africa, Switzerland, Thailand, Ukraine



Rest of world

Numbers do not add up to 100 percent due to rounding.
Source: SIPRI Military Expenditure Database; Deloitte analysis

Increased spending trends in the post-9/11 era

The Top 50 increased overall spending on defense by 22 percent between 2006 and 2011 as many of the largest spenders waged war in Iraq and Afghanistan, and the majority of countries modernized—but generally did not grow—their armed forces. Spending growth was also driven by the continued U.S. commitment to global defense leadership and by substantial investments by China and Russia in new capabilities.

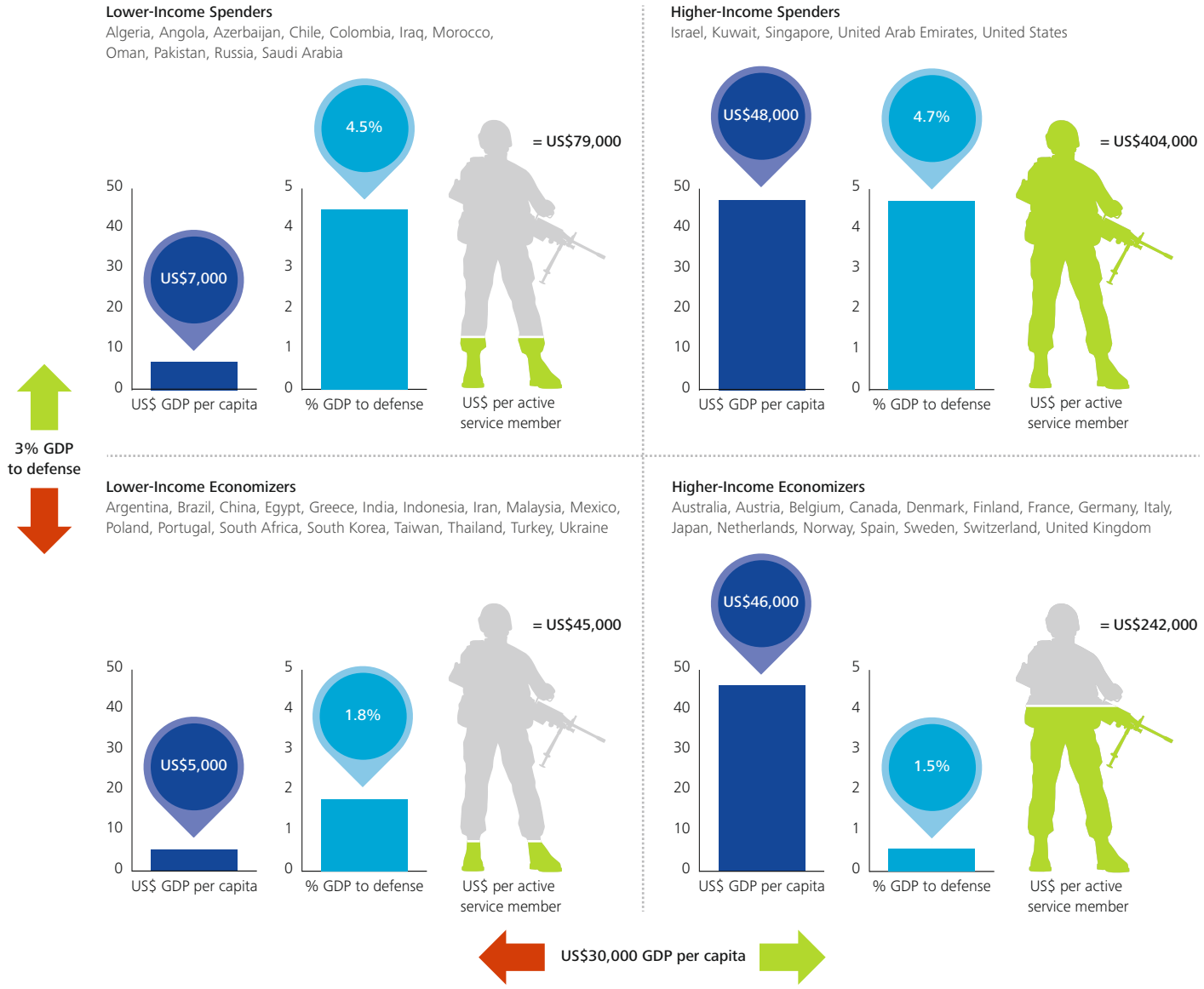
Forty of the Top 50 increased total annual spending by almost US$319 billion between 2006 and 2011. Eleven countries increased annual spending by more than US$5 billion. Only 10 countries reduced annual defense spending between 2006 and 2011. Declines of more than US$1 billion were recorded only by Italy, Spain, Greece, Iran, and Oman. The three eurozone countries faced structural budget changes relating to government austerity programs.

Global defense spending increased overall through much of the post-9/11 decade, but increases slowed from 2009 to 2010, in line with worldwide economic growth patterns. By 2010–2011, as the United States began drawdowns in Afghanistan and Iraq, and as austerity emerged as a policy priority in Europe and some Asian countries, defense spending growth slowed to below 1 percent overall. Slowing growth, the end of the Iraq and Afghanistan wars, and domestic politics frame the environment for defense spending in 2013.

Four strategic profiles

This report analyzes the Top 50 from a macroeconomic perspective, segmenting the countries by their respective levels of per capita GDP (an indicator of overall wealth and economic development) and percentage of GDP allocated to defense (an indicator of the level of priority attached to national defense). Each country is identified as "Higher-Income" or "Lower-Income" based on whether GDP per capita exceeds US$30,000. Each country is then classified as "Spender" or "Economizer" based on whether its level of defense spending exceeds 3 percent of GDP (see Figure 3 below). Using this methodology, in 2013, the Top 50 present four sharply different strategic profiles of countries seeking a balance between defense spending and other political and economic priorities.

Figure 3: Four strategic profiles



Sources: World Bank Databank, SIPRI Military Expenditure Database, IISS Military Balance; Deloitte analysis

The Higher-Income Spenders: Capital-intensive, high-wage defense meets debt and deficits

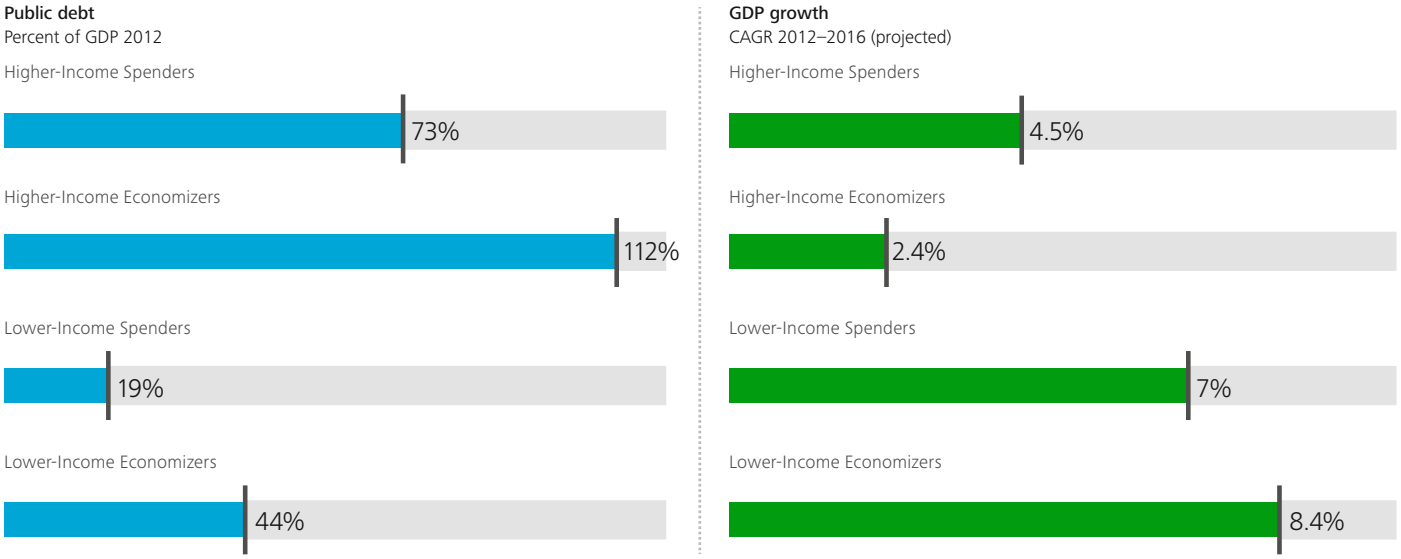
Only five of the Top 50 have per capita GDP above US$30,000 and also spend more than 3 percent of GDP on defense. The Higher-Income Spenders (Israel, Kuwait, Singapore, the United Arab Emirates, and the United States) have an average GDP per capita of US$48,000 and spend an average of 4.7 percent of GDP on defense. Because Higher-Income Spenders face high personnel costs and invest heavily in defense technology, their average annual spending per active service member is about US$404,000.

In 2013, the Higher-Income Spenders confront relatively high levels of debt and slow economic growth, which challenge their ability to sustain present levels of defense spending. Forecasted GDP growth averages 4.5 percent (compounded annual growth rate or CAGR) through 2016, and the Higher-Income Spenders face an average total government debt of 73 percent of GDP.[5]

The United States is the top spender on defense in the Higher-Income Spenders quadrant. The United States has made public commitments to continue investing in critical military resources, including intelligence, reconnaissance, counterterrorism; countering weapons of mass destruction; operating in anti-access environments; and prevailing in all domains, including cyber.[6] Even as budget-related austerity measures limit U.S. Department of Defense spending, U.S. defense spending remains about five times higher than the next closest competitor, China.

U.S. military forces maintained a high level of overseas deployments in the past decade, averaging 11.6 percent of active force end strength deployed between 2006 and 2012. Only the United Kingdom and Denmark—with much smaller forces—kept more than five percent of their active forces deployed, while China and Russia deployed less than 1 percent of their active forces outside the country during this period.[7] As Afghanistan and Iraq require fewer forces, the U.S. Army is positioning to remain extensively deployed in "shaping" and "partnership" operations elsewhere around the world.[8] U.S. military strategy emphasizes the intent on "pivoting to the Pacific," largely prompted by the increased economic importance of the region and concerns over China's growing military capability. Thus, in spite of budget constraints, the U.S. defense strategy appears likely to require continued high levels of spending and deployment.

Figure 4: Public debt and projected GDP growth



Sources: CIA World Factbook, IMF World Economic Outlook Database; Deloitte analysis

The Higher-Income Economizers: Scaling back to meet domestic priorities

Many of the eurozone members of the Top 50 are Economizers. The 16 Higher-Income Economizers include Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Italy, Japan, the Netherlands, Norway, Spain, Sweden, Switzerland, and the United Kingdom. The Economizers have an average GDP per capita of US$45,000, but these states allocate only about 1.5 percent of GDP to defense—about one-third the level of the Higher-Income Spenders. Spending per active armed service member is about US$242,000, 30 percent less than that of the Higher-Income Spenders. The Economizers confront public debt burdens of more than 112 percent and also face projected slow economic growth of about 2.4 percent through 2016. Given the relative degree of stability these countries enjoy and recent domestic pressures to contain high levels of debt, defense expenditures are necessarily limited.

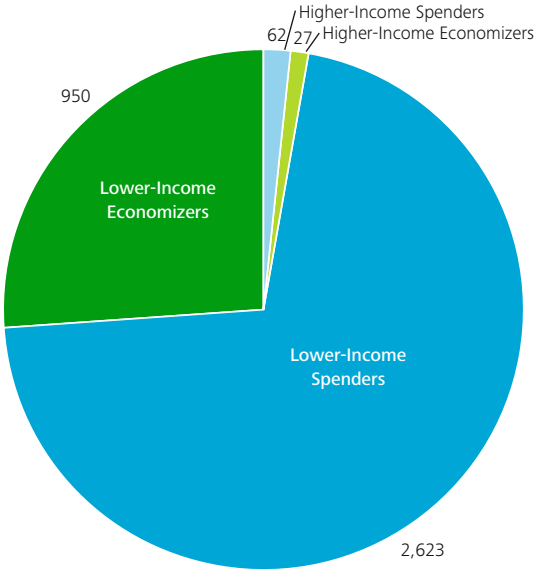
The United Kingdom is the largest defense spender among the Higher-Income Economizers. Recent efforts to limit spending in the wake of a double-dip recession, coupled with economic challenges in the eurozone, have caused the government to reassess fiscal priorities. In 2010, Prime Minister David Cameron announced that the defense budget had to be reduced 8 percent by 2014.[9] These cuts come amid domestic demands for greater spending on infrastructure projects aimed at stimulating private-sector growth.

The Lower-Income Spenders: High threats, developing economies

Algeria, Angola, Azerbaijan, Chile, Colombia, Iraq, Morocco, Oman, Pakistan, Russia, and Saudi Arabia compose this group, with an average per capita GDP of US$7,000—about 15 percent of that of the Higher-Income Spenders. These 11 countries devote an average of 4.5 percent of GDP to defense—similar to that of the Higher-Income Spenders. These countries spend an average of US$79,000 per active service member for one year. High economic growth—projected at more than 7 percent over the next five years—and low debt (only about 19 percent of GDP) position the Lower-Income Spenders to continue investing heavily in national defense, as well as social and infrastructure programs.

Requirements to modernize aging military stockpiles are driving relatively high levels of defense spending given the persistent internal and regional security threats faced by these countries. The Lower-Income Spenders suffer the largest number of terrorist attacks annually,* particularly as Pakistan and Iraq struggle to contain domestic instability (see Figure 5 below).[10] Other countries contend with external threats, as is the case for Azerbaijan in its conflict with Armenia over the territory of Nagorno-Karabakh. The high potential for conflict in this quadrant appears to drive heavy investment in national security capabilities.

Figure 5: Terrorist attacks by strategic profile 2011



Source: University of Maryland Global Terrorism Database; Deloitte analysis

Russia is the largest defense spender of the Lower-Income Spenders and plans to raise total annual defense spending 59 percent from 2012 levels by 2017.[11] Russia's armed forces have suffered from age and have not kept pace with the technological advancements of their North Atlantic Treaty Organization (NATO) and Chinese counterparts. Russia also contends with internal security threats, including persistent violence in the North Caucasus region.[12] In response, President Vladimir Putin has placed

* This paper counts infrastructure/facility attacks and bombings/explosions as terrorist attacks. An attack is counted if it is independent in space and time.

new emphasis on research and development (R&D), training, and education. Rising costs for soldier salaries and benefits have also driven higher defense spending.[13]

The Lower-Income Economizers: Balancing stability and development

These 18 countries (Argentina, Brazil, China, Egypt, Greece, India, Indonesia, Iran, Malaysia, Mexico, Poland, Portugal, South Africa, South Korea, Taiwan, Thailand, Turkey, and Ukraine) include 3.7 billion people and have the lowest average per capita GDP (US$5,000) of the Top 50. The Lower-Income Economizers devote 1.8 percent of GDP to defense, and they spend the lowest annual amount per service member (US$45,000, or 11 percent of the cost per armed service member of the Higher-Income Spenders).

The Lower-Income Economizers are projected to grow rapidly (at 8.4 percent CAGR) over the next five years. Their low debt levels (44 percent public debt to GDP on defense) also facilitate increased defense spending. Even though the Lower-Income Economizers face serious internal and external threats, they spend less than 3 percent of GDP on defense as they balance security and other development priorities.

China is the top spender among the Lower-Income Economizers. Perceived regional security threats continue to underlie its defense posture, with Taiwan, North Korea, and the South China Sea demanding a strong military presence. China's increased defense spending tracks the country's steadily increasing GDP, which has more than doubled since 2006.[14] Chinese government policy statements emphasize the approach of linking economic development and modernizing national defense.[15] Recent official statements explain the increase in macroeconomic terms as a "reasonable and appropriate growth of defense spending on the strength of rapid economic and social development and the steady increase of fiscal revenues."[16]

New realities in 2013

The emerging global defense environment is fundamentally different from that of the post-9/11 era. Higher-income countries, whose spending growth dominated the global defense environment for the past decade, are retrenching and focusing on austerity and domestic priorities. Lower-income countries are exploiting higher growth and lower debt levels to fund an unprecedented modernization and expansion of defense capabilities.

The 2013–2017 period will be characterized by declining defense budgets in the higher-income states—while the lower-income countries continue to grow defense spending and become more active in weapons R&D and trade.

This shift in investment patterns is occurring against a structural change in the missions and organizations around which national defense is organized. Cold War–era force structure, with its dependence on general-purpose forces and strategic nuclear weapons, is giving way to new structures built around special operations capability and emerging concepts of operations relating to information networks. Five new realities confront defense planners in 2013:

Spending growth concentrated in lower-income countries

The 2013–2017 period will be characterized by declining defense budgets in the higher-income states—while the lower-income countries continue to grow defense spending and become more active in weapons R&D and trade.

Much of the shift is happening among the Higher-Income Spenders, particularly as the United States strives to balance defense budget priorities with "the national security imperative of deficit reduction."[17] As part of an overall austerity program, the U.S. Department of Defense estimates that the overall U.S. defense budget—including war costs—will decline 20 percent from the post-9/11 peak (reached in 2010) by 2017.[18] This development is not restricted to the United States alone, as defense officials in Israel have predicted defense spending cuts of around NIS 3 billion for 2013 alone due to domestic austerity pressures.[19]

Austerity pressures are also expected to constrain the defense budgets of the Higher-Income Economizers. These governments are attempting to maintain procurement budgets while driving cost reductions through more conservative approaches to operating tempo, personnel costs, and force structure. For example, the United Kingdom applied budget reductions across the board, including general-purpose forces, logistics support, information systems, and air support capabilities.[20] British leaders have announced their intention to find further "efficiencies" as austerity pressures mount.[21] Likewise, Canada's armed forces identified US$1 billion to cut over the next three years by terminating civilian jobs, cutting back contractors, and retiring weapons systems and vehicles. General Tom Lawson, Canada's Chief of Defence Staff, acknowledged, "We are in a period of tighter funds.... It's going to require us to look hard for new ways of doing things."[22]

Targeted increases in defense spending by the higher-income countries are intended to address specific security challenges while being offset by cost reductions. For example, Japan invests in missiles, advanced fighter aircraft, and helicopters to counter what the government views as a rising threat from China.[23] However, these rebalancing efforts occur against a backdrop of retrenchment and reduction likely to continue through 2017.[24]

In contrast, defense spending is on the rise among the lower-income countries, fueled by generally strong economic growth and regional and internal security threats.[25]

While devoting less than 3 percent of GDP to defense spending, the Lower-Income Economizers will make

> "We are in a period of tighter funds.... It's going to require us to look hard for new ways of doing things."
>
> — General Tom Lawson, Chief of Defence Staff, Canada

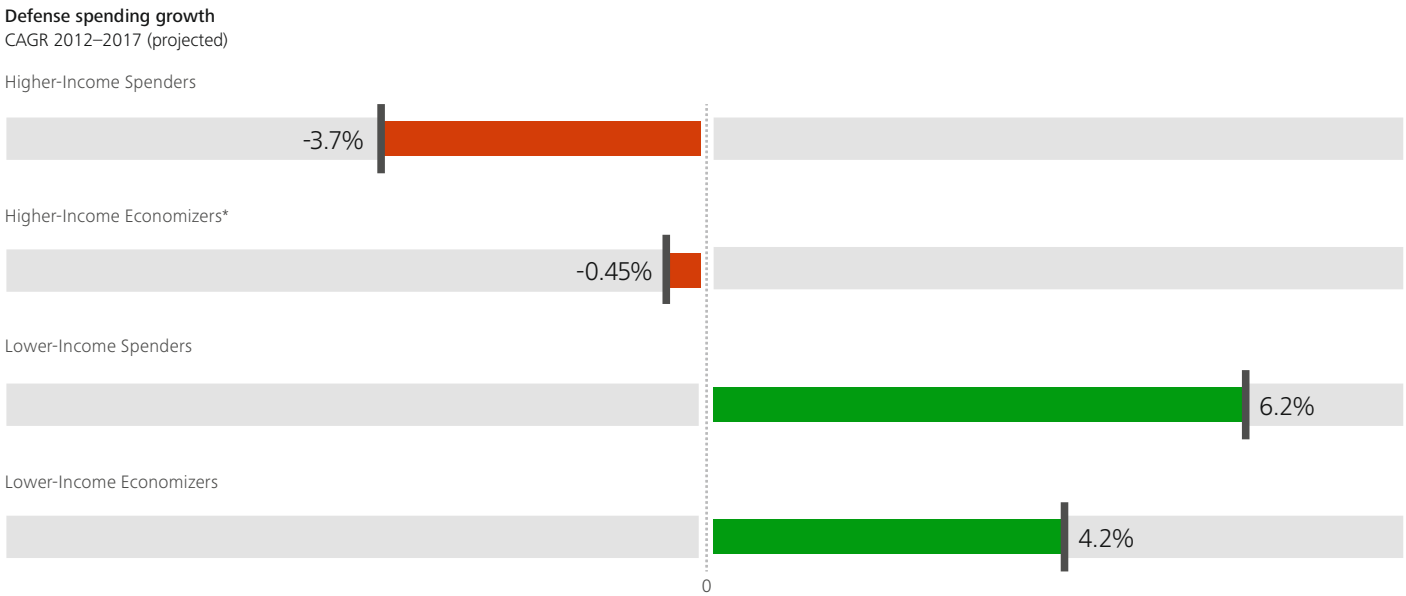
significant investments in defense capabilities, particularly as China seeks to solidify its position as a regional hegemon. Recent increases in China's spending are driven by structural and organizational reform of the People's Liberation Army (PLA), including the establishment of social security and safety-net programs for servicemen and the increase in other personnel-driven costs.[26] Increased cybersecurity programs, development of advanced aircraft and naval capabilities, and investment in indigenous arms manufacturing capabilities have also emerged as investment priorities.

Indonesia's strong economic growth has allowed the government to accelerate military investment and move up its planned modernization effort to 2019 instead of 2024. Orders for additional submarines and other hardware upgrades are also positioning Indonesia for a higher military profile.[27] These upgrades are meant to bolster defenses against domestic terrorism, natural disasters, and threats to domestic energy reserves.[28]

India had planned for defense investment growth through 2017, until fiscal challenges forced it to scale back procurement this year.[29] However, India aims to make up for cuts by indigenizing weapons manufacturing and increasing defense exports to other Southeast Asian countries.[30]

The Lower-Income Spenders are expected to increase investments in defense by 6.2 percent through 2017. Russia determined that defense spending will triple by 2015 in order to modernize 30 percent of its military units. Russian Deputy Prime Minister Dmitry Rogozin also cited a sharp increase in weapons R&D costs as reasons for the spending surge.[31]

Figure 6: Projected defense spending growth



Austria and Switzerland excluded.
Source: Jane's Defence Budgets; Deloitte analysis

Pakistan invested heavily in military R&D over the last five years. In addition to increased investment, Pakistan formed research and technology alliances with both Turkey and Ukraine.[32] These partnerships allow Pakistan to gain a foothold in the defense industry and become a major arms exporter in the region, focusing primarily on Bangladesh, Iraq, and Saudi Arabia.[33]

Colombia's defense budget increased 57 percent from 2012 to 2013. President Juan Manuel Santos earmarked US$7.6 billion of the total US$22 billion to invest in weapons technology and combat equipment in order to maintain pressure on the Revolutionary Armed Forces of Colombia (FARC) guerrilla group in the continent's longest running civil war. Even as talks continue toward a negotiated peace settlement, Santos asserts, "We have to be prepared for anything. This means reinforcing our infrastructure in case the dialogues fail."[34]

Denuclearization

According to the Carnegie Endowment for International Peace, there are currently nine nuclear weapons states—the United States, China, Russia, France, United Kingdom, Israel, India, Pakistan, and North Korea.[35] Iran is widely reported to be at some stage in developing a nuclear capability, although it is not clear whether a military capability is in reach.[36]

Figure 7: Operational nuclear warheads by country 2006–2012*

Nuclear state	2006 Operational warheads	2012 Operational warheads	Reduction
United States	5,521	2,150	3,371
Russia	5,682	1,800	3,882
France	348	290	58
Israel	200	0	200
United Kingdom	185	160	25
China	130	0	130
Pakistan	60	0	60
India	50	0	50
Total[41]	**12,176**	**4,400**	**7,776**

Source: SIPRI Yearbook

* A nuclear weapon state without operational warheads has nuclear weapons capability but does not have operational warheads.

Worldwide, operational nuclear arsenals continue to decline. Since 2006, operational nuclear warheads have been reduced by 64 percent, with all nuclear powers making significant drawdowns (see Figure 7). The United States began reducing the size of its nuclear arsenal in 1967 and has largely halted modernization efforts since 1992. The New START Treaty between the United States and Russia, which was ratified in 2011, committed both parties to limiting strategic nuclear warheads to 1,550. In his 2013 State of the Union speech, President Barack Obama indicated that the United States will engage Russia to seek further reductions.[37]

This pattern appears to reflect military judgments that developing and maintaining large nuclear arsenals at high levels of readiness may not be the preferred use of increasingly scarce budget resources. A planned US$80 billion effort to modernize the U.S. arsenal is reported to be a candidate for budget reduction.[38] In a recent administration review of U.S. nuclear posture, officials noted that the United States reduced the role of nuclear weapons in its overall defense posture.[39] In fact, U.S. officials now believe that nuclear threats arise primarily from the prospect of nuclear terrorism or proliferation. Therefore, policy emphasizes multilateral approaches to nuclear weapon and materiel "lockdown," compliance with the Nuclear Non-Proliferation Treaty, and strengthening International Atomic Energy Agency safeguards.[40]

Other nuclear powers are also decreasing the size and readiness levels of their nuclear arsenals. In its 2010 Strategic Defence and Security Review, the United Kingdom endeavors to reduce the number of warheads on nuclear submarines and diminish the number of operational warheads "from fewer than 160 to no more than 120." Prime Minister Cameron asserted that such reductions could be made while still presenting a credible and effective deterrent.[42]

While warhead numbers and force readiness levels appear to be continuing a downward trend, important exceptions complicate force planning efforts. For example, reports of China's land-based missile tests, including reported plans for deploying 20–30 mobile Dongfeng-41 launchers, and China's plans to deploy submarines with 12 missile launchers demand continued attention. Pakistan

also continues to test new short-range nuclear missile systems as part of its modernization program.[43] Despite the current public U.S. assessment that North Korea is unlikely to have operational nuclear weapons,[44] efforts by the regime to acquire nuclear capabilities must be taken into account.

Limited modernization and redeployments do not mask the long-term trend toward smaller nuclear forces—operating at lower states of readiness—among states choosing to maintain nuclear weapons.

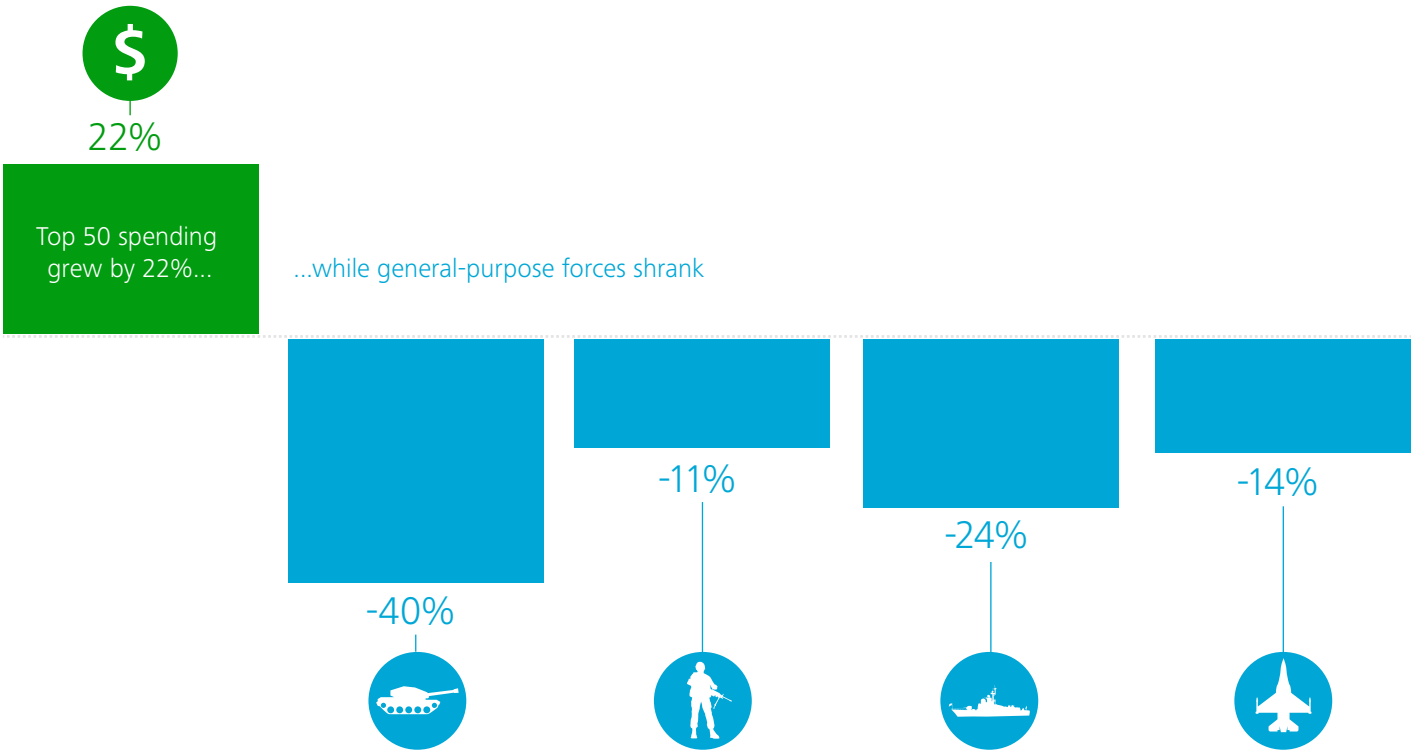
Declining emphasis on general-purpose forces

The Top 50 increased their total defense spending by 22 percent between 2006 and 2012 but pursued across-the-board reductions in general-purpose forces and weapons systems. As these countries confront budget pressures and nontraditional threats, production and procurement of units and systems intended for large-scale conventional battlefields continue to decline.[45]

Total active force end strength declined by 11 percent among the Top 50 between 2006 and 2012, with 33 of the Top 50 recording reductions.[46] Only eight of the Top 50 added more than 10,000 soldiers between 2006 and 2012. The largest increases were in Mexico (which added

Figure 8: Declining emphasis on general purpose forces

Between 2006–2012...



Iran and the United Arab Emirates excluded from spending growth.
Source: SIPRI Military Expenditure Database, IISS Military Balance; Deloitte analysis

87,000 troops), Colombia (which added 76,000), and Iraq, which added 44,000 troops as the country worked to reestablish its indigenous defense capability. Other Top 50 countries adding more than 10,000 soldiers included Saudi Arabia, Brazil, China, the United States, and Pakistan.

Top 50 inventories of main battle tanks (MBTs)—the mainstay of Cold War–era conventional combat operations—declined by 40 percent between 2006 and 2012. The sharpest reduction occurred among the Lower-Income Spenders, led by Russia, which decreased MBTs by 82 percent. This was slightly offset by Iraq's procurement of 336 MBTs as part of its military recapitalization effort.

Lower-Income Economizers decreased MBT stockpiles by only 11 percent, reflecting ongoing modernization efforts in China, India, and South Korea. The Lower-Income Economizers view tank production and tank forces as contributors to both economic development (as exports) and national security. Tank production has increasingly focused on smaller armies inside and outside the Top 50. Thailand's army now purchases T-84 Oplot tanks from Ukraine. Bangladesh recently purchased more than 40 Chinese-made MBT-2000 tanks.[47] While these orders, as well as Egyptian and Saudi Arabian orders for U.S. M1A2s, keep tank lines in production, the global trend toward smaller tank fleets is well established.

Figure 9: Total fighter aircraft and MBTs, 2006–2012

Source: IISS Military Balance; Deloitte analysis

Combat aircraft inventories declined by 14 percent overall. The largest decrease was observed among the Lower-Income Economizers, largely due to a sharp reduction in China's aircraft inventories, likely in advance of its modernization effort. Chinese government sources indicate that the J-15 carrier-based fighter and J-31 stealth fighter will be the centerpieces of the air combat fleet.[48]

Only six of the Top 50 added more than 50 combat aircraft during 2006–2012, with Israel making the largest addition (264 aircraft), followed by Pakistan (197), France (131), Sweden (115), Japan (68), and the United Arab Emirates (62).[49]

The largest fighter aircraft program under way worldwide is the U.S. F-35 Joint Strike Fighter, which may add or replace more than 2,400 aircraft in the United States and other Top 50 if the current base program is continued. The program remains challenged, as development and software testing will continue at least through 2019, and average unit procurement costs have more than doubled since the program began.[50]

General-purpose principal surface combatant inventories among the Top 50 countries declined by 24 percent between 2006 and 2012. The Top 50 reduced their fleets by more than 200 ships, with seven navies (the United States, Russia, the United Kingdom, Indonesia, Korea, India, and France) accounting for 67 percent of the reductions. Only five of the Top 50 navies added principal surface combatants, with China adding seven ships, Germany adding six, Pakistan adding four, Chile adding two, and Denmark adding one.[51]

Rising equipment, compensation, and benefit costs also appear to be driving slower growth in general-purpose forces. Public sources in the United States indicate that the cost to equip an individual soldier increased by 6.4 times between 2000 and 2010, while the same soldier's family support programs cost grew more than 300 percent in the same period.[52] As many of the Top 50 have moved away from conscription and toward professionalized military forces, the cost of attracting, equipping, and supporting soldiers placed pressure on end strength increases.

Rise of special operations forces (SOF)

As the mandate for general-purpose forces softens worldwide, the number of countries funding special operations capabilities has increased. From 2006 to 2012, the number of Top 50 countries with a publicly disclosed special operations force (SOF) structure increased by 40 percent.[53] Special operations capabilities are increasingly aligned with counterterrorism and counterinsurgency missions—a trend established after the 9/11 attacks. Two-thirds of the countries adding SOF are lower-income countries, where many terrorist-related attacks occur.[54]

The U.S. approach to special operations appears to exert a shaping influence on the policy and force structure of other Top 50 countries. In 2008, the United States Special

Figure 10: Countries with special operations forces capabilities

Source: IISS Military Balance; Deloitte analysis

From 2006 to 2012, the number of Top 50 countries with special operations forces increased by 40 percent.

Operations Command was designated responsibility for security force assistance worldwide and now performs an instrumental role in global training and assistance programs to other Top 50 armed forces and other military organizations.[55] The training and coordination role is set to expand as Special Operations Command pursues establishment of regional special operations coordination centers to cultivate relationships with non-U.S. special operations units.[56] As the troop drawdown in Afghanistan moves forward, the emphasis of U.S. SOF personnel will shift toward boosting the capacity of partner countries, predominantly in Africa and Southeast Asia.[57] This increased cooperation may spur further growth and development of SOF capabilities around the world.

Recent U.S. defense budget priorities confirm the continued U.S. emphasis on maintaining and enlarging special operations forces.[58] Between 2001 and 2013, U.S. SOF end strength grew from fewer than 40,000 to 66,000. The 2014 U.S. Department of Defense budget request maintained the upward growth trajectory for SOF in spite of overall cuts in defense spending.[59] Planned force structure additions include a fifth special forces battalion, increases in personnel for the 75th Ranger Regiment, civil affairs units, and units assigned to Air Force, Navy, and Marine special operations forces.[60]

While intercountry comparisons of special operations units are difficult because units have different structures, sizes, missions, and levels of skill, publicly available data estimate that the total number of special operations units increased across the Top 50 by 30 percent or more between 2006 and 2012. None of the Top 50 appear to have reduced special operations capabilities in this time frame, and the largest increases appear to be in China, India, Iran, and Turkey.[61]

Cyber as a military operational domain

The Internet has become an indispensable global tool for business and government. However, its ubiquitous use creates new vulnerabilities in safeguarding information and protecting digital infrastructure, with attacks on information networks increasing in both quantity and effects. China's Defense Ministry website and two military websites reportedly faced 144,000 attacks monthly during 2012.[62] In March 2013, the Spamhaus-distributed denial-of-service attack affected Internet service to hundreds of millions of people and institutions worldwide.[63] As instances of cyber attack become more frequent, countries view cyber defense as a matter of national security.[64] In the United States, recent budget requests emphasize the "increased frequency and magnitude of cyberspace threats" to justify enhancement of cyber capabilities for network defense, degrading adversary cyber capabilities and supporting defense of national infrastructure.[65] The United Kingdom's National Security Strategy categorized cyber attacks as "a Tier One threat to our national security, alongside international terrorism."[66]

More than half the Top 50 now include cyber capabilities in defense force structures and policies.[67]

The United States appears to be the heaviest investor in cyber capabilities. U.S. defense policy now acknowledges that cyberspace is an operational domain and organizes units to exploit the full military potential of this new domain.[68] The U.S. established Cyber Command in 2009, with a mission that includes "full-spectrum military cyberspace operations."[69] The proposed 2014 U.S. Department of Defense budget cites cyber security as a key priority area of investment.

The Higher-Income Economizers emphasize collaborative approaches to cyber to contain costs and expand information sharing across the eurozone. For example, the Nordic Defence Cooperation, which includes Finland, Iceland, Denmark, Norway, and Sweden, lists cyber defense as one of its "prioritized activities… with the greatest potential for cooperation."[70] NATO defense ministers accepted a NATO policy on cyber defense in 2011, focusing on attack prevention and resilience. More recently, the NATO Computer Incident Response Capability

and the NATO Communications and Information Agency were established to bring multiple NATO bodies under centralized protection from cyber threats.

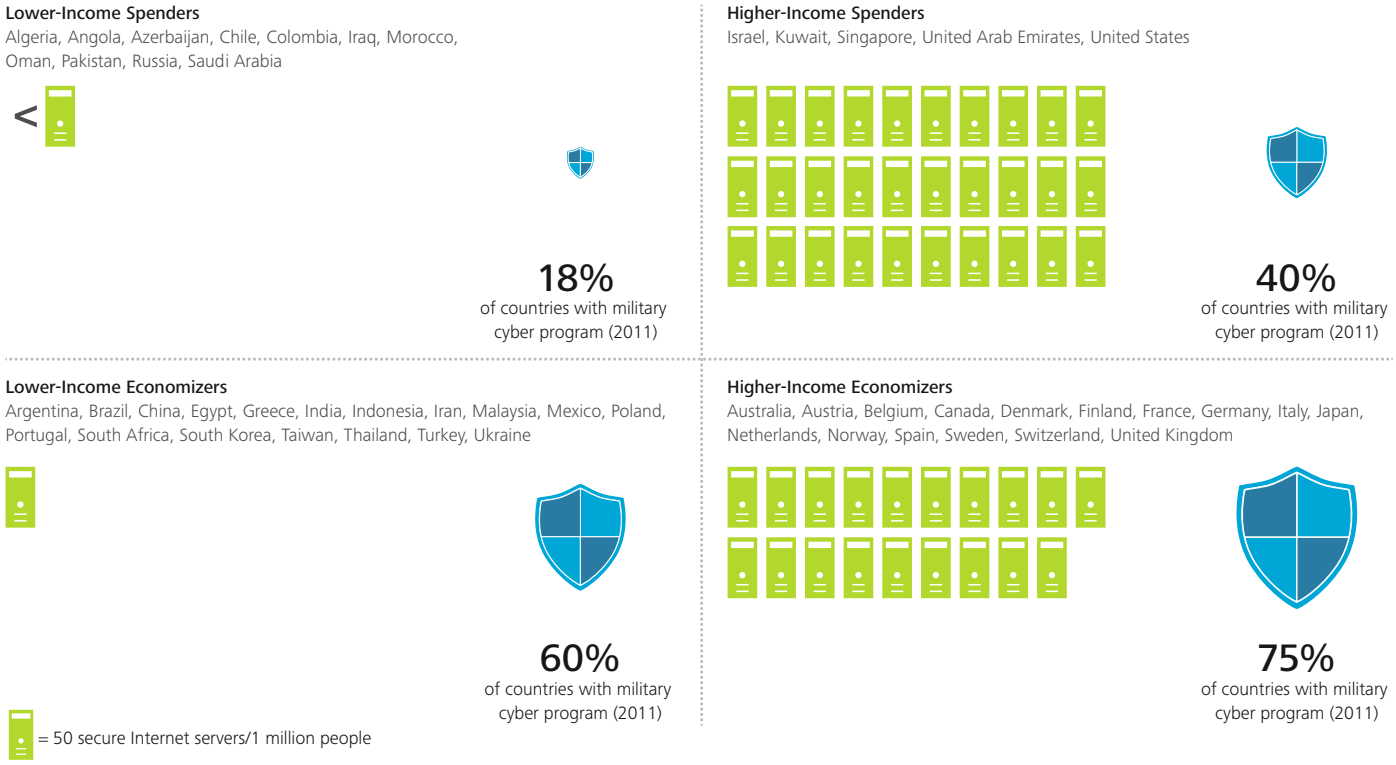
The Lower-Income Economizers and Spenders appear to be taking a more unilateral approach to developing military cyber capabilities. Recent public reports have identified an operational Chinese cyber capability as PLA Unit 61398 and claimed that the unit has attacked 141 non-Chinese organizations in 20 different industries.[71] India publicly announced a program, which would be supervised by the national security adviser, to bolster cyber defense capabilities. Plans include the training of 500,000 "cyber warriors" by 2017 and a program of mandatory cyber security checks.[72] South Korea launched its cyber warfare command in 2009 in response to reported 95,000 daily hacking attacks against military computer networks.[73]

Russia's military doctrine cites the use of informational instruments to protect its national interests and emphasizes a greater role for information warfare.[74]

Vulnerability to cyber attacks is likely to remain a special concern for the higher-income countries, as the majority of secure Internet servers are located within these countries (see Figure 11 below).[75] The Lower-Income Spenders have lagged in developing cyber programs, but this may be explained by the relatively low concentration of targets in these countries.

With half of the Top 50 engaged in some level of national security-related cyber policy development, cyber operations have emerged as a new domain for defense policymakers.[76]

Figure 11: Secure servers and percent of countries with military cyber programs



Sources: World Bank Databank, UNIDIR; Deloitte analysis

The new global defense debates

Balancing security and prosperity in an environment of ever-present threats and limited resources is neither an automatic outcome nor an unreachable objective. The rapid evolution of the global security environment—driven by structural economic shifts and accelerating technological change—challenges policymakers to consider three tradeoffs now facing Top 50 countries.

National defense versus domestic priorities

Among the higher-income countries, the perpetual question "How much defense is enough?" was postponed after 9/11 as national defense establishments rushed to modernize, which drove a wave of spending that substantially lifted many defense budgets through the past decade.

But in 2013, defense ministers and senior military personnel alike—from the United States to China and the eurozone—are now asked to justify defense spending against a broad range of domestic priorities.

Higher-income countries scale down their defense expenditures as balancing budgets and reducing deficits become increasingly important. Canada's Chief of Defence Staff General Lawson said, "There is a budget to balance and defense must do its part and that has our keen attention."[77] Meanwhile, the lower-income countries balance security with developmental demands, such as expanded health care, education, income security, and civil infrastructure.

The reemerging requirement for governments to address the tradeoff between security and fiscal responsibility is already affecting the global defense landscape. The U.S. defense budget proposal for 2014 acknowledges that defense spending is intended to balance the protection of security interests against "declining budgets and fiscal uncertainty."[78]

NATO's Smart Defence program is a direct result of austerity measures in the United States and Europe. This plan focuses on "specialization 'by design' so that members concentrate on their national strengths and agree to coordinate planned defence budget cuts."[79]

In the emerging political and economic environment, defense leaders will need to acquire new vocabulary and concepts to articulate the relative value of defense investments against alternative applications for public funds—including the alternative of cutting defense to pay for other priorities.

Individual liberties versus national security requirements

Modern security challenges facing the Top 50 are distinctly different from those of the past. Terrorist groups and other hostile nonstate actors—even rogue individuals—are emerging as significant threats to national security. The number of terrorist attacks in the Top 50 increased from 1,862 in 2006 to 3,662 in 2011.[80] New actors employ asymmetrical tactics, including launching cyber attacks to disrupt government networks and coordinating suicide bombings. As these threats are not bound by national borders, defense leaders have been forced to rethink security strategy.

With an emerging need for domestic operations to combat terrorism and insurgency, long-standing distinctions between military operations, covert action, and intelligence collection have blurred. More than half of the Top 50's militaries now incorporate cyber initiatives, including surveillance, in their strategic planning and operations. Eleven of the Top 50 operate unmanned aerial vehicle (UAV) programs.[81] These capabilities are increasingly employed to monitor and deter potential acts of aggression, both internally and externally. The United Kingdom's Chief of Defence Staff General Sir David expressed a widely held view when he asserted that "the distinction between home and abroad is strategically obsolete. Today it is part of a continuum."[82]

While cyber, intelligence collection, and UAV technologies provide important security capabilities, they also have the potential to encroach on civil liberties. The Center for Strategic and International Studies cites the public's fear that the "government will collect and use information in inappropriate ways, for political purposes, law enforcement, or administrative actions."[83] These concerns have been expressed over both cyber security and the use of drones. In March 2013, the U.S. Congress demanded

> "The security situation does not justify a conscript army any longer."
>
> — Thomas de Maizière, Minister of Defense, Germany

that the U.S. Department of Defense disclose domestic drone surveillance operations.[84] Representative Zoe Lofgren (D-CA) stated, "The expanded use of drones on U.S. soil raises serious Constitutional and civil liberties issues that Congress needs to address."[85] Similarly, the United Kingdom addressed this emerging challenge in the UK Cyber Security Strategy, asserting that, "At home we will pursue cyber security policies that enhance individual and collective security while preserving UK citizens' right to privacy and other fundamental values and freedoms."[86]

The responsibility of governments to protect citizens and economic interests from attack may now conflict in new ways with citizens' expectations of privacy. The rise of cyber and UAV technology invites new attention to the balance between military freedom of action in the interests of citizen security and the protection of civil rights.

Professionalism versus affordability

Salary and benefit costs emerged as a major driver of military budget increases over the past 10 years, as military organizations across the Top 50 abandoned conscription in favor of professional volunteers. Professional forces are quicker, more responsive, and may be more effective in combatting the wide range of threats facing the Top 50. Maintaining a volunteer force is politically appealing, as it does not require citizens who prefer not to serve to undertake military service.

Even as governments cut defense budgets, none of the Top 50 contemplate returning to conscription as a mechanism for controlling surging personnel costs. In fact, 16 of the Top 50 ended or significantly reduced conscription between 2006 and 2012.[87] As Germany's Minister of Defense Thomas de Maizière stated, "The security situation does not justify a conscript army any longer."[88] Germany ended conscription while making substantial reductions in defense spending.

The economic tradeoffs required to maintain high-quality professional forces are likely to receive new attention as budgets are challenged, even as the demands for special operations and cyber-related skills press toward greater professionalization. In China, the government justifies higher levels of defense spending by asserting that increased compensation and benefits are required to compete against rising salaries in the Chinese private and public sectors.[89] In the United States, compensation costs per active soldier jumped more than 40 percent since 2001, and soldier pay and benefits now account for more than one quarter of the base budget of the U.S. Defense Department.[90] Similarly, Russia is placing the "implementation of social protection measures for service personnel" as one of the top priorities for its increased defense budget for 2013–2016.[91]

As countries face greater pressures to contain defense spending, the Top 50 still prioritize the need for a professional military because the obvious political and military advantages of a volunteer force appear to outweigh the financial benefits of a conscripted military. However, as soldier compensation costs continue to rise, the tradeoff between the costs of a professional force and the need for increased affordability appear likely to become part of the defense debate.

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The security environment of the Top 50 defense ministries remains complex, nuanced, and rapidly evolving. As the defense ministries move into a new period—marked by a changing balance among higher- and lower-income countries—reasoned policy tradeoffs and informed dialogue may contribute to improved security and well-being for people around the world.

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