



Global Defense Outlook 2014

Adapt, collaborate,
and invest



About Deloitte's Global Defense Outlook

This report examines policies, practices, and trends affecting the defense ministries of 50 nations whose combined total publicly acknowledged spending on national defense accounts for more than 92 percent of global defense outlays. Publicly available information, interviews with officials in government and industry, and analyses by Deloitte's global network of defense-oriented professionals were 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

Adapt, collaborate, and invest:

The Global Defense Outlook in 2014

Instability in Ukraine, Japan's efforts to revitalize its defense, continued military buildups in China, and U.S. debates over post-war defense spending and force posture — these events highlight the fundamental shifts in global defense policies underway in 2014. What is driving these shifts and how are nations responding? The evolving global economy, combined with changing security threats facing the largest defense spenders, is driving revisions in defense planning and spending. Adaptation, collaboration, and investment have emerged as the top priority defense management strategies at mid-decade.

Adapt: Economics and shifting threats drive defense spending

The military strategies and investments of the next decade will be driven by changing economic realities and new security fundamentals — and the advantage will lie with defense establishments best able to adapt.

Defense ministries in higher-income nations adapt to new economic imperatives by restructuring, downsizing, and reexamining procurement budgets. Lower-income nations adapt to rapid economic growth and low debt by increasing defense spending to bolster security, while increasing economic well-being.

As global terrorism recedes and concentrates in a small number of lower-income nations, defense leaders adapt by moving toward police-based and intelligence-enabled counterterrorism approaches.

Nations adapt to new cyberthreats by forming new command structures and military services to operate in cyberspace. Resources once devoted to conventional military formations are moving toward network security and military cyber capabilities.

Collaborate: New partnerships emerge for security and economic development

Recognizing opportunities for mutual benefit and converting those opportunities into working relationships is a competitive advantage for successful defense ministries.

Acquiring and maintaining modern defense capabilities imposes costs beyond the capabilities of single nations. Collaboration is a practical solution to pressing economic and technical constraints. New collaborations are taking shape to manage cyberoperations, counterterrorism, and defense industrial development.

Invest: Ministries defend procurement budgets to maintain capability

Defense capital budgets are under pressure and defense ministries are making substantial efforts to sustain essential investments. Higher-income nations are protecting their investments to maintain their technical edge and production capabilities. Lower-income nations are investing to gain military advantages, but also to develop

The global defense leaders

Top 50 spend 92 percent of global defense budgets

Fifty nations account for 92 percent (\$1636B) of the world's total spending on national defense. (Figure 1) The defense policies and programs of these top 50 nations (the "Top 50") explain most of the world's defense activity and shape the global security environment in the broadest and most enduring ways. The Top 50 nations produce more than 90 percent of global economic output and include populations of more than five billion people across six continents.

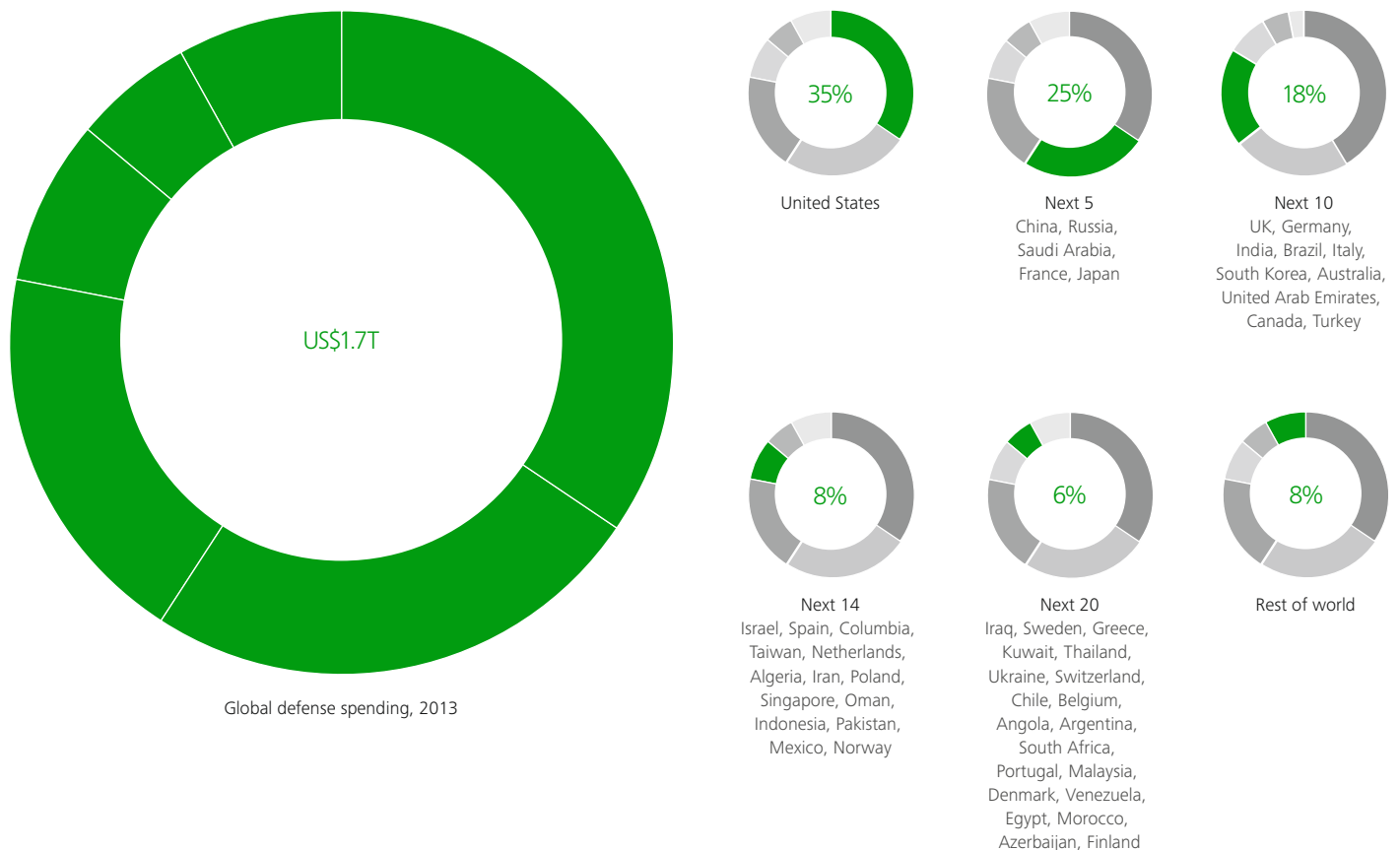
Within the Top 50, six nations — the United States, China, Russia, Saudi Arabia, Japan, and France — generate 60 percent of global defense spending.¹ More than 26 percent of global defense spending is driven by the next largest 24 national defense budgets, with another 20 countries accounting for six percent of the global defense spending total. The remaining United Nations members

account for eight percent of global defense spending outlays. The dominant position of the Top 50, and particularly the six largest spenders, decisively shapes the structure, size, and posture of global military forces.

The U.S. defense budget accounts for 35 percent of total global defense spending — fully twice the U.S. share of global gross domestic product (GDP)² and 10 times the U.S. share of the global population³. The United States spends more on defense than the combined defense spending of the next eight nations in the Top 50.

The U.S. share of global defense spending continues to decline from 40 percent in 2012 to 35 percent in 2013, as China, Russia, and other nations increase their defense budgets.

Figure 1: Top 50 defense spenders⁴



Numbers do not add up to 100 percent due to rounding.

Flat global defense spending as China, Russia, Saudi Arabia grow, but the United States and Europe reduce

Global defense spending growth has slowed substantially from the five to eight percent annual increases seen during the peak years of U.S. and coalition operations in Iraq and Afghanistan. This slow growth reflects the changing patterns of defense spending. Between 2008 and 2013, the total annual defense spending of the Top 50 increased by three percent.

Twenty-nine of the Top 50 increased defense spending in real terms, while 21 of the Top 50 reduced their defense outlays. (Figure 2)

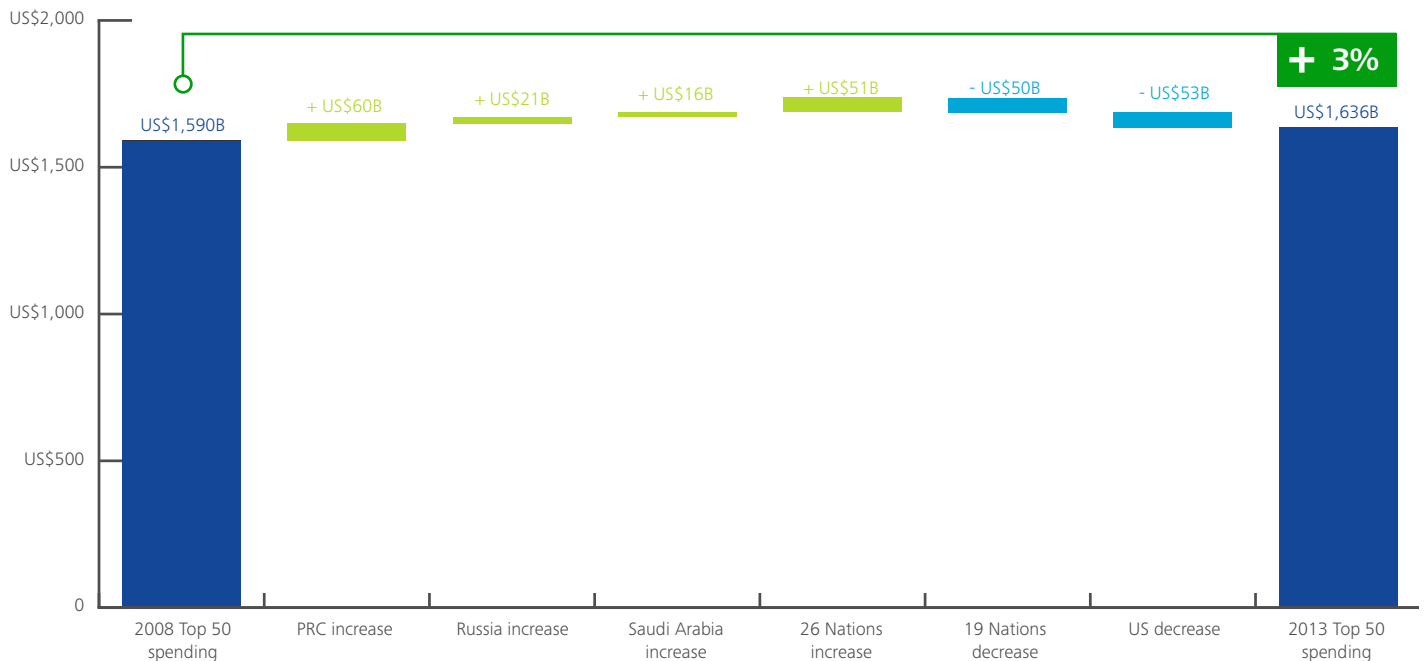
Among the 29 Top 50 nations that increased defense spending, eight increased their defense spending by more than 50 percent. Only nine of the nations posting increased defense spending were in Western Europe or the Americas.

Among the 21 countries with net reductions in annual defense spending from 2008 to 2013, 11 were in Europe or the Americas, reflecting increased requirements for austerity as well as the end of contingency operations.

The largest annual defense spending increases from 2008 to 2013 were posted by China, which increased its annual defense spending by \$60B, along with Russia (\$21B) and Saudi Arabia (\$16B), while the largest decrease in defense spending occurred in the United States, which reduced annual defense spending by \$53B.

The Top 50 nations include advanced industrial economies, as well as developing countries. National approaches to defense spending reflect economic policy choices, as well as military and strategic priorities. To highlight these choices and priorities, this report examines 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 the percentage of GDP allocated to defense spending (an indicator of the level of priority attached to national defense). Each country is categorized as higher income or lower income based on whether its GDP per capita is above or below US\$30,000. Each country is then further classified as a spender (“Spender”) or an economizer (“Economizer”) based on whether its level of defense spending exceeds three percent of GDP.

Figure 2: Top 50 Defense Spending Changes, 2008–2013⁵

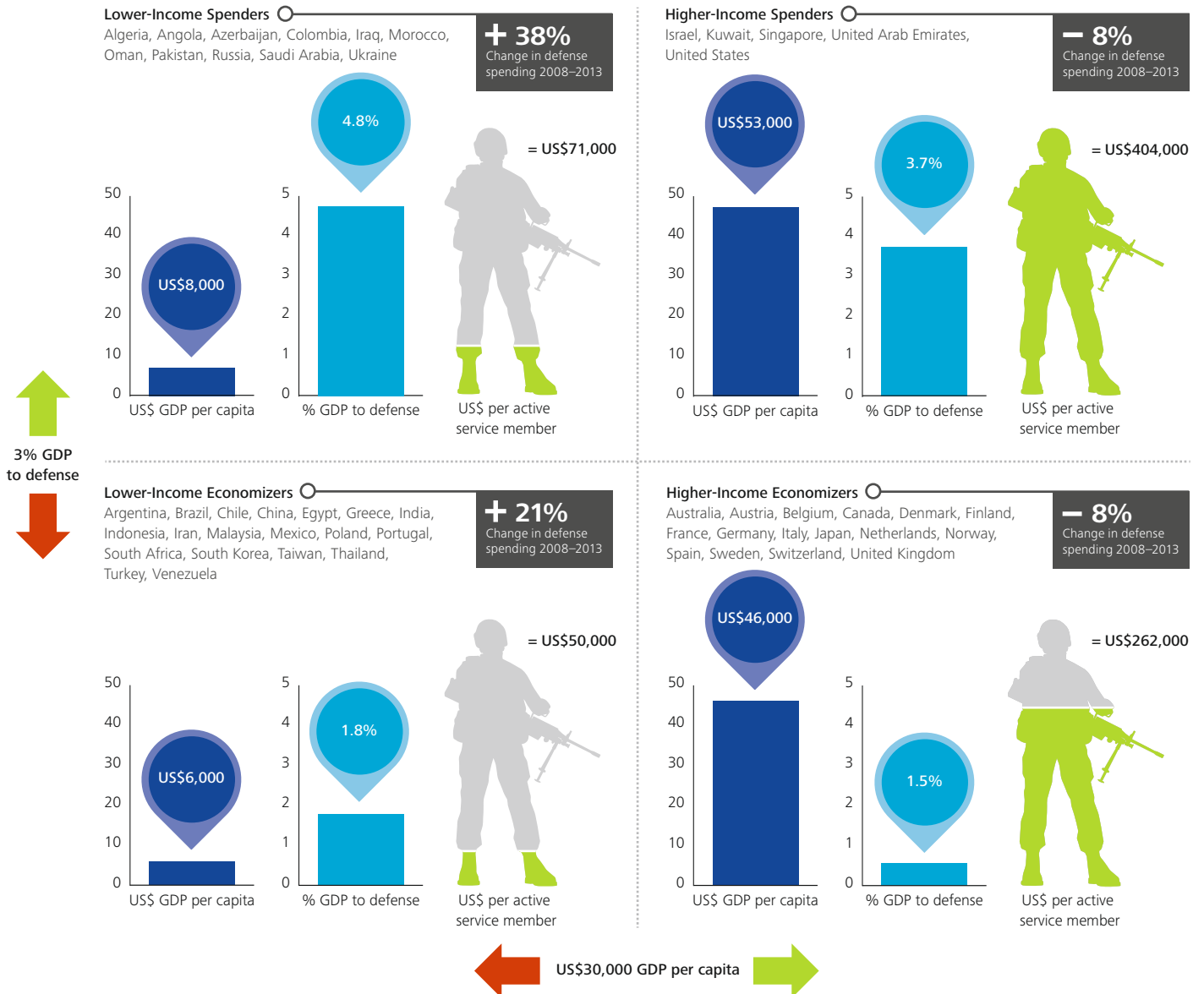


These classifications bring into sharp relief the different economic and military approaches to defense taken by

the Top 50. Sixteen of the Top 50 are Spenders, allocating on average more than three percent of GDP to national defense, while 34 of the Top 50 are Economizers, spending an average of less than two percent of GDP on national defense.

Higher-income nations reduced defense spending by eight percent between 2008 and 2013. Lower-income nations increased defense spending over the same period, with the lower-income Spenders boosting defense outlays by 38 percent and the lower-income Economizers increasing defense outlays by 21 percent.

Figure 3: Top 50 defense spending profiles: Spenders and Economizers



Shaping defense strategy: Global realities in 2014

What is driving the changing pattern of global defense spending? National security planning is entering a new period when neither conventional conflict nor the decade-long “war on terror” dominate the security policy landscape. Two key events in 2014 mark the starting point of this new period — the impending end of Operation Enduring Freedom in Afghanistan and instability in Ukraine. These events illustrate the new economic and security environments in which higher-income, high-debt nations constrain defense-related investments and pursuits, while lower-income countries increase defense-related investments and add capabilities.

Nations are responding to both strategic and economic realities as defense budgets, force structure, and force posture are reshaped.

Two economic realities reflect the changing patterns of growth, debt, and development. First, changing levels of economic growth and debt allow lower-income nations to increase defense investment, while higher-income countries retrench. Second, economic development pressures are leading lower-income nations to expand indigenous defense industries and focus on military exports.

Two strategic realities reflect fundamental changes in the global security environment. First, terrorism — once a global military priority — is receding in all but a few nations (mostly outside the Top 50). Second, cyberoperations are affecting Top 50 and smaller nations, with cyberattacks becoming more intense and widespread.

These new realities are leading to structural changes in the missions and organizations around which national defense is organized. Early 21st century force structure, with its emphasis on counterinsurgency and counterterrorism, is giving way to new structures built around multiusage and mobility, as well as concepts of operations related to information networks. The new realities are changing the way nations buy and apply defense resources.

Global economic conditions re-shape defense spending

1. Growth and lower debt allow lower-income countries to dominate defense spending growth

Defense leaders are confronting a military investment environment that is fundamentally different from that of the preceding decade. Unlike the post-9/11 period

during which higher-income countries drove double-digit increases in defense operational and capital spending, the post-2014 period is characterized by declining budgets in higher-income states — while lower-income countries continue to grow their defense spending.

Much of the higher-income national defense budget cutback is occurring in the United States, as defense budget reductions “reduce the military’s margin of error in dealing with risks” and “a smaller force strains... (the) ability to simultaneously respond to more than one contingency at a time⁶.”

But these same pressures are being felt in the other higher-income countries. Of the 25 Top 50 nations with the highest per capita income, all but four (Australia, Singapore, Kuwait, and Japan) have signaled that defense spending will decline or remain flat over the next two to five years. But the 25 lowest-income members of the Top 50 are all increasing defense spending in the same period — and the largest absolute defense budget increases worldwide are likely to come from this group (Brazil, China, India, and Russia).

These rapidly changing patterns will create substantial shifts in overall military spending balances worldwide. By 2015, China’s defense budget is expected to exceed the total of France, Germany, and the UK⁷, and total defense spending by Russia and China is expected to exceed spending by all the European Union countries combined⁸. Total defense spending across Asia-Pacific (excluding China) is expected to also exceed total spending by Western European countries within two years⁹.

Top-line budget pressures produce changes in capability. Higher-income defense ministries 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 has applied budget reductions across the board, including general purpose forces, logistics support, information systems, and air support capabilities.¹⁰ British leaders have announced their intention to find further “efficiencies” as austerity pressures mount.¹¹ The Italian Ministry of Defense (MOD) announced sharp reductions in military and civilian personnel and an administrative restructuring to free up its defense budget for acquisition programs, including the F 35 fighter.¹²

Defense spending growth among lower-income countries is being funded by generally strong economic growth and is directed against regional and internal security threats.

The Chinese government explained its plans for increased defense spending to cover costs for structural and organizational reforms of the People's Liberation Army (PLA), including the establishment of social security and safety net programs for servicemen and other personnel.¹³ Increased cybersecurity programs, development of advanced aircraft and naval capabilities, and investment in indigenous arms manufacturing capabilities have also emerged as Chinese defense investment priorities.

India's planned defense investment growth appears to be directed at regional rivals China and Pakistan, as well as internal threats arising from secessionist and Maoist insurgent groups.

Indonesia's strong economic growth has led the government to accelerate its military investment, moving to complete a planned modernization effort by 2019 instead of 2024. Orders for additional submarines and other modernization efforts are also positioning Indonesia for a higher military profile.¹⁴

As defense spending momentum shifts from higher-income countries to lower-income countries, military and political leaders will need to assess shifting vulnerabilities.

2. Lower-income countries grow defense industries and compete for export markets

As lower-income countries grow their economies and expand their defense investment, opportunities emerge to develop domestic defense industries and enter global export markets. These new opportunities increase the total return on defense spending and reduce reliance on the defense industries of higher-income nations. Defense industrial base development is now a key budget priority in lower-income nations.

Russia's arms sales abroad rose by 15 percent in the first half of 2013, and military technical collaboration is a key element of Russia's revised defense strategy. President Putin has committed nearly \$1B in new investment into the Russian aerospace industry over the next three years. Russian defense spending is focused on expanding the position of Russian aircraft manufacturers in world

markets, and President Putin has reinforced the message by demanding improvements in the maintenance and service of Russian aircraft exports. Russia's helicopter business appears to be the model, as Russian-made helicopters currently operate in more than 100 countries¹⁵.

Pakistan is expanding financial support to state-run Pakistan Ordnance Factories (POF), the Pakistan Aeronautical Complex, and the Karachi Shipyard, updating production capacity with the objective of increasing exports of military equipment¹⁶.

China's policy goal is to reach the global defense technology frontier by the early 2020s. Bolstered by strong increases in defense spending, China's defense industry is performing well. The average annual revenue from the 10 leading state-owned defense corporations has expanded by around 20 percent since the mid-2000s, exceeding \$233B in 2011 (including both military and civilian production)¹⁷. Current Chinese defense exports are reported to be less than \$1.5B annually, suggesting that there is substantial room for growth. With a PLA target of three percent of defense industry revenue set aside for research and development (R&D) by 2020, the Chinese defense budget is funding substantial economic development and export capabilities.

India is investing in indigenous private and public defense manufacturing and export capabilities. India's government has allowed private-sector participation in the defense industry since 2001. The government has announced new reforms to encourage competition and "level the playing field"¹⁸ for private-sector defense enterprises.

India's pursuit of indigenous manufacturing and defense exports includes expansion of joint manufacturing of defense technologies with Russia¹⁹, Egypt²⁰, Thailand²¹, and South Korea²².

Brazil is one of the two largest markets for defense systems in South America, and its participation in the 2014 World Cup and 2016 Olympic Games have focused Brazil's defense investment on security infrastructure. With this objective in view, Brazil's long-term strategy is to enhance and grow its defense industrial base and further expand exports²³. Brazil and Russia agreed on a program for joint development of military technologies, including "unrestricted transfer of technologies" as part of

a broader strategic dialog on defense collaboration²⁴. Brazil has also entered into defense industry partnerships with Turkey, establishing five industry working groups covering industrial collaboration in naval, aeronautics, space, command and control, and cyber matters. The objective of the industrial collaboration is to develop “common projects” that will increase Brazil’s participation in the international arena.”²⁵

Increased defense budgets in lower-income countries are creating room for investment in national defense industries. As these investments develop, lower-income nations will be better positioned to generate technology and jobs from indigenous business, while potentially increasing their income and influence through expanded military exports.

A changing global security environment reshapes defense requirements

1. Terrorism challenges lower-income nations

Following the terrorist attacks in September 2001, defense

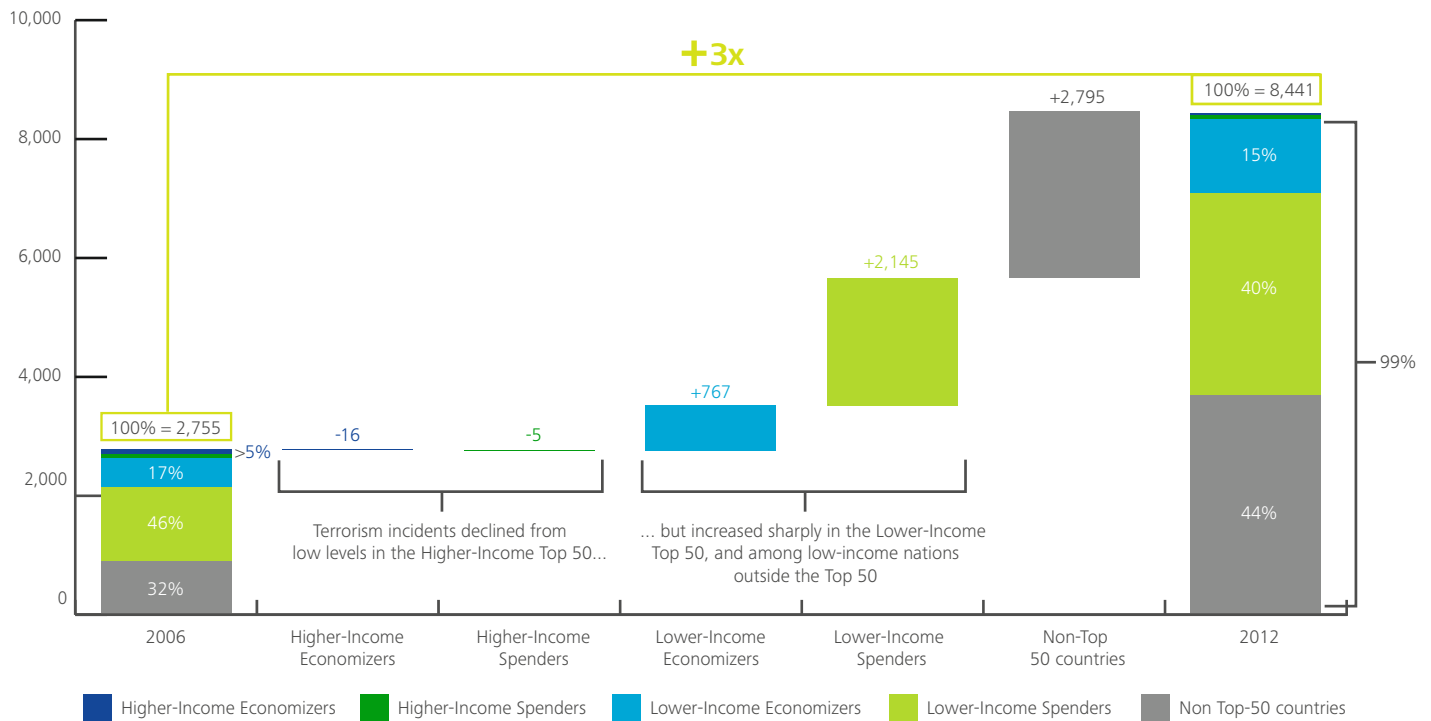
ministries worldwide turned their attention to building special operations and counterterrorism capabilities. Higher-income and lower-income nations in the Top 50 invested heavily in defense resources to reduce the likelihood of terrorist attacks and to share intelligence about terrorist network activities. These investments appear to have paid off in higher-income nations.

But the nature and targets of terrorist activity have changed and defense ministries are modifying their approaches and investments to reflect this shift in the security environment.

Between 2006 and 2012 (the last full year for which public data is available), the global total number of terrorist incidents per year tripled²⁶. But in that same period, terrorist incidents among the higher-income members of the Top 50 declined from already low levels. (Figure 4)

Between 2006 and 2012, all of the increases in terrorist incidents occurred in lower-income nations, and the

Figure 4: Change in terrorism incidents, 2006–2012, by defense spending type



Source: University of Maryland START GTD at <http://www.start.umd.edu/gtd/>; World Bank GDP data at <http://data.worldbank.org/indicator/NY.GDP.PCAP.CD>; Deloitte analysis

largest increases occurred in lower-income nations outside of the Top 50. By 2012, nearly half (44 percent) of global terrorism occurred outside the Top 50. Almost 90 percent of terrorist incidents occur in 12 countries with a median per capita income of \$1,580, and five of these countries (Afghanistan, Nigeria, Somalia, Yemen, and the Philippines) are not among the Top 50 defense spenders. Only one percent of terrorist incidents now occur within the higher-income Top 50 nations. (Figure 5)

The Top 50 nations are modifying counterterrorism strategies to reflect changing global realities. A gradual return to law enforcement and police-based

approaches, rather than direct military action, is well underway among higher-income countries. The UK's counterterrorism strategy (CONTEST) emphasizes law enforcement and prosecution as core elements of the national approach, with an explicit objective of disrupting and stopping terrorist activity by prosecuting individuals involved in terrorism-related crimes.²⁷ While continuing to maintain and enhance counterterrorism capabilities, the UK approach also recognizes the changing nature and magnitude of terrorist threats in higher-income nations. UK policymakers undertook a review of the country's counterterrorism powers and committed to "a correction in favor of liberty."²⁸

Figure 5: Terrorism incident locations, 2006–2012, by defense spending type



Source: University of Maryland START GTD at <http://www.start.umd.edu/gtd/>; World Bank GDP data at <http://data.worldbank.org/indicator/NY.GDP.PCAP.CD>; Deloitte analysis

Among the lower-income Top 50 nations, counterterrorism policies and structures are strengthening as nations pursue new approaches, including the integration of intelligence, security, and law enforcement operations, as well as traditional policing methods. India's complex terrorist threat and high-profile attacks led to proposals for a national counterterrorism center. But the military, civilian, and intelligence collaboration required to operate such an approach has proved problematic as the government works to integrate terrorism-related intelligence, maintain terrorist suspect-related databases, build security force capacity, and extend arrest and search powers²⁹.

The diverging counterterrorism approaches of the higher and lower-income Top 50 countries reflect the changing nature of terrorist threats, which are now viewed as more regionally based and less reflective of globally coordinated terrorist networks. Higher-income countries turn increasingly to civilian law enforcement, while lower-income countries continue to rely on security forces to address immediate threats.

2. Cyberoperations emerge as global threat

The global threat to computer systems and information networks is earning more attention and policy response from defense ministries worldwide. By 2011, U.S. defense policy acknowledged cyberspace as a military operational domain, and the United States began to organize, train, and equip units to exploit the full military potential of this new domain.³⁰ This acknowledgement followed establishment of U.S. Cyber Command whose mission includes "full spectrum military cyberspace operations".³¹

Across the Top 50 and smaller nations, threats to information networks now take many forms, from criminal activity (theft of credit card or identity information) to complex, persistent attacks mounted against corporations, government systems, and private individuals. While complete data on cyber-related activity is not publicly

available, analysis of reported cyberattacks during 2013 shows that the cyberthreat appears to consist primarily of criminal activity and data theft, vandalism and resource hacks (Figure 6³²), rather than attacks against infrastructure.

Cyberattacks are launched against countries at every level of economic development. While the largest number of cyberattacks are directed against the higher-income Spenders (especially against U.S. targets), public data indicates that more than 60 percent of cyberattacks are directed against other Top 50 nations and that more than 20 percent of cyberattacks are directed against non-Top 50 nations. Developing economy status does not protect a nation against the prospect of a cyberattack. (Figure 7)

While nations across the development spectrum are subject to cyberattacks, the pattern of incidents appears sharply different based on the GDP per capita of the target nations. Among the higher-income nations in the Top 50, industrial targets account for one-half to two-thirds of cyberattacks, while among the lower-income nations in the Top 50, most cyberattacks are directed against government targets. This difference may reflect the relatively high level of security and defensive capability around government systems in higher-income nations and the availability of potentially lucrative industrial targets. The difference may also reflect the relatively higher number of state-owned enterprises in the lower-income nations. (Figure 8)

Higher-income nations continue to develop collaborative approaches, as well as unilateral strategies, to manage cyberthreats. A North Atlantic Treaty Organization (NATO)-wide cyberexercise program has been in place since 2011, with 29 nations participating in a large-scale network defense simulation.³³ Top 50 countries participating in the coordinated NATO cyberexercise include the United States, Germany, Italy, Spain, the Netherlands, and the United Kingdom.³⁴

Figure 6: Cyber incidents by type, 2013

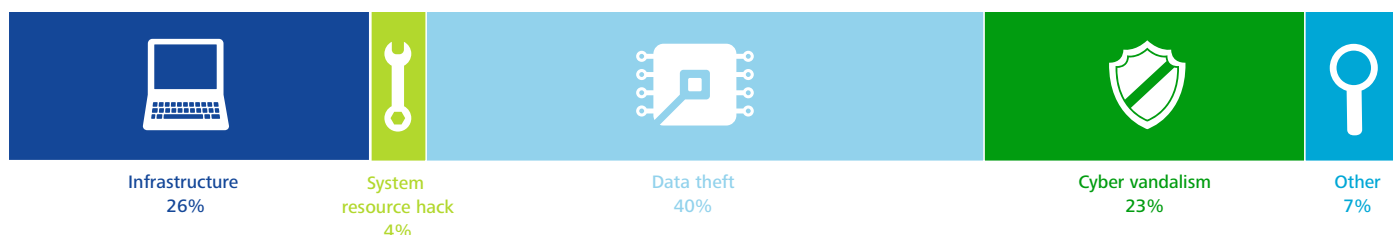
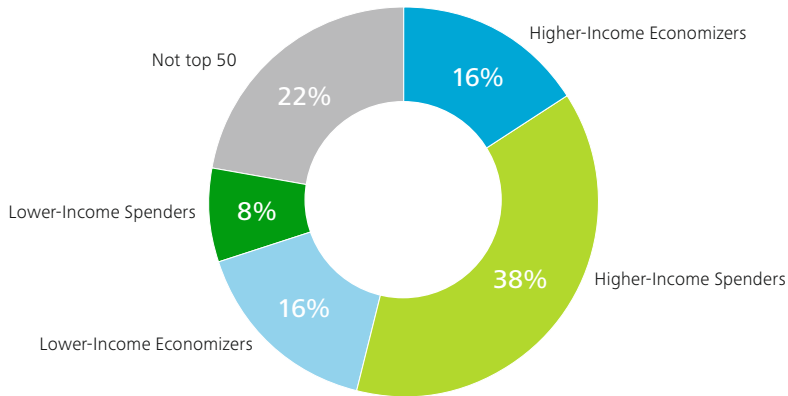


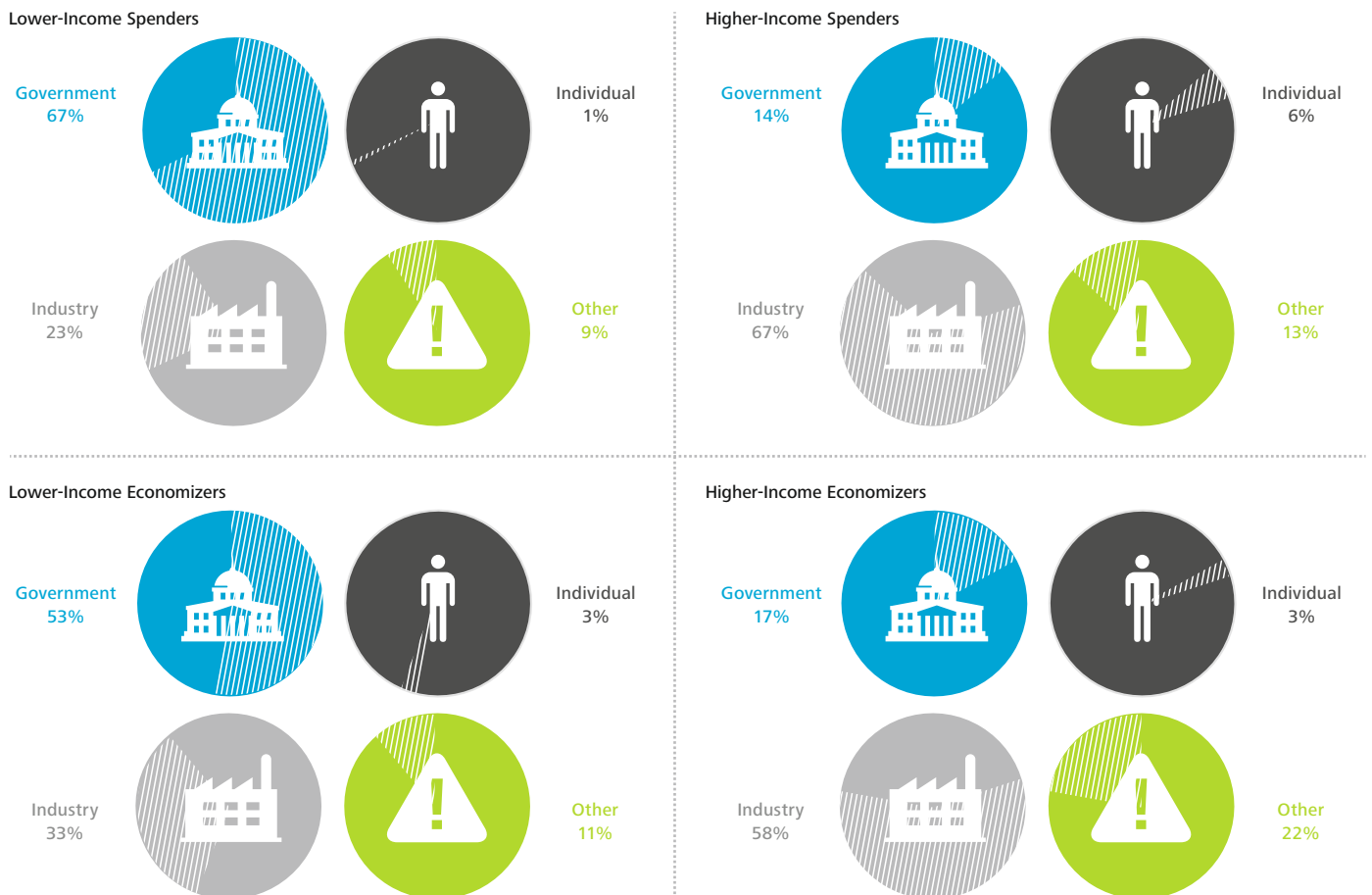
Figure 7: Cyber incidents by defense spending type, 2013



The European Union has agreed to pursue joint development of military and civilian applications for cyberdefense, further extending cyber-related cooperation among both higher-income and lower-income members of the Top 50³⁵.

The lower-income Top 50 countries are expanding cybercommand and control, as well as cyberoperational capabilities. South Korea launched its cyberwarfare command in 2009 in response to a reported 95,000 daily hacking attacks against military computer networks.³⁶ Public reports identified an operational Chinese cyber capability in People's Liberation Army (PLA) Unit 61398 and claimed that the unit has attacked 141 non-Chinese organizations in 20 different industries.³⁷ This disclosure was followed by Chinese government claims that the

Figure 8: Cyber incidents by target and defense spending type, 2013



Chinese Defense Ministry and related websites faced 144,000 attacks monthly, with most originating in the United States.³⁸ In March 2014, media reports disclosed the U.S. cyberoperation “Shotgiant,” directed against PLA Unit 61398 and the Chinese technology manufacturer Huawei³⁹.

India has publicly announced a program, reporting to the national security advisor, to bolster cyberdefense capabilities. Plans include training of 500,000 “cyberwarriors” by 2017 and a program of mandatory cybersecurity audits.⁴⁰ This program has now been embodied in a joint military cybercommand, established in early 2014, following reports of cyberattacks against India’s sensitive East Naval Command submarine fleet headquarters and other attacks against the Defense Research and Development Organization⁴¹.

Russia has announced plans to set up a dedicated cybersecurity command responsible for protecting military information systems.⁴² Published reports indicate that the Russian cybersecurity command — a new branch of the armed forces — is based on a military assessment that cyberspace “will be a theater of war in future military confrontations.”⁴³ During recent Russian operations in Crimea, a group of Russian hackers calling itself “Russian Cyber Command” released a large cache of documents from the Rosboronexport State corporation as part of an effort to “initiate a true domestic cyberwar on Russian military enterprises.”⁴⁴

Cyberoperations are no longer the domain of higher-income Top 50 nations. As cyber capabilities continue to proliferate, defense ministries across the Top 50 will need to address emerging cyber threats.

Spenders and economizers: National strategies for defense spending

Nations are adapting their defense budgets and capabilities in response to changing economic conditions and strategic factors. The new realities of the strategic environment affect nations differently, and among the Top 50, national strategies also differ sharply along economic lines. Higher-income and lower-income nations confront different economic conditions, with lower-income nations enjoying relatively higher levels of GDP growth and lower debt, enabling new social investments, including defense spending.

Higher-Income Spenders: Pressing against austerity

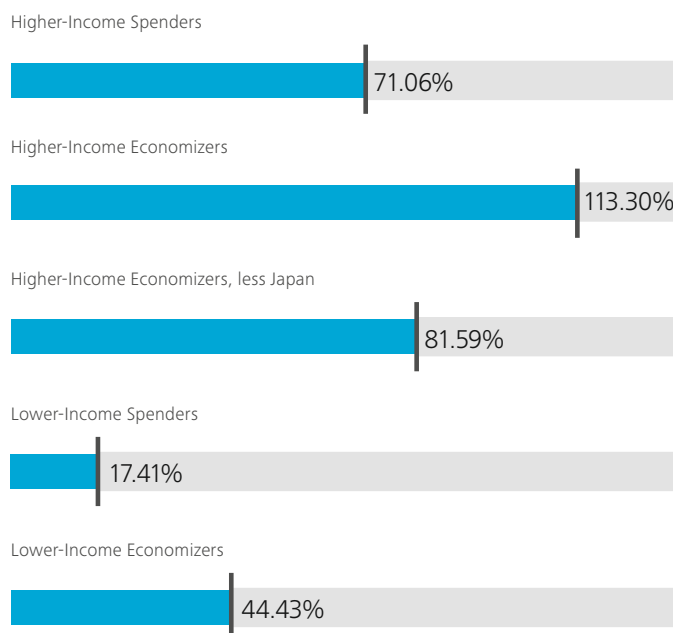
Higher-Income Spenders include Israel, Kuwait, Singapore, the United Arab Emirates, and the United States — these are the only Top 50 nations with per capita GDP above \$30,000 that also spend more than three percent of GDP on defense. The average GDP per capita of these five nations is \$46,000, and they spend an average of 4.1 percent of GDP on defense. More than 92 percent of the total defense spending of these five nations, and 94 percent of their combined GDP, reflects the U.S. defense budget and economic output.

Between 2008 and 2013, these five nations reduced defense spending by eight percent, led by declining U.S. outlays. The higher-income Spenders face relatively high levels of debt and slow economic growth, challenging their ability to sustain current levels of defense spending. Forecasted GDP growth in the five nations will average five percent through 2017, and these higher-income Spenders face average total government debt of 74 percent of GDP.⁴⁵ However, these higher-income Spenders are continuing to fund substantial investment in major military systems even as top-line budgets are pressed downward. The high-cost, technology-intensive nature of the defense posture adopted by the higher-income Spenders is evident in the high cost per active service member. The higher-income Spenders require an average budget of \$404,000 to maintain one active armed services member.

As part of a continuing deficit-reduction priority, the United States has signaled that it intends to scale back defense spending over the next five years. President Obama proposed a defense budget for 2015 that is \$0.4B below the enacted budget for 2014, but includes a new

Figure 9: Forecast growth and debt by defense spending type, 2014–2017

2013 Public debt as % GDP



Projected compound annual GDP growth 2013–2017



opportunity, growth, and security initiative that would add \$26B in 2015 for readiness and modernization.⁴⁶ More substantial budget reductions may be required after 2015, as the U.S. defense budget proposal exceeds the budget caps required by the U.S. Budget Control Act of 2011 by \$115B over the next three years.⁴⁷

Although U.S. defense budgets have declined from their wartime peak of \$688B in 2010 to \$607B in 2014, this decrease is accounted for by \$82B in reductions in budget authority for operations in Iraq and Afghanistan. U.S. policymakers face significant challenges in controlling the growth of core military spending, which is increasingly driven by rising personnel costs and large-scale acquisition programs. During the 2010–2014 period, total U.S. military personnel strength declined by four percent, but personnel-related spending, including health care costs, increased.⁴⁸

The United States has also made long-term defense investments in 86 major acquisition programs requiring more than \$1,600B in procurement spending to complete. The 10 largest programs (including the Joint Strike Fighter, the Burke-class destroyer, and the Virginia-class submarine) account for nearly two-thirds of this spending. More than 40 percent of the funding needed to complete these programs reflects cost growth from original estimates, and the programs are on average more than two years behind schedule.⁴⁹ Controlling U.S. defense spending to reach austerity targets is increasingly a matter of program management practices, rather than strategic or operational commitments.

Singapore's defense budget increased 3.2 percent in 2014 and absorbed 3.3 percent of GDP, which is well below the legally sanctioned cap of six percent.⁵⁰ Singapore maintains conscript forces at high levels of readiness, while investing substantially in advanced weapons and support systems.

Israel did not increase defense spending in 2014, but Prime Minister Netanyahu has signaled that budgets will increase from 2015 to 2018, focused on expanded training and acquisition of advanced defense systems, including the Joint Strike Fighter, the Iron Dome counter-rocket system, and the Arrow missile defense system⁵¹.

Higher-Income Economizers: Aligning defense with economic realities

The 14 higher-income Economizers include Australia,

Belgium, Canada, Denmark, Finland, France, Germany, Italy, Japan, the Netherlands, Norway, Sweden, Switzerland, and the United Kingdom. The higher-income Economizers reduced defense spending by eight percent between 2008 and 2013. These countries have an average GDP of \$53,000 (30 percent higher than the higher-income Spenders) and allocate an average of 1.4 percent of GDP to defense. Spending per active armed services member averages \$262,000. The higher-income Economizers confront public debt burdens of more than 112 percent of GDP (81 percent, if Japan is excluded) and projected economic growth of four percent.

UK, Japan, and France comprise half the total defense outlays of the higher-income Economizers, spending \$178B in 2013.

The current UK defense program assumes zero real growth for the defense budget between 2015 and 2020, although the program assumes that equipment spending will increase by one percent annually. This program follows an overall eight percent reduction in the UK defense budget since 2010, leading the current defense secretary to conclude that "we have reached the end of the process where we can salami-slice capabilities; we would have to ask some serious structural questions about the type of forces we are able to maintain."⁵²

French defense spending is set at 1.9 percent of GDP and is expected to decline by more than seven percent by 2019, reaching 1.2 percent of GDP in that year. These reductions reflect tightened fiscal policy and close attention to personnel levels, as France intends to maintain its current level of equipment spending constant in nominal terms. To reach this objective, the French Ministry of Defense will cut more than 33,000 positions, bringing the total number of staff reductions to around 82,000 since 2008⁵³.

Japan is reexamining its long-standing national policy of restricting defense spending to 1 percent of GDP, following Prime Minister Abe's characterization of Japan's security environment as "increasingly grave."⁵⁴ Unique among the higher-income Economizers, Japan plans increases in military capability, including fundamental changes in national policy to relax prohibitions on arms exports and expand the scope of conditions under which the Japanese Self-Defense Forces may engage in collective

self-defense. Broad-based spending increases will include improving domestic disaster response capabilities, as well as improving response capabilities to ballistic missiles and special operations-based attacks. Japan has committed to major military capital programs, including the Joint Strike Fighter, investments in cyberdefense, and enhanced maritime patrol capabilities⁵⁵. Japan's ability to generate the financial resources and political will to implement the new defense strategy will be tested over the coming years.

Lower-Income Spenders: Re-arming and rebuilding

Algeria, Angola, Azerbaijan, Colombia, Iraq, Morocco, Oman, Pakistan, Russia, Saudi Arabia, and Ukraine comprise the Lower-Income Spenders, with an average per capita GDP of \$7,600 — or 15 percent that of the higher-income Spenders. These 11 nations devote an average of 4.8 percent of GDP to defense. The lower-income Spenders increased defense spending by 38 percent between 2008 and 2013, with Russia and Saudi Arabia accounting for most of the increase. They spend an average of \$76,000 to support an active armed services member for one year. Relatively high growth — projected at more than six percent over the next five years — and low debt (only 16 percent of GDP) position these nations to invest heavily in national defense, as well as social and infrastructure programs.

Russia and Saudi Arabia account for more than 73 percent of the total defense spending of the 11 lower-income Spenders.

Russia is undertaking its largest rearmament program since the breakup of the Union of Soviet Socialist Republics (USSR), with defense spending set to increase by more than 60 percent from 2013 to 2016.⁵⁶ In calling for a new national defense plan, President Putin proposed that increased capital spending should be allocated to address cyberwarfare, unmanned systems, and countermeasures against precision-guided conventional weapons.

Saudi Arabia's increasing defense budget is tied to new capital programs, including the new and refitted F 15 fighter aircraft, totaling nearly \$30B.

Colombia, Algeria, and Pakistan have also focused substantial defense budget increases on new capital

spending. Colombia abandoned plans for acquiring main battle tanks, but increased spending for counterinsurgency and counterdrug operations, purchasing new Blackhawk helicopters and patrol vehicles⁵⁷.

Lower-Income Economizers: Boosting defense for stability and economic development

The 20 nations that comprise the lower-income Economizers — Argentina, Brazil, Chile, China, Egypt, Greece, India, Indonesia, Iran, Malaysia, Mexico, Poland, Portugal, South Africa, Spain, South Korea, Taiwan, Thailand, Turkey, and Venezuela — include 3.7 billion people, but have the lowest average per capita GDP (\$12,300) of the Top 50. These nations increased defense spending by more than 21 percent between 2008 and 2013, paced by China's rapid growth. The lower-income Economizers devote 1.8 percent of GDP to defense, and they spend the lowest annual amount per armed services member (\$50,000).

The lower-income Economizers are projected to grow rapidly over the next five years (at a seven percent compounded annual growth rate), allowing continued priority on defense investment. Their relatively low debt levels (44.5 percent of GDP) will also facilitate defense spending.

China, India, Brazil, and South Korea comprise 70 percent of total defense spending among the Lower-Income Economizers.

China has announced plans to increase its military budget by more than 12 percent in 2014, with planned spending of more than \$131B⁵⁸. Increased defense spending appears to focus on the overall modernization of the PLA, as well as on allowing China to undertake "new historic missions" to improve its international image as a "responsible great power."⁵⁹ Chinese defense policy attaches special importance to expanding capability for nonwar military operations, including humanitarian assistance, counterpiracy, and noncombatant evacuation operations⁶⁰. Power-projection platforms, including aircraft carriers, destroyers, frigates, and other long-range capabilities, appear to be core elements of the Chinese modernization program as well⁶¹.

The Indian government has increased defense spending by 10 percent above the previous 2013–2014 budget, taking the annual defense budget to \$38B, of which personnel costs consume 50 percent, with 36 percent for capital acquisitions. Among India's key defense priorities are the development of private-sector defense production and the reform of state-owned defense enterprises linked to the armed forces⁶².

Brazil's 2014 defense budget of \$31B marked a five percent increase over 2013. The continued rise in Brazil's

budget reflects a priority on the acquisition of new military capital equipment, including Brazil's submarine fleet, advanced artillery systems, transport aircraft and helicopters, and border control systems.

South Korea increased its 2014 defense spending by 4.2 percent over 2013⁶³, to \$33B, as the Korean military prepares to acquire 40 F 35 fighter aircraft and Global Hawk unmanned aircraft beginning in 2018⁶⁴. South Korea is also investing in advanced antimissile systems, including the PAC-2 and PAC-3 systems.



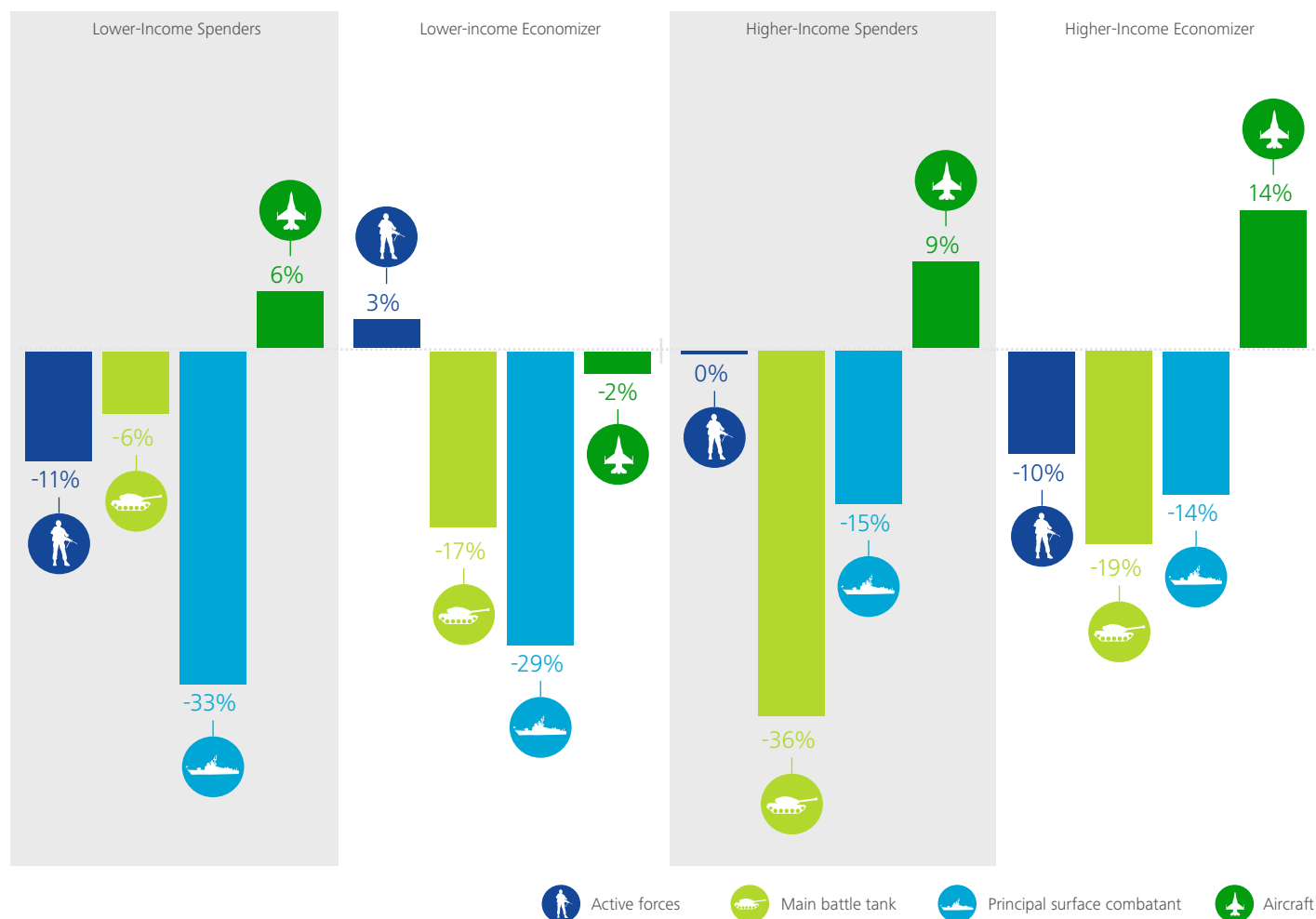
Global defense imperatives: Adapt, collaborate, and invest

The long decade of rising defense budgets among higher-income countries, driven by concerns about global terrorism and conflicts in Iraq and Afghanistan, has ended — along with the sustained economic growth that enabled rising defense budgets. Lower-income nations, bolstered by strong growth and lower levels of public debt, are exploring new approaches to defense, with many evaluating the potential of defense investments as elements of economic development strategy. The new strategic realities of terrorism and cyberthreats enable — and demand — adaptation, collaboration, and investment.

Adapt: Economics and shifting threats drive defense spending

Across higher-income nations, defense ministries are restructuring, downsizing, and reexamining procurement budgets to cope with the economic imperatives of slower growth and public demands for social services and lower debt levels. Lower-income nations — with higher growth, money to invest, and rising demand for domestic industrial development and jobs — see defense spending as a way to bolster security, while increasing economic well-being at home. But these essential economic adaptations address only one element of the new defense environment.

Figure 10: Change in defense assets by defense spending type, 2008–2013



As the threat from global terrorism redefines itself along regional lines, and as terrorist activity increasingly occurs outside the Top 50, defense policy is adapting by moving toward police-based and intelligence-enabled counterterrorism approaches.

Cyberthreats pose challenges worldwide — not just among the Top 50 — and nations are adapting to these new threats by applying defense and intelligence resources, as well as by forming new command structures and military services to operate in the new domain of cyberspace. Resources once devoted to tanks and battleships are now required to develop network security and offensive cyber techniques. In fact, defense ministries worldwide continue to reduce inventories of tanks, warships, and active-duty armed services members, while investing in modernized aircraft and other assets. (Figure 10)

The military strategies and investments built in the next decade will be driven by changing economic realities and new security fundamentals — and the advantage will lie with defense establishments able to adapt rapidly and effectively.

Collaborate: New partnerships emerge for security and economic development

The costs of new defense capabilities, and the technical requirements for operating and maintaining them, are increasingly beyond the capabilities of single nations. The F 35 fighter is among the most advanced and expensive military system ever developed, and its deployment already involves a broad consortium, including both higher-income and lower-income members of the Top 50. Japan's initiative to enter the global market for military exports is driven by the practical requirement to reduce unit costs of military systems (especially aircraft) that it needs to produce domestically.

In the domains of cyberoperations and counterterrorism, new collaborations are taking shape, often among unconventional partners. Brazil and Turkey choose to collaborate on cyberdefense; European Union members collaborate on cyberdefense and support global

partnerships to share intelligence on terrorist activities. These new or deepened relationships point toward a higher level of multilateral collaboration in national defense. Recognizing opportunities for mutual benefit and converting these opportunities into working relationships and institutions are now key advantages for defense ministries.

Invest: Ministries defend procurement budgets to maintain capability

Procurement budgets are under pressure and defense ministries are making substantial efforts to sustain the investment required to maintain and extend military competitive advantages. The world's largest defense spender — the United States — continues to experience massive cost overruns and program delays and must manage costs more effectively to sustain planned acquisitions. Across higher-income countries, defense capital spending is under pressure because of declining top-line budgets and rising demand for compensation increases. The French example of massive personnel reductions shows the challenge of maintaining essential defense capital spending in the current environment.

Lower-income nations face a qualitatively different challenge, as their budgets are smaller, but less immediately constrained by cost pressures. The lower-income Top 50 must balance military requirements and economic development priorities, and they face difficult decisions about which systems to import or codevelop and which systems to build internally. These decisions have security implications, but they are fundamentally economic and financial decisions.

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

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