UNINTENDED OUTCOMES OF SMALL BUSINESS LEGISLATION & POLICY: OPPORTUNITIES FOR IMPROVEMENT

By:

Jacques S. Gansler, William Lucyshyn, & Jinee Burdg

CENTER FOR PUBLIC POLICY AND PRIVATE ENTERPRISE
SCHOOL OF PUBLIC POLICY

March 2015

This research was partially sponsored by
the Coalition for Competition Member Companies.

UNIVERSITY OF MARYLAND 1856

Table of Contents

Executive Summary

The Federal Government's spent over $440B on procurement in FY 2014, with over $280B just for DoD. This spending creates opportunities for implementing selected national policies. As part of these, the Small Business Act of 1953 established the Small Business Administration (SBA) and small business set-asides to help maintain the health of the industrial base (defense and others), to facilitate greater competition, to create more opportunity for businesses to succeed in the public sector, to create jobs, and to encourage innovation (for the nation's economic competitiveness). However, the pursuit of admirable social goals can create problems and introduce inefficiencies into the procurement process. This report will focus primarily on the implementation of small business set-asides within the DoD, which, by far, buys the most goods and services. To that end, it reviews previous and current small business initiatives and discusses the related challenges and how they can be overcome; as well as the benefits that can be realized.

In addition to a review of existing literature on the effectiveness of the small business set-aside program, we met with senior executives (they ranged from managers and directors to vice presidents and CEOs, and included individuals from small, medium, and large businesses) from a variety of companies, as well as current and former government officials (they varied from base-level contracting officials to senior political appointees). The results of our research and interviews were analyzed and combined to inform the findings and recommendations.

Findings.

1. **Small Business Programs are Most Successful When Focused on Innovation**

   There was also a clear consensus, that, when selected for appropriate work, small businesses can often provide their federal customers with innovative products and services. One particularly successful small business program is the Small Business Innovative Research/Small Business Technology Transfer (SBIR/STTR) program. The DoD's SBIR/STTR program has fostered more than 21,400 companies and currently employs over half a million advanced-degree engineers and scientists. Over nine percent of the firms are female-owned and almost 45 percent are minority-owned businesses. The SBIR/STTR program has increased allocations and award levels; shortened timelines for award decisions; increased the focus on commercializing innovative products; and provided certainty and stability for the small businesses that leverage these programs (Shoraka 2012).

2. Small Business Agency Goals Appear to be Arbitrarily Set and They Do Not Measure the True Impact on Small Business

Although DoD has had trouble meeting its small business goals in the past, the DoD met and exceeded its departmental goals for small business contracting for the first time in FY 2014. This achievement is attributed to increased focus placed on small business contracting with the Better Buying Power Initiatives, as well as the inclusion of small business goal achievement on SES performance appraisals. There has been a great deal of emphasis placed on meeting the goal, and hopefully it wasn't achieved at the expense of mission performance. However, no one we interviewed understood the rationale or methodology for developing the goals, or whether one even existed.

Another difficulty that was identified with the goals is tracking of the subcontracted dollars. The current DoD approach does not fully capture all of the small business contracts throughout the multiple tiers below the prime level. Without this comprehensive and accurate information, it is impossible to assess the full impact and success of current small business policies.

3. Small Business Set Asides can create a Perverse Incentive Not to Grow

The original intentions of the SBA policy was to: help maintain the health of the defense industrial base; facilitate greater competition; create more opportunity for businesses to succeed in the public sector; create jobs; and encourage innovation. A principal part of this policy is to help small businesses grow. However, small businesses often choose to limit growth and remain small to avoid disqualifying themselves for small business set-asides and thus, become dependent on the subsidized federal contracts to survive. As a result, firms frequently do not graduate, negating one of the primary goals.

4. Setting Aside Very Large Awards for Small Business can be Counterproductive

An assessment of potential set-asides should be done, that includes a determination of which products and services small businesses are most qualified for; and, perhaps, better equipped to provide. Increasingly, more and more professional services contracts are being set aside for small business in order for the services to meet their mandated SB goals; acquisition officials are applying their small business goals in very blunt ways to meet their quotas. In doing so, firms that graduate before they are fully prepared, are prevented from accessing opportunities to continue their upward trajectory. As a result, many qualified bidders are excluded from competitions, thus depriving the government of solutions and services that could, potentially, provide the government with the "best value" solution.

5. Small Business Contracting Does Not Necessarily Create New Jobs

One of the underlying assumptions about small business is that of being an engine for job growth. Although this may hold true in the economy at large, this assumption proves false when analyzing federal government services contracting. For this specific sector, jobs are created by the government requirements and funds available; unlike the commercial sector where there may be un-met market needs.

6. Small Business Contracting Cost May Not Be Lower

Although there is a belief that small businesses providing services are lower cost, that is not intuitively the case. Many small businesses are based on a business model of offering high-priced subject matter experts and engineers, and thus have surprisingly high rates compared to large businesses. Other small businesses are built upon a lower-cost model composed of lower overhead, which may mean they have fewer business systems; low fringe benefits, which often leads to high employee turnover; but with higher general and administrative (G&A) costs.

7. When Agencies Use the Wrong North American Industry Classification System (NAICS) Code, Inappropriate Procurements are Set Aside for Small Business

With the increasing pressure to meet the small business set-aside goals, agencies, on occasion, use an inappropriate NAICS code for a subject procurement, allowing larger small firms to compete. This practice has come to known as “code shopping.” Although it can help agencies meet their small business goals, it does not help the intended firms.

8. The Small Business Set-Aside Program Invites Fraud

The SBSA program is a complex program with many regulations, a variety of stakeholders, and significant incentives for the participants; creating an atmosphere that is ripe for abusive behavior. When this program is abused, it deprives the legitimate, intended small businesses of an opportunity; but also, in many cases, unnecessarily raises the cost of the product or service. The following types of abuse were identified:

Fraudulent Certification -- Fraudulent Certification is prevalent because the SBA’s standard procedures often rely on a kind of corporate “honor system”, allowing businesses seeking contracts to self-certify on their applications. Since few federal agencies have the time to perform due diligence when processing these applications for miscoding or fraud, policing of the system is left up to firms willing to file a complaint.

Just a Pass Through[1] -- The intent of these programs is to grow small, and, in many cases, disadvantaged businesses to become competitors for additional contracts. When these companies exist simply as shells, or as “pass-throughs”, they fail to meet the objectives of the SBSA program

Exorbitant Salaries -- At times small companies pay their top executives exorbitant salaries. For example, Red River Computer Co. only employs 68 people, yet it paid its top executives more than $5 million in 2011, including $1.2 million to its CEO, Richard Bolduc.

[1] When the small business prime serves as a "front" for a large business and passes the vast bulk of the work through to the large business.

Overcharging -- On occasion, small businesses leverage their small business status to overcharge government agencies; these agencies may be more interested in reaching their small business goals than getting best value for the government.

Bid Protests -- Respondents agreed that competitions for small-business set-aside contracts are turning into high pressure contests; since if a firm isn't selected (particularly with the trend towards IDIQ contracts) it may be shut out of a business area for 5 or more years. As a result, small firms are making a strategic business decision to protest, because they cannot afford to lose contracts.

Recommendations and Conclusion

Small businesses, when used appropriately, can help to provide improved goods and services, at a reduced cost. However, as we have highlighted, the current approach creates many challenges; is subject to abuse; and can, in fact, raise costs.

The Congress and SBA should work to implement legislation and policies for preserving full and open competitions and sustainable business environments across companies of all sizes pursuing federal work. Changes in legislation, processes and assessments could improve cost-savings, align more fully with original program objectives, and provide additional guidance toward success. Specifically, we make the following recommendations:

Improve the SBIR program

The SBIR program is by far the most successful of the small business set aside programs. It fulfills all of the goals: sponsoring innovative companies, creating jobs, and increasing competition. Recognizing its value, Congress made some significant changes when it last reauthorized the program in 2011 (e.g. increased award size limits and expanded program size). However there is still room for improvement, as highlighted by the recent National Academy of Engineering study, chaired by one of the authors of this report, Dr. Jacques S. Gansler. The studies recommendations are in Appendix C.

Improve data gathering and program metrics

Currently, the small business set-aside program focuses on achieving the numerical goals for small business prime contracting. However, it is difficult to assess the costs that this program may impose, and how successful the program is in achieving the program's overall objectives (e.g. job creation, innovation, national economic growth, etc.); that is, the program's outcomes, without an improved effort to collect data, and develop adequate metrics. Examples include new jobs created, and the filing of new patents, in conjunction with set-aside contracts. Without the appropriate metrics it is impossible the judge the effectiveness of the program, and difficult to identify strategies to improve it.

Review NAICS code thresholds

The current NAICS codes have over 1100 distinct recognized industries plus additional sub-industries. The small business size standards vary from industry to industry; but when these industry groups are too broad, the codes can provide enough ambiguity so that an inappropriate code (and, as a result, size standards) can be used. These thresholds must be clear and unambiguous.

Set Realistic Numeric Agency Goals

The Small Business Administration should develop an understandable, rational, and transparent, methodology to establish numeric agency small-business goals (for both prime and sub-contracts). Consideration should be given to the development of a single goal, **<u>that would include both prime and subcontract dollars</u>**; adjusting the calculation and grading methodology to account for small business firms participating at all tiers of the agency contracts, to capture the full impact of government contracting on small business. In order to preserve adequate competition and a sustainable business environment for successful companies, require federal agencies to maintain a sufficient percentage of full and open competitions in all major procurement sectors (e.g., services, military construction, research and development, sustainment and modernization).

Use set-asides for acquisitions only when small business can handle them

Select small business set-asides that are suitable, that will enable a firm to grow, but do not overwhelm its infrastructure or capabilities. Awarding a contract to a firm that is beyond its capacity will cause the company to have difficulty with that work, and may cause it to fail.

Encourage the best Small Businesses to grow

Small business set-aside program must be structured to encourage the best firms to grow. To accomplish this, there must be enough opportunities for these firms to compete for, when they graduate. Agencies should strive to reserve a portion of large, long-term ID/IQ contracts for full and open competition, so that the best graduating firms can continue to grow (see item 4) Consideration should also be given to limit the time (e.g. 10 years) that firms are eligible for small business set-aside to preclude firms from finding a sweet spot and idling there, raising the entry barrier to new firms.

Revise and reauthorize the Small Business Competitiveness Demonstration Program

Congress should revise and reauthorize the Small Business Competitiveness Demonstration Program (discontinued by the Small Business Jobs Act, 2010) to examine the effect on small businesses of a freely-competitive market with no small business set-asides.

Reduce program abuses

Program abuses negatively affect the perception of the small business set-aside program, as well as its effectiveness. Agencies must take the appropriate steps to improve monitoring and enforcement.

I. Introduction

The Federal Government's spending on procurement (over $440B in FY 2014, with over $280B just for DoD) creates opportunities for implementing selected national socio-economic policies. Congress has taken advantage of these opportunities, passed legislation, and implemented programs with the goal of creating positive impacts for targeted groups, and in some cases for society as a whole. As part of these broad socio-economic goals, the Small Business Act of 1953 established the Small Business Administration (SBA) to "aid, counsel, assist and protect the interests of small business concerns, to preserve free competitive enterprise and to maintain and strengthen the overall economy of our nation" (SBA 2014a). However, as with any effort to regulate a complex system, there are unintended consequences.

Part of the mission of the SBA is manifested in the policy to encourage inclusion of small businesses in federal contracts, known as small business set-asides (SBSA). This policy is intended to help maintain the health of the defense industrial base;[2] to facilitate greater competition, to create more opportunity for small businesses to succeed in the public sector; to create jobs; and to encourage innovation. However, the pursuit of these admirable goals can, in many ways, conflict with the accepted fundamental principles of federal contracting. Specifically, "full and open" competition should be the norm—providing all contractors an equal opportunity to compete for the award—and the procurement award should strive to provide the government with the "best value", in terms of price and quality (Sakallaris 2012).

These SBSA policies also create other challenges for both government and small businesses. Principal among these is defining what a "small" business is. These definitions are tailored to industry classifications and have evolved over time. Once this is resolved, there is the problem of identifying "appropriate small business opportunities" to set-aside, since not all procurement opportunities are suitable for small businesses. Small businesses, for example, generally lack the infrastructure and capabilities to lead as prime contractors on large projects, or in specific industries such as aircraft manufacturing and large-scale engineering services—where a large

[2] The U.S. defense market is a monopsony with one primary buyer—the Department of Defense (DoD) (although other agencies, NASA, and the Department of Homeland Security are also players). DoD can use its large buying power to determine the makeup of the nation's defense industries (i.e. ownership, entry, exit, structure, conduct, and performance).

share of the dollar value of Department of Defense (DoD) procurements subsists. This results in the allocation of most small business set-asides into other areas, such as the Advisory and Assistance Services, infrastructure support, and military construction. The mismatch between small business capabilities and DoD requirements represents a growing and long-standing challenge. However, even in those cases, a small business could compete under a "full and open procurement" if they believed they could provide the required product or service competitively. Finally, since many small businesses may lack sophisticated marketing and business development capabilities, identifying, soliciting, and selecting the best small business providers can present a challenge to government buyers.

Research Scope

This research will focus primarily on the implementation of small business set-asides within the DoD, which, by far, buys the most goods and services. With the continued pressure on the defense budgets and the need to be as efficient as possible, we believe it is an opportune time to examine the small business set-aside policies; analyze their impact on DoD's acquisitions, as well as on the defense industrial base; and determine if any changes in these policies are warranted.

Small business set-asides generally have widespread political support, as they demonstrate a strong commitment to small business. It is widely believed that small businesses can diversify economic power and improve competition; adapt more readily to change; innovate and create specialized services and products not offered by larger firms; and create new jobs. To that end, a complex web of policies has evolved to promote small businesses, particularly with access to federal contracting opportunities. Although there are metrics to measure the outputs of the small business set-aside policies, i.e. how many small businesses have received government contracts, it is much more difficult to measure the outcomes regarding the perceived benefits. For example, how many new, net sustainable jobs are created? The objective of our research was to explore, and analyze these policies, identify benefits and challenges, and recommend ways that their implementation could be improved.

Research Methodology

The initial phase of research focused on a review of the existing literature, public source materials, including publically available data-bases, specialized business news services, and research publications. In addition to this review of existing literature, we developed a structured interview questionnaire and used it to interview senior executives from a variety of companies, as well as current and former government officials, between November 2013 and August 2014. The company representatives we met with ranged from managers and directors to vice presidents and CEOs and included individuals from small, medium, and large businesses from the defense industrial base. We also met with current and former government officials that ranged from base level contracting officials to senior political appointees. Since many of those interviewed preferred not to be identified, we used anonymous citations throughout the paper. See Appendix B for our interview questions and Appendix C for a table of the characteristics of the participant firms (and they are identified in the text using a code, e.g. small company 1 is SC1). The results of the review of existing data and interviews were analyzed and combined to inform the findings and recommendations.

Report Roadmap

The next section of this report provides the background for the Small Business Administration, and related legislation; including the Section 8(a) Business Development Program, the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs, and the Indian Incentive Program (IIP). The third section summarizes the study findings. The fourth section presents our recommendations and conclusion.

II. Background

The idea of protecting small businesses is not new. As early as 1890 Congress passed legislation, e.g. the Sherman Anti-Trust Act of 1890 (see Appendix A for additional legislation), to help promote competition, and to encourage the use of small businesses. In 1953, with the passage of the Small Business Act (see the box below), the small business program was provided with a dedicated agency, the Small Business Administration, whose overarching goal was to ***help maintain free competition and to support the national economy***. More specifically, the mission was to "aid, counsel, assist and protect, insofar as is possible, the interests of small business concerns" (SBA 2014a). The agency was also tasked with ensuring that small businesses receive a "fair proportion" of government contracts and sales of surplus property (SBA 2014b).

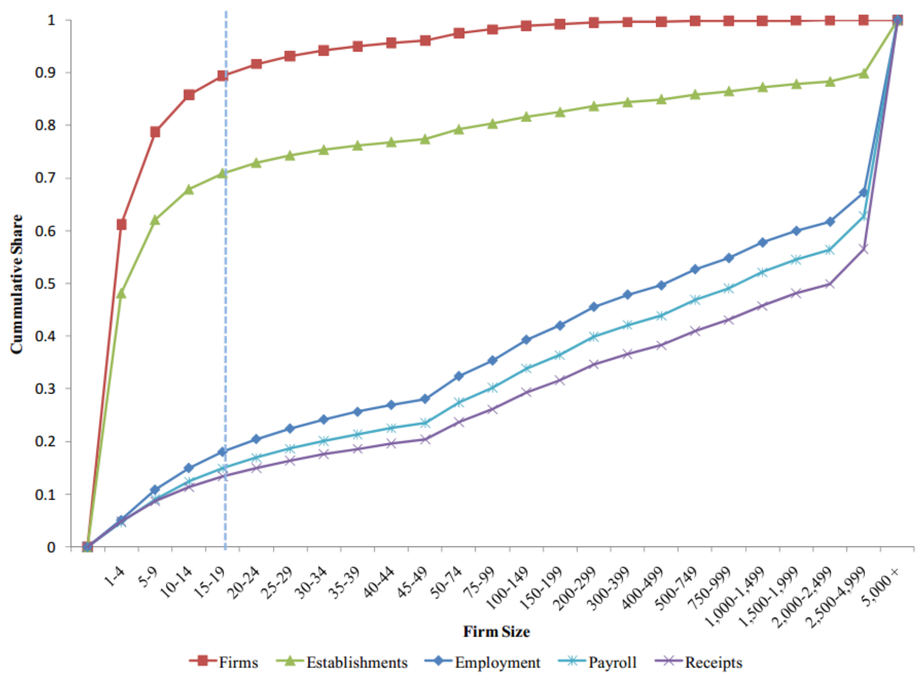
Since its creation, the SBA has grown significantly in terms of total assistance provided, and its array of programs to assist the development of small businesses in all areas. These programs now include financial assistance through loan guarantees and bonding programs; federal contract procurement assistance, management assistance, and specialized outreach to women, minorities and armed forces veterans (these are discussed in detail later in this section).

Small Business Act of 1953

The Small Business Act of 1953 stated that the Federal government "should aid, counsel, assist, and protect the interests of small business concerns in order to preserve free competitive enterprise; ensure that small firms receive a fair proportion of contracts and subcontracts; and maintain and strengthen the overall economy of the Nation. The Small Business Act also recognizes that this policy is directly tied to the health of the Nation's Defense Industrial Base, that it is "in the interest of maintaining or mobilizing the Nation's full productive capacity [and]... in the interest of war or national defense programs" (15 U.S.C. § 644(a)). This policy is reflected in Part 19 of the Federal Acquisition Regulation (FAR).

According to SBA's small business definition of 500 or fewer employees (for many sectors) 99.7 percent of U.S. firms are "small" businesses (Harrison 2013 and Small Business & Entrepreneurship Council 2014). However, this 99.7 percent employs less than half of all private sector employees, and accounted for only 48.5 percent of private sector payroll in 2011 (U.S. Census Bureau 2014).

Figure 1: Share of firms, employment, receipts, and payroll belonging to different firm size categories, 2007



Source: Hurst, Erik and Benjamin Pugsley. (2011). What Do Small Business Do? National Bureau of Economic Research. NBER Working Paper No. 17041. Retrieved from http://www.brookings.edu/~/media/files/programs/es/bpea/2011_fall_bpea_papers/2011_fall_bpea_conference_hurst.pdf.

Adjusting the cut-off for the number of employees would change the number of "small" businesses drastically. Figure 1 demonstrates that limiting small businesses to firms with 50 or fewer employees would reduce the small business share of the workforce to about 30 percent. If the cut-off for small businesses was changed to 20 employees or fewer, then small businesses would still account for 90 percent of all firms, but less than 20 percent of jobs. Additionally, the federal government has no designation for "mid-sized" firms. One consequence, for example, is when a small engineering services firm's gross revenues exceed $35 million; it is then considered “large.” These firms must now compete with companies like General Dynamics Corporation, Raytheon, Boeing, and Lockheed Martin whose gross revenues are reported as $12 billion, $13 billion, $19 billion, and $35 billion, respectively.

Today, policy-makers must assess whether or not the current policies and regulations – and the current interpretation and implementation of these policies and regulations – support the original goals and meet the needs of today’s national economy, particularly as they may impact innovation and national security. The remainder of this background section introduces Small Business Administration, Small Business Development Programs, and concludes with some observations of the federal government’s current contracting climate.

A. Small Business Set-Aside (SBSA) Requirements

Federal agencies must meet specific goals to award a certain percentage of total prime contracts as small business set-asides as required by the Small Business Act (Public Law 644 §15(g)). Currently, the government-wide small business prime contracting goal is approximately 23 percent of all prime contract dollars – i.e. 23 percent of all prime contract dollars should be awarded to small firms. Additionally, there are individual goals set for the disadvantaged business categories. The set-aside goals for small-disadvantaged businesses (SDB) and women-owned small businesses (WOSB) are five percent each; and for historically-underutilized businesses zones (HUBZone) and service-disabled veteran-owned small businesses (SDVOSB) the goals are three percent each (SBA 2014c). Finally, there is a small business subcontracting goal (the DoD’s for FY2013 was almost 37 percent), as well as for the disadvantaged business categories.

Categories of procurement excluded from the goals include non-appropriated funds, internal transactions, mandatory sources, contracts for foreign governments or international organizations, and contracts not under FAR (Office of Government Contracting 2003). The SBA process for developing goals is outlined in the box below.

Furthermore, the FAR (Subpart 19.5) requires that a contract be set-aside for small businesses if it meets the following stipulations:

- If at least two small businesses can provide the service AND the contract is valued between $3,000 to $150,000; or
- If there is a "reasonable expectation" that at least two small businesses will bid at fair market prices AND the contract is valued over $150,000 (referred to as the rule of two)

The SBA Process

The SBA negotiates small business contracting goals every two years with each department and agency. SBA negotiates with agencies to establish individual agency goals that, in the aggregate, constitute government-wide goals. In addition, SBA also negotiates a small business subcontracting goal based on recent achievement levels, and a HUBZone subcontracting goal equivalent to the required prime HubZone goal.

Before the beginning of the fiscal year, agencies submit their proposed goals to SBA. SBA's Office of Government Contracting determines if these individual agency goals, in the aggregate, meet or exceed the government-wide statutorily mandated goals in each small business category. SBA notifies the agencies of their final agency goals.

Source: U.S. Small Business Administration (SBA). (2014c). Goaling. Retrieved from http://www.sba.gov/content/small-business-goaling.

NAICS Codes

Currently, the SBA has two size classifications, "large" and "small." Generally, a small business is defined by three major elements:

1. Total revenue, sales, receipts, or profits,
2. Number of employees (max of 500-1,500 depending on the industry), and
3. Measure of total assets.

To determine whether or not a business is considered "small," the government uses the North American Industry Classification System (NAICS) codes. These codes establish the size standards that determine which businesses qualify as "small" for preferences or eligibility under government programs and procurements. In designating a NAICS code, the procuring agency is required to select the code that best describes the principal purpose of the product or service being acquired. This is a critical function because an erroneously assigned NAICS code may constitute valid grounds for a bid protest, which can be costly for the government (Ellinport 2013). See the figure below for a sample size standards by NAICS code.

Figure 2: NAICS Codes

NAICS Codes (updated July 2013)	Size Standard in millions of dollars	Size standard in number of employees
Construction	$33.50	N/A
Engineering Services	$14.00	N/A
Except: Military Aerospace Equipment and Military Weapons	$35.50	N/A
Except: Contracts and Subcontracts for Engineering Services Awarded under the National Energy Policy Act of 1992	$35.50	N/A
Except: Marine Engineering and Naval Architecture	$35.50	N/A
Research and Development in the Physical Engineering, and Life Sciences (except Biotechnology)	N/A	500
Except: Aircraft	N/A	1,500
Except: Aircraft Parts, and Auxiliary Equipment, and Aircraft Engine Parts	N/A	1,000
Except: Space Vehicles and Guided Missiles, their Propulsion Unites, their Propulsion Unit Parts, and their Auxiliary Equipment and Parts	N/A	1,000

To ensure that a small firm is the business performing the work rather than acting as a middle man or a pass through, regulations for performance of work were also established. When a firm wins a contract as the small business prime contractor, the small firm has to perform at least 51 percent of the work. The other 49 percent could be performed by subcontractors, including large firms. The 2013 National Defense Authorization Act (NDAA) revised this 51 percent of work rule to use "total contract price" instead of the SBA regulation's use of "personnel cost."[3]

B. Small Business Development Programs

SBA Small Business 8(a) Development Program

The Small Business Administration's Office of Government Contracting and Business Development also works with federal agencies to award contract dollars to small businesses and meet specific goals for five main programs:

- 8(a) Business Development Program,
- Historically underutilized business zones (HUBZone) Program,
- Service-Disabled Veteran-Owned Businesses (SDVOSB),
- Small Disadvantaged Businesses (SDB), and
- Women-Owned Small Businesses (WOSB).

In order to help small, disadvantaged businesses compete in the marketplace, the SBA created the Section 8(a) Business Development Program to provide non-financial assistance to small businesses owned and controlled by socially and economically disadvantaged individuals.[4] Section 8(a) Business Development eligibility requirements are as follows:

- The business must be majority-owned (51 percent or more) by an individual(s).
- The individual(s) must be an American citizen, by birth or naturalization.
- The business must be majority-owned (51 percent or more) and controlled/managed by socially and economically disadvantaged individual(s).

[3] The SBA regulation had stated that a small firm must "perform at least 50 percent of the cost of the contract incurred for personnel with its own employees" (Koprine 2013).

[4] *Social Disadvantaged Individuals*: "those who have been subjected to racial or ethnic prejudice or cultural bias because of their identity as a member of a group without regard to their individual qualities." *Economically Disadvantaged Individuals*: "those socially disadvantaged individuals whose ability to compete in the free enterprise system has been impaired due to diminished capital and credit opportunities as compared to others in the same business area who are not socially disadvantaged" 15 U.S.C. §637(a)(1)(A).

- The individual(s) controlling and managing the firm on a full-time basis must meet the SBA requirement for disadvantage, by proving both social disadvantage and economic disadvantage.
- The business must be a small business.
- The business must demonstrate potential for success.
- The principals must show good character.
- Separate eligibility requirements exist for a business that is owned by American Indians, Native Alaskans, Native Hawaiians or Certified Development Companies. (SBA 2014d).

Federal regulations also stipulate that a certain percentage of government contracts must be earmarked for small firms that qualify under Section 8(a) as an instrument for helping socially and economically disadvantaged entrepreneurs gain a foothold in government contracting. Once admitted into the program, Section 8(a) participants may remain for a total of nine years. During this time, the small firm spends the first four years in the *developmental stage*, which helps the firm to overcome its economic disadvantage by receiving business development assistance. The firm spends the last five years in the *transitional stage,* which helps the firm to overcome the remaining elements of economic disadvantage and to prepare the firm to leave the program. The SBA district offices monitor 8(a) business development firms with annual reviews, business planning collaborations, and systematic evaluations (SBA 2014e; CRS 2012).

The categories of Section 8(a) Business Development Programs are as follows:

- General
- American Indian - Tribally Owned Concern: any concern at least 51 percent owned by an Indian tribe (defined as "any Indian tribe, band, nation, or other organized group or community of Indians, including any Alaska Native Corporation (ANC), which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians, or is recognized as such by the State in which the tribe, band, nation, group, or community resides;"
- Alaskan Native Corporation-Owned Concern: "any Regional Corporation, Village Corporation, Urban Corporation or Group Corporation organized under the laws of the

State of Alaska in accordance with the Alaska Native Claims Act, as amended by 43 U.S.C 1601;"

- Community Development Corporation-Owned Concern: "a nonprofit organization responsible to residents of the area it serves which has received financial assistance under 42 U.S.C. 9805;"
- Native Hawaiian Organization-Owned Concern: "any individual whose ancestors were natives, prior to 1778, of the area which now comprises the State of Hawaii" (CFR 2006).

Other Small Business Programs

Agencies throughout the federal government maintain a variety of programs and offices to support small businesses. Although the Small Business Administration provides support to all federal agencies, each agency also maintains a separate managing organization and a set of regulations and policies to manage, execute, and monitor their small business programs. For example, the Environmental Protection Agency maintains its own Office of Small Business Programs (OSBP) to "advocate and foster opportunities for direct and indirect partnerships, contracts, and sub-agreements for small businesses and socio-economically disadvantaged businesses" (EPA 2014). Similar to the SBA, the Department of Labor's Office of Small and Disadvantaged Business Utilization (OSDBU) ensures procurement opportunities for small businesses, small disadvantaged businesses, women-owned small businesses, HUBZone businesses, and businesses owned by service-disabled

Indian Incentive Program Eligibility

For Native American businesses, there are two primary requirements that must be met in order to participate in the Indian Incentive Program:

1. Indian ownership of the subcontractor or supplier cannot constitute less than 51 percent of the enterprise (DFARS 252.226-7001).

2. Federally Recognized Tribal Enrollment as defined by the following:

   Native American: The subcontractor or supplier must be owned by a federally recognized [PDF] tribe or a member of a federally recognized tribe.

   Native Alaskan: The subcontractor or supplier must be owned by a "native", "native village" or "native group" (including corporations organized by Kenai, Juneau, Sitka, and Kodiak) as defined by the Alaska Native Claims Settlement Act.

   Native Hawaiian: The owner of the Native Hawaiian-Owned subcontractor or supplier must be a recognized Native Hawaiian as defined by 23 USC 4221(9).

(DoD Office of Small Business Programs 2014) veterans (DOL 2014). The Department of the Treasury maintains four major initiatives for small businesses: the State Small Business Credit Initiative, the Small Business Lending Fund, the Community Development Financial Institutions Fund, and the Office of Small and Disadvantaged Business Utilization (U.S. Department of the Treasury 2014). Even agencies within the DoD itself maintain separate small business programs, such as the Defense Intelligence Agency's Office of Small Business Programs (DIA 2014). Programs overseen outside of the SBA are described in more detail below.

Indian Incentive Program

The Indian Incentive Program (IIP) attempts to motivate prime contractors to utilize Indian organizations and Indian-owned economic enterprises by providing a five percent rebate to prime contractors, not only on subcontracted work performed by an Indian organization, but also on subcontracted commercial products manufactured in whole or in part by an Indian organization. Additionally, sub-tier contractors who subcontract to an Indian-owned firm also are eligible for incentive payments. See the box on the previous page for eligibility requirements. The funds for this program are authorized by Congress each year through the Defense Appropriations Act. In FY2009, $15 million was authorized for prime contractors and subcontractors (OSBP 2014).

SBIR/STTR Program

The Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) programs - coordinated by the SBA - require federal agencies to allocate a small percentage (currently 2.7%) of their total external research and development (R&D) budgets for contracts or grants to small businesses conducting R&D. In the case of STTR, the small business must partner and collaborate with nonprofit research institutions (for example, with universities) to secure funding.

The SBIR/STTR funded projects must meet specific research and development needs, and have the potential for commercialization. Approximately $3 billion is awarded through this program each year, and eleven federal agencies participate in these programs. The current eligibility requirements for small businesses include a U.S. location, at least fifty percent ownership/control by U.S. citizens, and fewer than 500 employees (SBA 2014e).

STTR's most important role is to bridge the gap between performance of basic science and commercialization of resulting innovations. The program's goals are to: stimulate technological innovation; foster technology transfer through cooperative research and development (R&D) between small businesses and research institutions; and increase private sector commercialization of innovations derived from federal R&D (STTR 2014).

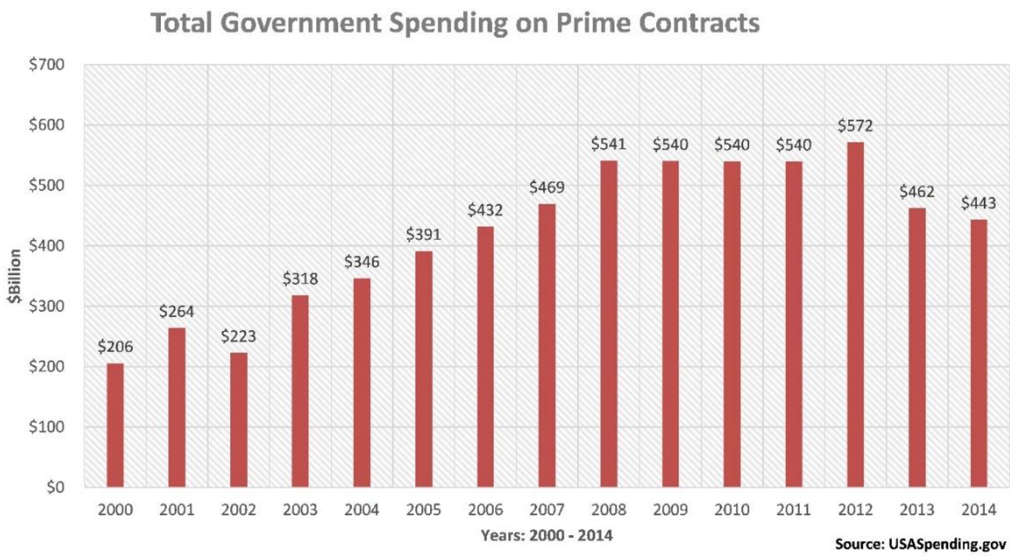
In December 2011, the SBIR/STTR Reauthorization Act of 2011 was signed, extending both the SBIR and STTR programs through September 30, 2017. This reauthorization act also created several pilot programs and amended provisions relating to program eligibility, technical assistance, annual reporting, and data collection (SBA 2012). On January 8, 2014, both SBIR's and STTR's program policy directives were amended, including modifications to the controversial new benchmark requirements regarding an awardee's progress towards commercialization (SBIR 2014).

C. Current Contracting Climate

The following section describes three challenges that were consistently identified by the business leaders we interviewed. Although these challenges were identified by firms of all sizes, they have particularly harmful effects on small businesses, since those firms have fewer resources to deal with them. Addressing these challenges, where government is able, will improve acquisitions in general, and will be particularly beneficial to small businesses.

1. The Continuing Budgetary Pressure

Although the previous decade experienced growth in federal spending, we have entered a period in which decreasing budgets are much more likely. Figure 3 illustrates the trend in total government spending on prime contracts since 2000. There was a dramatic increase following 2002 to a peak in 2008, with a leveling off, then a significant drop in 2013 and 2014. Figure 3: Total government spending on prime contracts



Although this same trend applies to the DoD, the Department has other internal pressures. In addition to the flat/declining defense budgets, the composition of military spending is increasingly being devoted to salaries and benefits payments (Salant 2014), putting even greater pressure on DoD's buying power. This reduced spending has resulted in too much capacity in some industry sectors that provide support to the government, in general, and DoD specifically. Clearly, many of these firms will need to diversify into other sectors, if they are to continue to grow (or even to exist).

2. Shortage of Experienced Federal Acquisition Professionals

For the government to acquire the best equipment and services, at the most attractive prices, it is necessary to have the highest quality, most experienced workforce--in the government's acquisition workforce, as well as in the supplier industry. Unfortunately, in its present state, the government's acquisition workforce does not always have the training and experience required to meet the needs of the twenty-first century.

A retired senior Air Force contracting official summarized his perspective on acquisition personnel as follows:

> "*There is an obvious challenge when you take people who do not possess the depth of experience and you rush them into positions commensurate with elders who have held 15 years' worth of experience before they came into the same position. There are some obvious challenges with experience level, education and training. There are institutions*

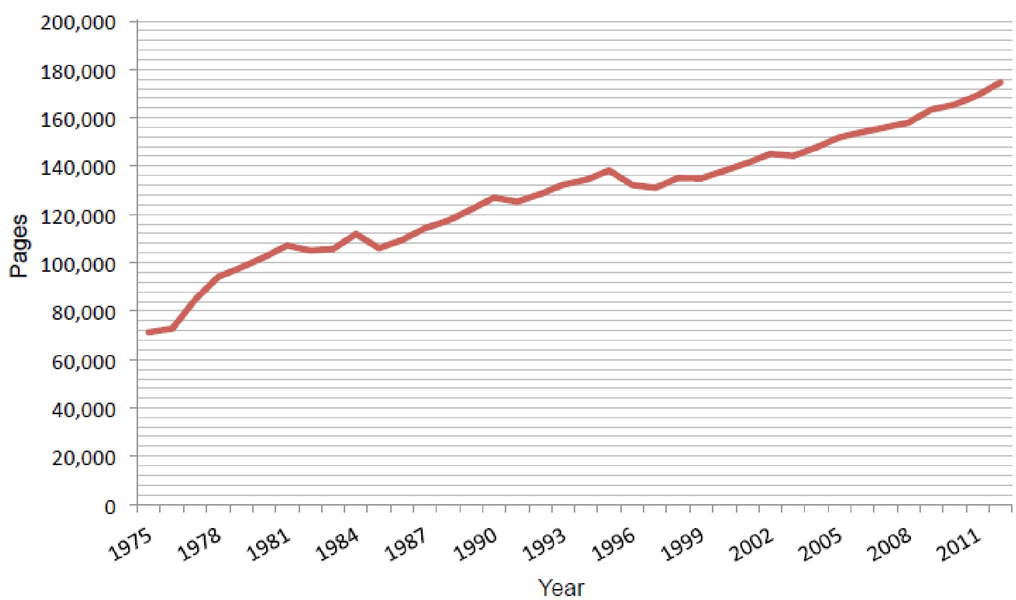
out there that are trying to tackle those challenges, but textbooks and classroom training can simply not replace repetition and experience."

3. Complex Regulations

"*Furthermore, thousands of pages of procurement regulations discourage small innovative businesses from even attempting to navigate the rules*" (Congresswoman Eshoo, Press Release January 27, 2014).

The total number of pages in the Code of Federal Regulations continues to climb, requiring additional administrative attention by both the contractors and federal acquisition workers. Figure 4 illustrates this increase in regulations from 1975 to 2011.

Figure 4: Total Number of Pages in the Code of Federal Regulations, 1975-2011



Source: Mclaughlin, P. (2013). On The Human Costs Of The US Regulatory System: Should Congress Pressure Agencies to Make Rules Faster? Testimony before the Senate Judiciary Committee on August 1, 2013.

The SBA Office of Advocacy has studied the impact of regulation on small businesses since 1995. In September 2010, the office released the study, which "demonstrated that small businesses bear a larger burden from regulations than large businesses" as of regulatory costs through 2008 (Crain & Crain 2010). This indicates that these continuing increases in regulations likely are increasing costs for small firms.

III. Findings

> *"SBSAs help people create opportunities for people to experience the American Dream in terms of being an owner and an entrepreneur, which is good. However, when the policy is implemented in such a blunt way without real consideration for what is the best way of approaching a problem to accomplish a mission, then the mission may suffer"* (LC1, Senior Vice President).

It was clear from all the individuals we talked to, that everyone wants to see small businesses succeed. There was a strong consensus that when a small business gets a federal contract, the business gets a needed boost, in the form of the revenue it needs to grow. At the same time, the government often benefits from working with diligent, innovative, and responsive firms. And, in fact, many of firms have received a leg-up from the SBSA program, enabling them to introduce innovative products or services to their federal customer. The challenge then is to strike a balance to help small businesses and achieve the ultimate win-win: help the small and disadvantaged businesses grow, while enabling the government to get the best possible value on the goods and services needed.

Our research identified both successes and challenges of the small business programs. The following section discusses these findings.

1. Small Business Programs are Most Successful When Focused on Innovation

Small business set-asides can provide a leg-up for small businesses trying to enter federal contracting. Once awarded a federal contract, the firm can gain the momentum to grow and diversify beyond that first single contract. The CEO of one small company reported that she would not have been able to establish her business without the support provided by the SBA. And, since her business plan called for 100 percent of the company's revenues to come from these federal contracts during the next year, the firm will depend on SBSAs, both as a prime, and as a subcontractor, for the foreseeable future.

> *"We're a zero dollar start-up… we worked with the SBA Denver district office and developed relationships with grant holders, built our candidate pool, and started working on teaming. We're not 8(a) yet because we haven't passed the economic viability qualifications yet, but will be once we qualify"* (SC3, Owner and CEO).

There was also a clear consensus, that, when selected for appropriate work, small businesses can often provide their federal customers with innovative products and services. And, since the customer is often dealing directly with one of the owners or other senior officer, customer service is generally satisfactory. A senior OSD official reported one reason for this improved customer service:

> *"A smaller company often responds more quickly to [federal customer] issues because that [federal customer] is a majority of the company's revenue."*

One particularly successful small business program is the Small Business Innovative Research/Small Business Technology Transfer (SBIR/STTR) program. The DoD's SBIR program requires that R&D budgets of more than $100 million set aside 2.7 percent of their R&D budgets for small firms. Similarly, the STTR program requires that R&D budgets of more than $1 billion set aside 0.35 percent of their R&D budgets for small firms. The National Academy of Science's 2009 Assessment of the SBIR Program concluded that small firms use the SBIR awards to advance projects, develop firm-specific capabilities, and create and market new commercial products and services.

The SBIR/STTR program is divided into three phases described in the box. Approximately $903 million were awarded to small businesses through the SBIR program in FY2013, divided among 1,720 Phase I awards and 879 Phase II awards. Approximately $110 million was awarded to small businesses through the STTR program in FY2013, divided among 254 Phase I awards and 108 Phase II awards (SBIR/STTR Presentation 2014).

SBIR/STTR Phases

Phase I. The objective of Phase I is to establish the technical merit, feasibility, and commercial potential of the proposed R/R&D efforts and to determine the quality of performance of the small business awardee organization prior to providing further Federal support in Phase II. SBIR Phase I awards normally do not exceed $150,000 total costs for 6 months.

Phase II. The objective of Phase II is to continue the R/R&D efforts initiated in Phase I. Funding is based on the results achieved in Phase I and the scientific and technical merit and commercial potential of the project proposed in Phase II. Only Phase I awardees are eligible for a Phase II award. SBIR Phase II awards normally do not exceed $1,000,000 total costs for 2 years.

Phase III. The objective of Phase III, where appropriate, is for the small business to pursue commercialization objectives resulting from the Phase I/II R/R&D activities. The SBIR program does not fund Phase III. Some Federal agencies, Phase III may involve follow-on non-SBIR funded R&D or production contracts for products, processes or services intended for use by the U.S. Government.

(Source: SBIR/STTR. (2014). The SBIR Program. Retrieved from http://www.sbir.gov/about/about-sbir.)

The DoD's SBIR/STTR program has fostered more than 21,400 companies and currently employs over half a million advanced degree engineers and scientists. Over nine percent of the firms are female-owned and almost 45 percent are minority-owned businesses. This program is one of the most successful R&D programs in the world (many nations around the world are now choosing to emulate the SBIR program in their country); spawning 25 percent of the key innovations (see Figure 5). The box lists some of the successful "graduates" of the SBIR program (Schmidt 2014).

"Graduates" of the SBIR Program

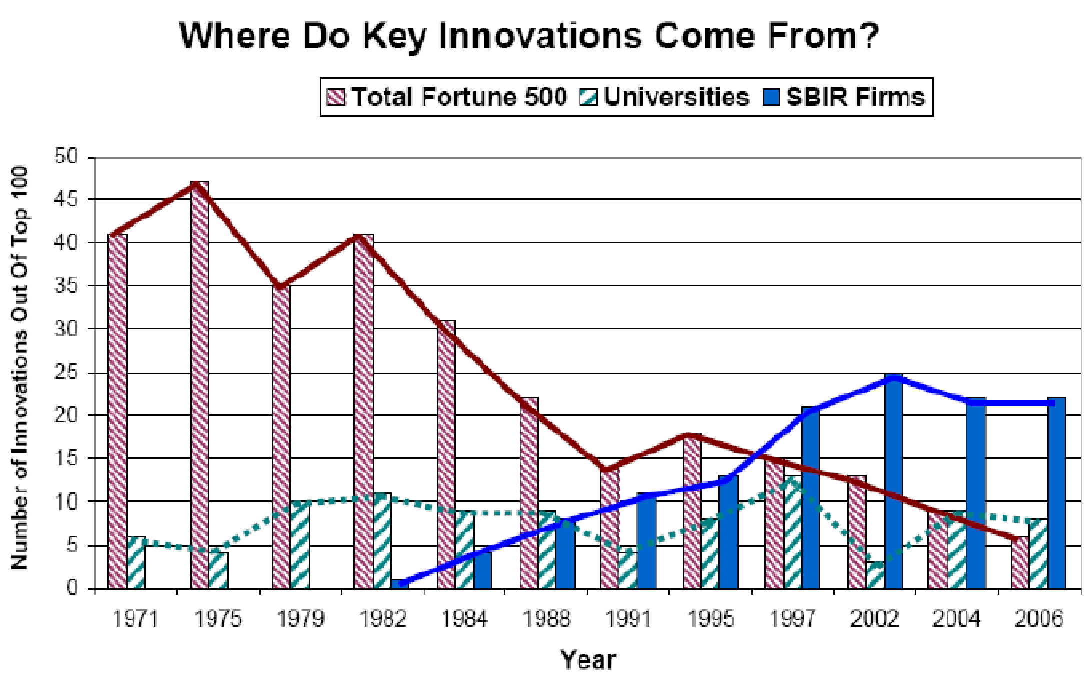
Qualcomm	American Biophysics
Symantec	Luna Innovations
Amgen	JDS Uniphase
Biogen	Armorworks
Genzyme	Chiron
Titan	Nanosys
iRobot	

Source: Schmidt, Robert. (2014). Testimony before the Committee on Small Business, United States House of Representatives, May 21, 2014. Retrieved from http://smallbusiness.house.gov/uploadedfiles/5-21-2014_schmidt_revised_testimony.pdf.

The SBIR/STTR program has increased allocations and award levels, shortened timelines for award decisions, increased the focus on commercializing innovative products, and provided certainty and stability for the small businesses that leverage these programs (Shoraka 2012). For example, Boston-based small business, Mide, landed a not-so-small role on the U.S. Navy's Aegis Weapon System thanks to its innovative sensor technology developed alongside Lockheed Martin through the SBIR program (Lockheed Martin 2014). The Submarine Program Executive Office is widely considered to be one of the more successful Phase III programs at DoD, and includes SBIR as an integral part of the technology development process.

A broad-based statistical analysis of SBIR recipients demonstrates that two of the program's objectives—stimulating technological innovation and increasing private sector commercialization of innovations derived from federal research and development—are being met. In addition, the case-based analyses demonstrate that the SBIR Program redirects the efforts of award recipients toward commercial activity that would not otherwise have taken place, and that commercial activity and its attendant spillover effects generate substantial positive net social benefits (Audretsch 2002).

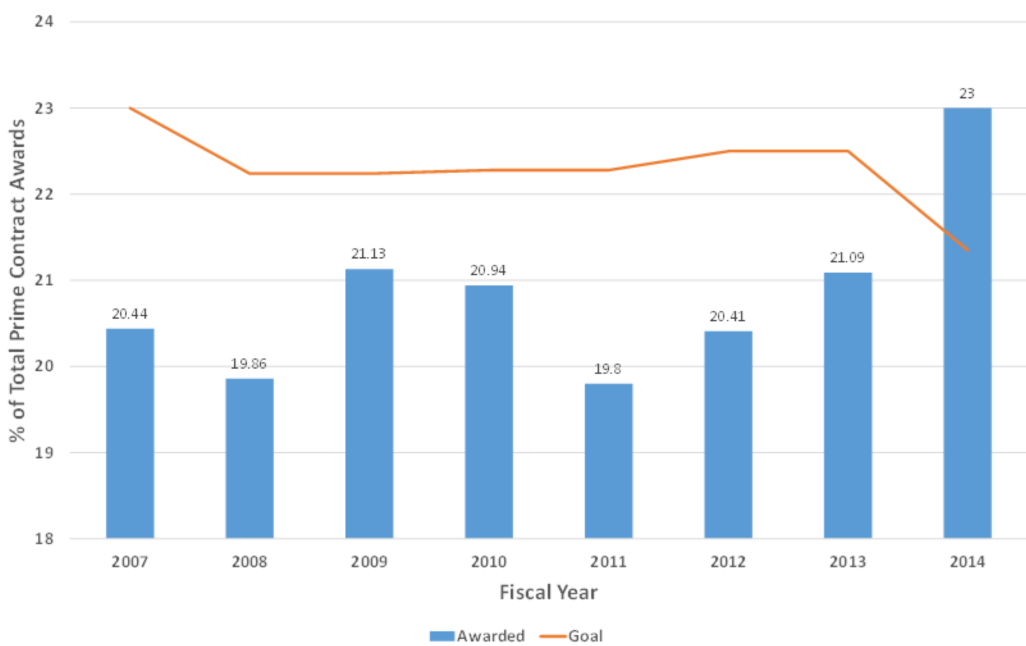
Figure 5. For the last decade, SBIR firms have received 3.45 times as many "R&D Top 100" awards as Universities, on about 1/8 of the budget (Schmidt 2014).



2. Small Business Agency Goals Appear to be Arbitrarily Set and They Do Not Measure the True Impact on Small Business

Congress passed legislation in 1978 for agency heads to set goals for the percentage of federal contract and subcontract dollars awarded to small businesses each year, and a decade later amended the Small Business Act requiring the President to set the government-wide goals (CRS 2013). For example, for FY 2014, the DoD's small business prime contracting goal is 21.35 percent, and its small business subcontracting goal is 36.70 percent.

Figure 6: DoD Goals vs. Actual Awarded Small Business "Prime" Dollars



Sources: Office of Small Business Programs (OSBP). (2014b). Department of Defense, program Goals and Statistics. Retrieved from http://www.acq.osd.mil/osbp/statistics/goals.htm and http://www.acq.osd.mil/osbp/statistics/sbProgramGoals.shtml; Federal Procurement Data System (FPDS). (2005-2014). Small Business Goaling Reports, Fiscal Year 2005-2014. Retrieved from https://www.fpds.gov/fpdsng_cms/index.php/en/reports.

Although DoD has had trouble meeting its small business goals in the past, the DoD met and exceeded its departmental goals for small business contracting for the first time, in FY 2014 (Figure 6 compares the small business contract goals for the DoD to the actual awards). This achievement is attributed to increased focus placed on small business contracting with the Better Buying Power Initiatives (Roulo 2014). Also, since 2011, small business goal achievement has been included in SES performance appraisals, for all functions related to acquisitions. It is not clear if these explain this recent surge, but we do know there has been a great deal of emphasis placed on meeting the goal. One can only hope the goal wasn't achieved at the expense of mission performance.

The SBA provides agencies with a performance scorecard each year. Figure 7 is the SBA's Small Business Procurement Scorecard for DoD for FY 2013 (the most current available SBA scorecard). The DoD was given an overall grade of B, but missed the goal for all but 2 of the 10 categories.

Figure 7: DoD Scorecard (FY 2013)

Department of Defense

FY2013 Small Business Procurement Scorecard

B

93.55%

FPDS-NG Prime Contracting Data as of Feb. 19, 2014
eSRS Subcontracting Data as of Mar. 14, 2014

Prime Contracting Achievement:			74.49%
	2012 Achievement	2013 Goal	2013 Achievement
Small Business	20.41%	22.50%	21.09% ($48.3 B)
Women Owned Small Business	3.38%	5.00%	3.57% ($8.2 B)
Small Disadvantaged Business	7.30%	5.00%	7.79% ($17.8 B)
Service Disabled Veteran Owned Small Business	2.33%	3.00%	2.64% ($6.0 B)
HUBZone	2.18%	3.00%	1.78% ($4.1 B)

Subcontracting Achievement:			9.10%
	2012 Achievement	2013 Goal	2013 Achievement
Small Business	35.50%	36.70%	35.40%
Women Owned Small Business	5.70%	5.00%	5.70%
Small Disadvantaged Business	4.80%	5.00%	4.70%
Service Disabled Veteran Owned Small Business	1.90%	3.00%	2.20%
HUBZone	1.40%	3.00%	1.50%

Source: DoD Office of Small Business Procurement. Retrieved from https://www.sba.gov/sites/default/files/files/FY13_DoD_SB_Procurement_Scorecard_Public_View_2014-04-28.pdf

The SBA calculates the overall score by weighting 80 percent for the small business prime goal, 10 percent for the subcontracting goal, and 10 percent to DoD's "Planned Progress Success" (SBA 2013). This grading methodology heavily weights prime contracts without considering their suitability for small businesses.

When we asked the interviewees if these goals were appropriate, we received a variety of answers. As one would expect, the small businesses thought the goals were about right or too low. The mid-size and large firms believed they were not necessarily unreasonable, but that the goals should absolutely not increase.

One point became very clear; no one understood the rationale or methodology for developing the goals, or whether one even existed. Also, there was a feeling that, within the DoD a great deal of the "spend" is clearly not suitable for small business, since much of it goes to original equipment manufacturers (OEMs). For example in FY 2013 of the $303 billion that the DoD contracted out, approximately $82 billion went to five large OEMs. As a result, there is a disparate impact on the remainder of the spending, particularly professional services.

> "*I don't think anyone can be sure what reasonable goals are, there was no rhyme or reason to the small business goals. From the government perspective, there are not a lot of large programs oriented towards weapons systems with small business potential; so we started looking to our services sector and we just started to hit them with goals. We would up their goals from last year, we could tell they were not going to make them, but we still pushed them*" (Former senior Air Force Contracting official).

Another difficulty that was identified with the goals is the tracking of the subcontracted dollars. The current DoD approach does not fully capture all of the small business contracts throughout the multiple tiers below the prime level. Industry data on small and sub-class business subcontractors are not available. Collecting such data may require new legislation (SBA 2014h). Consequently, it is difficult to determine how much of the total government spending goes to small business; there may be many more federal contract dollars going to small businesses than the amounts recognized by the SBA. One executive stated:

> "*If you take our business, $5.8 billion, we sub out $1.3 billion in revenue every year and 65 percent of that goes to smalls, okay, so there is a half a billion dollars just within our firm that is not being counted*" (LC1, Senior Vice President).

Without comprehensive and accurate information, it is impossible to assess the impact and success of current small business policies. Furthermore, the frequent difficulty in meeting small business set-aside prime contract goals brings to question whether changes are needed within the goaling structure, or how small businesses are defined, or both.

3. Small Business Set Asides can create a Perverse Incentive Not to Grow

One of the original intentions of the SBA policy was to help maintain the health of the defense industrial base,[5] facilitate greater competition, to create more opportunity for businesses to succeed in the public sector, to create jobs, and to encourage innovation. A principal part of this policy is to help small businesses grow. Small firms that utilize a government contract as a boost rather than their main source of revenue can use that money to reinvest – to diversify and build their businesses. These successful firms grow and graduate out of the small business category, and add a new competitor to the mid and large firms.

Figure 8: Innovative Activities of New Business Owners. Source: Hurst, Erik and Benjamin Pugsley. (2011)

	First Year of Business (2006)		Fifth Year of Business (2010)
	Sample 1: All	Sample 2: Positive Revenues	Sample 3: Positive Revenues
Percent of Firms that Already Developed Proprietary Technology, Processes, or Procedures	6.5	8.3	20.3
Percent of Firms that Already Applied for Patent, Copyright, or Trademark	4.9	6.0	17.6
Percent of Firms Stating That Many Existing Firms Already Offer Same Product/Service to Customer Base	35.7	43.3	39.6
Percent of Firms Stating That No Existing Firms Offers Same Product/Service to Customers	19.2	13.3	17.3
Sample Size	1,214	602	162

Notes: This table summarizes the responses to the questions asked of the nascent small business owners in the PSED about their actual and expected innovative activities. See text for the details. We focus on three samples. The first sample is all PSED respondents of nascent small business owners. The second sample is the set of all nascent entrepreneurs who actually had positive revenues during 2006 (first wave of the survey). The third sample is the set of all nascent entrepreneurs who actually had positive revenues during 2010 (most recent follow up wave of the survey). All data are weighted using the PSED sample weights from their respective survey wave. Responses for samples 1 and 2 are from the initial wave. Responses for sample 3 are from fifth wave.

Note: The Panel Study of Entrepreneurial Dynamics (PSED) research program is designed to enhance the scientific understanding of how people start businesses.

Furthermore, as discussed above, the SBIR program has been successful in helping small businesses innovate and introduce new products and ideas into the marketplace; however, few small businesses actually bring a *new* idea or product to market (see Figure 8). They do not spend money on research and development, getting a patent, or trademarking their ideas. Most small businesses, in fact, just provide existing services, to an existing customer base with

[5] The U.S.'s defense market is often described as a monopsony having one primary buyer—the Department of Defense (DoD) (although other agencies, NASA, and the Department of Homeland Security are also small players). Consequently DoD can use its buying power to determine the size of the nation's defense industries, ownership, entry, exit, structure, conduct, and performance.

familiar goods, in already-crowded markets (Lowry 2011). These small businesses often choose to limit growth and remain small to avoid disqualifying themselves for small business set-aside contracts instead of actively growing and diversifying into independent, economically robust firms. They become dependent on the subsidized federal contracts to survive.

This negates one of the primary goals of the SBA, to encourage the small businesses to hire more employees and grow. These "permanent small businesses" can become very adept in their niche area, but then may further limit access to new firms aspiring to enter the market. "Thus, it seems contradictory to use set-asides to promote small business independence and self-sufficiency" (Sakallaris, 2007 p.692)

4. Setting Aside Very Large Awards for Small Business can be Counterproductive

> *"If, as a rule, losing one contract or losing two contracts will bankrupt a company, then that's not a healthy situation…The basis ought to be what helps the US to have more businesses that are healthy enough to survive without special benefits. That's a problem [graduating] because businesses need to grow more slowly. I've seen lots of small businesses grow too much too fast, and not be able to digest it; then either become a not very good company or quickly become other than small basically before they're ready"* (former senior OSD official).

Seven small firms were recently awarded a Defense Information System Agency contract averaging over $40 million per year for each company ($1.4 billion total possible over five years) (Hoover 2013). While this appears to be a success story, these small firms will no longer qualify as "small" and will be unable to re-compete for the same or similar (small business) contracts in the future.

In this way, small businesses can often be a victim of their own success. If they are selected to prime on too large of a contract, the small firm may no longer qualify as a "small" according to its individual NAICS code, making it ineligible for any potential follow on contract, or for other small business set-aside contracts.[6] This can lead to a small firm graduating, but ill-prepared to compete with the larger companies.

[6] For the DoD, the inability of these small firms to re-compete devalues any government investment in that contract, including the experience they received and the networking between government and contractor employees.

> *Smalls typically stumble and fall or they figure out how to sell themselves or they divide themselves into smaller pieces so that they can stay under the goal"* (LC1, Senior Vice President).

As a result, a growing number of the businesses that provide professional services to the U.S. government report that they struggle to compete against much bigger rivals once they successfully graduate and become mid-sized firms. This problem is increasingly common as small business set-aside legislation currently lacks an adequate graduation program to help small firms transition into medium firms (Moore 2008).

After winning large government contracts, small firms expand to execute the contract and are caught in a "Catch-22"; they may now be disqualified from the small business contracts that enabled them to grow in the first place (Maltby 2011). At the same time, they may not be fully prepared to compete in the full and open category. For example, small businesses are exempt from having comprehensive management information tools and infrastructure as part of their business operations. Consequently, small businesses may only have basic financial management tools to manage their cost accounting. When they graduate, the government contracts often require more comprehensive financial and management systems, and the people to operate these systems. All these requirements add to overhead costs, which graduating small businesses have not previously included.

For instance, Deepak Hathiramani, founder of Vistronix Inc., a Reston, Virginia, technology support services company, was so unprepared for the challenges of a mid-tier contractor that his company stumbled after growing to $30 million in annual revenue. Vistronix had only 15 employees when it landed its first government contract in 1994. For nearly a decade later, it thrived on winning small business set-aside contracts providing computer systems integration for civilian agencies. By 2003, it was competing against much larger corporations for government work. Vistronix was unable to successfully transition into its mid-tier status and lost work to its larger rivals. Its annual revenue dropped from $30 million in 2002 to only $13.5 million in 2004. Additionally, its work force declined to fewer than 200 employees, from 400. When small firms become mid-size, they suddenly face a broader range of challenges without any type of government assistance. The challenges include inadequate access to sufficient capital, and international competition (Maltby, 2011).

According to Rep. Gerald Connolly (D-VA):

> *"Innovative, high performing small businesses are becoming victims of their own success – graduating from small business programs only to find themselves in the untenable position of facing off against multi-billion dollar firms."* (Weigelt, 2013)

Frequently, firms which are too large to qualify as "small" under the SBA's size standards, but are significantly smaller than the major defense contractors, experience unique difficulties in competing for DOD contracts. A Center for Strategic and International Studies (CSIS) study concluded that midsize firms (these were defined as firms which are too large to be categorized as small but had less than $3 billion in total annual revenue) were being "squeezed" out of DOD contracts by both large and small contractors. CSIS found that from 1999 to 2009, the share of DOD contracts awarded to small businesses increased (from 17.0% to 17.4%), the share awarded to these midsize firms decreased (from 36.0% to 28.9%), and the share awarded to large firms increased (from 47.0% to 53.7%) (CSIS 2012).

As a result, there is currently renewed support for government assistance for mid-tier firms. Groups such as the Mid-Tier Advocacy (MTA), which describes itself as a non-partisan organization made up of the country's top veteran-owned, services disabled, hub-zone certified, minority-owned and woman-owned businesses are pushing the government to help small firms service the next phase of their business when they face off against the major federal contractors.

> *"That's a problem [graduating] because businesses need to grow more slowly. I've seen lots of small businesses grow too much, too fast and not be able to digest it. They either become a not very good company or quickly become other than small basically before they're ready"* (former senior OSD official).

MTA lobbies for the recognition of mid-tier businesses as an industry-size category between large and small businesses. However, additional legislation to protect mid-sized firms would provide a "permanent crutch," merely extending subsidies for small firms that have graduated but remain incapable of building their own infrastructure. Therefore, the government must be careful in addressing this concern, since set-asides were never intended to be a permanent crutch, even for small companies. However, making the competitive jump to a medium-sized company from a protected, small business has proven challenging for many, particularly when it's made prematurely. This is especially true for companies specializing in national security engineering services and construction.

Additionally, when small firms serve as primes on large contracts, they can often face a disadvantage with their limited "reach-back" capabilities; the firm may not have the resources to contact other experts to answer questions, or help identify solutions. Consequently, larger firms may be better suited for some professional services contracts because they are more heavily capitalized with in-house test capabilities and services.

> *"I do not believe, in many cases, that these small firms [have the reach back capability]. When I look at the magnitude of some of these efforts that have been put on to the backs of small businesses, I don't believe they have the full capability of performing it. In many cases, they don't have the financial wherewithal; they're not capitalized sufficiently to provide certain types of capabilities that the government has qualified as services"* (retired senior Air Force contracting official).

As a result, the small business must often team with another contractor. One form of teaming occurs when two small businesses join resources together to bid on a prime contract. Unless the small firm subcontractor has the necessary complimentary capabilities, and not the same deficiencies as the prime, this teaming may prove unsatisfactory. When the small prime lacks the infrastructure and capabilities to perform the contracted effort, they may often turn to a large, experienced firm for the subcontracted effort (limited to 49 percent of the contract). This puts the large firm in an awkward position, since they are now being "managed" by a small firm, even though they may have more expertise, and depth. Some argue that it, in fact, costs the government more money because, now the government pays overhead to the prime to "manage" the subcontractor (Hilmer 2012). Such a heavy reliance on a large teammate also diminishes the opportunity space for other smalls to participate in a given procurement. In a services activity, if the required services are better met by a large prime, then it may be better for the customer, and small businesses to have the larger company prime (without the required 50% contract cost requirement) and spread a larger percentage of subcontracted work among a greater number of small firms.

In summary, setting aside work for small business that is beyond its scope or magnitude is a disservice to both the firm and the government customer. The award can accelerate the graduation from small to large, before the small business is fully prepared to assume the new role.

> "*Suddenly, upon graduating from small business status, their business environment becomes severely distorted. Resulting revenue losses can lead to layoffs or employee relocations that touch communities, individual families, and the government customer*." (MC1)

5. Small Business Contracting Does Not Necessarily Create New Jobs

One of the underlying assumptions about small business is that of being an engine for job growth. Although this may hold true (with several qualifications) in the economy at large[7], this assumption proves false when analyzing federal government services contracting. For this specific sector, jobs are created by the government requirements and funds available; unlike the commercial sector where there may be un-met market needs. With government services, we are dealing with a "zero-sum game"; the government requirement determines the number of jobs. The only discussion, then, is how the jobs are distributed between large and small firms, and, perhaps more importantly, which firm will provide the government with the best value solution. The only way a small firm will produce more jobs is if it is less efficient, but at a higher cost for the same service. Studies have also concluded that small businesses are not a key engine of job creation in general; in fact, older small business cut more jobs than they create. Research by the economist John C. Haltiwanger and others shows that the only small businesses that create more jobs than they destroy are those less than five years old, meaning start-ups (Gabriel 2012).

6. Small Business Contracting Cost May Not Be Lower

Although there is a belief that small services businesses are lower cost, that is not intuitively the case. Many are based on a business model of offering high-priced subject matter experts and engineers, and thus have surprisingly high rates compared to large businesses. Other small businesses are built upon a lower-cost model composed of lower overhead, which may mean

---

[7] "The claim that small businesses are the primary creators of jobs is based on research published originally in the 1980s. More recent research has revealed some methodological deficiencies in these original studies and suggests that small businesses contribute only slightly more jobs than other firms relative to their employment share. Moreover, this differential is not due to hiring by existing small firms, but rather to startups, which tend to be small. Some critics also question whether small business jobs should be encouraged because they tend to be lower paid, with fewer benefits and more turnover" (Gravelle, 2010). Also see Dilger, 2015, for more on the subject of small business and job creation.

they have fewer business systems; low fringe benefits, which often leads to high employee turnover; and high general and administrative (G&A) costs (which results from the inability to allocate overhead costs across different parts of the organization).

There are other reasons small business costs may be higher. These include:

- Higher regulatory cost. An SBA study shows that businesses with 20 employees or fewer pay 36 percent more per employee on fixed regulatory costs than large business counterparts (Crain, 2010).
- Reduced buying power. Small businesses do not have the benefits of a large businesses' "buying power," and this contributes to higher overhead and fringe benefits costs
- Fewer employees. Small businesses are often "top heavy", and have much fewer direct-charge employees against which to spread government regulatory costs (noted above)
- Difficulty obtaining financing. Small businesses have more difficulty securing low-cost financing, which can increase contract start-up costs.

7. When Agencies Use the Wrong NAICS Code, Inappropriate Procurements are Set Aside for Small Business

With the increasing pressure to meet the small business set-aside goals, agencies, on occasion, use an inappropriate NAICS code for a subject procurement. For example, in July of 2012 the Small Business Administration Office of Hearings and Appeals (OHA) published a decision in favor of Delphi Research, Inc., declaring NAICS code 541712 inappropriate for the subject procurement. Delphi alleged that NASA erred in assigning NAICS 541712 code (work that fit within the exception for aircraft research and development, which utilizes a size standard of 1,500 employees) to a procurement because the principal purpose of the service being acquired was not intended for original research and experimental development activities. In the Delphi Research case, SBA OHA pointed out that SBA regulations require the contracting officer to designate the NAICS code that best describes the principal purpose of the product or service being acquired in light of the industry description in the NAICS Manual, the description in the solicitation, and the relative weight of each element in the solicitation. OHA ruled that NASA should instead have selected NAICS code 541513, Computer Facilities Management Services, with a corresponding small business size standard of $27.5 million in average annual receipts

(US SBA OHA 2012). Based on the scope of work, this procurement then should have been in the “full and open” competition category. This practice has come to known as “code shopping”, and can help agencies meet their small business goals, but does not help the intended firms.

8. The Small Business Set-Aside Program Invites Fraud

The SBSA program is a complex program with many regulations, a variety of stakeholders, and significant incentives for the participants; creating an atmosphere that is ripe for abusive behavior. When this program is abused, it deprives the legitimate intended small businesses an opportunity, but also, in many cases, unnecessarily raises the cost of the product or service. The following types of abuse were identified by virtually every person we talked to, and the examples are well documented by government audits and reports.

Fraudulent Certification

Program abuse is currently plaguing the small-business set-asides legislation. Large firms are receiving contracts that are set aside for small firms, and ineligible small firms are fraudulently registering as SDB, HUBZone, WOSB, and SDVOSB, and receiving the government subsidies earmarked for the disadvantaged entities. According to two former contracting officials:

> *“Abuse is very common; when the guy who owns a business puts his wife in charge in name only, so that he qualifies as WOSB, this is in conflict (contrast) to the intent of the law”* (contracting official, Air Force).

For example, in June 2013, a former security contractor CEO was sentenced to 72 months in prison for creating a front company to obtain Section 8(a) contracts, at a value of over $31 million. In 2004, this individual owned a small business with an African-American female president and obtained certification under Section 8(a). That president left the firm and the individual continued to maintain that status for his firm. The individual then formed a second firm and hired a Portuguese female, who served as a figurehead owner, in order to obtain certification for minority contracts from 2004 to 2012 valued at over $153 million (DOJ 2013).

This abuse is prevalent because the SBA’s standard procedures rely on a kind of corporate “honor system”, allowing businesses seeking contracts to self-certify on their applications. Since few federal agencies have the time to perform due diligence when processing these applications for miscoding or fraud, policing of the system is left up to firms willing to file a complaint.

In 2004, the DoD's Office of Inspector General responded to a complaint regarding seven contracts awarded to an ineligible section 8(a) program contractor valued at over $1.5 million, specifically under the Minority Small Business and Capital Ownership Development Program. The audit concluded that the Defense Supply Center (Columbus, Ohio) and the SBA failed to document and to support the technical and financial capabilities of the contractor. Additionally, the contractor was serving as a broker for other manufacturers to perform the requirements, a prohibited practice for this Section 8(a) program. The Defense Logistics Agency reported that the DoD has no role in determining the technical capabilities of a Section 8(a) firm, and the IG office refuted this, pointing out that the Partnership Agreement between the agencies implies a shared responsibility. This audit revealed a disconnect in the expected assessment responsibilities by each agency, and highlights the need for continued clarification.

In 2009, the GAO examined abuse with Service-Disabled Veteran-Owned Small Business (SDVOSB) set-asides. The box provides one example of engineering firms fraudulently using a certified service-disabled veteran to compete for and obtain a contract. The GAO found ten cases where the government's self-certification system for the SDVOSB program allowed ineligible firms to receive millions of dollars in federal contracts for the following reasons:

- Lack of fraud prevention controls by SBA and agencies awarding contracts;
- Lack of required documentation submissions to substantiate eligibility for the program or application process with the SDVOSB program;

Section 8(a) Fraud: SDVO

During a review of engineering contracts awarded during a six month period, auditors noticed that one person was listed as the 51 percent owner of five SDVO companies.

An in-depth audit revealed that this owner was rarely seen at any of the office locations and had no engineering training. The owner also stated that he did not participate in management decision making nor supervise company engineers.

SBA regulations require that the management and daily business must be controlled by at least one veteran and that a service-disabled veteran must have managerial experience of the extent and complexity to run the business.

The audit concluded that the engineering firms were fraudulently using a certified service-disabled veteran to compete for and obtain these contracts.

(Source: Department of Defense Office of Inspector General. Auditor Fraud Resources. Retrieved July 24, 2014 from http://www.dodig.mil/resources/Fraud/scenarios.html.)

- The sole process used to detect fraud is the formal bid protest at the SBA;
- The bid protest decisions not always resulting in the termination of contracts with ineligible firms; and
- People committing the fraud seldom being suspended or debarred after being guilty of committing the fraud (DoD OIG 2003).

Section 8(a) Fraud: HUBzone

An audit of one DoD agency's HUBzone contracts found several cases of fraud. SBA requires that a HUBZone business must be at least 51 percent owned and controlled by a United States citizen. One firm had two owners and one owner was American, but the business partner's citizenship application was pending approval, making the firm ineligible.

Twenty-five percent of the firms violated the SBA requirement that at least 35 percent of employees reside in the HUBzone because none of their employees actually lived in the HUBzone. These firms also listed a HUBzone address but actually conducted their businesses outside that location, and, additionally, four firms were using only P.O. boxes as their HUBzone address. The SBA requires that a firm participating in the HUBZone program must have its principal office located within a HUBZone.

(Sources: Department of Defense Office of Inspector General. Auditor Fraud Resources. Retrieved July 24, 2014 from http://www.dodig.mil/resources/Fraud/scenarios.html; CRS 2012)

The following year, the GAO examined a more holistic problem of abuse within the entire Section 8(a) Program including SDVOSB, HUBZone, SDB, and WOSB. From this investigation, the GAO identified $325 million in set-aside and sole-source contracts given to firms not eligible for the Section 8(a) Program. Once again, the GAO found that these firms obtained the contracts through fraudulent schemes such as underreporting income, lying about ethnicities, or ineligible companies using "pass through" eligible firms to secure the 8(a) work. In 2012, the GAO found that the DoD incorrectly coded 137 contracts and failed to ensure that contract action reports were coded to reflect the correct set-aside used. By entering incorrect information into the FPDS-NG, the contracting activities compromised the integrity of the data (GAO 2012).

The GAO concluded that this fraud was difficult to prevent due to many weaknesses in the Section 8(a) application process. A lack of any face-to-face contact allowed ineligible individuals or “pass through” companies to enter the program. There was inadequate monitoring of eligibility for individuals and firms that were already accepted into the program. Other issues included a lack of a consistent enforcement strategy and no substantial consequences for fraud abuse to deter individuals from committing the crime (GAO 2010). For example, the box provides (on the previous page) an example of HUBZone contract fraud at one DoD agency where at least 20 percent of contracts were awarded to ineligible firms.

The HUBZone program, which is based on the U.S. Census, is particularly vulnerable to fraud. Additionally problematic is the current net worth standard, excluding individuals with a personal net worth of more than $250,000 from entering the program – this cut-off amount has not been updated for inflation since 1989 (CRS 2012).

Just a Pass Through

Small businesses themselves can abuse a prime contract status by subcontracting to larger firms for much of the work, also referred to as “pass-through.” In 1986, Congress began imposing limitations on 8(a) firms subcontracting, and these were updated by the 112th Congress, requiring at least 50 percent performance of the amount paid to them under the contract for services with the 8(a) firm’s own personnel (CRS 2012).

> *“Right now, it seems that many smalls are just shell companies, or pass through companies; this is especially true with Native American set-asides”* (former senior defense official).

The intent of the small business set-aside programs is to grow small, and, in many cases, disadvantaged businesses to become competitors for additional contracts. When these companies exist simply as shells or as “pass-throughs”, they fail to meet the objectives of the SBSA program. Another former contracting official stated that:

> *“Anytime the small business is working in name only, this causes the DoD to simply pay a mark-up fee of 2 percent - 8 percent. This is detrimental and unfair to the taxpayer when we blindly give work to smalls, and this happens a lot because the government focuses on excessive amount of small businesses, that’s when you get the shell companies to emerge”* (former senior defense official).

The question of fit has been highlighted by large firms using small firms as pass-through, especially for service contracts that small firms cannot handle without significant performance of work by a large firm. This has been particularly difficult in the IT services area. Restricting acquisitions for IT products to small businesses eliminates the country of origin requirements of both the Trade Agreements Act and the Buy American Act, allowing non-designated countries a supply line directly to the U.S. government. Agencies should make efforts to consider whether a small business prime can actually deliver the products and services desired without violating applicable SBA regulations (Ellinport 2014).

The Office of the Inspector General also reported program abuse within the Mentor-Protégé Program where misuses have occurred where the cooperative agreements did not contain statements of work with specific performance standards, but rather provided general tasks of support, which resulted in having inadequate means to determine if objectives were being met. Work performances did not always relate to the program, and sound business practices in administration and oversight were not always met (DoD OIG 2003).

Exorbitant Salaries

> *"At least 77 contractors whose revenue came nearly entirely from taxpayers each paid their top five executives more than a combined $3 million a year, a total of $633 million, (The Washington Times found in an analysis of federal contracting data). Contracting disclosures exempt publicly-traded companies, meaning the list represents a small fraction paying big bucks with federal dollars, mostly small and unknown companies, with the largest and highest-paying, such as Lockheed Martin Corp., not counted"* (Rosiak 2013).

For example, Red River Computer Co., discussed previously employs 68 people, yet it paid its top executives more than $5 million in 2011, including $1.2 million to its CEO, Richard Bolduc. Another firm, Lakeshore Engineering Services Inc., has 80 employees and uses its minority owned status to obtain federal contracts, with at least 80 percent of its revenues coming from those contracts (revenues range between $10 million and $40 million). The company then subcontracts most of the work to other firms. Yet, its top five executives are paid more than $6 million annually, with one executive, Ketul Parikh, alone earning $2.4 million in 2012 (Rosiak 2013).

Some argue for a cap for management salaries (there is already a cap on direct employee salaries), and that, just as the government must be prudent in paying its employees, it must also not overpay any contractors. However, Stan Soloway of the Professional Services Council said this solution is counterproductive, because while abuse exists in the system, "the issue we're most concerned about is expanding [the salary cap] to all employees, because if I'm required to get really high-end technology or analytic skills, I can't get them on a government contract" (Rosiak 2013).

Overcharging

On occasion, small businesses leverage their small business status to overcharge government agencies; these agencies may be more interested in reaching their small business goals than getting best value for the government. For example, in 2010, Red River sold an Apple MacBook Pro Notebook computer to the Air Force for $6,584. In March 2011, it sold the Census Bureau an Apple MacBook Pro for $4,648. Red River was given preference because of its status as a small business. The newest model of that computer can be purchased online from Apple Inc., for $2,799 (Rosiak 2013).

Bid Protests

Respondents agreed that competitions for small-business set contracts are turning into high pressure contests. This is caused in part, by the trend to move to larger and longer-term IDIQ contracts with SBSAs; these have the potential to reward a few small businesses, but others may be cut out of the business sector for five years or more. A government contract officer stated it this way: "SBSAs are giving small businesses work, but you have to be among the select few; there are some winners but there will be a lot of losers."

One consequence is that the number of losing company protests to the U.S. Government Accountability Office (GAO), has increased from 1,352 to 2,429 over the last decade (Davenport 2014). Companies are making strategic decisions about protesting because small firms cannot afford to lose contracts.

This has led to a policy feedback loop. In their effort to limit protests, acquisition officials are more risk averse – following the letter of the law rather than focusing on the original intent of law, as well as limiting their interaction with businesses (e.g. when conducting their market survey). According to a personal interview with one Air Force contracting official, "It takes the government so long to do anything because if we miss a box, or we do anything wrong, then there is a protest and then it takes even longer." In addition to slowing the acquisition process, these protests can have a significant impact on a small firm. According to one respondent of a WOSB:

> *"We won a GPS Systems Engineering Contract. Two other businesses filed protests, so then we had to stop working on the contract. We had already hired people to work on the contract; so now we are keeping these people on board through overhead. The barrier is keeping the team alive and keeping your future alive; and that is a lot of overhead for a small firm"* (MC4, Vice President).

VI. Recommendations and Conclusion

The SBA should work to improve procedures to minimize government costs and to increase the sustainable economic success of defense contractors. Changes in processes and assessments could improve cost-savings, align more fully with original program objectives, and provide additional guidance toward success. Specifically, we make the following recommendations:

1. Improve the SBIR program

The SBIR program is by far the most successful of the small business set aside programs. It fulfills all of the goals, sponsoring innovative companies, creating jobs, and increasing competition. Recognizing its value, Congress made some significant changes when it last reauthorized the program in 2011 (e.g. increased award size limits and expanded program size). However there is still room for improvement, as highlighted by the recent National Research Council study (The National Academies 2014), chaired by one of the authors of this report, Dr. Jacques S. Gansler (see Appendix C for the recommendations).

2. Set Realistic Numeric Agency Goals

The Small Business Administration should develop an understandable, rational, and transparent, methodology to establish numeric agency small business goals. Consideration should be given to the development of a single goal, that would include both prime and subcontract dollars; adjusting the calculation and grading methodology to account for small business firms participating at all tiers of the agency contracts. The existing method fails to recognize the full value from doing business as a subcontractor. As a result, there is little incentive for agencies to meet their small business subcontracting goals, even though these may often offer the best opportunities for small business to participate in DoD contracts. Furthermore, consideration should be given to developing agency goals by industry sector, to preclude select sectors from being targeted excessively to meet the agency goals, ensuring that there remains a fair opportunity for firms of all sizes, in all of the sectors.

3. Encourage the best Small Businesses to grow

One of the primary goals of the small business set-aside program is to help develop and maintain a robust and effective defense industrial base. To that end the small business set-aside program must be structured to encourage the best firms to grow. To accomplish this, there must be enough opportunities for these firms to compete for when they graduate. As was previously discussed, that is often not the case, particularly in the engineering services sector, where many of the opportunities are found in large IDIQ contracts. The DoD and industry are better served by ensuring that a sufficient number of these large contracts are competed as full and open, enabling the best graduating firms to still compete as primes for these opportunities.

Paradoxically, today if two or more small businesses do find a full and open opportunity, the mere fact that they represent themselves to be qualified for the work is seen to establish a "reasonable expectation" that that at least two small businesses will bid at fair market prices, thus triggering the provisions of FAR 19.5, and causing the procurement to be set aside for small business – especially when top government officials are heavily incentivized to meet goals.

Finally, consideration should also be given to limit the time (e.g. 10 years) that firms are eligible for small business set-aside to a reasonable period that provides them an opportunity to get established and grow. This will preclude firms from finding a sweet spot and idling there, raising the entry barrier to new firms.

4. Improve data gathering and program metrics

It is impossible to understand the full impact of any program without reliable data and metrics. Currently, the small business set-aside program focuses on achieving the numerical goals for small business contracting. However, it is difficult to assess the costs that this program may impose, and how successful the program is in achieving the program's overall objectives (e.g. job creation, innovation, growth, etc.), that is, the program's outcomes. The SBA, in conjunction with the applicable agencies, must improve data gathering and develop metrics to determine the small business set-asides' program costs and outcomes. For example, metrics to determine the economic benefits to the nation and defense industrial base by set-asides should be established. Examples include:

1. Expansion of direct employee hiring by a set-aside winner outside the set-aside award or any other set-aside awards (measuring the ability of the company to truly expand and create net new employment outside of set-aside contracts).
2. Filing of patents in conjunction with set-aside contracts.

3. Total dollars awarded to small business at the subcontract level, to include 2^{nd} and 3^{rd} tier subcontractors. (Ideally, all levels could be counted, but this report recognizes the difficulties inherent in prime contractors and government procurement offices obtaining the SB status of all subcontractors and suppliers performing on federal contracts.

Without the appropriate metrics it is impossible the judge the effectiveness of the program, and difficult to identify strategies to improve it.

5. Use set-asides for acquisitions only when small business can handle them

When given the appropriate contracts, small businesses can successfully perform as, or more, efficiently than a large business. The key is selecting the suitable opportunities that are within the scope and scale of the small business, so that selecting a small business prime does not create a risk of poor performance. Small business set-asides are suitable when they enable a firm to grow, but do not overwhelm its infrastructure or capabilities. Awarding a contract to a firm that is beyond its capacity will cause the company to have difficulty with that work, and may cause it to fail.

There are few defined criteria to determine which contracts should be set aside for small businesses other than value. The scope of work, the overall contract value, and the level of complexity can all vary. Based on the emphasis placed on meeting the small business set-aside goals, the decision is often dictated by that agency's intent on meeting its internal small business goals. If the average contract awarded in a particular NAICS code is equal to or greater than the small business size cutoff for that code, it means that a small business with 3 contracts will likely soon be other than small. When, the contracts are too large; agencies should strive to limit the contract size to less than the annual NAICS Code limit for a small business.

Questions that should be addressed include:

- Is the magnitude of the task, both in terms of size and scope, consistent with other work small business contractors have successfully executed and is the effort consistent with the proposed NAICS codes?
- Does the contractor have the number of qualified personnel required to perform this effort?

- Does the small business contractor have the immediate resources to perform critical tasks during the contract transition period?
- Does the contractor have a proven history of managing other teammates?
- Does the contractor have the depth and/or the demonstrated capability to accommodate workload surges or emergent programs?
- Does the contractor have the requisite management structure and processes to perform the contract, specifically the cost monitoring and supplier purchasing systems, and importantly for classified government programs, the appropriate cyber security and overall security compliance record to ensure appropriate protection of sensitive program information?

> *"The set-asides need to be scaled for the size of the company, but what we see today is billion dollar level enterprise contracts being set aside for small businesses that do not have the staffing and financial wherewithal to perform the contract."* (MC1 Senior Company Officer)

As previously discussed, government agencies are directed to attempt to meet a small business goal of 23 percent in prime contracts, and a disproportionate share of the SBSA goals must come from the professional services sector. However, some contracts may not be appropriate for a small business to bid on as the prime contractor. The vice president of one large company put it this way:

> *"In many cases you see these huge procurements and games being played in terms of trying to get very large procurements through with firms that are not able to really do the work at scale, that a large business can; and then they often turn around and hire the large businesses anyway to do the 49 percent, and it's really an increased cost to the government. There are a lot of large businesses that feel like it's an economic question and they see abnormalities in terms of what the government is paying and how the firms are configured in order to deliver the services."*

Often the employees of the large subcontractor are "rebadged" to augment the "small" prime. If the small firms merely are serving as a "middle man" – taking a cut and then subcontracting out to large firms because the small firm either lacks the capabilities or can achieve a higher profit – then this fails to promote cost-savings for the government and fails to provide best-value.

An assessment should include a determination of which products and services small businesses are most qualified and perhaps better equipped to provide. If the purpose of supporting small businesses is to diversify the supplier base to ensure competition, then scalability and economies of scale should be considered in the release and grading of contracts.

> *"When the government puts out a large contract and sets it aside as an 8(a), and then the 8(a) firm turns around and subcontracts out the larger amount of the work, then this drives up the price" (MC3 Executive Manager & Chief Financial Officer).*

Acquisition officials are applying the goals in very blunt ways to meet their quotas, oftentimes at the expense of the mission. According to a retired senior Air Force contracting official:

> *"If you go back as recently as the late 90s and you look at how small-business set-asides policy evolved and came to be, that is what they're oriented towards, (hardware not services) they have not changed appreciably since then and it works. In the knowledge-based services, we often don't know what we're looking for. They're harder to describe, articulate, and categorize; they're harder to measure. It's hard to understand what knowledge based services evolved to a tech readiness level. So the market research is sort of pigeon-holed by NAICS codes, not by a capability gap. So it's difficult to explain whether or not the small business set-asides desires and intentions really apply to knowledge-based services. I personally don't think it does."*

6. Review NAICS code thresholds

A small business is defined as one that is independently owned and not dominant in its field of operation; the SBA is permitted to further define size standards on an industry by industry basis. The current NAICS codes presently have over 1100 distinct recognized industries plus additional sub-industries. The small business size standards vary from industry to industry, based on a number of criteria that include average firm size, startup costs and entry barriers. The SBA has defined these size standards for groups of industry. When these groups are too broad, the codes can provide enough ambiguity so that an inappropriate code (and as a result size standards) can be used. This results in an inappropriate set of firms that are subsidized, and the intended recipients are not eligible. These thresholds must be clear and unambiguous.

7. Revise and reauthorize the Small Business Competitiveness Demonstration Program

In 1988, Congress established the Small Business Competitiveness Demonstration Program to examine the effect of a freely competitive market with no small business set-asides. The program was limited to ten industries and ten federal agencies, including the DoD. This program was discontinued by the Small Business Jobs Act of 2010 (FAR Subpart 19.10; SBA website). This pilot program should be revised and reauthorized to continue to assess the performance of small business without the protection of set-asides in the current fiscal environment.

8. Reduce program abuses

Program abuses negatively affect the perception of the small business set-aside program, as well as its effectiveness. Agencies must take the appropriate steps to improve monitoring and enforcement. Moreover, the current complexity of the small business set-aside program creates an environment that can enable abuses and protests. Congress should streamline and simplify the current set-aside programs.

Conclusion

> "*One of the great mistakes is to judge policies and programs by their intentions rather than their results.*" **—** Milton Friedman

The current federal policy towards small business was formed, and is maintained by the best of intentions. However, like most policy initiatives there are several unintended consequences. For example, as we highlighted, the small business program provides few incentivizes for small businesses to graduate. Not all, but some small business service providers monitor their average revenue stream to continue to receive the benefits of the small business set-aside programs. At the same time, increasing the pressure to meet the small business set-aside goals may incentivize DoD acquisition personnel to focus on the goals, rather than getting the mission accomplished for the government.

In the current budgetary environment, the nation must ensure that this policy is working in an effective and efficient way as possible. We do not argue that small business set asides should be eliminated. However, we do argue for a closer examination of those policies, and the implementation of some improvements. Perhaps, most importantly, we believe this area needs increased study, to determine in a more quantitative way, the true outcomes of the policies, so that the policies can been modified and they can better achieve the overarching goals of the nation's small business goals.

Reference List

Acs, Zoltan J. and David B. Audretsch. Innovation, Market Structure, and Firm Size. The Review of Economics and Statistics, Vol. 69, No. 4 (Nov., 1987), pp. 567-574. Published by: The MIT Press. Stable URL: http://www.jstor.org/stable/1935950 .Accessed: 30/12/2014 10:57

Audretsch, D. B., Link, A. N., & Scott, J. T. (2002). Public/private technology partnerships: evaluating SBIR-supported research. *Research Policy*, *31*(1), 145-158.

CFR. (2006). Retrieved from http://www.gpo.gov/fdsys/pkg/CFR-2006-title13-vol1/pdf/CFR-2006-title13-vol1-part124.pdf.

Clark, Charles S., 2012. Pentagon seeks to strengthen acquisition workforce, Government Executive, March 2, 2012.

Congressional Budget Office. (2012 July). Long-Term Implications of the 2013 Future Years Defense Program. Retrieved from http://www.cbo.gov/sites/default/files/cbofiles/attachments/07-11-12-FYDP_forPosting_0.pdf.

Congressional Research Service. (2012 September). Federal Contracting and Subcontracting with Small Businesses: Issues in the 112th Congress. Kate M. Manuel and Erika K. Lunder.

Congressional Research Service. (2013 January). Federal Contracting and Subcontracting with Small Businesses: Issues in the 112th Congress. Kate M. Manuel and Erika K. Lunder.

Crain, N. and M. Crain. (2010). The Impact of Regulatory Costs on Small Firms. Small Business Administration Office of Advocacy. September 2010. Retrieved from http://www.sba.gov/sites/default/files/advocacy/The%20Impact%20of%20Regulatory%20Costs%20on%20Small%20Firms%20%28Full%29_0.pdf.

Center for Strategic and International Studies (CSIS), "Defense Contract Trends: U.S. Department of Defense Contract Spending and the Supporting Industrial Base," Washington, DC, p. 35,

Davenport, C. (2014). With budget tightening, disputes over federal contracts increase. *The Washington Post.* April 4, 2014. Retrieved from http://www.washingtonpost.com/business/economy/with-budget-tightening-disputes-over-federal-contracts-increase/2014/04/04/32165290-b5c6-11e3-8020-b2d790b3c9e1_story.html.

Defense Intelligence Agency. (2014). Office of Small Business Programs. Retrieved from http://www.dia.mil/Business/OfficeofSmallBusinessPrograms.aspx.

Denes, T. (1997). Do Small Business Set-Asides Increase the Cost of Government Contracting? ASPA. *Public Administration Review*. Vol., 57, No. 5 (Sep. – Oct., 1997), pp. 441 – 444.

Department of Defense Office of the Inspector General. (2003). Acquisition: Cooperative Agreements Supporting the Mentor Protégé Program (D-2003-077).

Department of Defense Office of Inspector General. (2004). Small Business Administration Section 8(a) Program Contracting Procedures at the Defense Supply Center, Columbus - Report No. D-2004-070(PDF). Retrieved from http://www.dodig.mil/audit/reports/fy04/04070sum.htm.

Dilger, Robert J. (2015). Small Business Administration and Job Creation. CRS Report R41523. January, 2015.

DoD Office of Small Business Procurement. Retrieved from http://www.acq.osd.mil/osbp/gov/resources/FY12FinalScorecard_DoD_2013-06-20.pdf.

Department of Justice. (2013). Press Release: Former Security Contractor CEO Sentenced For Masterminding $31 Million Disadvantaged Small Business Fraud Scheme. The United States Attorney General's Office: Eastern District of Virginia. June 21, 2013. Retrieved from http://www.justice.gov/usao/vae/news/2013/06/20130621ramannr.html.

Department of Labor (DOL). (2014). Office of Small and Disadvantaged Business Utilization. Retrieved from http://www.dol.gov/oasam/programs/osdbu/.

Department of the Treasury. (2014). Small Business and Community Development Programs. Retrieved from http://www.treasury.gov/resource-center/sb-programs/Pages/default.aspx.

Dilger, R. & Manuel, K. (2012). Small Business Mentor-Protégé Programs. June 4, 2012. Congressional Research Service. Retrieved from http://fas.org/sgp/crs/misc/R41722.pdf.

Ellinport, J. (2013). Small Business Set-Asides: Under GSA Multiple Award Schedule Contracts. *Contract Management*. June 2013. Retrieved from http://www.ncmahq.org/newspublications/CMMIssueDetail.cfm?ItemNumber=14508.

Ellinport, J. (2014). The Illusion of Small Business Set-Asides in Information Technology Procurement. *Contract Management*. August 2014, pp 27-35.

EPA. (2014). Thinking Small Business First – Professionalism, Innovation, Collaboration, Advocacy. Retrieved from http://www.epa.gov/osbp/.

Eshoo Press Release. (2013 December). Eshoo Statement on House Passage of Bill to Mitigate Abusive Patent Legislation. Retrieved from http://eshoo.house.gov/press-releases/eshoo-statement-on-house-passage-of-bill-to-mitigate-abusive-patent-litigation/.

Eshoo Press Release. (2014 January). Reps. Eshoo & Connolly Unveil Draft Federal IT Procurement Reform Bill. Retrieved from http://eshoo.house.gov/press-releases/reps-eshoo-connolly-unveil-draft-federal-it-procurement-reform-bill/.

FAR. Part 13. Retrieved from https://acquisition.gov/far/current/html/Subpart%2013_1.html.

Federal Procurement Data System (FPDS). (2005-2014). Small Business Goaling Reports, Fiscal Year 2005-2014. Retrieved from https://www.fpds.gov/fpdsng_cms/index.php/en/reports.

Gabriel, T. (2012). A Fuller Picture in the Small-Business Tug of War. *The New York Times*. July 13, 2012. Retrieved from http://www.nytimes.com/2012/07/14/us/politics/amid-tax-debate-a-closer-look-at-small-businesses.html?_r=0.

Gansler, Jacques S. 2007. Report of the "Commission on Army Acquisition and Program Management in Expeditionary Operations" Urgen Reform Required: Army Expeditionary Contracting. October 31, 2007

Gansler, et. al. (2013). The DoD's Use of Lowest Price Technically Acceptable (LPTA) Source Selection. Center for Public Policy and Private Enterprise.

General Services Administration. (2014). GSA Awards Small Businesses with Big Opportunities with OASIS. July 25, 2014. Retrieved from http://www.gsa.gov/portal/content/186647.

Government Accountability Office (GAO). (2007). Protégés Value DOD's Mentor-Protégé Program, but Annual Reporting to Congress Needs Improvement. (GAO-07-151). January 2007. Retrieved from http://www.gao.gov/assets/260/256085.pdf.

Government Accountability Office (GAO). (2012). Defense Contracting: Competition for Services and Recent Initiatives to Increase Competitive Procurements. (GAO-12-384). March 15, 2012. Retrieved from http://www.gao.gov/products/GAO-12-384.

Government Accountability Office (GAO). (2011). Mentor-Protege Programs Have Policies That Aim to Benefit Participants but Do Not Require Postagreement Tracking. (GAO-11-548R). June 15, 2011. Retrieved from http://www.gao.gov/products/GAO-11-548R.

Government Accountability Office (GAO). (2010). 8(a) Program: Fourteen Ineligible Firms Received $325 million in Sole-Source and Set-Aside Contracts. (GAO-10-425). March 20, 2010. Retrieved from http://www.gao.gov/new.items/d10425.pdf.

GovTrack. (2014a). Small Business Regulatory Sunset Act of 2014 (S. 2747). Retrieved from https://www.govtrack.us/congress/bills/113/s2747/text.

GovTrack. (2014b). Incentivize Growth Now In Tomorrow's Entrepreneurs Act of 2014 (S. 2724). Retrieved from https://www.govtrack.us/congress/bills/113/s2724/text.

GovTrack. (2014c). COMPETE Act of 2014 (S. 2715). Retrieved from https://www.govtrack.us/congress/bills/113/s2715.

GovTrack. (2014d). Women's Small Business Ownership Act of 2014 (S. 2693). Retrieved from https://www.govtrack.us/congress/bills/113/s2693.

Grant Thornton. (2012). Industrial Survey 2012: 18th Annual Government Contractor Survey. Retrieved from http://www.grantthornton.com/~/media/content-page-files/aerospace-and-defense/pdfs/2012/18th-Government-Contractor-Survey-FINAL-opt.ashx.

Gravelle, Jane G. (2010). Small Business and the Expiration of the 2001 Tax Rate Reductions: Economic Issues. CRS Report R41392. September 3, 2010

Gryphon Technologies. (2007). Industry/Defense: Challenges and Issues from a Small Business Perspective. Retrieved from http://www.dtic.mil/ndia/2007expwarfare/BradenGryphon.pdf.

Harrison, J.D. (2013). Who Actually Creates Jobs: Start-ups, Small Businesses, or Big Corporations? *The Washington Post.* April 24, 2013. Retrieved from http://www.washingtonpost.com/business/on-small-business/who-actually-creates-jobs-start-ups-small-businesses-or-big-corporations/2013/04/24/d373ef08-ac2b-11e2-a8b9-2a63d75b5459_story.html.

Hillmer, L. (2012). Testimony to House Armed Services Committee Panel on Business Challenges within the Defense Industry. Hearing: Doing Business with DoD: Unique Challenges Faced by Small and Mid-Sized Businesses.

Hoover, M. (2013). 7 small businesses win $1.4B DISA network contract: work could last over the next five years. *Washington Technology*. Jan 3, 2013. Retrieved from http://washingtontechnology.com/articles/2013/01/03/8-disa-wins.aspx.

Hurst, E. and B. Pugsley. (2011). What Do Small Business Do? National Bureau of Economic Research. NBER Working Paper No. 17041. Retrieved from http://www.brookings.edu/~/media/files/programs/es/bpea/2011_fall_bpea_papers/2011_fall_bpea_conference_hurst.pdf.

Koprine, S. (2013). Limitations on Subcontracting: Congress Enacts Major Changes. SmallGovCon. January 8, 2013. Retrieved from http://smallgovcon.com/statutes-and-regulations/limitations-on-subcontracting-congress-enacts-major-changes/.

Lockheed Martin Press Release. (2014). Lockheed Martin Small Business Innovation Research Program Scores A Win With New Sensor Technology. Retrieved from http://www.lockheedmartin.com/us/news/press-releases/2014/february/-lockheed-martin-small-business-innovation-research-program-scor.html.

Lowry, A. (2011). Why Small Businesses Aren't Innovative: Everyone says small businesses are dynamic, market-sharing, job creators. But new evidence suggests that's not true. *Slate*. September 19, 2011. Retrieved from http://www.slate.com/articles/business/small_business/2011/09/why_small_businesses_arent_innovative.html.

Maltby, E. (2011). Contractors Find Gains Hard to Hold: Federal Professional-Services Suppliers Run Into Trouble After Out-Growing Small Business Status. *The Wall Street Journal*. November 3, 2011. Retrieved from http://online.wsj.com/news/articles/SB20001424052970203716204577013742042606930

Mclaughlin, P. (2013). On The Human Costs Of The Us Regulatory System: Should Congress Pressure Agencies to Make Rules Faster? Testimony before the Senate Judiciary Committee on August 1, 2013. Retrieved from http://mercatus.org/publication/human-costs-us-regulatory-system-should-congress-pressure-agencies-make-rules-faster.

Medici, Andy. 2014. OASIS small-business contract starts strong. The Federal Times. October 20, 2014, p.17

Moore, N., et. al. (2008). Enhancing Small-Business Opportunities in the DoD. Santa Monica, CA: RAND Corporation. National Defense Research Institute.

The National Academies. (2009). An Assessment of the SBIR Program at the Department of Defense. (ISBN-13: 978-0-309-10947-5). Retrieved from http://www.ncbi.nlm.nih.gov/books/NBK32835/.

The National Academies. (2014). SBIR at the Department of Defense. The National Academies Press. Retrieved from http://www.nap.edu/download.php?record_id=18821#.

Office of Government Contracting. (2003). Goaling Guidelines for the Small Business Preference Programs for Prime and Subcontract Federal Procurement Goals & Achievements. Retrieved from http://www.sba.gov/sites/default/files/goals_goaling_guidelines.pdf.

Office of Small Business Programs (OBSP). (2014). Department of Defense. Retrieved from http://www.acq.osd.mil/osbp/index.shtml.

Office of Small Business Programs (OBSP). (2014b). Department of Defense program Goals and Statistics. Retrieved from http://www.acq.osd.mil/osbp/statistics/goals.htm.

Rivera, J. (2011). New Rules and Regulations for Small Business Programs. Presented October 3, 2011.

Rosiak, L. (2013). Executives pay balloons for federal contractors; small businesses add up to big gap. *The Washington Times*. April 22, 2013. Retrieved from http://www.washingtontimes.com/news/2013/apr/22/executive-pay-balloons-for-federal-contractors/?page=all.

Roulo, Claudette. (2014). Small-business Contracting on the Rise, Official Says. DoD News. Oct 14, 2014. Retrieved from http://www.defense.gov/new/newsarticle.aspx?id=123411.

Sakallaras, A. G. (2012). Questioning the Sacred Cow: Reexamining the Justifications for Small Business Set Asides. Public Contract Law Journal, Vol. 36, No. 4 (Summer 2007), pp. 685-700

Salant, J. (2014). Pentagon Contracts Decline 11 percent in March. *Bloomberg*. April 10, 2014. Retrieved from http://www.bloomberg.com/news/2014-04-10/pentagon-contracts-decline-11-in-march.html.

Schmidt, R. (2014). Testimony before the Committee on Small Business, United States House of Representatives, May 21, 2014. Retrieved from http://smallbusiness.house.gov/uploadedfiles/5-21-2014_schmidt_revised_testimony.pdf.

Schmitt, J. and N. Lane. (2009). An International Comparison of Small Business Employment. Center for Economic and Policy Research (CEPR). Retrieved from http://www.cepr.net/documents/publications/small-business-2009-08.pdf.

Scholtes, J. (2010). Bill Would Give Small Businesses Better Shot to Win Federal Contracts. *CQ Weekly*. (March 8, 2010): 572.

Shoraka, J. (2012). Testimony of John Shoraka – Acting Associate Administrator Before the House Committee on Armed Services. Doing Business with DoD: Unique Challenges Faced by Small and "Mid-Sized" Businesses." U.S. Small Business Administration.

Small Business Administration. (2009 April). SBA Size Standards Methodology. Retrieved from http://www.sba.gov/sites/default/files/size_standards_methodology.pdf.

Small Business Administration. (2012 January). Reauthorization of the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Programs.

Memo to SBIR Program Managers. Retrieved from http://www.acq.osd.mil/osbp/sbir/docs/SBIR%20STTR%20Reauthization%20Memo%20-%20120130.pdf.

Small Business Administration. (2013). Briefing: Fiscal Year 2012 Small Business Procurement Scorecard, Grade Calculation Methodology. June 24, 2013, Retrieved from http://www.sba.gov/sites/default/files/files/Scorecard_Grade_Calculation_Methodology_FY12_FINAL_2013-06-24.pdf.

Small Business Administration. (2014a). Mission. Retrieved from http://www.sba.gov/about-sba/what_we_do/mission.

Small Business Administration. (2014b). What we do. Retrieved from http://www.sba.gov/about-sba/what_we_do/history.

Small Business Administration. (2014c). Goaling. Retrieved from http://www.sba.gov/content/small-business-goaling.

Small Business Administration. (2014d). 8(a) Requirements Overview. Retrieved from http://www.sba.gov/content/8a-requirements-overview.

Small Business Administration. (2014e July). Small Business Innovation Research Program (SBIR): How it works and how to qualify. Retrieved from http://www.sba.gov/blogs/small-business-innovation-research-program-sbir-how-it-works-and-how-qualify.

Small Business Administration. (2014f). ANC Business Guide. Retrieved from http://www.sba.gov/sites/default/files/ANC%20Workbook%20P.pdf.

Small Business Administration. (2014h). Evaluation of the Small Business Procurement Goals Established in Section 15(g) of the Small Business Act. June 2014. Retrieved from http://www.sba.gov/content/evaluation-small-business-procurement-goals-established-section-15g-small-business-act.

Small Business Administration. (2014i). Table of Small Business Size Standards Matched to North American Industry Classification System Codes. Effective July 14, 2014. Retrieved from http://www.sba.gov/sites/default/files/files/Size_Standards_Table.pdf.

SBA Office of Inspector General. (2007). Audit of Two 8(a) Sole Source Contracts Awarded to Contractors in SBA's Mentor Protégé Program. Report No: 07-19. March 30, 2007. Retrieved from http://archive.sba.gov/idc/groups/public/documents/sba/oig_gcbd_7-19.pdf.

SBA Office of Inspector General. (2013). Performance Audit Report: Benefits of Mentor Protégé Joint Ventures are Unknown: Robust Oversight is Needed to Assure Success and Avoid Abuse. Retrieved from http://www.sba.gov/sites/default/files/Report%2013-03%20Benefits%20of%20Mentor%20Protege%20Joint%20Ventures%20are%20Unknown.pdf.

Small Business & Entrepreneurship Council. (2014). Small Business Facts. Retrieved from http://www.sbecouncil.org/about-us/facts-and-data/.

Small Business Innovation Research (SBIR). (2014 January). Amendments to the SBIR/STTR Policy Directives published in the Federal Register. Retrieved from http://www.sbir.gov/news/amendments-sbirsttr-policy-directives-published-federal-register.

SBIR/STTR. (2014). The SBIR Program. Retrieved from http://sbir.gov/about/about-sbir.

SBIR/STTR Presentation. (2014 February). DoD SBIR/STTR Commercialization of University Innovations. Briefing presented by Christopher S. Rinaldi, SBIR/STTR Program Administrator to National Academy of Science (NAS) University Symposium February 5, 2014. Retrieved from http://sites.nationalacademies.org/PGA/cs/groups/pgasite/documents/webpage/pga_086821.pdf.

Small Business Technology Transfer (STTR). (2014). The STTR Program. Retrieved from http://www.sbir.gov/about/about-sttr.

Timberlake, G. (2014 August). Congress Can Help by Keeping It 'Simplified.' LinkedIn. Retrieved from https://www.linkedin.com/today/post/article/20140808195024-247152-congress-can-help-by-keeping-it-simplified.

Tipton Press Release. May 21, 2013. Tipton Addresses Small Business Caucus Kick-Off Event. Retrieved from http://tipton.house.gov/press-release/tipton-addresses-small-business-caucus-kick-event.

Uquillas, Jorge and Kate Caison. 2014. LPTA Dominates Best Value Source Selections. Bloomberg Government. October 24, 2014

US SBA OHA. (2012). *NAICS Appeal of Delphi Research, Inc.*, SBA No. NAICS-5377 (2012). July 10, 2012

U.S. Census Bureau. (2014). Statistics of U.S. Businesses. Retrieved from http://www.census.gov/econ/susb/. USAspending.gov. Department of Defense FY2013. Retrieved from http://www.usaspending.gov/index.php?overridecook=yes&carryfilters=on&q=node%2F3&maj_contracting_agency=9700&maj_contracting_agency_name=Department+of+Defense&fiscal_year=2013&tab=By+Agency.

Weigelt, Matthew. (2013). Set-aside for mid-tier companies still possible. FCW. Feb 19, 2013. Retrieved from http://fcw.com/articles/2013/02/19/mid-tier-set-aside.aspx.

Acknowledgements

This research was partially sponsored by gifts from members of the Coalition for Competition, a 501c(6) organization advocating a balanced government contracting environment that provides best value for the government and the American taxpayer while strengthening the industrial base. We are especially grateful for the support of the interviewed firms, and the current and former federal government officials, for their participation and the valuable insights they provided. The authors also would like to thank Caroline Dawn Pulliam for her assistance with the planning and coordination of this study. Also deserving of thanks for her research is Jacqueline Plant, Master of Public Policy candidate.

Authors

Jacques S. Gansler

The Honorable Jacques S. Gansler, former Under Secretary of Defense for Acquisition, Technology, and Logistics, is a professor and holds the Roger C. Lipitz Chair in Public Policy and Private Enterprise in the School of Public Policy, University of Maryland; he is also Director of the Center for Public Policy and Private Enterprise. As the third-ranking civilian at the Pentagon from 1997–2001, Dr. Gansler was responsible for all research and development, acquisition reform, logistics, advance technology, environmental security, defense industry, and numerous other security programs. Before joining the Clinton Administration, Dr. Gansler held a variety of positions in government and the private sector, including Deputy Assistant Secretary of Defense (Material Acquisition), assistant director of defense research and engineering (electronics), senior vice president at TASC, vice president of ITT, and engineering and management positions with Singer and Raytheon Corporations.

Throughout his career, Dr. Gansler has written, published, testified, and taught on subjects related to his work. He is the author of five books and over 100 articles. His most recent book is *Democracy's Arsenal: Creating a 21st Century Defense Industry* (MIT Press, 2011).

In 2007, Dr. Gansler served as the chair of the Secretary of the Army's Commission on Contracting and Program Management for Army Expeditionary Forces. He has been a long-time a member of the Defense Science Board and the Government Accountability Office (GAO) Advisory Board. He is also a member of the National Academy of Engineering and a fellow of the National Academy of Public Administration. Additionally, he is the Glenn L. Martin Institute Fellow of Engineering at the A. James Clarke School of Engineering; an affiliate faculty member at the Robert H. Smith School of Business; and a senior fellow at the James MacGregor Burns Academy of Leadership (all at the University of Maryland). From 2003–2004, Dr. Gansler served as interim dean of the School of Public Policy at the University of Maryland, and from 2004–2006, he served as the vice president for research at the University of Maryland.

William Lucyshyn

William Lucyshyn is the Director of Research and a Senior Research Scholar at the Center for Public Policy and Private Enterprise in the School of Public Policy, University of Maryland. In this position, he directs research on critical policy issues related to the increasingly complex problems associated with improving public-sector management and operations, and with how government works with private enterprise. Current projects include modernizing government supply-chain management, identifying government sourcing and acquisition best practices, and analyzing Department of Defense business modernization and transformation. Previously, Mr. Lucyshyn served as a Program Manager and the Principal Technical Advisor to the Director of the Defense Advanced Research Projects Agency (DARPA) on the identification, selection, research, development, and prototype production of advanced technology projects.

Prior to joining DARPA, Mr. Lucyshyn completed a 25-year career in the U.S. Air Force. Mr. Lucyshyn received his Bachelor degree in Engineering Science from the City University of New York and earned his Master's degree in Nuclear Engineering from the Air Force Institute of Technology. He has authored numerous reports, book chapters, and journal articles.

Jinee Burdg

Jinee Burdg is a Research Associate at the Center for Public Policy and Private Enterprise in the School of Public Policy, University of Maryland. Her research focus is on federal acquisitions and defense supply chain management. She obtained her Master of Public Policy with a specialization in health policy at the University of Maryland's School of Public Policy. She also holds a Bachelor of Science degree from the University of Georgia. She is pursuing a career in policy and program analysis.

Appendix A: History of Small Business Procurement Laws

The Federal Government has implemented laws to facilitate government procurement summarized by the table below.

Purveyor of Public Affairs Act of 1795	Allowed the government to buy needed supplies and materials to perform government functions.
Civil Sundry Appropriations Act of 1861	Continued the principle of advertised procurements for the next 86 years.
Sherman Anti-Trust Act of 1890	Protected small companies and their labor force from large business
Eight-Hour Work Law of 1892	Set the eight-hour work day
Armed Services Procurement Act of 1947	Continued the sealed bid as the preferred method of procurement, placed procurement rules in one location and gave us the Armed Services Procurement Regulation, which was the beginnings of today's rulebook, the FAR.
Davis-Bacon Act of 1931	Set the minimum wage on the construction site at the local prevailing wage
Buy American Act of 1933	Required the government to buy only American products
Smaller War Plants Corporation of 1942	
Armed Services Procurement Act of 1947	
Defense Production Act of 1950	Antitrust protection
Small Business Act of 1953	Established the Small Business Administration (SBA)
Truth in Negotiation Act of 1962	Required both prime and subcontractors on contracts over $500,000 to certify the cost data submitted under the solicitation.
Competition in Contracting Act (CICA) of 1984	Provided that agencies may use “other than full and open competition” when making awards to small businesses;” such awards can be made on a set-aside or sole-source basis
Small Business Prime Contract Goal	Set at 20%
Government Performance Results Act (GPRA) of 1993	Established a system to set goals for program performance and to measure results in an effort to improve the confidence of the American people in the capability of the Federal Government.
Federal Acquisition Streamlining Act of 1994 (FASA)	Promoted the use of multiple award contracts (MACs), and it created a micro-purchase label for acquisitions under $2,500, which eliminates competition and small business set-aside requirements for those types of purchases.
Federal Acquisition Reform Act (FARA) of 1996	Established commercial off-the-shelf (COTS) items and exempted these items from federal procurement laws
Information Technology Management Reform Act (ITMRA) of 1996	Provided for the use of multiagency contracts and what have become known as government wide agency contracts (GWACs) for federal agencies to access each other’s information technology contracts

Appendix B: Interview Questions

1. How do you classify your business? i.e. small, medium, large?

2. Which sector or industry does your firm operate in?

3. How many full time employees are currently employed by your firm?

4. Is your firm national? If not, in what region does it operate?

5. What were your gross revenues for your most recent fiscal year?

6. What percentage of those revenues are from federal government contracts?

7. How would you describe your firm's business conditions? Financial health?

8. What are the challenges your firm faces today, when dealing with the federal government?

9. Do current small business set-aside policies enable the DoD to fully leverage the desired attributes of small businesses, such as agility and innovation? How are these attributes manifested on knowledge-based service contracts? Can you provide an example?

10. Are the current small business set-aside goals reasonable?

11. How has the nature (size, complexity) of small business set-aside contracts changed over time? Have these changes affected your business or your employees?

12. Based on the current policies, what are the positive outcomes for small businesses? Negative outcomes?

13. Based on the current policies, what are the positive outcomes for medium and large businesses? Negative outcomes?

14. Based on the current policies, what are the positive outcomes for national security and the defense industrial base? Negative outcomes?

15. Based on the current policies, what are the positive outcomes for your local community? Negative outcomes?

16. Are set-aside policies effective in preserving the industrial base across all small businesses, that is, among product development companies and services companies? Are such policies necessary to preserve the overall defense industrial base?

17. Are there unintended consequences from the current policies?

18. How can current policy be reformed to improve the effectiveness and efficiency of DoD acquisitions, while ensuring small businesses are afforded the desired opportunity to a share of DoD procurement expenditures?

Appendix C: Key Recommendations from the National Research Council Report, SBIR at the Department of Defense, 2014.

Key Recommendations

The committee's key recommendations by thematic area are highlighted and cross-referenced below.

Encouraging Commercialization

- **Encourage Prime Contractors:** DoD should consider experimenting with different kinds of incentives to encourage primes to work more effectively—and more often—with SBIR firms to commercialize new technologies.
- **Brief PEOs:** DoD should use new administrative funding in part to develop better briefing materials for PEOs and PCOs. DoD should consider developing a briefing program for all PEOs and PCOs, and should in particular focus for new PEOs and PCOs. (
- **Financial Incentives:** DoD should encourage its components to experiment with financial incentives for the adoption of SBIR technologies. Even where financial incentives are not available, DoD should consider encouraging components to add explicit targets to prime contracts, in the same way that targets for the participation of small businesses more generally have been added to some contracts.

Addressing Under-Represented Populations

- **No Quotas:** DoD should *not* develop quotas for the inclusion of selected populations into the SBIR program. Such an approach is not necessary to meet Congressional intent and is likely to reduce program effectiveness.
- **Outreach and Education:** DoD should develop an outreach and education program focused on expanding participation of under-represented populations.
- **Tracking and Metrics:** The DoD Office of Small Business (OSB) should improve tracking and metrics against which to benchmark the activities of components in relation to this Congressional objective.

Improving Tracking, Data Collection, and Adoption of Best Practices

- **Alignment:** DoD should address the need for better alignment of data collection, agreed metrics, and utilization of effective evaluation and assessment tools to guide program management.
- **Annual Report:** DoD should provide a single, more comprehensive annual report that could —after appropriate consultations—be used to satisfy the reporting requirements of numerous Congressional sponsors.
- **Data Accuracy:** DoD should improve the accuracy of data recorded in the Federal Procurement Data System (FPDS).

Streamlining Program Management and Agency Mission Objectives

- **Streamline Guidance:** DoD should revise guidance at the Small Business Administration (SBA), DoD, or component levels that impose unnecessary rigidity on program operations.
- **Maintain TPOC Continuity:** DoD should identify ways to ensure that the knowledge of and enthusiasm of sponsoring Technical Points of Contact (TPOC) is not lost to the project. DoD should consider ways to support ongoing engagement by TPOCs in projects after they have formally handed them on at the end of a rotation.
- **Protect Data Rights:** DoD should work with SBA to explore mechanisms that more effectively protect SBIR data rights.
- **Disseminating Best Practices:** DoD should develop a process for tracking experimentation within the SBIR program. Furthermore, DoD needs to focus attention on the development of a comprehensive toolset of mechanisms for transferring both formal and informal knowledge about best practices.

Improving Contracts and Audits

- **Improve Audits:** DoD should explore the development of less onerous and more effective auditing procedures for small businesses that can be completed in a timelier manner.
- **Improve Contracting Practices:** DoD should provide opportunities for small business concerns (SBC) to raise concerns about contracting practices at the component level.

Appendix D: Firm Participant Characteristics

Company	NAICS/Area	Annual Revenue	% Federal Contracts	Employees
Large 1 (LC1)	Technology and Program Management	$1 - $10 billion	99	3000
Large 2 (LC2)	Aviation Missile Defense	$1 - $10 billion	99	4600
Large 3(LC3)	Defense Electronics and Communication	$1 - $10 billion	65	3800
Medium 1 (MC1)	Engineering Services	$300million - $1 billion	99	1500
Medium 2 (MC2)	Engineering, IT, Professional Services	$300million - $1 billion	100	2300
Medium 3 (MC3)	Construction	$35 – $300 million	50	75
Medium 4 (MC4)	WOSB Space Systems Engineering	$35 – $300 million	99	145
Small 1 (SC1)	Services R&D	< $35million	100	325
Small 2 (SC2)	8(a) SDB Advisory & Assistance Support	< $35million	100	80
Small 3 (SC3)	WOSB Engineering Services	< $35million	0	3

The Center for Public Policy and Private Enterprise provides the strategic linkage between the public and private sector to develop and improve solutions to increasingly complex problems associated with the delivery of public services — a responsibility increasingly shared by both sectors. Operating at the nexus of public and private interests, the Center researches, develops, and promotes best practices; develops policy recommendations; and strives to influence senior decision-makers toward improved government and industry results. The Center for Public Policy and Private Enterprise is a research Center within the University of Maryland's School of Public Policy.

UNIVERSITY OF MARYLAND 1856