The Dynamics of Defense Budget Growth, 1998-2011

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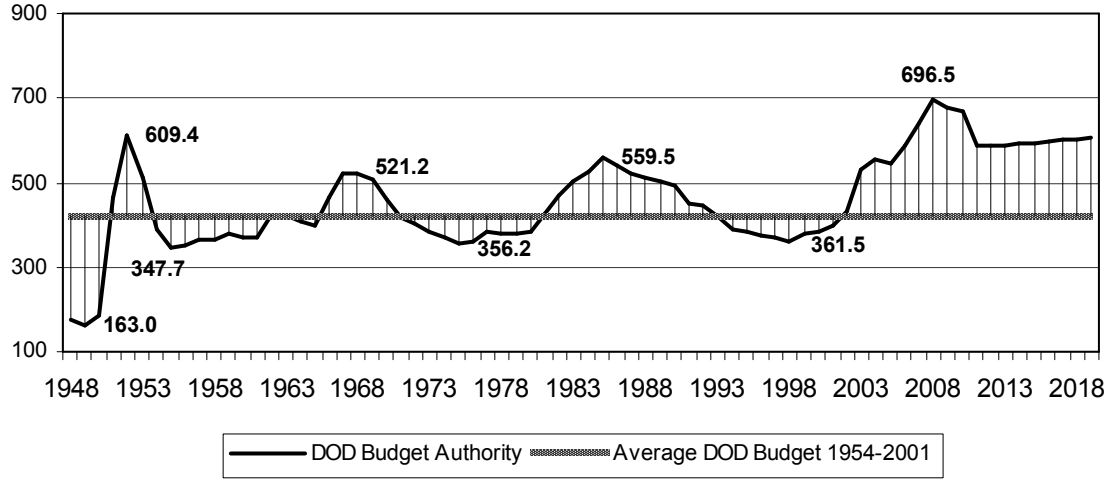
The rise in US defense spending since 1998 has no precedent in all the years since the Korean war. (Figure 1.) The DoD budget reached its post-Cold War ebb in 1998: $361.5 billion (2011 USD). Since then it has rebounded to $708 billion – a 96% increase. The portion of the 2011 budget request that is unrelated to contingency operations (the so-called "base budget") is $549 billion, which is 54% higher in real terms than in 1998.

Figure 1. DOD Budget Authority 1948-2019
(Billions of 2010 USD)



Sources: see *Data Sources* at end

Whether one looks at the total DoD budget, or just that portion not attributable to today's wars, US defense spending is now stabilizing at levels significantly above Cold War peaks (adjusted for inflation) and far above the Cold War average, in real terms. Measured in 2011 dollars, average DoD budget authority was:

- $430 billion for the period 1954-2001;
- $525 billion for the Reagan years; and,
- $503 billion for the Vietnam War "high tide" years 1966-1970.

As this is occurring, the United States has entered a period of acute economic uncertainty, marked by increasing demands and constraints on federal resources. Largely as a result of the 2008-2010 financial crisis and recession, gross federal debt will surpass 100% of Gross National Product (GDP) in 2011. Although not as high as during the Second World War, the debt-to-GDP ratio is projected to remain above the 100% threshold for much longer.

If the run-up to the 2010 mid-term elections is any indication, the United States may be facing a "perfect political storm" of fiscal constraint as the electoral fate of its political leaders increasingly hinges on their stance regarding deficit reduction. As surely as some will target non-defense spending as a source of savings, others will look to DoD's budget which, after all, has accounted for almost 65% of the rise in discretionary spending since 2001. {1}

In this context, it is useful to look more closely at the recent dynamics of defense budget growth. These should provide clues relevant to containing or reversing that growth. By contrast, not very useful is the notion that the rise in defense spending can be understood as resulting from some immutable growth factor or "constant". Some observers have noted that over the past 60 years or so, DoD's budget has grown at an average annual rate of approximately 2% over inflation per full-time person in uniform. {2} Others have promoted the 2% "constant" as a criterion for assessing the adequacy of planned budgets.{3} But this view mistakes observation for explanation. Any empirical trend in budget growth is no more an explanation of itself than is global warming. Instead, it is something needing an explanation or, perhaps, multiple explanations.

The most ready explanation for the post-1998 spending surge is that it is due largely to post-9/11 military operations. In fact, these operations account for just 22% of the 2011 budget request and about 52% of the total increase in expenditures since 2001. Moreover, the wars themselves have been exceptionally expensive by historical standards. Measured in 2010 dollars, the Korean conflict cost $393,000 per person/year invested; the Vietnam conflict cost $256,000; and the Iraq and Afghanistan commitments, $792,000 so far. Rather than adequately explain the post-1998 spending surge, the high cost of recent military operations only adds to the explanatory burden.

Some insight into current cost drivers can be gleaned by comparing the recent surge in spending with two lesser ones that preceded it: the 1958-1968 surge of 43% and the 1975-1985 surge of 57%. The first of these involved the conduct of the Vietnam War (which was the principal cost driver) and an effort to expand and transform the force. The second surge emphasized recapitalization and a modest increase in force size. Notably, the percentage rise in spending between 1998-2008 was nearly as great as both of these previous two surges combined. And this comparison illuminates one factor that distinguishes the recent surge: it reflects the combined effect of a major war effort and a major effort at force recapitalization.

A second contributing factor, especially pertinent to the high cost of operations in Iraq and Afghanistan, is that America's armed forces are ill-suited to fighting very large-scale and protracted counter-insurgency campaigns. In a sense, we have been attempting to fight "Mr. Johnson's war" using "Mr. Reagan's military":

- Given the voluntary basis of today's armed services, long labor-intensive wars drive personnel costs sharply upward, as DoD must bid higher and higher to recruit and retain personnel.

- Today's wars also are unique in their high degree of dependence on contract labor. This is partly because they are not large enough to do what we have attempted in Iraq and Afghanistan.

In 2009, the Central Command area hosted over 240,000 DoD contractors (compared to 280,000 military personnel supporting war operations there).{4} This ratio of nearly one-to-one contrasts with a 5:1 ratio in Vietnam and 5:2 ratio in Korea. This means that today's wars are relatively larger than they seem. The added contract personnel register in the budget mostly as increased operations and maintenance costs.

- Finally, much of the modernization spending over the past ten years has been irrelevant to counter-insurgency operations. Thus the wars required their own wave of equipment acquisition and modification – which national leadership has chosen to implement concurrently with other, previously planned modernization.

These factors help explain the differences in how the Vietnam conflict and today's wars affected DoD budget growth, as summarized in Table 1.

Table 1. Comparison of DoD Budget Growth Across Two War Decades

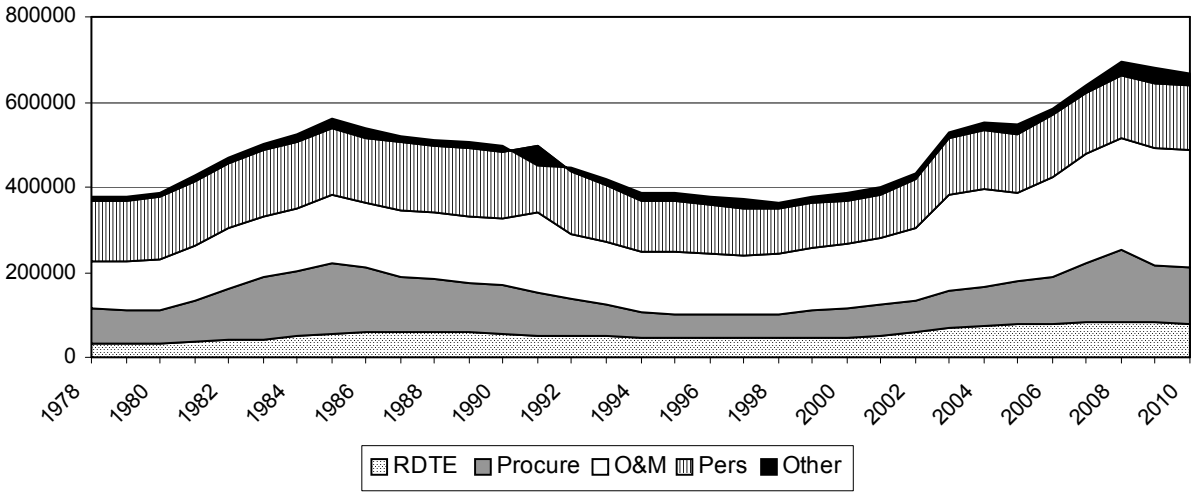
	% change 1959-1969	% change 1999-2009
Procurement and RDT&E	18.5%	98%
Operations & Maintenance	46%	86%
Personnel costs	37%	47.5%
Total Budget Authority	33%	78%
Full-time End Strength	38%	3%

Source: DoD, *National Defense Budget Estimates for FY 2011* (March 2010)

This quick survey of recent budget dynamics should be sufficient to illustrate that there is more to the recent spurt in defense spending than some immutable growth factor or constant. And simply pointing to the wars as a reason for cost growth barely scratches the surface. Instead, a variety of policy decisions and choices have led us to our current circumstance.

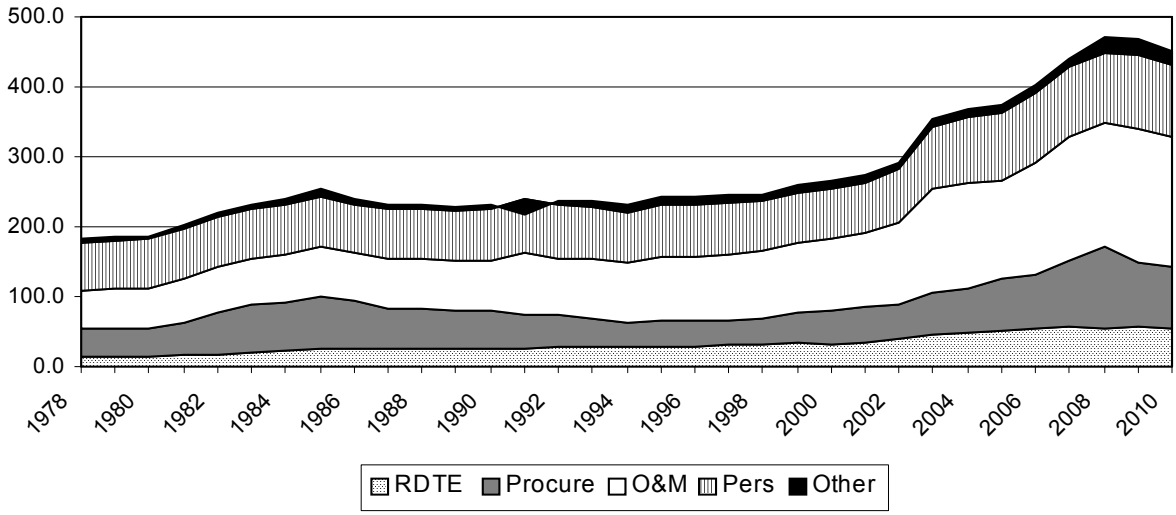
In the next sections we take a closer look at how DoD has allocated funds among appropriation categories and how this allocation has changed over time. In this our aim is to illustrate how yesterday's choices have structured today's. Our time frame is 1978-2010 – a period spanning both the transition to an all-volunteer military and the geostrategic revolution of 1989-1992.

Figure 2. DoD Budget Authority by Appropriation Title 1978-2010
(Millions 2010 USD)



Sources: see *Data Sources* at end.

Figure 3. DoD Per Person BA by Appropriation Title 1978-2010
(000's 2010 USD)



Sources: see *Data Sources* at end.

2. The allocation of DoD resources, 1978-2010

Figures 2 and 3 cover the period 1978-2010, giving different views of the allocation of DoD funds among key congressional appropriation categories: Military Personnel, Operations and Maintenance (O&M), Procurement, and Research, Development, Testing, and Evaluation (RDT&E – henceforth R&D). Figure 2 shows the change in total budget authority for each "account" in 2010 dollars. Figure 3 shows the same, but on a *per person* basis, which is a way of filtering out those changes due to fluctuations in end strength. ("Per person" here means "per full-time person in uniform").

2.1 Overall spending

When measured on a *per person* basis, DoD budget authority appears remarkably stable during the 25-year period 1983-1998. It began to rise in 1998, however, accelerating sharply with the onset of the Iraq War, before settling at an average of $459,000 *per person* for the years 2007-2010. This is 78% higher than the Reagan peak, 95% higher than on the eve of the first Gulf War, and nearly three times the inflation-adjusted peak during the Vietnam era. Setting aside war costs, the Obama administration plans to stabilize *per person* expenditures at about $377,000 *per person* in today's dollars, which is 57% higher than the average for 1983-1998.

2.2 O&M spending

An important contributing factor to the general rise in spending has been the Operations and Maintenance (O&M) account. Calculated on a *per person* basis, O&M spending began to climb sharply upward in the early 1990s. Its climb accelerated further with the onset of the post-9/11 wars, before settling at a level in 2010 that is 160% higher than the 1989 level in real *per person* terms. Today, DoD is allocating more than 2.5 times as much *per person* to O&M as it was at the peak of the Reagan surge.

The proportion of the DoD budget allocated to O&M has been rising steadily since 1979. Most of the growth in O&M as a portion of the budget occurred between 1989 (31%) and 1999 (39%). Today, it claims about 41% of the total DoD budget.

2.3 Civilian & contractor labor

An important factor in the O&M rise during the mid-1990s was the balance between DoD civilian and military payroll. The civilian payroll – which is largely paid out of O&M – went from being 49% as large as the military payroll during the 1980s to being 57% as large during the 1990s. Subsequently, it receded back to 44% during 2000-2008. Complementing this trend (and eventually overtaking it) was increased reliance on "outsourcing" or contracting. This registers as part of "non-pay" O&M expenditures. Beginning in the 1990s and accelerating sharply after 1998, DoD has allocated much more of its resources to non-pay O&M, including contracts.

2.4 R&D and procurement spending

Over the thirty-year period 1980-2010, "modernization spending" (procurement and R&D together) has moved in a typical boom-bust cycle. Total modernization spending was 32% lower in the 1990s than in the 1980s. However, in 2000-2009, total modernization spending rebounded to near the 1980s level in real terms. Measured in *per person* terms, 1990s modernization spending was only 14% lower than 1980s spending, while spending during 2000-2009 was fully 47% higher in real terms than during the 1980s. During the past four years, *per person* modernization spending has averaged 53% higher than the highest year of Reagan modernization spending.

2.5 Personnel spending

During the 20-year period 1981-2001, budget authority for personnel varied by only a few percent around an average of $73,200 (2010 USD) *per person*. However, between 2001 and 2010, it rose 40%. The increase was sufficient to bring total personnel expenditures back up to Cold War levels – for a military only 69% as large. Slightly more than half of the post-1998 boom in personnel spending was due to the wars.

3. Dilemmas of the drawdown

3.1 Long-term development trends

The post-Cold War changes in America's armed forces occurred in the context of already ongoing efforts at force transformation. One effort began in the 1970s with the transition to a volunteer military. Another began in the 1980s with the effort to recapitalize the post-Vietnam military and improve its readiness. Both of these fit into an even longer-term force development strategy that has emphasized quality over quantity. This strategy aims to build on America's presumed competitive advantages over likely opponents: its greater technological competency and its more skilled and motivated workforce.

The switch to a professional military produced a more reliable and ready cadre.{5} It also significantly increased personnel costs, which averaged 23% higher in real *per person* terms during the 1980s than during the 1960s. The "quality over quantity" strategy, and the dependence on high-cost personnel, also implied increased *per person* allocations for research, development, and procurement – an objective that came more into reach once America had exited its consumptive commitment in southeast Asia. But the resultant posture carries with it an inherent constraint: there is a size threshold beyond which the cost of competing for and adding quality personnel becomes prohibitive.{6} Where that threshold sits depends on both intrinsic and extrinsic factors. The intrinsic factors include the amount of pressure the Pentagon puts on its personnel and the general state of military morale; the extrinsic include general economic conditions and population demographics.

3.2 A more "ready" and deployable force

Both the George H.W. Bush and Clinton administrations began to implement force reductions in ways generally consonant with the "quality over quantity" strategy, aiming to match cuts with an increase in the readiness and flexibility of the resultant, smaller force. Force structure – that is, numbers of divisions, air wings, and ships – was reduced more than personnel, so that the residual units could be better filled. And there was increased investment in mobility assets.

As noted previously, operations and maintenance spending per person also took a sharp upward turn during this period – rising 30% in real terms. (Although total O&M expenditures declined by 12%, the decline in total personnel numbers was greater.) Especially benefitting were mobility capabilities, logistics, and central support and administration.{7}

The relative rise in O&M spending was partly a "forced choice" and partly a free one. It is simply easier to slice away combat units (which come in discrete multiples) than it is to appropriately downsize the complex web of supporting structures (and infrastructure). Thus, whenever force size is reduced rapidly, we might expect a rise in per person expenditures on infrastructure, operations, and maintenance allocations – at least temporarily. Restoring lost efficiencies would depend on a subsequent re-engineering of support services and infrastructure.

There was more to the post-1990 rise in relative O&M expenditures than losses in economy of scale, however. O&M spending had already been rising during the 1980s – up about 22% per person in real terms during that decade. This rise is perfectly consonant with a "quality over quantity" force development strategy – one that seeks to bolster combat forces with "enabling" assets and services. The relative rise in infrastructure and support expenditures also accords with the transition to a volunteer military, as MIT researcher Cindy Williams has pointed out. {8}. Part of attracting and holding higher-quality personnel is providing better personnel and family services, including better provisions for health care and housing.

In sum, policy regarding operations and maintenance expenditures during the 1990s was complex, seeking simultaneously to trim unnecessary excess while enhancing force multipliers and enablers.

3.3 The struggle to recapitalize

Procurement was the account that suffered the most during the 1990s. It reached its post-Cold War nadir in 1997: $54 billion (2010 USD). Average budget authority for procurement during the decade was 44% lower in real terms than in the 1980s. The decline in average *per person* expenditure was somewhat less: 31% – still, a considerable cut. However, two factors helped mitigate it:

> *First,* the Reagan-era DoD had capitalized a larger arsenal, which it then bequeathed to the 1990s. This was Reagan's gift to Clinton. When reductions took hold, the retirement of older equipment effectively lowered the average age of equipment pools, thus achieving what might be called "virtual modernization."

Second, total spending on Research and Development (R&D) was sustained during the 1990s in real terms. Measured on a *per person* basis it actually rose by 32%. Looking at procurement and R&D spending together shows a combined, real decline of only 14% per person.

The above caveats notwithstanding, no one at the time doubted that procurement spending would have to rise again, soon. Barring further cuts in force structure, even a moderate program of recapitalization might aim to achieve an annual average of $75 billion in procurement spending, once the Reagan cascade had been fully absorbed.

In light of increasing O&M expenditures and excess spending on infrastructure, the prospect of also boosting procurement expenditures put the "peace dividend" at risk. Something had to give. The prevailing conceit at the time was that much of the new funding for procurement could be found by trimming excess O&M and infrastructure spending. Also, proponents of military transformation contended that equipping and restructuring the armed forces along "information-age" lines could achieve significant new efficiencies.

3.4 The failure of reform

In implementation, however, both the reform and the transformation agendas fell well short of their promise. In both cases, institutional resistance and bureaucratic inertia proved stronger than the impetus for change.{9}

The Government Accountability Office points to competitive (out)sourcing efforts and military base reductions as the initiatives that probably have saved the most money.{10} However, these two efforts taken together have not yielded reliable net savings exceeding three or four percent of annual budgets. Such a modest level of savings cannot even fund the growth in *peacetime* operational activity – to say nothing of war and full-bore modernization. The only thing left to give was the peace dividend, which quickly evaporated after 1998 as budgets rebounded to Cold War levels.

4. More hands to the task: recent DoD workforce dynamics

From 1978 through 2002, the budget for military personnel showed little real (ie. inflation-adjusted) growth when measured on a *per person* basis. Thus, when the post-Cold War cuts in personnel numbers began, the personnel account became a true bill-payer (second only to modernization in this regard). This circumstance abruptly ended in 2002, due mostly to pay and benefit hikes as well as war-related bonuses and incentives.

Today, the personnel account is comparable in real terms to that during the Reagan era, although the US military is only 69% as large. Figured on a *per person* basis, personnel costs are 84% higher in real terms than in 1967, when last we were engaged in a large counter-insurgency effort. As noted earlier, the logic of the present personnel policy ensures that long, exhausting wars will drive personnel costs sharply higher. The policy was not designed with labor-intensive slogs in mind. Indeed, it evolved specifically as part of our recoiling from such an effort – the Vietnam war – and its effects.

4.1 The high-cost of military labor and its effects

In 2004, the life-cycle cost of a US military officer amortized over a 20-year career was approximately $88,000 per year (current dollars); for enlisted personnel, $43,400 per year. This is considerably more expensive than comparable civilian labor.{11} The high cost of US military personnel undergirds DoD's reluctance to increase end strength. Thus, most of the recent additions to the Army and Marine Corps have been matched by reductions in the Navy and Air Force. The total number of full-time US military personnel by the end of 2010 will be barely 50,000 more than the post-Cold War low point – and 22,000 of these will be temporaries. Rather than add substantially to military end strength, DoD has tried to squeeze more out of the high-priced labor on hand (or substitute civilian labor for it where it can).

The cost of military labor is not the only limiting factor on end strength. As noted, the Pentagon's prevalent force development strategy seeks to build on the high quality of US military personnel by supporting and equipping them to a peerless standard. In this approach, it makes no sense to pit personnel, O&M, and modernization spending against each other. Doing so only serves to bust the formula. A degree of control can be imposed on the process by strictly setting the key independent variable: the number of military personnel. The high cost of military personnel also creates substantial pressure to restrict their use to roles that closely correspond to their unique skills and skill level – the rule being: use them where their use is most cost-effective and not elsewhere.

4.2 Adding and cascading labor

Looking at the evolution of the Pentagon's workforce overall, we see several types of initiatives in play since 1989:

> *First* (and obviously), the post-Cold War cuts in the number of miliary personnel and DoD "in-house" civilians (with a small percentage of military positions recently restored).
>
> *Second,* some migration of military personnel from the "non-deployable" to the "deployable" segment of the forces. All told, the annual *Defense Manpower Requirements Reports* show a migration of 59,000 military positions from the infrastructure category to the "operating forces" category during the period 2000-2009. {12}
>
> *Third,* the replacement of military personnel in some roles by civilians (either DoD employees or contracted labor). Similarly, DoD civilian employees have been increasingly subject to replacement by cheaper, contract labor. And,
>
> *Fourth,* a general growth in the proportion of the Pentagon workforce that is private contract labor. This growth far exceeds the replacement of DoD military and civilian personnel just cited.

There is more to this program than just the desire to optimize the use of military personnel or to achieve "savings" by having government and private entities compete for jobs.

Principally, there is a drive to bring more hands to the task in a cost-effective way because the task list is ever expanding.

Between 1994 and 2004 as many as 15,000 military personnel were transferred (or due to be transferred) to new positions as a result of competitive outsourcing efforts. As noted by the GAO, "when work performed by uniformed personnel is outsourced, the personnel generally are assigned to other duties."{13} Between 2004 and 2010, another 48,000+ military positions were slated to be soon filled by DoD civilians or contract personnel. Of these 48,000 personnel, 19,000 (all Army and Marine Corp) are being transferred to other duties – many in support of the Army's new modular brigades.

Competitive outsourcing has effected DoD civilian personnel more than uniform personnel. But, in this case too, many of those displaced simply moved to other jobs. According to a 2004 study, between 1995 and 2003, more than 65,000 DoD civilian positions were subject to public-private competition under the stringent guidelines set out in OMB Circular A-76.{14} As a result, nearly 25,000 DoD civilian positions were cut. However, 11,000 of the displaced employees simply moved to other positions.

4.3 DoD contracting trends

By far, most DoD contracting occurs outside the A-76 process. And it has been growing exponentially. Between 1989 and 1999, DoD purchases of outside goods and services grew as a part of the budget from 45% to 47.5%. Between 1999 and 2009 it grew further to approximately 57% of the budget.{15} GAO estimates that DoD's total contract obligations were over $387 billion in 2008, having doubled since 2001.{16} This growth has occurred in the context of a longer-term trend: the proportion of purchases that are "services" has been steadily growing, while the proportion that is "goods", falling. According to one study of DoD contracts, "services" constituted more than one-third of purchases in 1984, but 56% by 2003.{17} Together, these trends underline DoD's increasing reliance on contract labor – the so-called "shadow workforce".

4.4 The growth of DoD contract labor

In tandem with the increasing role of service contracts, contract labor is growing as a proportion of the DoD total workforce. Indeed, DoD's shadow workforce may have grown by as much as 40% since 1989 (while the pool of military and DoD civilian personnel each declined by 32%). The growth rate of contract labor is suggested by a series of studies conducted by Paul C. Light of the Brookings Institution and NYU's Wagner Graduate School of Public Service.{18} These use the US Bureau of Economic Analysis' input-output model of the US economy to resolve every dollar of federal contracting (whether for goods or services) into a labor value. The estimate is rough and surely overstates the size of the DoD contractor force (partly because it also captures secondary workers, such as contractors' own accountant services). But it remains valuable as an indicator of scale and, especially, as a foundation for trend analysis. Light's 2006 study, *The New True Size of Government,* indicates that DoD contracts employed as many as 5.2 million workers in 2005, either directly or indirectly.

Even if one substantially discounts Light's absolute numbers, his trend analysis provides an important insight into DoD workforce dynamics: *between 1989 and 2005, the pool of DoD contract labor has grown more than the pool of uniform and civilian employees has declined.* If we cautiously discount the study's absolute numbers by 30%, it would still suggest that DoD's total workforce – military, civilian, and contractor – was *as large in 2005 as it was in 1989,* at the close of the Cold War. And this would certainly entail that it is today *larger* than in 1989.

A sharp rise in the proportion of the budget devoted to contracting, and in the proportion of the workforce that is contract labor, comports well with the observed dynamics of O&M spending since 1990.

4.5 O&M spending and workforce dynamics

O&M spending mostly divides between the DoD civilian payroll and the purchase of goods and services. During the 1990s, the civilian payroll declined much less than the military pay account as budget cuts initially exempted many support and infrastructure activities. The ratio between the civilian and military payrolls did not return to its earlier balance until 2003, and this happened largely due to the war-related surge in military personnel spending. *Non-pay O&M expenditures*, which cover many contract activities, held steady during the 1990s despite overall budget cuts. It then began to rise sharply in 1998 – as did R&D and procurement spending. Together these trends indicate that:

- The reduction in military personnel after 1989 was mitigated, first, by reducing civilian DoD workers more slowly and, later, by adding large numbers of contract workers.

- A fair portion of this mitigation had to do with retaining and then expanding support personnel. This reflected (i) the effects of losing economies of scale in support activities as the force grew smaller, (ii) the difficulty of trimming excess support and infrastructure, (iii) the desire to retain all facets of US military power even as the number of military personnel declined, and (iv) the adoption of policies that compelled higher readiness levels and greater operational tempo.

4.6 Re-inflating the Pentagon workforce

In sum: America's military workforce has been fully re-inflated with most of the regrowth displaced to the defense contractor segment. Military end strength has recovered only marginally. However, there has been some migration of military personnel toward the "sharp end" – that is: from the non-deployable to the deployable segment of the forces. But this migration probably does not and will not exceed 100,000 troops, including those recently added, both permanent and temporary.

5. Discordant modernization

Since reaching a low-point in the late-1990s, procurement spending has rebounded substantially, rising by more than 160% in real terms. Not since the nation undertook crash rearmament for the Korean war has as much been spent in a single year as in 2008, when the procurement account was allotted $170 billion.

Comparing recent spending with that during the last recapitalization surge (1979-1990) provides some perspective:

- Total budget authority for procurement during the period 1999-2010 has been approximately $1.25 trillion (2010 USD) – which compares well with the 1979-1990 recapitalization, when $1.48 trillion (2010 USD) was authorized.
- Calculated on a *per person* basis, procurement spending during 1999-2010 was 25% higher in real terms than during the period 1979-1990.
- Only about 20% of procurement spending since 1998 has been related to the wars in Iraq and Afghanistan.
- Research and Development spending during 1999-2010 was much higher than in 1979-1990: $822 billion *versus* $571 billion.

Taken together, procurement and R&D constitute the "modernization" category. Total modernization spending was marginally higher in 1999-2010 than in 1979-1990. Viewed on a *per person* basis, however, recent budget authority for modernization is 50% higher in real terms than during the 1979-1990 period.

5.1 A period of troubled modernization

Beginning in the early 1990s, DoD acquisition practice has evinced several, contending "modernization imperatives" or visions. And DoD has failed to adequately prioritize among them or compel choices. Given resource constraints, few have developed in a satisfactory way, and this generates unrelenting upward pressure on the budget. We might call this phenomenon *discordant modernization*.

Looking back, post-Cold War modernization trends can be usefully divided into three categories: Legacy, Transformational, and Adaptive.

> *Legacy efforts* ideally reflect past adaptations that may nonetheless offer an insurance policy in the present as the force adapts to new circumstances, goals, and opportunities;
>
> *Transformational efforts* pursues new opportunities for more effective action based on new technology, techniques, and forms of organization;
>
> *Adaptive efforts* correspond to new security missions and circumstances (such as war);

If strategic discipline is lax, legacy modernization will predominate, at least for a while. This, because legacy efforts enjoy considerable institutional momentum. Countervailing pressures must mount to overcome this momentum. Once they do, external circumstances may compel a rush of *ad hoc* measures. Subsequently , these may come to redefine the main thrust of modernization, although their long-term relevance could be more limited than appreciated in the moment. This is the circumstance DoD finds itself in today with regard to procurement for counter-insurgency.

5.2 The tracks of discordant modernization

The Army provides a good example of discordant modernization with its efforts to (i) modernize or replace with similar systems its equipment stocks from the 1980s, (ii) digitalize and modularize its units, (iii) field UAVs, tactical robots, and various directed energy weapons, (iv) pursue the Future Combat System, and (v) add Stryker armored vehicles, MRAPs, and up-armored HMMWVs for stability and counter-insurgency operations.

However, the Army does not stand alone in this regard. The tracks of discordant modernization are evident elsewhere as well:

- In the Air Force, high-end modernization of platforms for stealthy, penetrating strike have predominated even as capacities to use standoff weapons, simpler platforms, and UAVs have advanced.

- In the Navy, emphasis remains on numerous big-deck aircraft carriers even as (i) the missile attack capability of the fleet has grown exponentially and (ii) UAVs – which can be launched in large numbers from the Navy's Amphibious Assault Ships – are playing an ever larger role as attack platforms. Largely irrelevant to current needs, two new classes of attack submarines have entered service since 1997. And, despite a much smaller fleet, the Navy intends to maintain four classes of surface combatants.

- Despite significant investment, the effort to build force networks is lagging, especially between services, facing both technical and integration problems. A principal conceit of networking is that it lessens the need to load individual platforms and units with capabilities. There is only limited evidence of progress in exploiting this putative benefit.

6. Conclusion: View to a Change

To restate the problem: Coming efforts to bring US federal deficits down to a level below real growth in GDP may seek as much as a $250 billion reduction in annual federal expenditures. Currently, the DoD budget accounts for 19% of the total federal budget and 56% of discretionary spending. Additionally, service plans do not yet fit inside the Administration's projected budgets. It is likely that DoD will face a budget reckoning – and soon.

We have reviewed the recent dynamics of DoD budget growth with an eye toward finding its independent variables, which we might manipulate to effect change. Several guidelines for budget reduction seem clear:

First, greater restraint in committing ourselves to large-scale protracted counter-insurgency campaigns is key. Of course, few would step willingly into a known quagmire. So, practically speaking, this *proviso* implies a de-emphasis on seeking "regime change" by military means and strict limits on "post-conflict reconstruction" operations in cases where these face substantial indigenous opposition.

Second, military modernization efforts have suffered from weak prioritization and poor integration. Partly, this reflects the decentralized nature of our acquisition process in which, as a former US Comptroller General puts it, "[c]apabilities and requirements are based primarily on individual service wants versus collective defense needs".{19} The remedy is a much greater emphasis on joint planning and much stronger leadership from the center in *compelling* a more integrated and adaptive approach.

Third, we need to re-boot efforts to streamline service structures and functions. During the 1990s, reformers sought to trim redundancy in service missions, adopt much leaner command structures, and consolidate many of the individual services' support programs. The shortfall in achieving these goals deserves more than a shrug. Instead, an abiding and energetic re-commitment to these ends should become a prerequisite for assuming major command responsibilities.

Finally, the growth in the DoD workforce and in O&M expenditures does not simply reflect a decrement in efficiency. It also – and, perhaps, mostly – reflects an increment in activity and capability. Similarly with regard to cost growth in acquisition: the F-35 Lightning costs four times as much as a first iteration F-16 partly because it is much more capable. This points to the fact that, while we precisely measure the budget *inputs* to our force development system, we only exceptionally measure its real *output* – which is not numbers of platforms and personnel but, instead, levels of activity and power.

If today's armed forces are more costly than their 1989 precursors, despite being smaller, they also are more active and much more capable, unit for unit. The real question that circumstances may now force upon us is this: How much of our mounting power and activity is truly essential to our nation's security? And at what point does this power and activity cross the threshold of diminishing returns? We will not find an answer by fixating on end strength or numbers of air wings, brigades, and ships.

Data sources for Figures 1-3

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Notes

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