

AUGUST 2013

Enlisting productivity to reinforce European defense

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In an era of fiscal restraint, the defense future of Europe will depend on how well it can bring productivity into the equation.

European governments are pinched between two pressures: a need to commit more resources to their collective defense, and their straitjacketed finances. On the one hand, Europe is under pressure, both internally and from its allies, to take more responsibility for defense and security, especially in its immediate neighborhood. NATO Secretary General Anders Rasmussen has indicated that Europe should share the burdens of defense and clearly commit itself to contributing to certain core capabilities—or even to providing a full spectrum of capabilities.

On the other hand, and more important, our April 2013 survey of over 100 European defense executives and military leaders shows that a tightening fiscal environment is reducing the room for maneuver in national budgets. Seventy-six percent of respondents said that the imperatives of austerity are the most important factor shaping European defense.

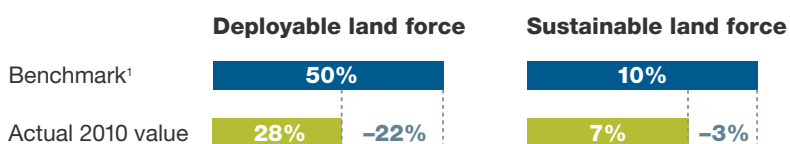
The twin pressures are already straining capabilities. The 2011 military action in Libya exposed worrisome trends: Europe's inability to act and provide frontline capabilities (including aircraft, warships, surveillance, refueling, and drones) without heavy reliance on US help. Across the board, European forces cannot meet NATO's current goal that 50 percent of total military personnel should be deployable. Nor can Europe meet its target for sustainable deployment (Exhibit 1).

These gaps emerge from the fragmentation of Europe's defense forces, which employ almost six times as many weapons systems as the United States does—while spending less than half as much (Exhibit 2). For small and midsize forces, the economics of large fixed costs (a hallmark of defense budgets everywhere) mean that eliminating an entire capability makes better economic sense than pruning it back. But when several nations eliminate capabilities, the region as a whole can develop broad and dangerous gaps that larger nations are not prepared to plug by themselves.

Larger countries are more inclined to sustain a full range of capabilities while scaling back on their depth. But even with a seemingly large installed base of equipment, trade-offs in cutting budgets and capabilities are easy to miscalculate. Take the case of the CH-53 heavy-lift helicopter, which had a 2012 installed base in Germany of about 80 aircraft. The Afghanistan mission revealed that

Exhibit 1 European forces fall short of NATO's goals for deployable and sustainable land forces.

North Atlantic Treaty Organization (NATO) targets,
% of total military land-forces personnel



¹ Benchmarks were approved by European Defence Agency (EDA) Ministerial Steering Board and apply to total sum spent by all participating members. These benchmarks are voluntary—turning them into national targets is optional—and no timelines are set for realizing them.

Source: European Defence Agency (EDA) 2010 armed-forces data; NATO; McKinsey analysis

only a quarter of them were equipped with sand filters needed to qualify the helicopters as mission ready. Only half of the mission-ready helicopters were deployable and not tied up in maintenance or in training missions.

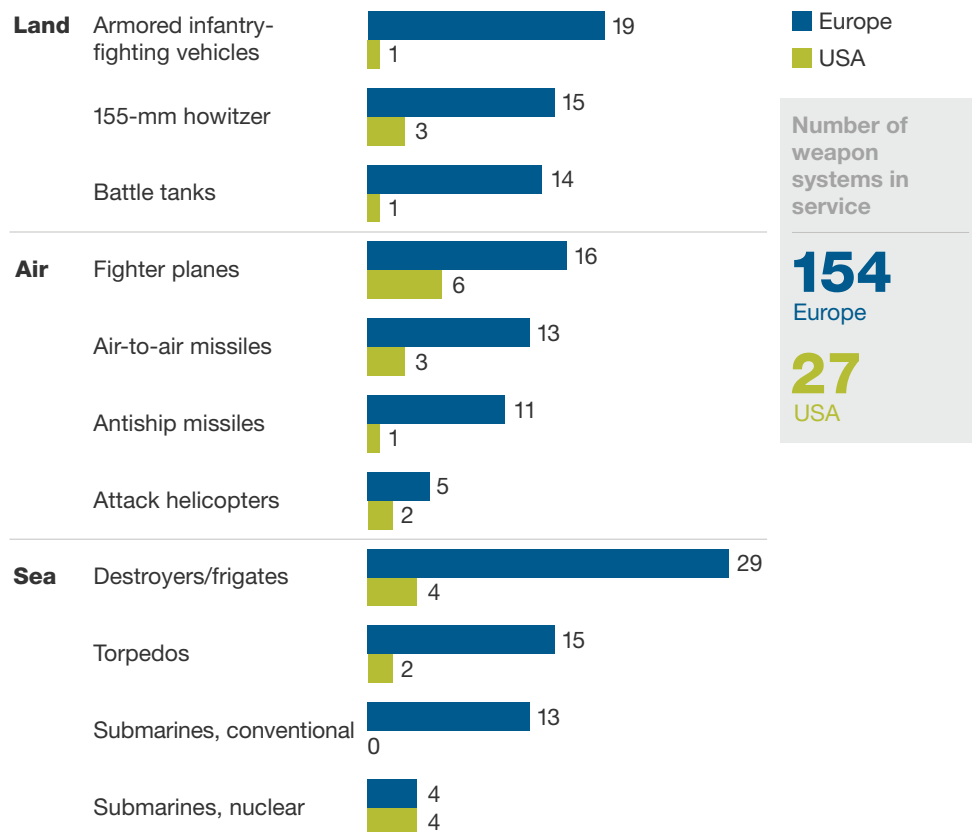
The German army chose to invest in a program of modernization and life extension for helicopters, actually enhancing its capability. But in Germany and throughout Europe, planners, bowing to the inevitable, are making big reductions to force structure. As they do, various delayed effects can turn seemingly minor decisions into disproportionate reductions in combat power.

To succeed in the twin goals of reducing costs while meeting ambitious goals for a greater commitment to defense, Europe's military forces must become more productive. First and foremost, militaries will need to find a more cooperative and pragmatic model of pooling and sharing. Low political will for concrete forms of cooperation provides only limited room for countries to integrate their capabilities. But as a medium- to long-term strategy, pooling and sharing can be a smarter way of organizing defense forces to overcome the inefficiency of national governments attempting to provide similar capabilities.

To demonstrate the enormous long-term potential at stake in pooling and sharing, consider this rough estimate (Exhibit 3). If Europe consolidated its aggregate demand so that its defense orders were as large as those of the US government, average batch sizes would be 570 percent

Exhibit 2 The European market is fragmented, as is evident in the number of weapon systems available.

Variety of systems from selected weapon-system categories in service¹



¹Analysis for Europe includes European Defence Agency (EDA) members, as well as Denmark, Norway, and Switzerland.

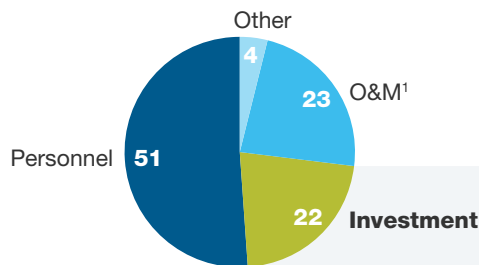
Source: *The Military Balance 2012*, International Institute for Strategic Studies, March 2012; McKinsey analysis

bigger. Our analysis and experience show that, on average, each doubling of volume increases efficiency by approximately 20 percent. When this effect is applied to the 40 percent labor-cost share typical of weapon systems, the savings potential amounts to around 17 percent of total procurement costs. To put this into perspective, in 2012 the savings would have been €7 billion out of a European total of roughly €43 billion spent on weapons. Joint purchasing of materials could yield additional savings of about 14 percent.

Exhibit 3 Nations in Europe could save up to 31 percent through joint procurement of military goods and services.

European 2010 defense expenditures, %

100% = €194 billion



Savings potential of pooling,² estimate based on batch size increase of 570%

Investment before pooling, 100% = €43 billion



¹Operations and Maintenance

²Pooling is defined as joint procurement of military goods or services by 2 or more countries or states.

Source: C. Lanier Benkard, "Learning and forgetting: The dynamics of aircraft production," *American Economic Review*, 2000, Volume 90, Number 4, pp. 1034–54; European Defence Agency (EDA) 2010 armed-forces data; Mark Arena et al, *Why Has the Cost of Fixed-Wing Aircraft Risen?*, RAND, 2008; McKinsey analysis

With this much at stake, greater pooling and sharing are clearly vital. But more can be done. We see two other important steps for European defense. First, individual nations can make their militaries more efficient, in ways that do not require cooperation from neighboring states, by pulling a range of productivity levers along the entire budget. Second, government and industry must agree on a scenario for supply-side consolidation to reduce excess capacity among defense suppliers.



For more on this research, download the full report, *The Future of European Defence: Tackling the Productivity Challenge*, developed in partnership with the Munich Security Conference. [□](#)

The authors would like to thank their colleagues David Chinn, Christian Jansen, Detlef Kayser, and Kai Wittek for their contributions to this article.

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