

Chapter 10

IMPROVEMENTS IN SERVICES CONTRACTING: THE DEFENSE DEPARTMENT'S IMPLEMENTATION OF PERFORMANCE-BASED SERVICES ACQUISITION¹

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I. INTRODUCTION

The Department of Defense (DoD) relies on the private sector to provide a wide range of services (these can include consulting and administrative support, information technology services, product maintenance services, and base operations support) to accomplish functions needed to deliver important defense capabilities. For example, in FY 2014, the DoD obligated \$145 billion on contracted services; this accounted for more than half of the DoD's total contract spending (\$275 billion). Government-wide, the percentage of total contract dollars spent on service contracts has increased from 23% in 1985 to 63% in 2014 (Kelman, 2017). Because services account for such a significant component of government spending, several initiatives have been implemented over the years in an effort to improve the efficiency of services contracting.

Performance-based services acquisition (PBSA) is a proven strategy that can reduce costs and improve the quality of service. Rather than specify inputs or service requirements, the customer stipulates a level of performance that the contractor is then obligated to meet or exceed. The contractor has the freedom to meet the objective using its resources and personnel to improve processes and effectiveness. This strategy aims to align the objective and incentives of the contractor with those of the customer. When properly structured, these contracts incentivize service providers to improve their efficiency (Cavadias, J., 2004; Cunic, B., 2003; Gansler, J. S., & Lucyshyn, W., 2006; Hensher, D.A. and J Stanley, 2003; Sols, A. et al., 2007; Wimmer, S. J., 2003).

In 2000, then-Under Secretary of Defense (Acquisition, Technology, and Logistics) Jacques Gansler issued PBSA guidance: “It is the policy of the Department of Defense that, in order to maximize performance, innovation and competition, often at a savings, performance-based strategies for the acquisition of services are to be used wherever possible” (Gansler, 2000). He went on to state that “In order to ensure that the DoD continually realizes these savings and performance gains, I establish, at a minimum, that 50% of service acquisitions, measured both in dollars and actions, are to be performance-based by the year 2005.”

This report will examine trends in PBSA over the course of the fifteen years. The objective is to answer the following questions:

- How have the DoD and its constituent organizations responded to this mandate?
- Has DoD implemented PBSA appropriately?

To answer these questions, we analyzed data from the Federal Procurement Data System (FPDS). FPDS contains contracting data that allows for this kind of insight. It is the central repository of information on federal contracting. The system contains detailed information on contract actions over \$3,000. It is also relied upon to create recurring and special reports for the President, Congress, the Government Accountability Office, federal executive agencies, and the general public. We disaggregated the data (by sector, agency, year, contract-type, etc.) to capture the trends and patterns related to PBSA. Based on our analysis of the data, we present findings and recommendations aimed at improving PBSA implementation.

II. BACKGROUND

In FY 2015, the DoD obligated \$275 billion. Of this amount, \$130 billion, or 47% was spent on non-service contracts (supplies); \$145 billion (53%) was spent on services, a figure that includes contracted R&D. The DoD contracts for a large variety of services, ranging from building maintenance to weapons design, healthcare, education, transportation, and food services. Although the DoD buys a wide variety of services, about half of its spending is in six areas: engineering services, R&D, building construction, health care, facilities support, and aircraft manufacturing services.

1.1. PBSA Defined

The Federal Acquisition Regulation defines PBSA as “an acquisition structured around the results to be achieved as opposed to the manner by which the work is to be performed.” The Department of Defense Guidebook says PBSA “involves acquisition strategies, methods, and techniques that describe and communicate measurable outcomes rather than direct performance processes” (DoD, 2000). The definition used by the National Institute of Governmental Purchasing (2012) adds an important distinction: compensation. Performance-based contracting “is a results-oriented contracting method that focuses on the outputs, quality, or outcomes that may tie at least a portion of a contractor’s payment, contract extensions, or contract renewals to the achievement of specific, measurable performance standards and requirements.” In F2015, of the \$145 billion spent on service contracts, \$99 billion was awarded using PBSA.

PBSA contracts specify a desired result, without specifying how the work is to be performed. This method of contracting diverges from traditional contracting approaches (called compliance contracting or regulatory contracting) that include narrow specifications on how the result is to be delivered. Such restrictions prevent the contractor from profiting from any innovations—but also minimize the incentive to develop them in the first place. PBSA, in contrast, permits greater flexibility. Contractors are free to pursue efficiencies and innovations that will reduce the cost of meeting the contract’s requirements.

2.2. Goal and Benefits of PBSA

The goal of a PBSA arrangement is to align the incentives of the suppliers with the purchaser; in other words, what benefits the buyer also benefits the supplier. Consider the case of an auto mechanic. Instead of paying on a transactional basis, (i.e. the mechanic performs a repair when there is a malfunction), the driver pays the mechanic a fixed sum annually to maintain the car in an operational condition with a specified availability. This shift produces efficiencies by “changing the rules of cooperation so that the self-interested rational choices the agent is likely to make fulfill the outcomes that the principal desires” (Taylor & Shaver, 2010). Such an arrangement of incentives discourages suppliers from performing behaviors which are beneficial to themselves, but diminish the quality or availability of the service delivered.

There are other benefits to PBSA. For one, it may offer a resolution to the “historic disconnect between the motivation for governments to contract and how they actually go about contracting” (Martin, 2016). This disconnect arises when governments contract for services with the expectation that the superior efficiency of private firms will deliver those services more cheaply and reliably. However, by employing the rigid process specifications (which detail how the work is to be performed) that are common to traditional contracting, government hinders the contractor’s ability to innovate, thereby minimizing or negating the private firm’s primary advantage. The specificity of such a contract may inhibit a contractor from exploiting innovations and the resulting efficiencies. Such a contractual arrangement is, in part, self-defeating. By instead embracing performance-based requirements, PBSA allows contractors to profit from reduced costs or innovation. Furthermore, reducing the focus on specifications decreases public expenditure by reducing the need for oversight by government personnel. We elaborate upon the benefits and drawbacks of PBSA in Part III.

In the private sector, certain industries have embraced the use of performance-based contracting. Commercial airlines, for instance, were among the first to do so. Performance-based contracting in this industry took the form of ‘power-by-the-hour’ contracts, in which aircraft engines and maintenance are provided for a fixed sum per flight-hour the engine is in use, rather than as a fee for the service of engine maintenance. Previously, the engine manufacturers had less incentive to perform preventive maintenance, since they stood to gain from more lucrative repair and maintenance work. It is important to stress that the incentives involved can be powerful. For example, Dennis and Kambil (2003) found that in 2003 General Motors’ profit rate on after-sales maintenance was much higher than that earned through the sale of its cars. In contrast, under fixed sum per flight-hour schemes, manufacturers only receive payment when the engine is in use, thereby rewarding availability and reliability. This strategy ensures the engine is available more often and at lower cost.

The principles of PBSA have led to reforms in the health care industry as well, under the guise of pay for performance. Pay for performance introduces financial incentives to medical personnel to achieve more optimal patient outcomes rather than be compensated strictly for services performed. The similarities are evident.

Furthermore, the clear links between private industry health care and public health care shows that PBSA concepts work in both sectors and between them. The Centers for Medicare and Medicaid Services sponsors a Value-Based Purchasing system, intended to pay “for inpatient acute care services based on the quality of care, not just quantity of the services they provide” (Center for Medicare and Medicaid Services, 2015).

The benefits of PBSA have been promoted by numerous government and private-sector organizations. We have aggregated and summarized these benefits.

- *Improved performance* – PBSA helps align the objectives of the service provider with those of the buyer. With properly structured service contracts, service providers, are tasked with achieving outcomes as opposed to following specified processes and have the freedom to innovate.
- *Lower cost* – Best of breed commercial firms have used performance-based contracts to reduce costs of services even as they improve performance.
- *Increased innovation* – PBSA encourages innovation by granting firms flexibility to determine the processes they use to perform the required function. Since they are incentivized throughout the contract to meet the required metrics while minimizing their cost, competitive firms will continuously strive to innovate to improve their processes, while reducing costs.
- *Shifts risk to the contractor* – Since the government gives the contractor latitude in the selection of processes to use in the performance of the service, the contractor assumes a greater risk.
- *Greater use of commercial services* –Although government policy explicitly embraces greater use of commercial off-the-shelf technologies and commercial standards, the DoD has been slow to fully implement these policies. By focusing on performance over process, PBSA helps to reduce barriers to entry for commercial firms, thereby increasing the potential for competition.
- *More effective oversight* – Traditionally, the DoD has spent a large amount of resources verifying that contractors comply with the detailed processes and procedures the government specifies in its contracts—regardless of whether such compliance produces better outcomes. With the performance-based contract structure, the government can reduce the cost and increase the effectiveness of

its oversight by tracking appropriately selected performance metrics to monitor contractor performance.

- *Greater contractor-government cooperation* – DoD services are provided through an ever-widening network of contractors. PBSA encourages better contractor-government partnership that is more collaborative and less adversarial than traditional contracting.

Drawbacks, both real and perceived, have also emerged.

- *Perception that the government has less control* – Critics of PBSA argue that the government, by not issuing explicit specifications, will have less control, and as a result, could receive less satisfactory performance.
- *Questionable applicability* – Several critics of PBSA argue that this strategy can only be used for certain types of services. Most of these critics argue that PBSA is best used for contracts that include “many common, routine, and relatively simple services” (Edwards & Nash, 2007).
- *Ineffective metrics* – Appropriately chosen metrics (1) direct contractor efforts and (2) provide effective oversight. Although concern for appropriate metrics is valid for all DoD contracts, ineffective metrics particularly undermine PBSA contracts because they form the basis of evaluating contractor performance.

III. ANALYSIS OF FPDS DATA

In 1991 the Office of Federal Procurement Policy (within the Office of Management and Budget) issued Policy Letter 91-2, which ushered in the formal adoption of PBSA by government. The letter declared “It is the policy of the Federal Government that (1) agencies use performance-based contracting methods to the maximum extent practicable when acquiring services and (2) agencies carefully select acquisition and contract administration strategies, methods, and techniques that best accommodate the requirements” (OFPP Letter 91-2, 1991). Subsequent Federal legislation like the Government Performance and Results Act (GPRA) of 1993, the Federal Acquisition Streamlining Act, and the Federal Acquisition Reform Act of 1995 formalized this commitment.

The Federal Acquisition Regulation² was not amended to incorporate PBSA policies contained in OFPP’s policy letter 91-2 until 1997 (GAO, 2008). FAR Part 37 provides government agencies with

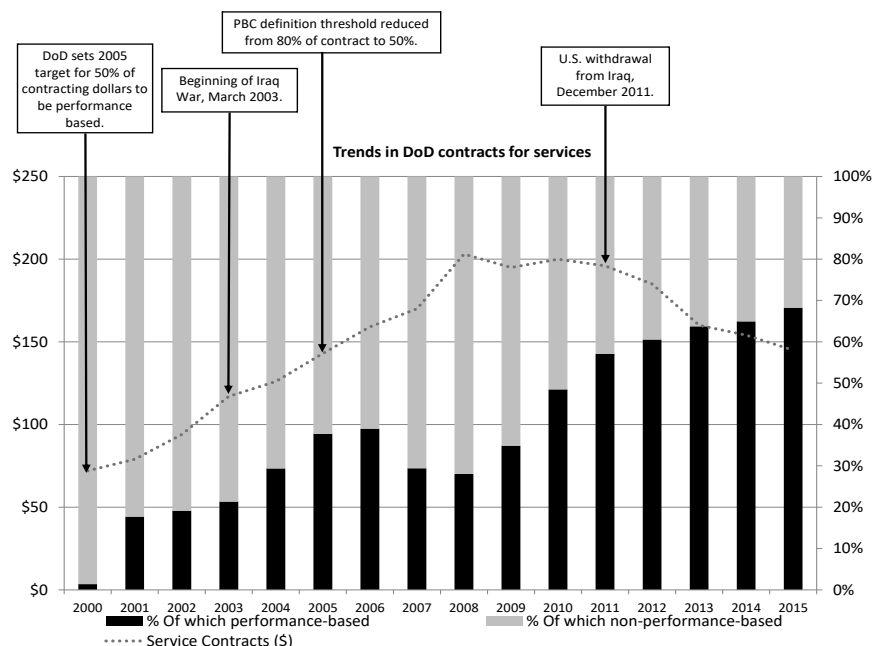
the policy and procedures that are specific to the acquisition and management of contracted services. This Part also identifies performance-based acquisition as the “preferred method for acquiring services [which should be used] to the maximum extent practicable,” except in certain circumstances. FAR Part 37 also states that agencies should facilitate greater use of PBSA by reducing barriers to competition and by providing sufficient training to DoD service acquisition personnel.

In 2000, the DoD formalized its commitment to PBSA. Then-Under Secretary of Defense, Acquisition, Technology, and Logistics Jacques Gansler issued new guidance: “In order to ensure that the DoD continually realizes these savings and performance gains, I establish, at a minimum, that 50% of service acquisitions, measured both in dollars and actions, are to be performance-based by the year 2005.”

Figure 1 depicts total spending on services contracts and the percentage of the spending that was performance-based over the last 15 years. The figure also shows highlights important events that undoubtedly impacted the use of PBSA. Note that following the 2000 issuance of the directive to increase PBSA such that it would represent 50% of all service contracts spending by 2005, PBSA increased by more than 15% (in 2001). The beginning of the War in Iraq saw a continued increase in both services spending and reliance on PBSA. However, between 2006 and 2007 PBSA declined, reaching a four-year low in 2008 (regarded as the height of the war), even as overall contracts spending spiked at over \$200 billion.

This decline occurred despite a change in FPDS classification of PBSA contracts. Prior to 2005, FPDS required that “a minimum of 80 percent of the requirements under the procurement action must meet the FAR standards.” In 2005, the minimum was reduced to 50%. All else equal, one would expect this change to increase PBSA contracts spending. That this did not occur suggests that the War in Iraq had a larger impact on the decline in PBSA than the spending figures alone indicate. In any case, this wartime decline is unsurprising. Edwards and Nash, Jr. (2007), who have been critical of PBSA—specifically, its applicability to the provision of complex services—assert that “it is unrealistic to ask agencies to specify services at the time of contract award in clear, specific, objective, and measurable terms when future needs are not fully known or understood, requirements

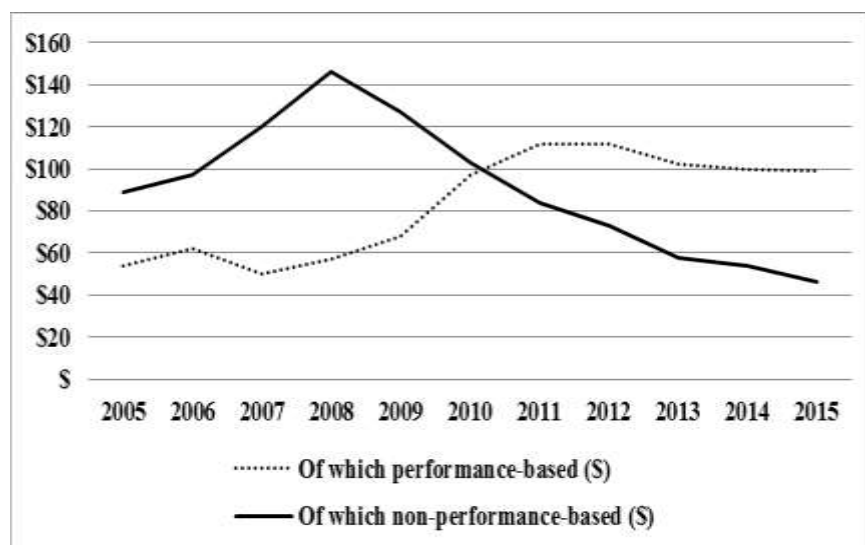
FIGURE 1
Trends in DoD PBSA
(Action Obligations in \$Billions; Analysis of FPDS Data)



and priorities are expected to change during performance, and the circumstances and conditions of performance are not reliably foreseeable.” There is no doubt that this scenario often prevails during war, which likely explains the apparent reluctance to use PBSA. Interestingly, however, prior research (e.g. Lucyshyn, Rigilano, & Safai, 2016) indicates that PBSA can be implemented successfully during times of conflict for some types of contracts, provided that they are structured appropriately.

Within service contracting, the composition of performance-based and non-performance-based has changed substantially over the last 15 years. Analysis of the Federal Procurement Data System (FPDS) shows that PBSA now constitutes a majority of total DoD service contract spending. Figure 2 shows the composition of performance-based and non-performance-based contracts among all DoD service

FIGURE 2
DoD Service Contracts
 (Action Obligations In \$ Billions; Analysis of FPDS Data)



contracts. In absolute terms, non-performance contracts have declined by more than two-thirds since their 2008 peak, from \$146 billion to \$46 billion in 2015, while performance-based contracts have plateaued at approximately \$100 billion in 2014 and 2015.

To a lesser extent, non-DoD, civilian agency service contracting has seen the same change in contract composition. Performance-based contracts represent more than 50% of all civilian service contracts, and, in 2015, accounted for \$70 billion of the total \$125 billion spent. Figure 3 shows the composition of service contracts within the federal government, outside of the DoD. The pattern is smoother overall, but shows PBSA contracts overtaking non-PBSA contracts at approximately the same point in time.

It is also noteworthy that as PBSA began to overtake non-PBSA in terms of total services contract spending, so, too, did the DoD begin to overtake civilian government in its rate of PBSA (see Figure 4).

FIGURE 3
Civilian Service Contracts (Action Obligations in \$Billions; Analysis of FPDS Data)

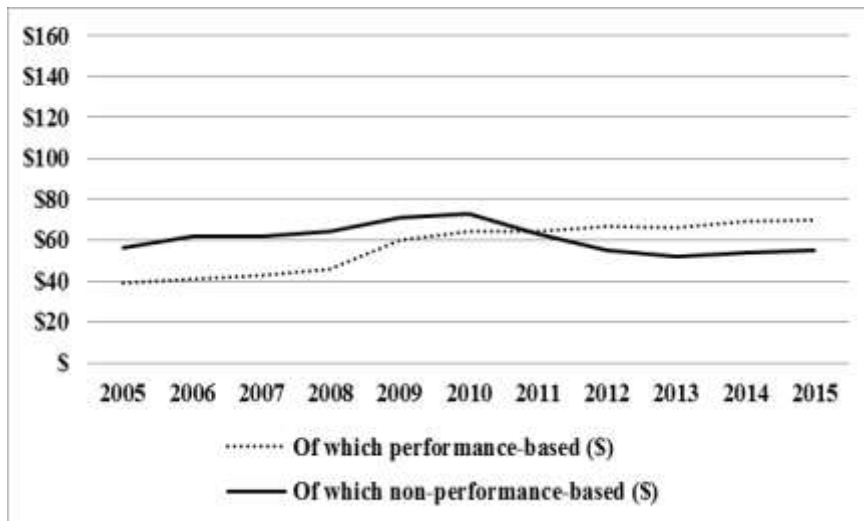
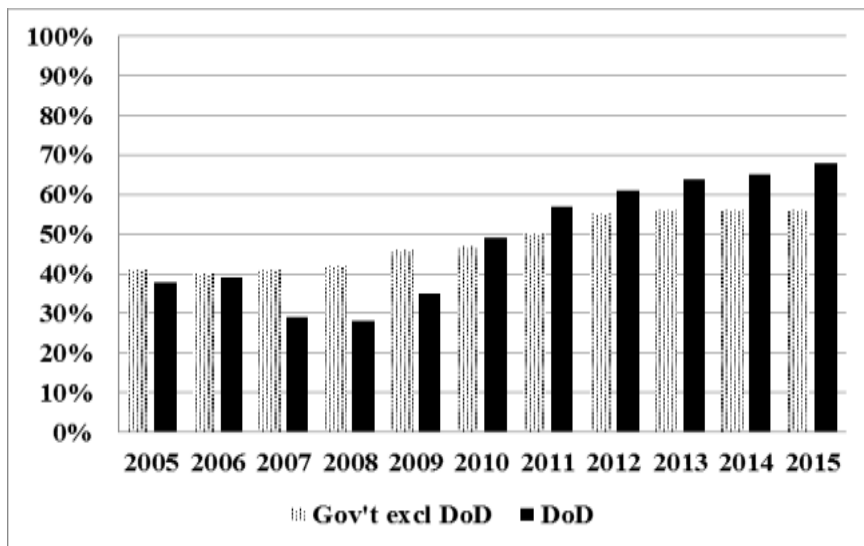


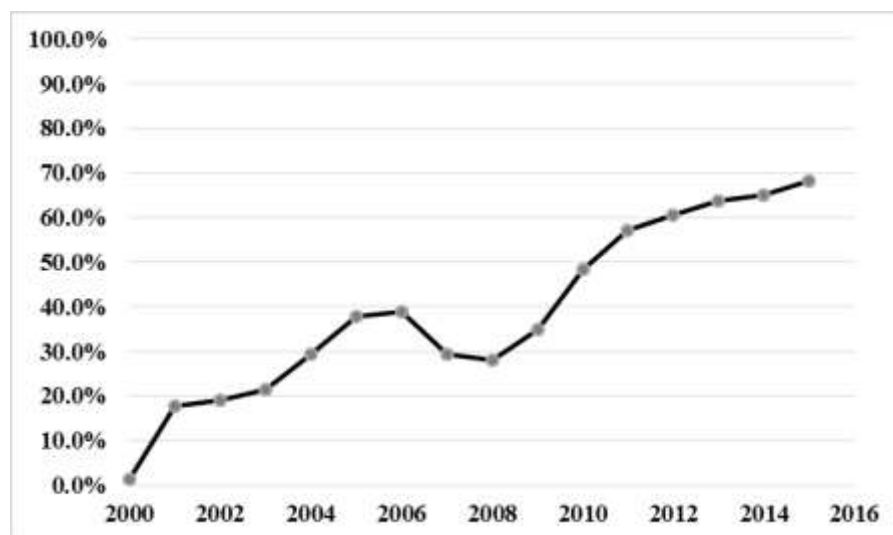
FIGURE 4
PBSA Contracts (Action Obligations [\$]; Analysis of FPDS Data)



3.1. PBSA and Contract Type

The examination of FPDS data reveals that the percentage of DoD service contracts that are performance-based has increased steadily to almost 70 percent in 2016 (see Figure 5). This data provides a clear answer to our first question: the DoD has dramatically increased its use of performance-based contracts.

FIGURE 5
Percentage of DoD Service Contracts That Are Performance-Based
(Action Obligations [\$]; Analysis of FPDS Data)

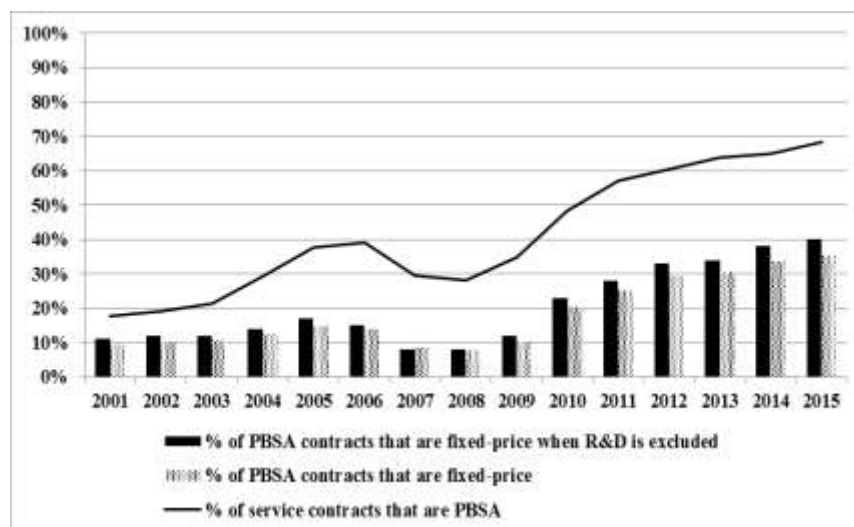


While it is important to stress that PBSA is a strategy amenable to the use of different types of contracts, fixed-price contracts are generally preferred (FAR 37.102). With a fixed-price contract, the government agrees to pay an agreed-upon price for goods or services. This price may be truly fixed or may be subject to a limited amount of adjustment based on the provisions of the contract. The fixed-price encompasses both the contractor's expected cost to produce the goods or services, as well as the contractor's expected profit. With fixed-price contracts, providers have a greater incentive to innovate in order to reduce their costs, thereby increasing their profit. The cost

reductions achieved by the provider can then be taken into account by government in determining baselines for future contracts.

When the percentage of DoD contracts that is performance-based is overlaid by the percentage of these contracts that are also fixed-price, we see that although the two are correlated, a slight divergence has occurred over the last six years (see Figure 6). In other words, PBSA implementation has outpaced the adoption of fixed-price contracting in recent years.

FIGURE 6
Trends in DoD PBSA and Fixed-Price Contracts (Action Obligations in \$Billions; Analysis of FPDS Data)



As shown in Figure 6 above, this divergence narrows somewhat when one excludes research and development (R&D), a category of service contracting that has steadily transitioned to PBSA over the course of the last decade, but for which fixed-price contracts are seldom appropriate (Gansler et al., 2012).

As of FY 2015, roughly half of all DoD performance-based contracts were fixed-price. This finding is in contrast to the relative composition of civilian performance-based contracts, only 38% of which were fixed-price as of 2015.

3.2. PBSA and Performance-Based Logistics

Data on one specific form of PBSA—Performance-Based Logistics (PBL)—is mixed. The *Defense Acquisition Guidebook* defines PBL as “...the purchase of support as an integrated, affordable, performance package designed to optimize system readiness and meet performance goals for a weapon system through long-term support arrangements with clear lines of authority and responsibility.” Application of PBL may be at the system, subsystem, or major assembly level depending on program unique circumstances and appropriate business case analysis.

While overall PBL expenditure has increased steadily over the last 15 years, likely due to its expansion within successful programs, there were only 87 PBL programs in 2013, compared to over 200 in 2005. PBL programs evolve along a common trajectory. With new systems, cost-plus reimbursement contracts followed by cost-plus incentive contracts are used in order to provide the government customer and the provider with a cost baseline. Once the costs, risk factors, and system failure modes and rates have stabilized, the program transitions to the use of fixed-price contracts where providers are paid a fixed cost or fixed rate (e.g. per hour, per mile) so long as operational readiness is achieved at the specified level(s). Over time, the provider makes improvements to its supply chain, logistics networks, operations, and the system itself in order to reduce costs and increase profitability. In the “terminal stage” of its evolution, the exemplary PBL achieves consistently high availability and has optimized maintenance processes and the associated logistics networks on which they rely. The program operates at lower risk, from both a cost and technical perspective.

Despite successful outcomes, there are indications that some longstanding PBL programs are reverting to traditional contracting approaches. Recently, for instance, a high-profile, award-winning PBL program, the High Mobility Artillery Rocket System, transitioned inventory management from the contractor to the government and reverted to cost-reimbursement contracts—as opposed to fixed-price—in an effort to reduce costs. This program is still categorized as “performance-based” in that it relies, at least ostensibly, on performance metrics for inventory fill-rates.

3.3. PBSA at Present

Despite falling short of the mandate that 50% of service contract be performance-based by 2005, PBSA spending has increased dramatically within the DoD. In 2015, 68% of DoD contracts for services were performance-based. This increase has been more or less uniform throughout the department. As of FY 2015, PBSA rates for the military service branches were as follows: Air Force, 69%; Army, 62%; and Navy, 58% (based on FPDS data).

Of course, this high-level data may not tell the whole story. As indicated previously, the change in threshold to be categorized as performance-based— from 80% to 50% of a contract’s performance elements—is not reflected in this data. In addition, some contracts may be performance-based “in name only,” either lacking enforcement mechanisms or disbursing payments even when performance is suboptimal. In other words, the data may not accurately reflect the extent to which performance-based strategies are actually applied.

While PBSA may appeal to program officials from a theoretical standpoint, some may be reluctant to embrace this strategy for a variety of reasons, including cultural inertia within the DoD, contractor reluctance, and/or an inability (lack of personnel or technical capacity) to measure contract performance. Indeed, a recent DoD Inspector General (DoD IG) report evaluated 60 DoD performance-based contracts. The report revealed that DoD contracting personnel failed to properly negotiate and evaluate most of the contracts. For example, in 33 instances the DoD failed to clearly define criteria for successful completion of various tasks, but disbursed payments to the contractors on a regular basis (DoD IG, 2013).

More generally, a wealth of studies dating back to the 1980s suggests a disinclination on the part of managers to use pay-for-performance strategies for reasons that are “distinctly uneconomic” including notions of fairness, equity, morale, trust, social responsibility, and culture (Baker, Jensen, & Murphy, 1998).

IV. FINDINGS AND RECOMMENDATIONS

4.1. Findings

Based on the available data, the DoD has made impressive gains in its implementation of PBSA. In 2016, close to 70% of DoD services

contracts were performance-based. Despite these increases in the overall rate of PBSA, PBL implementation, in terms of the number of programs, has declined. Even taking this into consideration, the DoD has clearly outpaced the rest of the government in the implementation of PBSA.

We also found that the awarded PBSA contracts are increasingly using the preferred contract structure—fixed price contracts. The proportion of DoD performance-based contracts that are fixed-price has increased to approximately 50% in 2016, up from a low of 29% in 2007. However, when R&D contracts are excluded from consideration, this rate increases to close to 60%, and correlates much better with the upward trend in total PBSA. When compared to the civilian fixed-price PBSA rate of 38% (in 2016), the DoD has made significant progress—especially when one considers the DoD's uncertain operating environment.

4.2. Recommendations

Based on these findings, we provide the following recommendations.

4.2.1. Ensure proper alignment of government objectives with provider incentives

PBSA arrangements can be more challenging to develop and manage than other contract types. Just as an appropriate program structure aligns the incentives of the customer (the government) and the support provider, leading to a win-win scenario, an inappropriate structure can create perverse incentives, and result in undesired or unintended consequences.

4.2.2. Improve the training of the acquisition workforce

The DoD should also increase the training of its employees involved in the acquisition of services. Training should emphasize the importance of a robust requirements definition process, the need for clear performance requirements, measurable performance and standards.

4.2.3. Cost-plus performance-based services contracts must apply stringent cost controls.

Categorizing a contract as performance-based does not make it so, especially with regard to cost-plus contracts. While some performance-

based services acquisitions are best suited to cost-plus contracts, they must be structured appropriately to ensure optimal outcomes. Carefully-considered contract ceilings, cost-per-unit usage rates, and logistics footprint constraints should be included in cost-plus contracts. Without these features, contractors may be incentivized to accrue surplus inventory beyond what is necessary to meet the performance requirement.

V. CONCLUSION

When PBSA is used appropriately, it can represent a clear benefit to both parties; the customer only pays for the results of the service provided, and the contractors are incentivized to innovate and apply their domain knowledge and experience to reduce their costs. The DoD has recognized this potential, and has moved to implement PBSA across a broad range of services; the preferred fixed-price contract structure is also increasingly used. Government at all levels must continue to move aggressively to attain the best value for the taxpayers; PBSA is one strategy that can be used to attain this goal.

NOTES

1. This research was partially sponsored by the Naval Postgraduate School.
2. The Federal Acquisition Regulation System governs the "acquisition process" by which executive agencies of the United States federal government acquire goods and services by contract with appropriated funds

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